

## SIMATIC HMI

### HMI device Mobile Panel 277F IWLAN

#### Operating Instructions



The following supplement is part of this documentation:

No.	Designation	Drawing number	Edition
1	Product Information	A5E02615843-01	08/2009

Order No.: 6AV6691-1DQ01-2AB0

Preface	
Overview	1
Safety instructions, standards and notes	2
Planning application	3
Installation and connection	4
Operator controls and displays	5
Configuring the operating system	6
Commissioning the HMI device	7
Fail-safe mode	8
Operating a project	9
Operating alarms	10
Operating recipes	11
Maintenance and care	12
Technical specifications	13
Appendix	A
Abbreviations	B

## Legal information

### Warning notice system

This manual contains notices you have to observe in order to ensure your personal safety, as well as to prevent damage to property. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring only to property damage have no safety alert symbol. These notices shown below are graded according to the degree of danger.

<b>⚠ DANGER</b>
indicates that death or severe personal injury <b>will</b> result if proper precautions are not taken.
<b>⚠ WARNING</b>
indicates that death or severe personal injury <b>may</b> result if proper precautions are not taken.
<b>⚠ CAUTION</b>
with a safety alert symbol, indicates that minor personal injury can result if proper precautions are not taken.
<b>CAUTION</b>
without a safety alert symbol, indicates that property damage can result if proper precautions are not taken.
<b>NOTICE</b>
indicates that an unintended result or situation can occur if the corresponding information is not taken into account.

If more than one degree of danger is present, the warning notice representing the highest degree of danger will be used. A notice warning of injury to persons with a safety alert symbol may also include a warning relating to property damage.

### Qualified Personnel

The device/system may only be set up and used in conjunction with this documentation. Commissioning and operation of a device/system may only be performed by **qualified personnel**. Within the context of the safety notes in this documentation qualified persons are defined as persons who are authorized to commission, ground and label devices, systems and circuits in accordance with established safety practices and standards.

### Proper use of Siemens products

Note the following:

<b>⚠ WARNING</b>
Siemens products may only be used for the applications described in the catalog and in the relevant technical documentation. If products and components from other manufacturers are used, these must be recommended or approved by Siemens. Proper transport, storage, installation, assembly, commissioning, operation and maintenance are required to ensure that the products operate safely and without any problems. The permissible ambient conditions must be adhered to. The information in the relevant documentation must be observed.

### Trademarks

All names identified by ® are registered trademarks of the Siemens AG. The remaining trademarks in this publication may be trademarks whose use by third parties for their own purposes could violate the rights of the owner.

### Disclaimer of Liability

We have reviewed the contents of this publication to ensure consistency with the hardware and software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions.

# Preface

## Purpose of the operating instructions

These operating instructions provide information based on the requirements defined by DIN EN 62079 for mechanical engineering documentation. This information relates to the place of use, transport, storage, mounting, use and maintenance.

These operating instructions are intended for the following user groups:

- Operators

The operator operates and monitors the system during the process control phase.

The following chapters are relevant to the operator:

- Operator controls and displays
- Fail-safe operation
- Operating a project
- Operating recipes
- Operating alarms

- Commissioning engineers

The commissioning engineer integrates the HMI device into the system and ensures the operating capability of the HMI device for the process control phase.

All the operating instructions are relevant for the commissioning engineer.

Depending on the use of the HMI device, certain chapters may not be of relevance to the commissioning engineer, for example the chapter "Maintenance and servicing".

- Service technicians

Service technicians rectify faults that occur during the process control phase.

The entire set of operating instructions is relevant to service technicians in principle.

Depending on the use of the HMI device, however, certain chapters may not be relevant to them, for example the chapter on "Maintenance and care".

- Maintenance technicians

Maintenance technicians carry out regular maintenance work during the process control phase. The chapter on "Maintenance and care" is relevant to maintenance technicians.

The chapter "Safety instructions, standards and information" should be particularly heeded by all person groups.

The help integrated in WinCC flexible, the WinCC flexible Information System, contains detailed information. The information system contains instructions, examples and reference information in electronic form.

## Basic knowledge required

General knowledge of automation technology and process communication is needed to understand the operating instructions.

It is also assumed that those using the manual have experience in using personal computers and knowledge of Microsoft operating systems.

## Scope of the operating instructions

These operating instructions apply to the Mobile Panel 277F IWLAN HMI device in combination with the WinCC flexible software package.

For fail-safe operation, the information in the function manual "Fail-safe operation of the Mobile Panel 277F IWLAN" applies.

## Position in the information landscape

These operating instructions form part of the SIMATIC HMI documentation. The following information provides you with an overview of the SIMATIC HMI information landscape.

### User manuals

- WinCC flexible Micro  
Describes basic principles of configuration using the WinCC flexible Micro Engineering System.
- WinCC flexible Compact/ Standard/ Advanced  
Describes basic principles of configuration using the WinCC flexible Compact Engineering System/WinCC flexible Standard/WinCC flexible Advanced.
- WinCC flexible Runtime  
Describes how to commission and operate your runtime project on a PC.
- WinCC flexible Migration
  - Describes how to convert an existing ProTool project or WinCC project to WinCC flexible.
- Communication
  - Communication Part 1 describes the connection of the HMI device to SIMATIC PLCs.
  - Communication Part 2 describes the connection of the HMI device to third-party PLCs.

## Getting started

- WinCC flexible for first time users  
Based on an example project, this is a step-by-step introduction to the basics of configuring screens, alarms, recipes and screen navigation.
- WinCC flexible for power users  
Based on an example project, this is a step-by-step introduction to the basics of configuring logs, project reports, scripts, user management, multilingual projects and integration in STEP 7.
- WinCC flexible options  
Based on an example project, this is a step-by-step introduction to the basics of configuring the WinCC flexible Sm@rtServices, Sm@rtAccess and OPC server options.
- Mobile Panel 277 IWLAN  
Introduces project design for WLAN communication step by step using a sample structure.

## Operating instructions

- Operating instructions for SIMATIC HMI devices
  - OP 73, OP 77A, OP 77B
  - TP 170micro, TP 170A, TP 170B, OP 170B
  - OP 73micro, TP 177micro
  - TP 177A, TP 177B, OP 177B
  - TP 270, OP 270
  - TP 277, OP 277
  - MP 270B
  - MP 277
  - MP 370
  - MP 377
- Operating instructions for mobile SIMATIC HMI devices
  - Mobile Panel 177
  - Mobile Panel 277
  - Mobile Panel 277 IWLAN
  - Mobile Panel 277F IWLAN
- Operating instructions (compact) for SIMATIC HMI devices
  - OP 77B
  - Mobile Panel 177
  - Mobile Panel 277
- Operating instructions for SIMATIC accessories
  - Industrial USB Hub 4
- Function manual
  - Fail-safe operation of the Mobile Panel 277F IWLAN

### Online availability

Technical documentation on SIMATIC products and SIMATIC systems is available in PDF format in various languages at the following addresses:

- SIMATIC Guide Technical Documentation in German:  
["http://www.automation.siemens.com/simatic/portal/html\\_00/techdoku.htm"](http://www.automation.siemens.com/simatic/portal/html_00/techdoku.htm)
- SIMATIC Guide for Technical Documentation in English:  
["http://www.automation.siemens.com/simatic/portal/html\\_76/techdoku.htm"](http://www.automation.siemens.com/simatic/portal/html_76/techdoku.htm)

### Screens

The HMI device is sometimes shown in the form of photographs in these operating instructions. The photographs of the HMI device may differ slightly from the factory state of the HMI device.

### Conventions

Configuration and runtime software differ with regard to their names as follows:

- "WinCC flexible 2007" for example, refers to the configuration software.  
The term "WinCC flexible" is used in a general context. The full name, for example "WinCC flexible 2007", is always used when it is necessary to differentiate between different versions of the configuration software.
- "WinCC flexible Runtime" refers to the runtime software that can run on HMI devices.

The name "Mobile Panel 277 Wireless" is the umbrella term for the following HMI devices:

- Mobile Panel 277 IWLAN
- Mobile Panel 277F IWLAN

The following text notation will facilitate reading these operating instructions:

Notation	Scope
"Add screen"	<ul style="list-style-type: none"><li>• Terminology that appears in the user interface, for example dialog names, tabs, buttons, menu entries</li><li>• Inputs required, for example limit values, tag values</li><li>• Path information</li></ul>
"File > Edit"	Operational sequences, for example, menu commands, shortcut menu commands
<F1>, <Alt+P>	Keyboard operation

Please observe notes labeled as follows:

---

#### Note

Notes contain important information concerning the product, its use or a specific section of the documentation to which you should pay particular attention.

---

## Registered trademarks

Names labeled with a ® symbol are registered trademarks of the Siemens AG. Other names used in this documentation may be trademarks, the use of which by third parties for their own purposes could violate the rights of the owner.

- HMI®
- SIMATIC®
- SIMATIC HMI®
- SIMATIC ProTool®
- WinCC®

## Contact persons and office locations

If you have any further questions relating to the products described in this manual, please contact your local representative at the Siemens branch nearest you.

Your Siemens representative can be found at "<http://www.automation.siemens.com/partner>".

## Training Center

Siemens AG offers a variety of training courses to familiarize you with automation systems. Contact your regional Training Center or the central Training Center in D-90327 Nuremberg, Germany.

Internet: "<http://www.sitrain.com>"

## Technical Support

You can contact Technical Support as follows:

Using the support request form on the web at:  
"<http://www.siemens.com/automation/support-request>"

Further information about our technical support is available on the Internet at  
"<http://www.siemens.com/automation/service>".

## Service & Support on the Internet

Service & Support provides additional comprehensive information on SIMATIC products through online services at "<http://www.siemens.com/automation/support>":

- Newsletters with the latest information about your products
- A large document base is available using our Service & Support search engine
- A forum for global exchange of information by users and experts
- Current product information, FAQs and downloads
- Your local contact person for SIMATIC products
- Information about on-site services, repairs, spare parts, and more

## Recycling and disposal

Due to the low levels of pollutants in the HMI devices described in these operating instructions, they can be recycled. For environment-friendly recycling and disposal of your old equipment, contact a certified disposal facility for electronic scrap.



# Table of contents

	<b>Preface</b> .....	<b>3</b>
<b>1</b>	<b>Overview</b> .....	<b>17</b>
1.1	Product overview .....	17
1.2	Design of the HMI device .....	18
1.2.1	Mobile Panel 277F IWLAN.....	18
1.2.2	Supplementary pack and other accessories.....	20
1.2.3	Battery .....	22
1.2.4	Charging station .....	23
1.3	Configuration and process control phase .....	24
1.4	Transponder.....	25
1.5	Ranges in the plant .....	27
1.6	Fail-safe operation .....	28
1.7	Functional scope with WinCC flexible.....	29
1.8	Software options .....	32
1.9	Communication .....	33
<b>2</b>	<b>Safety instructions, standards and notes</b> .....	<b>35</b>
2.1	Safety instructions.....	35
2.2	Guidelines, standards, certificates and approvals .....	37
2.3	Operating safety.....	40
2.4	Power supply.....	41
2.5	Notes about usage.....	43
2.6	Risk analysis .....	44
2.7	Safety functions of the emergency stop button.....	45
2.8	Enabling button .....	46
2.9	Electromagnetic compatibility .....	48
2.10	Transport and storage conditions .....	50
<b>3</b>	<b>Planning application</b> .....	<b>51</b>
3.1	Application and ambient conditions .....	51
3.2	Mounting location and clearance of charging station .....	54
3.3	Information on insulation tests, protection class and degree of protection.....	56
3.4	Rated voltages .....	56
3.5	Required properties of the WLAN connection .....	57
3.6	Effective ranges and zones.....	57
3.6.1	Division of the system into effective ranges and zones.....	57
3.6.2	Distance measurement between HMI device and transponder.....	60

3.6.3	Planning effective ranges.....	62
<b>4</b>	<b>Installation and connection .....</b>	<b>65</b>
4.1	Checking the package contents.....	65
4.2	Mounting the charging station.....	66
4.3	Setting transponder ID and inserting the battery .....	66
4.4	Mounting the transponder .....	69
4.5	Electrical installation.....	69
4.6	Connection of the charging station to the power supply .....	69
4.7	Connecting the HMI device .....	71
4.7.1	Opening and closing the terminal compartment .....	71
4.7.2	Interfaces of the HMI device .....	76
4.7.3	Connecting the configuring PC .....	77
4.7.4	Connecting the PLC .....	79
4.7.5	Connecting the printer.....	80
4.7.6	Connecting USB devices .....	81
4.7.7	Connecting the tabletop power supply unit.....	82
4.8	Inserting, charging and changing the battery.....	83
4.8.1	Safety instructions.....	83
4.8.2	Inserting batteries for the first time.....	85
4.8.3	Displaying battery status.....	86
4.8.4	Changing the main battery .....	87
4.8.5	Changing the bridging battery.....	89
4.9	Switching on and testing the HMI device.....	90
<b>5</b>	<b>Operator controls and displays .....</b>	<b>93</b>
5.1	Overview .....	93
5.2	Displays on the Mobile Panel 277F IWLAN.....	95
5.3	Power management.....	97
5.4	Safety-related operator controls.....	99
5.4.1	Emergency stop button .....	99
5.4.2	Enabling button .....	101
5.5	Operator controls .....	104
5.5.1	Handwheel .....	104
5.5.2	Key-operated switch.....	105
5.5.3	Illuminated pushbutton.....	106
5.5.4	Evaluation of the operator controls .....	106
5.5.4.1	Overview .....	106
5.5.4.2	Evaluating operator controls as direct keys .....	107
5.5.4.3	Activation of function key LEDs using system functions.....	110
5.5.4.4	Evaluation of the handwheel with system functions .....	111
5.5.4.5	Evaluation of the key-operated switch with system functions.....	111
5.5.4.6	Evaluation and activation of the illuminated pushbuttons with system functions.....	112
5.6	Using a memory card with the HMI device .....	113
5.7	Labeling the function keys.....	116
5.8	Holding the mobile panel and fixing it to the wall.....	118
5.9	Charging station .....	120

5.9.1	Charging batteries in the charging compartment.....	120
5.9.2	Displays on the charging station.....	121
5.9.3	Locking the charging station.....	122
<b>6</b>	<b>Configuring the operating system .....</b>	<b>125</b>
6.1	Loader.....	125
6.2	WLAN.....	129
6.2.1	Overview.....	129
6.2.2	Parameterizing the WLAN connection.....	132
6.3	Control Panel.....	135
6.3.1	Overview.....	135
6.3.2	Reference.....	136
6.3.3	Operating the Control Panel.....	138
6.4	Changing settings for operation.....	141
6.4.1	Configuring the screen keyboard.....	141
6.4.2	Setting the character repeat rate of the screen keyboard.....	143
6.4.3	Setting the double-click.....	144
6.4.4	Calibrating the touch screen.....	145
6.5	Changing password protection.....	147
6.6	Changing HMI device settings.....	148
6.6.1	Setting the date and time.....	148
6.6.2	Changing regional settings.....	150
6.6.3	Backup registry information.....	151
6.6.4	Changing screen settings.....	152
6.6.5	Setting the screen saver.....	153
6.6.6	Changing the printer properties.....	155
6.6.7	Restarting the HMI device.....	157
6.6.8	Displaying information about the HMI device.....	159
6.6.9	Displaying system properties.....	160
6.6.10	Activating vibration alarm.....	162
6.7	Programming the data channel.....	163
6.8	Setting the delay time.....	166
6.9	Setting the PROFIsafe address.....	167
6.10	Enabling PROFINET IO.....	168
6.11	Configuring network operation.....	170
6.11.1	Overview of network operation.....	170
6.11.2	Setting the device name of the HMI device.....	171
6.11.3	Changing the network configuration.....	172
6.11.4	Changing the logon data.....	174
6.11.5	Changing e-mail settings.....	175
6.12	Changing internet settings.....	176
6.12.1	Changing internet settings.....	176
6.12.2	Setting the proxy server.....	177
6.12.3	Changing data protection settings.....	177
6.12.4	Importing and deleting certificates.....	179
6.13	Backing up and restoring with an external memory medium.....	180
6.14	Displaying battery status.....	184
6.15	Activate memory management.....	185

<b>7</b>	<b>Commissioning the HMI device .....</b>	<b>187</b>
7.1	Overview .....	187
7.2	Operating modes.....	188
7.3	Using existing projects .....	190
7.4	Data transmission options.....	191
7.5	Preparing and backing up a project .....	191
7.5.1	Overview .....	191
7.5.2	Transfer .....	192
7.5.2.1	Overview .....	192
7.5.2.2	Starting manual transfer.....	193
7.5.2.3	Starting automatic transfer .....	194
7.5.2.4	Starting backtransfer .....	196
7.5.3	Testing a project.....	197
7.5.4	Acceptance of the system.....	198
7.5.4.1	Overview .....	198
7.5.4.2	Accepting effective ranges and transponders.....	199
7.5.4.3	Testing effective ranges .....	202
7.5.5	Testing zones.....	202
7.5.6	Backup and restore .....	203
7.5.6.1	Overview .....	203
7.5.6.2	Backup and restore using WinCC flexible.....	204
7.5.6.3	Backup and restore using ProSave .....	206
7.5.7	Updating the operating system .....	208
7.5.7.1	Overview .....	208
7.5.7.2	Updating the operating system using WinCC flexible.....	210
7.5.7.3	Updating the operating system using ProSave.....	211
7.5.7.4	Resetting to factory settings with WinCC flexible .....	212
7.5.7.5	Resetting to factory settings with ProSave .....	214
7.5.8	Installing and removing options .....	216
7.5.8.1	Overview .....	216
7.5.8.2	Installing and removing options using WinCC flexible .....	217
7.5.8.3	Installing and removing options using ProSave .....	219
7.5.9	Transferring and transferring back license keys .....	220
7.5.9.1	Overview .....	220
7.5.9.2	Transferring and transferring back license keys .....	221
<b>8</b>	<b>Fail-safe mode.....</b>	<b>223</b>
8.1	Organizational measures .....	223
8.2	Switch-off behavior.....	225
8.3	Integrating the HMI device .....	227
8.4	Removing the HMI device.....	228
8.5	Logging onto and off from the effective range .....	229
8.6	"Override" mode.....	232
<b>9</b>	<b>Operating a project .....</b>	<b>235</b>
9.1	Starting the project.....	235
9.2	Error cases.....	237
9.3	Direct keys .....	238
9.4	Operator input options.....	239

9.5	Function keys .....	241
9.6	Setting the project language .....	242
9.7	Input .....	242
9.7.1	Overview .....	242
9.7.2	Entering and editing numerical values .....	244
9.7.3	Entering and editing alphanumerical values .....	246
9.7.4	Entering the date and time .....	248
9.7.5	Entering symbolic values .....	248
9.8	Displaying infotext .....	249
9.9	Device-specific displays .....	250
9.9.1	Displaying battery status .....	250
9.9.2	Displaying WLAN quality .....	251
9.9.3	Displaying the effective range name .....	252
9.9.4	Displaying the effective range quality .....	253
9.9.5	Displaying zone names .....	254
9.9.6	Displaying zone quality .....	254
9.10	Bar and gauge .....	255
9.11	Operating the slider control .....	257
9.12	Operating the switch .....	258
9.13	Operating the trend view .....	259
9.14	Operating the Status Force .....	261
9.14.1	Overview .....	261
9.14.2	Operation .....	262
9.15	Operating the Sm@rtClient view .....	264
9.15.1	Overview .....	264
9.15.2	Operation .....	265
9.16	Project security .....	266
9.16.1	Overview .....	266
9.16.2	User view .....	268
9.16.3	User logon .....	269
9.16.4	User logoff .....	271
9.16.5	Creating users .....	271
9.16.6	Changing user data .....	273
9.16.7	Deleting users .....	274
9.17	Closing the project .....	274
<b>10</b>	<b>Operating alarms .....</b>	<b>275</b>
10.1	Overview .....	275
10.2	Recognizing pending alarms .....	277
10.3	Displaying alarms .....	277
10.4	Display infotexts for an alarm .....	280
10.5	Acknowledge alarm .....	281
10.6	Edit alarm .....	282
<b>11</b>	<b>Operating recipes .....</b>	<b>283</b>
11.1	Overview .....	283

11.2	Structure of a recipe .....	284
11.3	Recipes in the Project .....	286
11.4	Recipe displays .....	288
11.5	Recipe Values in the HMI Device and the PLC .....	291
11.6	Operating the recipe view .....	292
11.6.1	Overview .....	292
11.6.2	Creating a recipe data record .....	293
11.6.3	Editing a recipe data record .....	294
11.6.4	Deleting a recipe data record .....	295
11.6.5	Synchronizing tags .....	296
11.6.6	Reading a recipe data record from the PLC .....	297
11.6.7	Transferring a recipe data record to the PLC .....	298
11.7	Operating the simple recipe view .....	299
11.7.1	Overview .....	299
11.7.2	Creating a recipe data record .....	301
11.7.3	Editing a recipe data record .....	302
11.7.4	Deleting a recipe data record .....	303
11.7.5	Reading a recipe data record from the PLC .....	304
11.7.6	Transferring a recipe data record to the PLC .....	305
11.8	Exporting a recipe data record .....	306
11.9	Importing a recipe data record .....	307
11.10	Examples .....	308
11.10.1	Entering a recipe data record .....	308
11.10.2	Manual production sequence .....	309
<b>12</b>	<b>Maintenance and care .....</b>	<b>311</b>
12.1	Maintenance and care .....	311
12.2	Spare parts and repairs .....	312
<b>13</b>	<b>Technical specifications .....</b>	<b>315</b>
13.1	Dimension drawings .....	315
13.1.1	Mobile Panel 277F IWLAN .....	315
13.1.2	Charging station .....	317
13.1.3	Transponder .....	318
13.2	Specifications .....	319
13.2.1	Mobile Panel 277F IWLAN .....	319
13.2.2	Batteries .....	322
13.2.3	Charging station .....	322
13.2.4	Transponder .....	323
13.2.5	Description of interfaces on the HMI device .....	323
13.3	Radiation characteristic .....	324
13.3.1	Radiation characteristic of the transponder .....	324
13.3.2	Radiation characteristic of HMI device .....	327
<b>A</b>	<b>Appendix .....</b>	<b>331</b>
A.1	ESD guideline .....	331
A.2	System alarms .....	333
<b>B</b>	<b>Abbreviations .....</b>	<b>365</b>

B.1	Abbreviations .....	365
	<b>Glossary .....</b>	<b>367</b>
	<b>Index.....</b>	<b>375</b>





# Overview

## 1.1 Product overview

### Expanded possible fields of application – with Mobile Panel 277F IWLAN

The Mobile Panel 277F IWLAN offers the option of implementing mobile safety functions (emergency stop and enabling) at any point of a machine or system.

An effective range limit has been implemented for the Mobile Panel 277F IWLAN. Depending on his or her location, the operator receives a secure, electronically monitored operator control enable.

The HMI device communicates with the F-CPU via WLAN. This enables the operator to operate different machines or systems without cables getting in the way.

The Mobile Panel 277F IWLAN is characterized by short commissioning times, a large user memory and high performance, and is optimized for projects based on WinCC flexible.

The Mobile Panel 277F IWLAN has the following features:

- Safety-related operator controls:
  - Emergency stop button
  - Enabling button
- Effective range concept
- Wireless operation with
  - IWLAN interface via PROFINET
  - Battery operation
- 7.5" TFT screen with 64k colors
- 18 function keys with LED
- Extended HMI functions

## 1.2 Design of the HMI device

### 1.2.1 Mobile Panel 277F IWLAN

#### Introduction

The Mobile Panel 277F IWLAN is available in two design variations:

- With enabling button and emergency stop button
- With enabling button, emergency stop button, handwheel, key-operated switch and two illuminated pushbuttons

---

#### Note

The Mobile Panel 277F IWLAN is intended to be battery-operated.

---

#### Front view

The following figure shows the Mobile Panel 277F IWLAN.

This can vary, depending on the delivery status of the HMI device.



- ① Emergency stop button
- ② LED array
- ③ Display with touch screen
- ④ ON/OFF button
- ⑤ Covers for the labeling strip guides
- ⑥ Key-operated switch, optional
- ⑦ Illuminated pushbutton, optional
- ⑧ Membrane keyboard
- ⑨ Handwheel, optional

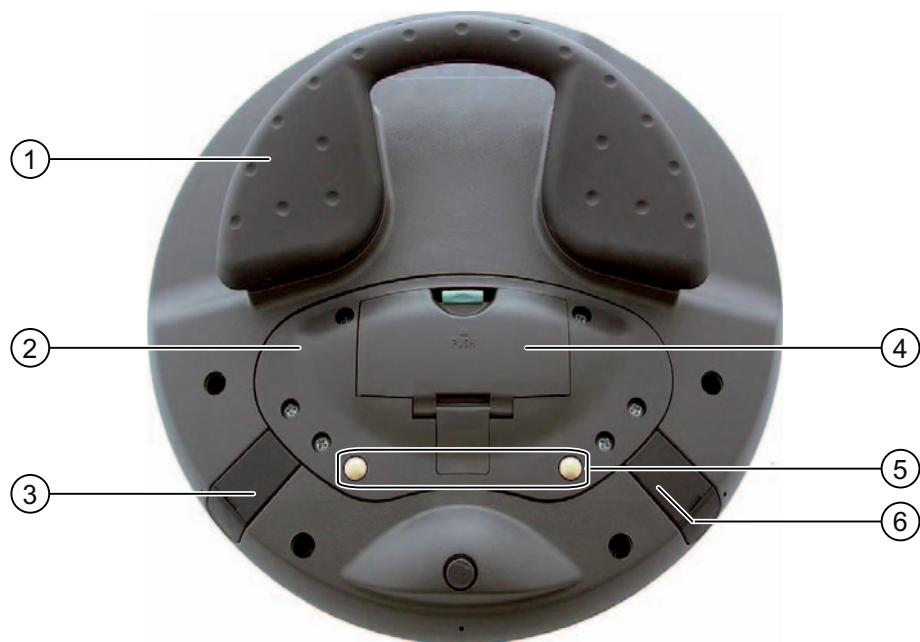
### Side view



- ① Fall protection for the emergency stop button
- ② Enabling buttons, positioned on both sides of the Mobile Panel 277F IWLAN
- ③ Handle

### Rear view

On the reverse side you will find the type plate and approvals.



- ① Handle
- ② Connection compartment cover
- ③ Connection for tabletop power supply unit
- ④ Battery compartment cover
- ⑤ Charging contacts for charging station
- ⑥ USB connection

The Mobile Panel 277F IWLAN can be securely hooked into a charging station.

## 1.2.2 Supplementary pack and other accessories

### Accessory kit

The accessory kit is supplied with the HMI device.

The accessories pack for the HMI device contains the following:

- Main battery
- Bridging battery
- Cover cap with rubber seal
- Screws for fixing the cover cap
- Label for cover cap
- Function manual "Fail-safe operation of the Mobile Panel 277F IWLAN", in German
- CD

The CD includes the following documents:

- Function manual "Fail-safe operation of the Mobile Panel 277F IWLAN", in German, English and Japanese
- F-FBs for the Mobile Panel 277F IWLAN

Additional documents may be enclosed with the accessory kit.

### Protective foil

A protective foil kit for the HMI device can be ordered.  
Use order number 6AV6 671-5BC00-0AX0.

The protective foil prevents the touch screen from being scratched or soiled.

### Labeling strips

Labeling strips can be ordered as accessories. Use order number 6AV6 671-5BF00-0AX0.  
Stickers for the cover caps can also be supplied, in addition to the labeling strips. The cover caps cover the slot openings for the labeling strips.

### Memory card

---

#### Note

#### Multimedia card

The multimedia card of the SIMATIC S7 PLC cannot be used.

---

Only use the SD memory cards or multimedia cards tested and approved by Siemens.

### **SIMATIC PC USB FlashDrive**

The SIMATIC PC USB FlashDrive is a mobile form of data storage with a high data throughput, designed for industrial use.

### **Main battery**

The HMI device is designed to be operated by a battery.

The main battery can be ordered with the order number 6AV6 671-5CL00-0AX0.

### **Bridging battery**

The bridging battery allows you to change the main battery during operation.

### **Charging station**

The charging station is used to charge the battery in the HMI device and to safely store the HMI device. You can also charge a main battery in each of the two charging compartments. The charging station is designed to be used in the system.

The charging station can be ordered with the order number 6AV6 671-5CE00-0AX0.

### **Tabletop power supply unit**

The tabletop power supply unit is only suitable for an office environment. You can operate the HMI device with a tabletop power supply unit. The tabletop power supply unit, including main supply conductors (EU, US, UK, Japan), can be ordered with the order number 6AV6 671-5CN00-0AX1.

### **Transponder**

One or more transponders form zones in the system. The transponder can be ordered with the order number 6AV6 671-5CM00-0AX0.

You can find more information about this on the Internet at:  
<http://mall.automation.siemens.com>.

### 1.2.3 Battery

#### Purpose

The HMI device is supplied with a main battery and a bridging battery.

#### Main battery and bridging battery

When fully charged, the main battery guarantees approximately 4 hours' operation time in normal operation. After this time, the battery must be either changed or recharged.

You can change the main battery while the HMI device is operating. The bridging battery supplies the power while the main battery is being changed.

While the power is being drawn from the bridging battery, the following features are deactivated:

- Display backlighting
- Membrane keyboard
- Touch screen
- Function key LEDs
- Illuminated pushbuttons
- USB interface

#### Charging options

To charge the main battery, you have the following possibilities:

- In the HMI device while it is in the charging station
- In the charging compartment of the charging station
- In the HMI device when connected to the tabletop power supply unit

#### See also

Inserting, charging and changing the battery (Page 83)

Charging batteries in the charging compartment (Page 120)

## 1.2.4 Charging station

The following figure shows the charging station.



- ① Lock
- ② Hook for hooking in the HMI device
- ③ Charging compartment for one main battery each
- ④ Charging contacts for the HMI device
- ⑤ LED display
- ⑥ Power supply connection

## Functions

The charging station performs the following functions:

- Charging the batteries in the charging compartments of the charging station
- Supplying power to the HMI device
- Charging the main battery fitted in the HMI device
- Safe storage of the HMI device

The lock prevents unauthorized removal of the HMI device from the charging station.

### Accessory kit

The accessory kit is supplied with the charging station.

The accessory kit for the HMI device contains the following:

- Lock
- Key set for lock
- Counterpart for power supply connector

Additional documents may be enclosed with the accessory kit.

### See also

Charging station (Page 120)

## 1.3 Configuration and process control phase

### Introduction

You must follow the phases below in order to use an HMI device in the system:

- Configuration phase
- Process control phase

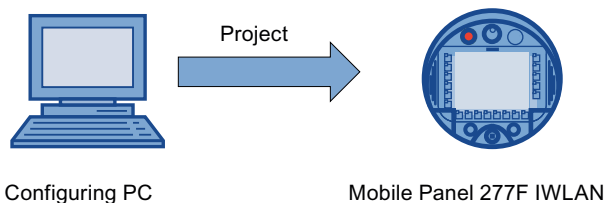
### Configuration phase

The HMI device project, which includes the plant screens, is created during the configuration phase.

The following actions are carried out as part of the configuration phase:

- Creating the project
- Accepting the project (determining the checksum)
- Testing the project
- Simulating the project
- Backing up the project

After the configuration phase, the project is transferred to the HMI device by the configuring PC.

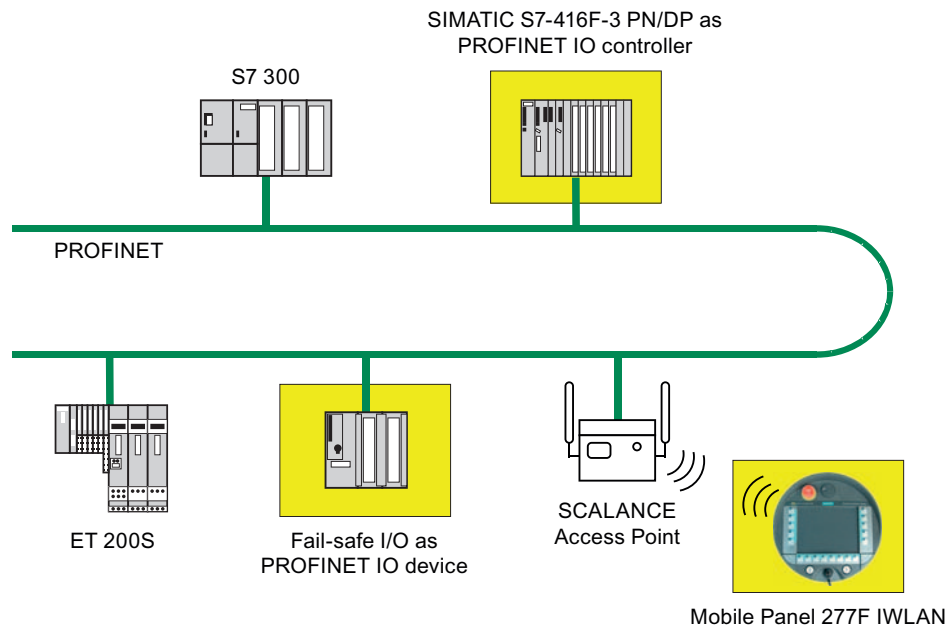




## Process control phase

Once the project is transferred to the HMI device, the operator operates and monitors current processes in the process control phase. The HMI device is connected to a PLC in the plant and exchanges values with this PLC. The plant screens on the HMI devices are used to provide a clear overview of the active processes.

The following figure shows an example of a system structure with the Mobile Panel 277F IWLAN.



In the depicted configuration, each PROFINET IO device communicates with just one PROFINET IO controller. In this example, the Mobile Panel 277F IWLAN communicates exclusively with the F-CPU as the F-PROFINET IO controller.

## See also

Operating a project (Page 235)

Preparing and backing up a project (Page 191)

## 1.4 Transponder

### Forming effective ranges and zones with transponders

Transponders form effective ranges and zones. Effective ranges and zones are defined by the maximum distance from one or more transponders.

### Effective ranges

You can define effective ranges in your system.

An effective range is the range in which sections of the system, for example a machine, can be operated with the enabling buttons of the HMI device.

## Zones

You can divide your system into zones.

A zone is a physical range for operator control and monitoring which is registered by the HMI device. Depending on the project design, the HMI device displays zone-specific process displays and allows image objects to be operated in a zone-dependent manner.

### Determining the current effective range and current zone

The assignment of transponders to effective ranges and zones is predefined in the project.

Each transponder has a unique ID. The transmitting range of the transponder approximates to a lobe shape with a range of approximately 8 m.

Distances are measured as follows:

- The HMI device sends signals in the current project
- The transponder responds to the signal from the HMI device and sends its ID to the HMI device
- The HMI device evaluates the ID and only measures the distance between it and the configured transponder(s)

Thus the HMI device determines which effective range/zone it is currently in.

### Installation and connection

You must install the transponders in the system such that the effective ranges and zones are covered by the transmitting ranges of the relevant transponders.

The transponders are battery-operated.

### System without effective ranges and zones

You can also operate the Mobile Panel 277F IWLAN in a system without effective ranges and zones. In this case, no transponders are required in the system.

### Accessory kit

The accessories pack is supplied with the transponder.

The accessories pack for the transponder contains the following:

- 3 AA mignon batteries, 1.5 V

Additional documents may be enclosed with the accessory kit.

### See also

Distance measurement between HMI device and transponder (Page 60)

Setting transponder ID and inserting the battery (Page 66)

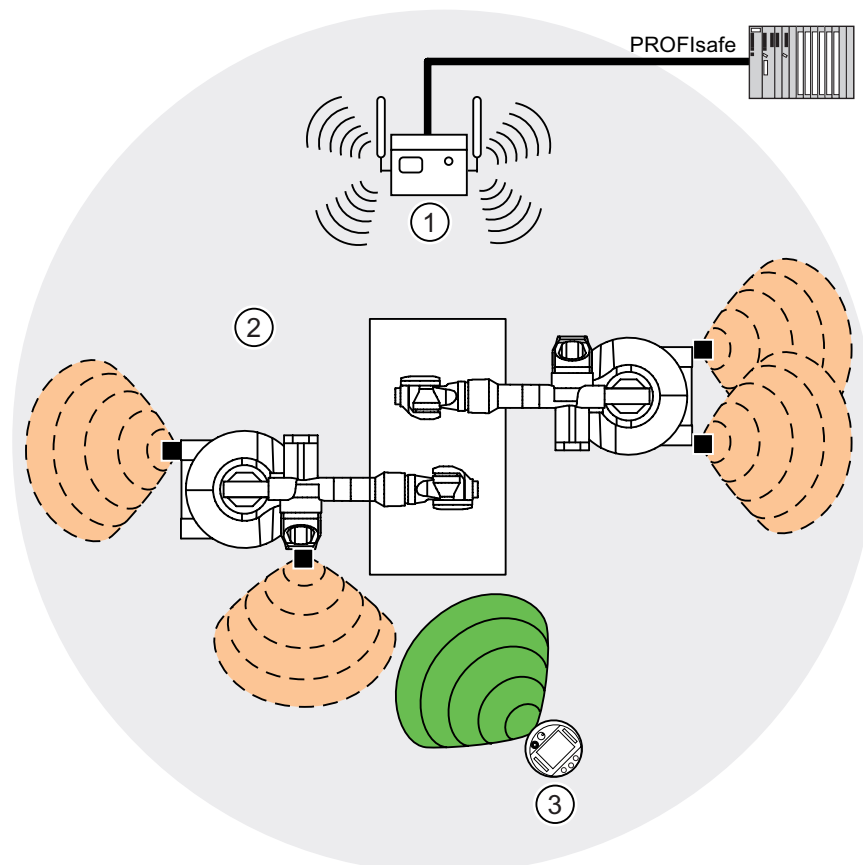
Effective ranges and zones (Page 57)

Radiation characteristic of the transponder (Page 324)

## 1.5 Ranges in the plant

### WLAN range

The WLAN range is the range in the plant where the HMI device communicates with other communication nodes over a wireless local area network.



- ① Access point is the network transition from WLAN to LAN
- ② WLAN range in which communication with the access point is possible
- ③ Mobile panel in the WLAN range; the emergency stop button is active, the enabling buttons are without function.

When the PROFIsafe communication between the controller and operator panel is established in the WLAN range, the emergency stop button on the HMI device becomes active.

### Effective range

An effective range is the range in which sections of the system, for example a machine, can be operated with the enabling buttons of the HMI device. A requirement for fail-safe operation is that the HMI device is logged onto an effective range within the WLAN range.

## Zones

In addition to the effective ranges you can define zones in your system. The zones are not relevant for fail-safe operation. They are used merely to control the project depending on the location of the operator. For example a picture change can be configured for zone entry or zone exit.

Zones and effective range are independent of each other.

## See also

Division of the system into effective ranges and zones (Page 57)

## 1.6 Fail-safe operation

### Configuration tools and add-on packages

For fail-safe operation of the HMI device, the following software is required:

- STEP 7 V5.4 as of SP2
- SIMATIC S7 Distributed Safety as of V5.4 SP3
- WinCC flexible 2007

### Fail-safe automation system

Fail-safe automation system (F systems) are used in plants requiring higher levels of safety.

F systems control processes in such a way that a safe state is achieved in every situation. An immediate shutdown therefore does not pose a danger to people or the environment.

### Fail-safe application of the HMI device

The Mobile Panel 277F IWLAN is a PROFINET IO device on Industrial Ethernet.

During fail-safe operation, the HMI device registers the signal states of the emergency stop button and enabling button, and transmits corresponding safety message frames to the CPU. The CPU and HMI device communicate with each other via the PROFIsafe fail-safe protocol.

The HMI device can operate in fail-safe mode conforming to SIL3/Plc/Cat. 4 if the safety functions are appropriately configured in STEP 7 with the "S7 Distributed Safety" option package.

To guarantee availability of the safety functions, particular fail-safe function blocks (F-FBs) must be used in the safety program. The F-FBs are supplied on a CD together with the HMI device.

## Diagnostics function of the HMI device

HMI device diagnostics conforming to PROFINET IO standard IEC 61784-1:2002 Ed1 CP 3/3 are available for the standard application.

The diagnostics function cannot be parameterized. The diagnostics are always activated and are automatically made available by the HMI device in STEP 7 in the event of an error.

In addition to the safety-relevant part, the diagnostics function transfers the following diagnostics:

- Communication error

Communication between the HMI device as I/O device and the F-CPU as I/O controller has been interrupted (for example, due to incorrect PROFIsafe address or missing WLAN connection).

Additional information on fail-safe operation is available in the function manual "Fail-safe Operation of the Mobile Panel 277F IWLAN."

## 1.7 Functional scope with WinCC flexible

The following tables show the objects that can be integrated into a project for a Mobile Panel 277F IWLAN.

### Note

The specified values are maximum values of the individual objects. Simultaneous use of multiple objects with their maximum value can lead to problems in the active project.

## Alarms

Object	Specification	Mobile Panel 277F IWLAN
Alarm	Number of discrete alarms	4.000
	Number of analog alarms	200
	Length of the alarm text	80 characters
	Number of tags in an alarm	Max. 8
	LEDs	Alarm line, Alarm window, Alarm view
	Acknowledge error alarms individually	Yes
	Acknowledge several error alarms simultaneously (group acknowledgment of alarm groups)	16 alarm groups
	Edit alarm	Yes
	Alarm indicator	Yes
ALARM_S	Display S7 alarms	Yes
Alarm buffer retentive	Alarm buffer capacity	512 alarms
	Simultaneously queued alarm events	Max. 250
	View alarm	Yes
	Delete alarm buffer	Yes
	Line-by-line printing of alarms	Yes

### Tags, values and lists

Object	Specification	Mobile Panel 277F IWLAN
Tag	Number	2.048
Limit value monitoring	Input/Output	Yes
Linear scaling	Input/Output	Yes
Text list	Number	500 <sup>1)</sup>
Graphics list	Number	400 <sup>1)</sup>

<sup>1)</sup> The maximum total of text and graphics lists is 500.

### Screens

Object	Specification	Mobile Panel 277F IWLAN
Screen	Number	500
	Fields per screen	200
	Tags per screen	200
	Complex objects per screen (for example bars)	10
	Template	Yes

### Recipes

Object	Specification	Mobile Panel 277F IWLAN
Recipe	Number	300
	Data records per recipe	500
	Entries per recipe	1.000
	Recipe memory	64 KB
	Location <sup>1)</sup>	<ul style="list-style-type: none"> <li>• Memory card</li> <li>• USB memory stick</li> <li>• Network drive</li> </ul>

<sup>1)</sup> The number of recipe data records might be restricted by the capacity of the storage medium.

## Logs

### Note

The HMI devices are suitable for the logging of relatively small volumes of data.

Manage the data in several adjacent archives in a segmented circular log. The use of a large circular log has a negative effect on performance.

Object	Specification	Mobile Panel 277F IWLAN
Logs	Number of logs	20
	Number of sub-archives with segmented circular log	400
	Entries in each log including all partial logs	10.000
	Filing format	CSV with ANSI character set
	Location <sup>1)</sup>	<ul style="list-style-type: none"> <li>• Memory card</li> <li>• USB memory stick</li> <li>• Network drive</li> </ul>

1) The number of entries in the log may be restricted by the capacity of the storage medium.

## Safety

Object	Specification	Mobile Panel 277F IWLAN
User administration	Number of user groups	50
	Number of users	50
	Number of authorizations	32

## Infotexts

Object	Specification	Mobile Panel 277F IWLAN
Infotext	Length (no. of characters)	320 (depending on font)
	For alarms	Yes
	For screens	Yes
	For screen objects (for example for I/O field, switch, button, invisible button)	Yes

**Additional functions**

Object	Specification	Mobile Panel 277F IWLAN
Monitor setting	Touch screen calibration	Yes
	Brightness setting	Yes
Language change	Number of languages	16
VBScript	User-specific extension of the functionality	Yes
	Number of scripts	50
Graphic object	Vector and pixel graphics	Yes
Trends	Number	300
Task planner	Number of tasks	48
Text objects	Number	10.000
Direct keys	PROFINET IO direct keys	Yes

**Device-specific functions**

Object	Specification	Mobile Panel 277F IWLAN
Battery	Displaying battery status	Yes
WLAN quality	Displaying WLAN quality	Yes
Effective range quality	Displaying the effective range quality	Yes
Effective range name	Display effective range name	Yes
Zone quality	Displaying zone quality	Yes
Zone name	Displaying zone names	Yes

**1.8 Software options**

The following software options are available for the HMI device:

- WinCC flexible/Sm@rtService

The Sm@rtService option enables you to access a remote HMI device from the HMI device or PC via Ethernet. Access to the Mobile Panel 277F IWLAN is read-only.

- WinCC flexible/Sm@rtAccess

The Sm@rtAccess option enables you to set up communication between different HMI systems.

- WinCC flexible /Audit

The Audit option extends the HMI device to include functions for recording operations in an audit trail and electronic signature.



## 1.9 Communication

### Number of connections

Connection	Mobile Panel 277F IWLAN
Maximum number of connections	6

---

#### Note

In the following cases, you must not enable PROFINET IO in the Control Panel:

- Use of PLCs from other manufacturers
- 

### PLCs that can be used for the Mobile Panel 277F IWLAN

The HMI device has been enabled for use with the following type of PLC:

- SIMATIC S7
- Allen-Bradley E/IP C.Logix

---

#### Note

A SIMATIC S7F is vital for fail-safe functionality.

---

### Protocols

The HMI device uses the following protocol for communication with the PLC:


- PROFI-safe Mode V2.0



## Safety instructions, standards and notes


### 2.1 Safety instructions

#### Safety regulations


 <b>WARNING</b>
<b>Injury or material damage</b> Strictly observe all instructions in this document at all times. Otherwise, hazardous situations can arise or the safety functions integrated in the HMI device can be rendered ineffective.

Observe the safety and accident prevention instructions applicable to your application in addition to the safety instructions given in this manual.


#### Configuration requirements

 <b>WARNING</b>
<b>Injury or material damage</b> The configuration engineer for a machine or system PLC must take precautions to ensure that an interrupted program can be restarted normally after communication errors, voltage dips, or power failures. Dangerous operating modes must not occur, not even temporarily, from the entire sequence of the user program up to troubleshooting.

#### Proper use


 <b>WARNING</b>
Commissioning of the HMI device is forbidden until it has been absolutely ensured that the machine which is to be operated with the HMI device complies with Directive 98/37/EC.


### Fault-free operation


 <b>WARNING</b>
<b>Interference with other systems</b> When using the HMI device in accordance with DIN EN 13557 you must ensure that the HMI device does not interfere with other systems at the site, or that other systems do not interface with the HMI device.

### Safety measures during operation

<b>NOTICE</b>
<b>Non-functional emergency stop button</b> The emergency stop button must be checked periodically for proper function.

 <b>WARNING</b>
<b>HMI device failure</b> After a hard impact to the HMI device, check the safety-relevant features for functional capability, for example in the event that the HMI device is dropped.

 <b>WARNING</b>
<b>Danger of injury</b> Manual movements controlled with the HMI should only be executed in conjunction with the enabling buttons and at reduced velocity.


 <b>WARNING</b>
<b>Exclusive operating right</b> When operating the plant with the HMI device it is not permitted to operate the plant concurrently from a different HMI device. Prevent concurrent operation through appropriate configuration.

### High frequency radiation

<b>NOTICE</b>
<b>Unintentional operating situations</b> High-frequency radiation, for example from cellular phones, can lead to undesirable operating situations.

## 2.2 Guidelines, standards, certificates and approvals

### Certifications

 <b>CAUTION</b>
The following overview shows possible approvals. The only valid approvals for the HMI device, the charging station, the power supply module, and the transponder are those shown on the label on the rear panel.

### CE approval



The HMI device, charging station, power supply unit, and transponder satisfy the requirements and protection objectives of the EC Directives below. The HMI device, charging station, power supply unit, and transponder comply with the harmonized European standards (EN) published in the Official Journals of the European Union for programmable controllers:

- 2004/108/EC Electromagnetic Compatibility Directive (EMC Directive)
- 98/37/EG Directive of the European Parliament and Council of 22 June 1998 on the approximation of the laws and administrative regulations of the Member States concerning machinery
- Specific absorption rate in accordance with EN 50392

### EC Declaration of Conformity

The EC Declarations of Conformity are available to the relevant authorities at the following address:

Siemens AG  
Industry Sector  
I IA AS RD ST PLC  
PO Box 1963  
D-92209 Amberg

### UL approval



Underwriters Laboratories Inc., to

- UL 508 (Industrial Control Equipment)
- CSA C22.2 No. 142 (Process Control Equipment)

The approval is only valid in the case of battery operation or when stationary in the charging station.

## **Marking for Australia**



The HMI device, charging station, power supply unit, and transponder satisfy the requirements of Standard AS/NZS 2064 (Class A).

## **Wireless approval**

The HMI device wireless approvals for the various countries are located as follows:

- On the rear of the HMI device
- In the product information supplied together with the HMI device

## TÜV

The TÜV confirms that the HMI device satisfies the requirements of the standards below with regard to its safety functions.

- SIL3 to IEC 61508-1 to 4
- Category 4 in accordance with EN 954-1.
- Pl e and Cat. 4 in accordance with EN ISO 13849-1
- EN 60204-1
- ISO 13850
- IEC 62061

## Requesting certificates

Copies of the certificates and associated reports can be requested from the following address:

Siemens AG  
Industry Sector  
I IA AS RD ST  
PO Box 1963  
D-92209 Amberg

## 2.3 Operating safety

### Standards

The HMI device complies with the following standards:

- EN 954-1  
Safety of machinery
- EN 60204-1  
Safety of machinery – Electrical equipment of machines
- EN 62061  
Safety of machinery – Functional safety of safety-related electrical, electronic and programmable electronic control systems
- EN ISO 13849-1  
Development, testing and certification of safety-related machine controls
- ISO 13850  
Safety of machinery – Emergency stop – Principles for design
- IEC 61508  
Functional safety of electrical/electronic/programmable electronic-related systems
- EN 61131-1 and EN 61131-2  
Programmable Controllers
- The HMI device was tested for EMC in accordance with the following standards:
  - EN 61000-6-4, Generic standard – emitted interference
  - EN 61000-6-2, Generic standard, Immunity, industrial environments
  - EN 61131-2, Programmable Controllers
- EN 300 328 V1.6.1, EN 300 440-1 V1.3.1, EN 301 893, EN 301 489-1, EN 301 489-17, FCC Part 15.245, 15.247, 15.407  
Wireless approval
- EN 50 360, IEEE 1528-X, EN 50371, EN 50 392  
Radiation protection requirements (SAR/EMF)



If the HMI device is used in a system, the following standards are fulfilled:

- prEN 1921, Industrial automation systems – safety of integrated manufacturing systems
- EN 12417:2001, Machine tools – safety – machining centers
- UL 508, Industrial Control Equipment
- CSA C22.2 No.14, Industrial Control Equipment




## 2.4 Power supply


### Safety regulations

<b>CAUTION</b>
<b>Damage to the HMI device</b> Only operate the HMI device with approved components: <ul style="list-style-type: none"><li>• Batteries</li><li>• Charging station</li><li>• Tabletop power supply unit</li></ul>
 <b>WARNING</b>
<b>Injury or material damage</b> You may operate the HMI device in the plant only with the battery or in the charging station. Operation with the desktop power supply module is not permitted.
 <b>WARNING</b>
<b>Effectiveness of the emergency stop button</b> The emergency stop button only has an effect if the HMI device is integrated into the safety program.

### Charging station

 <b>WARNING</b>
<b>Injury or material damage</b> The charging station complies with the following standards: <ul style="list-style-type: none"><li>• EN 50335-2-29</li><li>• DIN EN 60204-1</li><li>• Protection class III in accordance with EN 61131-2 or EN 50178.</li></ul> The 24 VDC power supply must be ensured by safely isolating the low voltage from hazardous voltages, for example by using a safety transformer or equivalent equipment. Allowance should be made for the loss of voltage on the connection cable during dimensional analysis of the supply!

Please refer to the technical data for the supply voltage requirements.

 <b>WARNING</b>
<b>Injury or material damage</b> Configure the 24 VDC supply for the charging station correctly, otherwise components of your automation system can be damaged and persons may be injured. Use only voltage generated as protective extra-low voltage (PELV) for the 24 VDC supply of the charging station.

<b>CAUTION</b>
<b>Safe electrical isolation</b> Use only power supply units with safety isolation complying with IEC 60364-4-41 or HD 384.04.41 (VDE 0100, Part 410), for example according to the PELV standard, for the charging station's 24 VDC supply. The supply voltage must be within the specified voltage range. Malfunctions in the charging station may otherwise result. Applies to non-isolated plant configurations: Connect the GND 24 V connection from the 24 V power supply output to equipotential bonding for uniform reference potential.

### Tabletop power supply unit

<b>CAUTION</b>
Please note that the mains connector must be removed for a complete disconnection from the mains.

Do not operate the HMI device in the plant with the table power supply unit.  
The tabletop power supply unit is only suitable for an office environment.  
The device is designed for operation on grounded power supply networks (TN systems to VDE 0100, Part 300, or IEC 364-3).  
Operation is not authorized on ungrounded or impedance-grounded power networks (IT networks).

## 2.5 Notes about usage

### Using the HMI device

A list indicating the country or geographical region of a country in which the HMI device is certified is included in the product information supplied with the HMI device.

### Use in industry

The HMI device is designed for industrial use. For this reason, the following standards are met:

- Interference emission requirements, paragraph 7.3, DIN EN 60947-1, Environment A
- Interference immunity requirements DIN EN 61326

### Residential use

---

#### Note

The HMI device is not suitable for use in residential areas: If you use the HMI device in residential areas, the radio/TV reception may be impeded.

---

If the HMI device is used in a residential area, you must take measures to achieve Limit Class B conforming to EN 55011 for RF interference.

A suitable measure for achieving the required RF interference level for Limit Class B includes for example:

- Use of filters in electrical supply lines

Individual acceptance is required.

### Use of cable-free control equipment

 <b>WARNING</b>
When using cable-free control equipment you must ensure that it does not interfere with other systems at the site, or that other systems do not interfere with it.

## **2.6 Risk analysis**

### **Carrying out a risk analysis**

The following standards must be used to perform the risk analysis:

- EN ISO 12100-1 and EN ISO 12100-2, General design guidelines for machines
- EN 1050 Risk Assessment for Machinery
- EN 954-1 Safety of Machinery

These considerations result in a safety category (B, 1, 2, 3, 4) in accordance with EN 954-1 that ultimately dictates how the safety-related aspects of the system that will be configured must be furnished.

With the safety-related parts of the Mobile Panel 277F IWLAN the following requirements are satisfied:

- Category 4 in accordance with EN 954-1
- SIL 3 in accordance with IEC 61508
- PI e and Cat. 4 in accordance with EN ISO 13849-1

The risk assessment must take into account that the overall concept of the plant must be configured accordingly. More detailed instructions on risk assessment and risk reduction are provided in the system manual "Safety Integrated".

### **See also**

Safety-related operator controls (Page 99)

## 2.7 Safety functions of the emergency stop button

### Safety instructions

There is an emergency stop button on the Mobile Panel 277F IWLAN.

The emergency button on the Mobile Panel 277F IWLAN brings about a safety-related stop of the configured system in accordance with EN 60204-1:1997, Section 9.2.5.3.

You have the option of implementing a Category 0, 1, or 2 Stop function in accordance with EN 60204-1: 1997, Section 9.2.2. The stop function category must be selected on the basis of a risk assessment.

#### **WARNING**

##### **Emergency stop button not available**

The emergency stop button on the HMI device must not be used as a replacement for a permanently-wired emergency stop/emergency off on the machine. Install stationary emergency stop buttons that are available at all times on the configured system.

#### **WARNING**

##### **Effectiveness of the emergency stop button**

The following requirements must be met in order to render the emergency stop button effective:

- The HMI device must be operated in the charging station or operated with the battery.
- The project must be running on the Mobile Panel 277F IWLAN.
- The HMI device must be integrated in the safety program of the F-CPU.

If these prerequisites are satisfied the following applies:

- The "SAFE" LED on the HMI device is illuminated.
- The emergency stop button of the Mobile Panel 277F IWLAN is effective.

##### **Category 0 or 1 Stop**

If a Category 0 or 1 Stop circuit is implemented, the stop function must be in effect regardless of the operating mode. A Category 0 Stop must have precedence. Release of the emergency stop button should not cause a hazardous situation (see also EN 60204:1997 chapter 9.2.5.3).

The stop function is not to be used as a replacement for safety equipment.

### Storing the HMI device

#### **WARNING**

##### **Non-functional emergency stop button**

If the HMI device is not integrated, the emergency stop button does not function.

To avoid confusion between effective and non-effective emergency stop buttons, only one integrated HMI device should be freely accessible.

If the HMI device is not in use, it must be stored in a locked area.

### See also

Emergency stop button (Page 99)

## **2.8 Enabling button**

### **Introduction**

The enabling mechanism is comprised of two enabling buttons mounted on both sides of the HMI device.

Numerically controlled machines and systems are equipped with the operating modes "Automatic mode" and "Special mode".

Safety is ensured in automatic mode by means of closed, isolating protective devices and/or with functional non-isolating protective devices that block access.

In special mode, safety has to be ensured in a different manner than in automatic mode. In special mode, the danger zones of the machine or system are entered, where controlled movements have to be possible.

### **Special mode**

A reduced speed on the machine or in the system has to be specified for special mode based on the risk assessment. Movement of the machine should only be possible when the enabling device is activated. The operator must have the necessary qualifications and be acquainted with the details of the intended application.

### **Safety instructions**

The safety-related aspects of the velocity reduction control and those for the enabling device are designed in such a way that they satisfy the EN 954-1 safety category determined by the risk analysis.

The operating principles of enabling devices are described in EN 60204. Through the findings from accident investigations and the existence of technical solutions, the 3-stage enabling button became state of the art. Positions 1 and 3 of the enabling button are Off functions. Only the middle position allows the enabling function. EN 60204-1:1997 is identical to IEC 60204-1, whereby the 3-stage enabling button is gaining international importance.

The Stop category of the enabling device must be selected on the basis of a risk assessment and correspond to a Category 0 or 1 Stop.

**⚠ WARNING****Injury or material damage**

Enabling buttons should only be used when the following applies for the person activating the enabling button:

- The person can see the danger zone.
- The person is capable of recognizing personal injury hazards in good time.
- The person is capable of taking immediate measures to avoid danger.

The only person allowed to remain in the danger zone is the person who is activating the enabling button.

Commands for unsafe conditions are not permitted to be issued with one enabling button alone. For this purpose, a secondary, intentional start command by means of a button on the Mobile Panel 277F IWLAN is required.

The following happens if you leave the effective range for a period of up to 30 seconds with the enabling button pressed: Enabling is revoked 5 seconds after leaving the effective range.

If you reenter the effective range within 30 seconds, you must release the enabling button and press it again for enabling to take effect again.

**NOTICE****Enabling button not effective**

The enabling button is only effective if the HMI device is logged on in the effective range and the "RNG" LED on the HMI device lights up.

If the operator leaves the effective range, the enabling button is deactivated after 5 seconds. The "Exit effective range without logoff" dialog opens after 30 seconds. The "RNG" LED only goes off when the operator confirms this dialog.

**Risk from improper use**

To avoid the danger of unauthorized use of the enabling button due to impermissible hold-down, on each project start the enabling button must be pressed all the way down, and then released.

## 2.9 Electromagnetic compatibility

### Introduction

The HMI device, the charging station, the transponder, and the power supply satisfy, among other things, the requirements of the EMC laws pertaining to the European domestic market. The enhanced testing and limit value levels defined by CDV 61326-3-1/Ed. 1 have been taken into account during the type test

### EMC-compliant installation

Conditions for fault-free operation include EMC-compatible assembly of the charging station and the use of interference-proof cables.

The "Directives for interference-proof installation of PLCs" and the "SIMATIC NET, Fundamentals of Industrial WLAN" manual also apply to the assembly of the charging station.

### Pulse-shaped disturbance

The following table shows the electromagnetic compatibility of modules with regard to pulse-shaped interference.

Pulse-shaped disturbance	Checked with Applies to charging station with or without plugged-on HMI device and power supply unit (230 VAC)	Degree of severity
Electrostatic discharge in accordance with IEC 61000-4-2	Air discharge: 8 kV Contact discharge: 6 kV	3
Burst pulses (high-speed transient interference) in accordance with IEC 61000-4-4	2 kV supply line	3
High-power surge pulses in accordance with IEC 61000-4-5, external protective circuit required (refer to the manual Automation System S7-300, Installation, "Lightning and overvoltage protection" section)		
<ul style="list-style-type: none"> <li>Asymmetrical coupling</li> </ul>	2 kV power cable DC voltage with protective elements	3
<ul style="list-style-type: none"> <li>Symmetrical coupling</li> </ul>	1 kV power cable DC voltage with protective elements	3



## Sinusoidal interference

The following table shows the EMC behavior of the modules with respect to sinusoidal interference.

Sinusoidal interference	Test values Applies to HMI device, charging station, and power supply unit:	Degree of severity
HF radiation (in electromagnetic fields) in accordance with IEC 61000-4-3	80% amplitude modulation at 1 kHz <ul style="list-style-type: none"> <li>to 10 V/m in the range 80 MHz to 1 GHz</li> <li>To 10 V/m in the range 1.4 GHz to 2 GHz</li> <li>To 1 V/m in the range 2 GHz to 2.7 GHz</li> </ul>	3
RF interference current on cables and cable shielding conforming to IEC 61000-4-6	Test voltage 10 V, with 80% amplitude modulation of 1 kHz in the range 9 kHz to 80 MHz	3

## Emission of radio interference

The following table shows the unwanted emissions from electromagnetic fields in accordance with EN 55011, Limit Value Class A, Group 1, measured at a distance of 10 m.

30 MHz to 230 MHz	< 40 dB (V/m) quasi-peak
30 MHz to 1.000 MHz	< 47 dB (V/m) quasi-peak

### Additional measures

Before you connect the HMI device to the public network, ensure that it is compliant with Limit Class B in accordance with EN 55022.

## Specific absorption rate SAR

- Recommendation 1999/519/EC; Exposure of the public to EMF
- Limit values for Europe according to EN 50932
- Limit values for USA in accordance with FCC OET Bulletin 65 Supplement C
  - 2.0 W/kg within 10 g of tissue (in accordance with ICNIRP guideline)
  - 1.6 W/kg within 1 g of tissue (in accordance with IEEE/FCC)

## 2.10 Transport and storage conditions

### Mechanical and climatic transport conditions

The shipping conditions of this HMI device exceed requirements in accordance with IEC 61131-2. The following specifications apply to devices that are shipped and stored in the original packaging.

The climatic conditions comply with the following standard:

- IEC 60721-3-2, Class 2K4 for transport

The mechanical conditions are compliant with IEC 60721-3-2, Class 2M2.

The following table shows the transport and storage conditions for the HMI device, charging station, tabletop power supply unit and transponder.

Type of condition	Permitted range
Drop test (in transport package)	≤ 1 m
Temperature	From -20 to +60 °C
Atmospheric pressure	From 1,080 hPa to 660 hPa, corresponds to an elevation -1,000 to 3,500 m
Relative humidity	Applies to HMI device: From 10% to 90%, without condensation Applies to charging station and transponder from 35% to 85%, without condensation
Sinusoidal vibration in accordance with IEC 60068-2-6	5 Hz to 9 Hz: 3.5 mm 9 Hz to 500 Hz: 9.8 m/s <sup>2</sup>
Shock in accordance with IEC 60068-2-29	250 m/s <sup>2</sup> , 6 ms, 1,000 shocks

### NOTICE

#### Device failure

In the following cases, ensure that no moisture (dew) can settle on or in the HMI device, charging station or transponder:

- Transportation of the HMI device in low temperatures
- Under extreme temperature variations

The HMI device must have acquired room temperature before it is put into operation. Do not expose the HMI device to direct radiation from a heater in order to warm it up. If dewing has developed, wait approximately four hours until the HMI device has dried completely before switching it on.

The following points must be adhered to in order to ensure a fault-free and safe operation of the HMI device:

- Proper transportation and storage
- Proper installation and mounting
- Careful operation and maintenance

The warranty for the HMI device will be deemed void if these stipulations are not heeded.

## Planning application

### 3.1 Application and ambient conditions

#### Mechanical and climatic conditions of use

The HMI device is designed for use in a location protected from the effects of the weather. The conditions of use are compliant with requirements to DIN IEC 60721-3-3:

- Class 3M3 (mechanical requirements)

The table applies to the HMI device, charging station, and transponder.

Tested for	Test standard	Comments
Sinusoidal vibration, stationary	DIN IEC 60721-3-3	Frequency range: <b><math>2 \leq f \leq 200</math> Hz</b> Deflection: 1.5 mm/5 m/s <sup>2</sup>
Shocks, non-stationary, Total shock response spectrum	DIN IEC 60721-3-3	Shock amplitude: 70 m/s <sup>2</sup> Shock duration: 22 ms

- Class 3K3 (climatic requirements)

The table applies to the HMI device, charging station, and transponder.

Ambient conditions	Permitted range	Comments
Air temperature	5 to 40 °C	
Relative humidity	5 to 85 %, no condensation	Corresponds to relative humidity, load degree 2 in accordance with IEC 61131, part 2
Absolute humidity	1 to 25 g/m <sup>3</sup>	
Atmospheric pressure	70 to 106 kPa	Corresponds to an elevation of up to 3,000 m

#### Use with additional measures

In the following cases the use of the HMI device requires additional measures:

- In locations with a high degree of ionizing radiation
- In locations with difficult operating conditions, for example due to:
  - Corrosive vapors, gases, oils or chemicals
  - Electrical or magnetic fields of high intensity
- In systems that require special monitoring, for example:
  - Elevators
  - Systems in especially hazardous rooms

### Testing for mechanical environmental conditions

The following table provides information on the type and scope of tests to determine mechanical ambient conditions for the HMI device.

Tested for	Test standard	Comments
Vibrations	IEC 60068, part 2-6 (sinusoidal)	Type of vibration: 20 frequency cycles with a tuning rate of 1 octave/minute. Frequency range: <b>10 ≤ f ≤ 150 Hz, ± 1 Hz</b> Deflection: 0.35 mm / 5 g ± 15% at the control point
Shock	IEC 60068, part 2-27	Shock form: Half-sinus Shock amplitude: 30 g Shock duration: 11 ms Number of shocks: 3 per axis
Continuous shocks	IEC 60068, part 2-29	Shock form: Half-sine Shock amplitude: 10 g Shock duration: 16 ms Shock cycle: (1-3)/s Number of shocks: 1000 ± 10
Impact	IEC 60068, part 2-75	One-time impact stress of 1 Nm with an impact test device similar to DIN VDE 0740, Part 1, Section 19.2 at room temperature.
Falling	Drop testing in accordance with EN 60068-2-32	1.2 m Applies to the HMI device with and without battery:

### Reducing vibrations

If the HMI device is subjected to greater shocks or vibrations, you must take appropriate measures to reduce acceleration or amplitudes.

We recommend fitting the charging station of the HMI device to vibration-absorbent material (on metal shock absorbers, for example).

### Climatic ambient conditions for the HMI device

The following table shows the permitted climatic ambient conditions for use of the HMI device:

Ambient conditions	Permitted range	Comments
Temperature <ul style="list-style-type: none"> <li>• Operation</li> <li>• Storage/transport</li> </ul>	<ul style="list-style-type: none"> <li>• 0 to 40 °C</li> <li>• -20 to 60 °C</li> </ul>	
Relative humidity	5 to 85 %, no condensation	Corresponds to relative humidity, load degree 2 in accordance with IEC 61131, part 2
Atmospheric pressure	1060 to 700 hPa	Corresponds to an elevation of -1,000 to 2,000 m
Pollutant concentration	SO <sub>2</sub> : < 0.5 vpm; Relative humidity < 60 %, no condensation	Check: 10 cm <sup>3</sup> /m <sup>3</sup> ; 10 days
	H <sub>2</sub> S: < 0.1 vpm; Relative humidity < 60 %, no condensation	Check: 1 cm <sup>3</sup> /m <sup>3</sup> ; 10 days

### Climatic ambient conditions for the charging station

The following table shows the permitted climatic ambient conditions for use of the charging station.

Ambient conditions	Permitted range	Comments
Temperature <ul style="list-style-type: none"> <li>• Operation</li> <li>• Storage/transport</li> </ul>	<ul style="list-style-type: none"> <li>• From 0 to 40 °C</li> <li>• From -20 to 60 °C</li> </ul>	
Relative humidity	5 to 85 %, no condensation	Corresponds to relative humidity, load degree 2 in accordance with IEC 61131, part 2
Atmospheric pressure	1060 to 700 hPa	Corresponds to an elevation of -1,000 to 2,000 m
Pollutant concentration	SO <sub>2</sub> : < 0.5 vpm; Relative humidity < 60 %, no condensation	Check: 10 cm <sup>3</sup> /m <sup>3</sup> ; 10 days
	H <sub>2</sub> S: < 0.1 vpm; Relative humidity < 60 %, no condensation	Check: 1 cm <sup>3</sup> /m <sup>3</sup> ; 10 days

### Ambient climatic conditions for the transponder


The following table shows the permitted climatic ambient conditions for use of the transponder:

Ambient conditions	Permitted range	Comments
Temperature <ul style="list-style-type: none"> <li>• Operation</li> <li>• Storage/transport</li> </ul>	<ul style="list-style-type: none"> <li>• 0 to 50 °C</li> <li>• -20 to 60 °C</li> </ul>	
Relative humidity	5 to 85 %, no condensation	Corresponds to relative humidity, load degree 2 in accordance with IEC 61131, part 2
Atmospheric pressure	1060 to 700 hPa	Corresponds to an elevation of -1,000 to 2,000 m
Pollutant concentration	SO <sub>2</sub> : < 0.5 vpm; Relative humidity < 60 %, no condensation	Check: 10 cm <sup>3</sup> /m <sup>3</sup> ; 10 days
	H <sub>2</sub> S: < 0.1 vpm; Relative humidity < 60 %, no condensation	Check: 1 cm <sup>3</sup> /m <sup>3</sup> ; 10 days

## 3.2 Mounting location and clearance of charging station

### Selecting a mounting location for the charging station

The charging station is designed for vertical installation.

 <b>WARNING</b>
<p><b>Emergency stop button not effective</b></p> <p>If the HMI device is not integrated, the emergency stop button does not function.</p> <p>The charging station must be installed in either a system area with sufficiently wide WLAN coverage or a separate service area. If the charging station is in the system and the HMI device is hooked into the charging station, the emergency stop button must be effective.</p> <p>To avoid confusion between effective and non-effective emergency stop buttons, only one integrated HMI device should be freely accessible.</p>

<b>CAUTION</b>
<p><b>System or machine stop</b></p> <p>The HMI device can fall down if it is not securely hooked in. The emergency stop button on the HMI device can also be triggered unintentionally.</p> <p>In order to ensure that the HMI device can be hooked in securely, select a vertical surface or one inclined slightly to the rear as the mounting surface.</p>

**NOTICE**

**Battery cannot be charged**

To charge the batteries, the ambient temperature/battery temperature must not exceed 40 °C. The higher the temperature, the longer it will take for the battery to charge.

Find a place with a cool ambient temperature for the charging station. If necessary, allow the battery to cool first.

**Note**

**Positioning**

Observe the following points when selecting the mounting location:

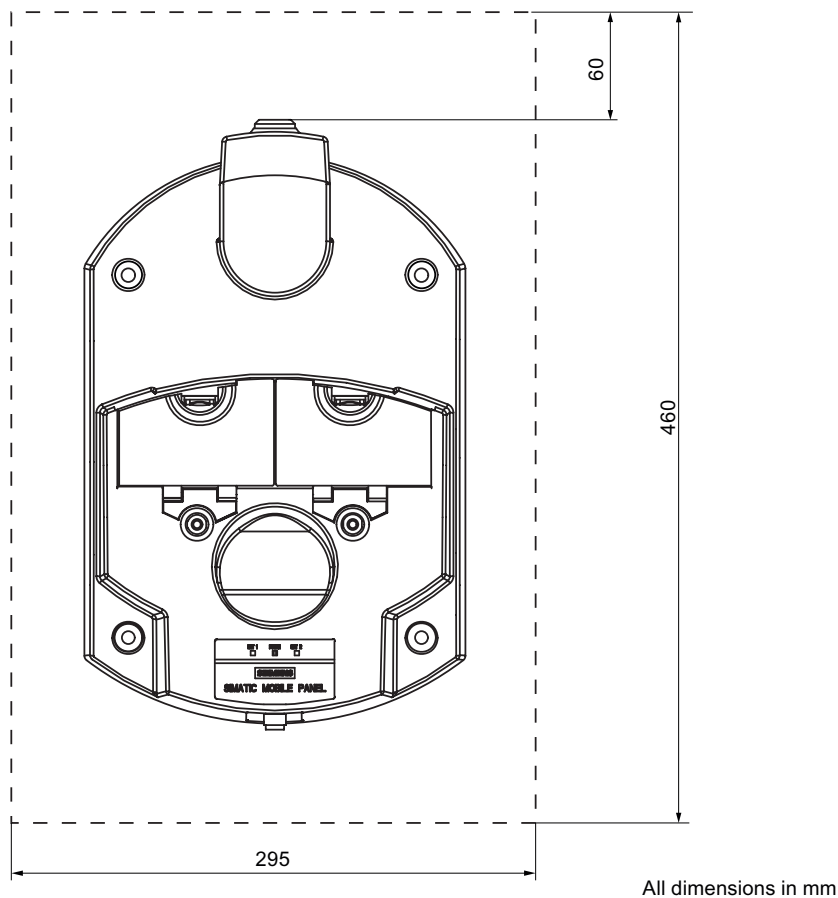
- Do not mount the charging station directly below an Access Point.
- The display must not be exposed to direct sunlight
- Ergonomic mounting height

The position must satisfy the following conditions:

- Ergonomic operation of the HMI device while it is in the charging station
- Ease of insertion of the HMI device into the charging station and removal from the charging station

**Maintaining clearances**

The following clearance is required around the charging station:



### 3.3 Information on insulation tests, protection class and degree of protection

#### Test voltages


Insulation strength is demonstrated in the type test with the following test voltages in accordance with IEC 61131-2:

Circuits with a nominal voltage of $U_n$ to other circuits or ground	Test voltage
< 50 V	500 VDC

#### Protection against foreign objects and water

##### Note

The HMI device only complies with the quoted safety classes if the plugs in the cable entries have sealing caps.

Degree of protection in accordance with IEC 60417	Explanation	Symbol
Front panel and rear panel	Protection class III	

Degree of protection in accordance with IEC 60529	Explanation
Front panel and rear panel	HMI device: <ul style="list-style-type: none"> <li>• IP65</li> </ul> For the charging station and transponder: <ul style="list-style-type: none"> <li>• IP65</li> </ul>

### 3.4 Rated voltages

The following table shows the permissible rated voltage and the relevant tolerance range for the charging station.

Nominal voltage	Tolerance range
+24 VDC	19.2 V to 28.8 V (-20%, +20%)

The following table shows the possible, permissible rated voltage for the tabletop power supply unit.

Nominal voltage	Tolerance range
230 VAC	170 to 264 V
120 VAC	85 to 132 V



## 3.5 Required properties of the WLAN connection

Please observe the installation guidelines when installing the WLAN network. Further information on this is available in the system manual "Fundamentals of industrial wireless LAN", in the "Network architecture" chapter.

We recommend that you plan the WLAN coverage in the plant in such a way that no more than 4 HMI devices are located in the radio link of an Access Point.

<b>NOTICE</b>
As a basic principle, WLAN in accordance with IEEE 802.11 a should be used with the Mobile Panel 277F IWLAN.

### Ad hoc mode

Ad hoc mode cannot be used in conjunction with the Mobile Panel 277F IWLAN.

### See also

Description of interfaces on the HMI device (Page 323)

## 3.6 Effective ranges and zones

### 3.6.1 Division of the system into effective ranges and zones

#### Effective ranges

Safety-related operator inputs are only possible in a limited area upstream of a machine or system. This is known as the effective range. The effective range assumes that the operator has a clear view the machine without any obstructions. To perform safety-related operator inputs, the operator must log the HMI device onto the effective range.

---

**Note**

You can also operate the HMI device without any effective ranges being defined in the system. Zones and effective ranges are completely independent of each other.

---

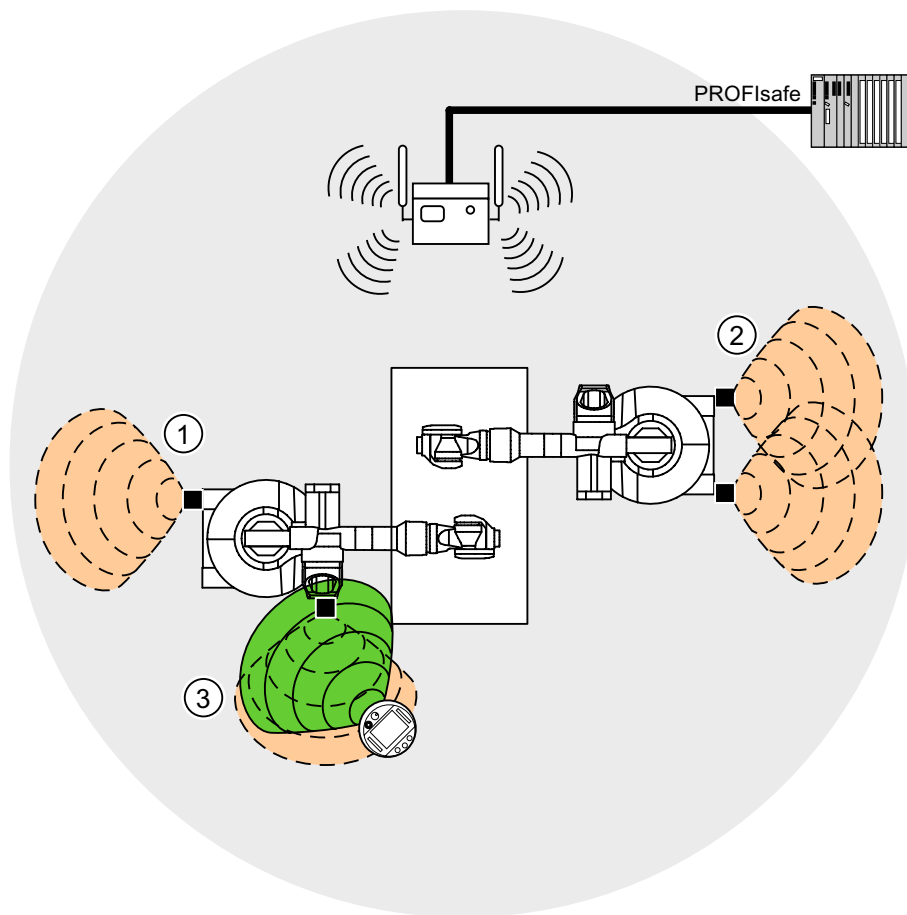
### Rules for effective ranges

A maximum for 127 effective ranges can be defined for each project. An effective range requires at least one transponder. An effective range can be formed by a maximum of 127 transponders. Effective ranges must not overlap.

An effective range is defined by the maximum distance of the HMI device from one or more transponders. The same maximum distance applies to all transponders in an effective range. The assignment of transponders to effective ranges is predefined in the project.

### Example

The following figure shows an example with three effective ranges.



- ① Effective range 1, formed by a transponder
- ② Effective range 2, formed by two transponders
- ③ The Mobile Panel is in effective range 3.

## Zones

The system can be divided into different zones. A zone might be where part of a particular industrial process is carried out, for example assembly of parts. Zone-specific process displays and possible operations can be configured in the project.

### Note

You can also operate the HMI device without any zones being defined in the system.

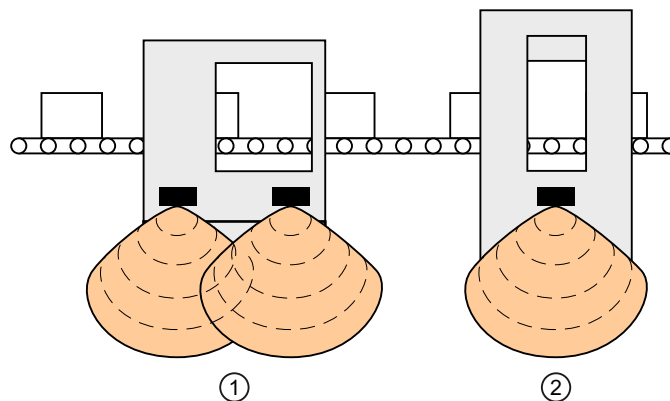
## Rules governing zones

A maximum of 254 zones is possible. A zone requires at least one transponder. A zone can be formed by a maximum of 255 transponders. Zones must not overlap.

A zone is defined by the maximum distance of the HMI device from one or more transponders. The same maximum distance applies to all transponders in a zone. The assignment of transponders to zones is defined in the project.

## Example

The figure below shows an example with two zones:



- ① Zone 1, formed by 2 transponders
- ② Zone 2, formed by 1 transponder

## Transponder

Each transponder has a unique ID. The transmitting range of the transponder approximates to a lobe shape with a range of approximately 8 m.

The ID is set directly on the transponder. The set ID must match the project parameterization.

Distances are measured as follows:

- The HMI device sends signals in the current project.
- The transponder responds to the signal from the HMI device and sends its ID to the HMI device.
- The HMI device measures the distance between it and the transponder(s).

Thus the HMI device determines which effective range/zone it is currently in.

### Rules governing transponders

The following rules apply to assigning transponders:

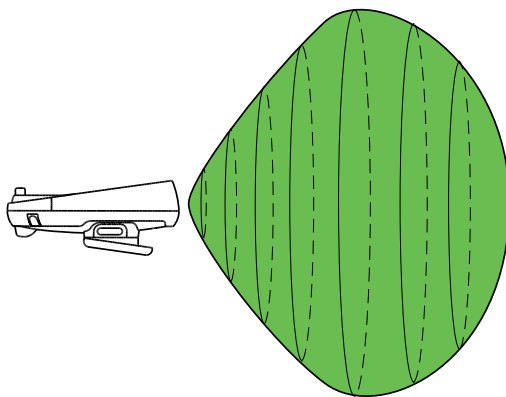
- A transponder can only be assigned to one zone.
- A transponder can only be assigned to one effective range.
- A transponder can be assigned to a zone and an effective range simultaneously.

#### See also

Ranges in the plant (Page 27)

### 3.6.2 Distance measurement between HMI device and transponder

The transmitting range of the transponder and the receiving area of the HMI device approximate to a lobe shape with a range of approximately 8 m. More information can be found in chapter Radiation characteristic (Page 324).



Distance measurement between the HMI device and the transponder is only possible if both devices are within the other's receiving area. The table below shows when distance measurement is feasible. In the figures, the HMI device is shown as a circle and the transponder as a square.

HMI device in transponder's transmitting range	Yes	Yes	No
Transponder in HMI device's receiving area	Yes	No	Yes
<b>Result</b>	<b>Distance measurement successful</b>	<b>Distance measurement not possible</b>	<b>Distance measurement not possible</b>

### Aligning the HMI device to the transponder

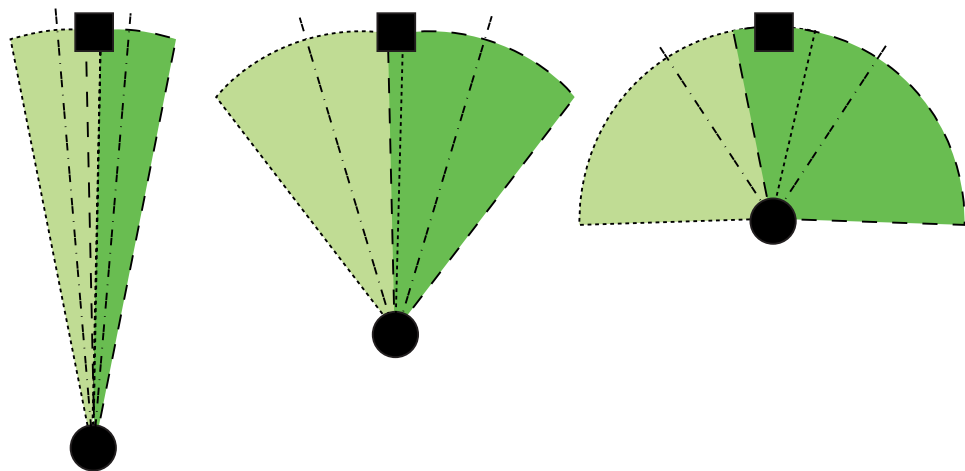
You must align the HMI device to the transponder to enable them to recognize one another.

The further away the HMI device is from the transponder, the more accurately it and, therefore, the antennae's main direction of radiation, must be aligned to the transponder. It is only permissible to turn the HMI device very slightly.

The closer the HMI device is to the transponder, the further you can turn the HMI device away from the transponder.

At a distance of 8 m, the permissible angle of deviation is about  $20^\circ$ . At a distance of 4 m, the permissible angle of deviation is about  $110^\circ$ .

The figure below shows an example of the possible angle of rotation in relation to the distance from the transponder.



See also

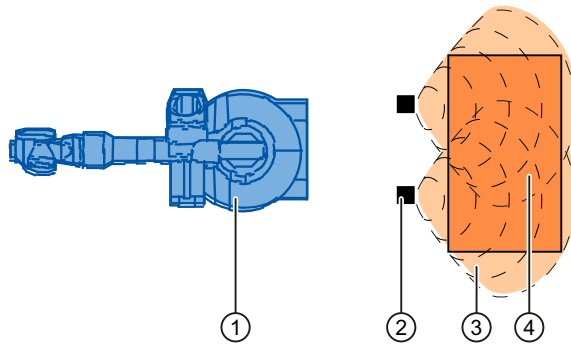
Transponder (Page 25)

### 3.6.3 Planning effective ranges

#### Effective range and transponder

An effective range is formed physically by transponders. Transponders must be mounted in the perimeter around the machine in such a manner that the planned effective range is covered by the transmitting range of the transponders assigned to it.

Example:



- ① Machine that will be operated from within the effective range
- ② Transponder with transmitting range in the form of a lobe
- ③ Planned effective range;  
Assuming that the Mobile Panel is aligned with the transponders, fail-safe operation of the machine is possible.
- ④ Actual effective range, safe operation is still possible from here.

## Rules for effective ranges

The following rules apply when defining effective ranges:

Rule	Meaning
The distance between the transponder and the HMI device must not be longer than 8m.	System limits
The effective range must be sized in such a way that it can be fully seen by the operator.	Too great or an unclear effective range prevents visual control on the part of the operator.
The distance between the machine to be operated and the operator must be sized depending on the machine.	Insufficient distance from the machine increases the injury hazard for the user. Too great a distance from the machine prevents visual control on the part of the operator.
Machine, transponder and operator position must be aligned with each other.	The HMI device must be able to measure the distance to the transponder during operation. To do this, you have to align the HMI device with the transponder. The operator must be able to see the machine at the same time.
Effective ranges should not overlap. Consequently you should only assign each transponder to a single effective range. Transponders in <b>different</b> effective ranges must be far enough away from each other that their transmission ranges do not overlap.	Assignment of effective range to the machine that will be operated must be unique.
You can set up a maximum of 127 effective ranges in a project.	System limits
A maximum of 127 transponders can be assigned to one effective range.	System limits

## Procedure

1. On the system plan specify which parts of the system will be operated with the enabling buttons. You require effective ranges for these areas of the system.
2. Specify the spatial expansion of the individual effective ranges. The operator must be located within the limits of the respective effective range in order to operate the corresponding plant unit with the enabling buttons.

Comply with the rules for the definition of effective ranges. Take special note that the effective range is not too large so that it cannot be seen or that any other hazards occur.

3. Plan the transponders in the effective range in such a manner that the effective range is covered by the radiated emission of the transponders. Also note that the effective range is not too large so that it cannot be seen or that any other hazards occur.
4. Define:
  - A name, a display name and an ID from the value range 1 to 127 for each effective range
  - A name and a plant-unique ID for each transponder from the value range 1 to 65534
  - For each effective range the maximum distance that the HMI device can have to the transponders of this effective range. The distance must be the same for all transponders of an effective range.
  - The mounting location for an indicator, for example a light that shows that an HMI device is logged on in the effective range.
5. On the system plan, note the display names and the IDs that you use during commissioning.

Prior to commissioning you must affix the IDs of the effective ranges in the plant so that they are easily legible.



## Installation and connection

### 4.1 Checking the package contents

Check the package contents for visible signs of transport damage and for completeness.

<b>NOTICE</b>
Do not install parts damaged during shipment. In the case of damaged parts, contact your Siemens representative.

The documentation belongs to the HMI device and is required for subsequent commissioning. Keep the supplied documentation to hand throughout the entire service life of the HMI device. You must pass on the enclosed documentation to any subsequent owner or user of the HMI device. Make sure that every supplement to the documentation that you receive is stored together with the operating instructions.

The following is supplied along with the HMI device:

- HMI device
- Main battery
- Bridging battery
- Function manual "Fail-safe operation of the Mobile Panel 277F IWLAN", in German
- CD

The CD includes:

- Function manual "Fail-safe operation of the Mobile Panel 277F IWLAN", in German, English and Japanese
- F-FBs for the Mobile Panel 277F IWLAN
- Cover cap with rubber seal
- Screws for fixing the cover cap
- Label for cover cap

Additional documents may be included in the delivery.

## 4.2 Mounting the charging station

### Requirements

- 4 x M6 cylinder head screws, with nuts if required
- You have selected a location with a low ambient temperature  
To charge the batteries, the ambient temperature / battery temperature must not exceed 40 °C
- You have selected a position for the charging station that is easy and safe to reach
- You have selected a good ergonomic height for the charging station

### Procedure

Proceed as follows:

1. Place the charging station from the front onto the mounting surface.
2. Mark the fastening holes with a marking-off tool.
3. Drill 4 through holes or 4 x M6 threaded holes.
4. Mount the charging station.

### Result

The charging station is now mounted.

### See also

Mounting location and clearance of charging station (Page 54)

Application and ambient conditions (Page 51)

## 4.3 Setting transponder ID and inserting the battery

### Introduction

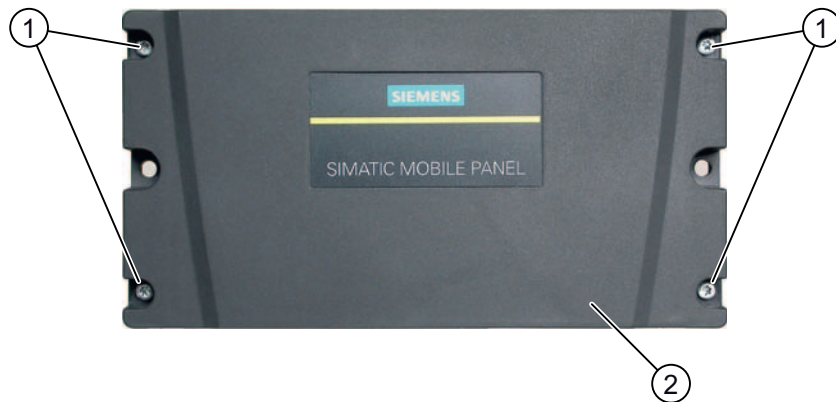
To operate the transponder you must first insert the batteries and set the transponder ID.

The transponder ID is read and evaluated by the HMI device in the current project.

### Requirements

- Torx screwdriver, size T10
- Screwdriver, size 0
- 3 AA mignon batteries, 1.5 V, included in delivery

### Procedure for opening the transponder



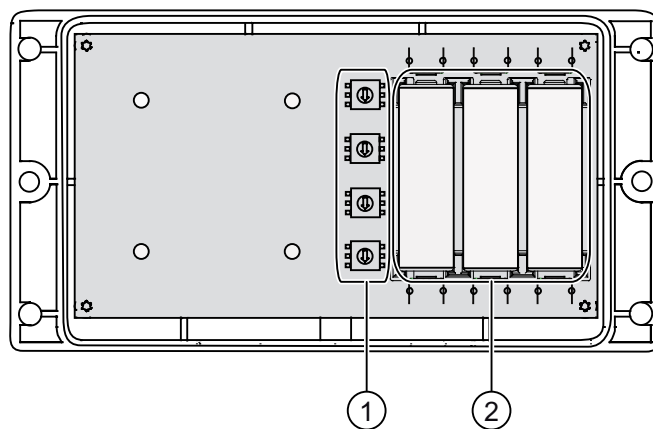
- ① Screws
- ② Cover

1. Loosen the four marked screws.
2. Lay the cover aside.

The cover is designed in such a way that the screws cannot be lost.

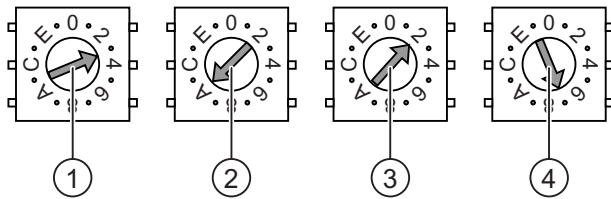
### Rotary coding switch and batteries

The following figure shows the position of the 4 rotary coding switches and the batteries in the transponder.



- ① Rotary coding switch
- ② Batteries

### Example for setting the transponder ID



- ① Rotary coding switches for 4th decade, MSB: most significant byte      Set value: 3
- ② Rotary coding switches for 3rd decade      Set value: A
- ③ Rotary coding switches for 2nd decade      Set value: 2
- ④ Rotary coding switches for 1st decade, LSB: least significant byte      Set value: 7

The figure shows the set transponder ID 3A27H, i.e. 14,887, in decimal format.

### Procedure

<b>CAUTION</b>
<b>ESD</b> When working in the open housing, ensure that current-carrying conductors do not come into contact with electrical circuits. Note the ESD instructions.

Proceed as follows:

1. Insert the batteries as shown on the printed circuit board.
2. Set the transponder ID with the help of a screwdriver.  
Please note the MSB and LSB markings on the printed circuit board.  
Set the hexadecimal transponder ID. The values permitted in hexadecimal format are 1 to FFFE, i.e. decimal format from 1 to 65,534.
3. Screw down the cover on the transponder.

<b>NOTICE</b>
<b>Damage to thread</b> The transponder housing is made of plastic. Therefore, the mounting hole threads cannot handle the same amount of stress as a comparable metallic housing. If the screws are tightened more than 20 times, there is risk of damage to the threads. Only tighten the screws with the permitted torque of 0.4–0.5 Nm.

### Result

The batteries have been inserted in the transponder. The transponder ID is now set.

### See also

Distance measurement between HMI device and transponder (Page 60)

## 4.4 Mounting the transponder

### Requirements

- 2 x M4 cylinder head screws, with nuts if required
- The batteries have been fitted in the transponder and the ID is set
- You have selected a position that provides good illumination for the desired area

The transmitting range of the transponder and the receiving area of the HMI device approximate to a lobe shape with a range of approximately 8 m. More information can be found in chapter Radiation characteristic (Page 324).

### Procedure

Proceed as follows:

1. Place the transponder from the front onto the mounting surface.
2. Mark the fastening holes with a marking-off tool.
3. Drill two through holes or two threaded holes M4.
4. Attach the transponder.

### Result

The transponder is now mounted.

## 4.5 Electrical installation

### Electrical connections

The following connection options are available:

	HMI device	Charging station	Tabletop power supply unit
Configuring PC	Yes		
Supply voltage		Yes	Yes

## 4.6 Connection of the charging station to the power supply

### Requirements

- The charging station is mounted according to the specifications in this document.
- Cable plug included in the scope of supply
- Three-core cable, flexible, 0.75 mm<sup>2</sup>
- End sleeves

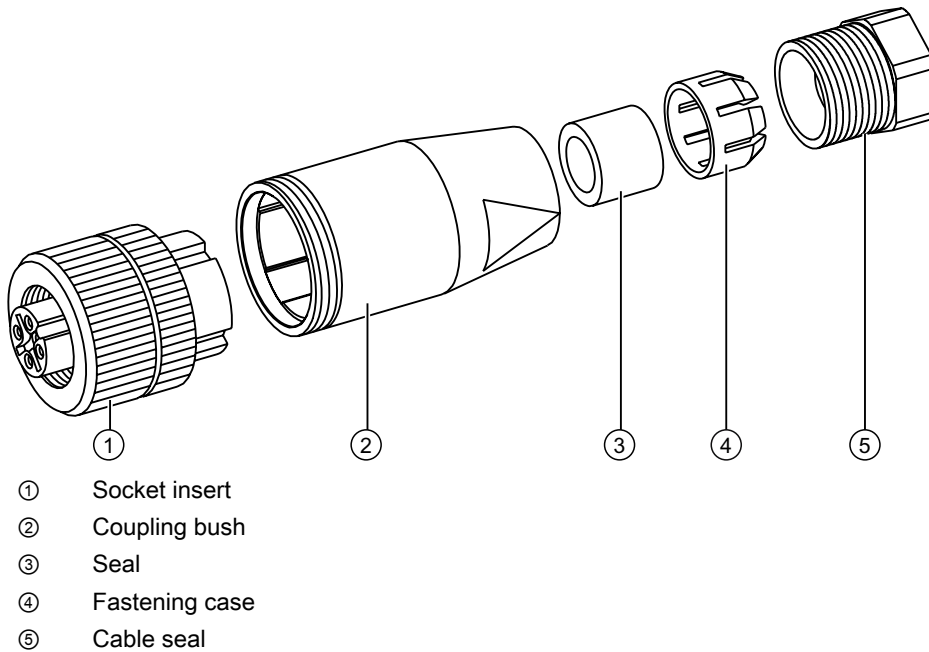
**Pin assignment**

Pin	Assignment
1	+24 VDC
2	n. c.
3	GND 24 V
4	PE

**Procedure for mounting the cable plug**

1. Screw the cables to the contacts in the socket insert and mount the socket.

The following figure shows an exploded view of the cable plug:



**Procedure for connecting the charging station**

1. Connect the supply line to the power supply.
2. Connect the cable plug to the counterpart on the charging station.

**Result**

The charging station is now connected to the power supply. The "POWER" LED lights up green when the power supply to the charging station is within the nominal range.

**See also**

Rated voltages (Page 56)

## 4.7 Connecting the HMI device

### 4.7.1 Opening and closing the terminal compartment

#### Introduction

You can open the connection bay of the HMI device during operation.

Before you begin:

#### CAUTION

##### Malfunctions

If the HMI device is switched on and resting on its front, the following can be activated:

- The emergency stop button  
This can bring the system to a standstill unintentionally.
- The key-operated switch or an illuminated pushbutton  
This can result in malfunctions.

#### NOTICE

##### Damage to the HMI device

Pay attention to cleanliness. Foreign bodies or liquids must not come into contact with the printed circuit board or penetrate the inside of the HMI device.

Place the HMI device with the front side facing down on a flat, clean surface to protect against damage.

#### CAUTION

##### Shutdown or rampdown of the system

When you open the connection bay, you remove the main battery. This failure of the main battery is bridged by the bridge battery, if fitted. The maximum buffer time is 5 minutes. If you exceed the buffer time, the HMI device will switch off. If the HMI device has been integrated, this will lead to a shutdown or rampdown of the system.

Do not exceed the buffer time!

#### Requirements

Cross-head screwdriver, size 2

### Battery compartment and connection bay



- ① Locking latch
- ② Connection bay cover
- ③ Connection for tabletop power supply unit
- ④ Battery compartment cover
- ⑤ Charging contacts for charging station
- ⑥ USB interface

---

#### Note

##### Sequence for opening

Always remove the battery compartment cover first and remove the main battery before opening the connection bay cover.

---



## Procedure for opening the battery compartment

Proceed as follows:

1. Pull up the locking latch on the battery compartment cover.

The battery compartment cover can now be opened.



2. Remove the battery compartment cover.

## Result

The battery compartment is open. The main battery, if fitted, is visible.

### NOTICE

#### Damage to the HMI device

The connection bay cover is connected to the HMI device's housing by wiring. Close the connection bay cover carefully.

## Procedure for opening the connection bay

### CAUTION

The connection bay may only be opened by trained skilled personnel for service purposes.

### CAUTION

#### Damage to the HMI device

When the connection bay is open the HMI device is vulnerable to damage from mechanical influences and live parts. If a bridging battery is fitted in the HMI device or the tabletop power supply unit is connected, some parts of the HMI device will still be electrically live.

Please observe the following:

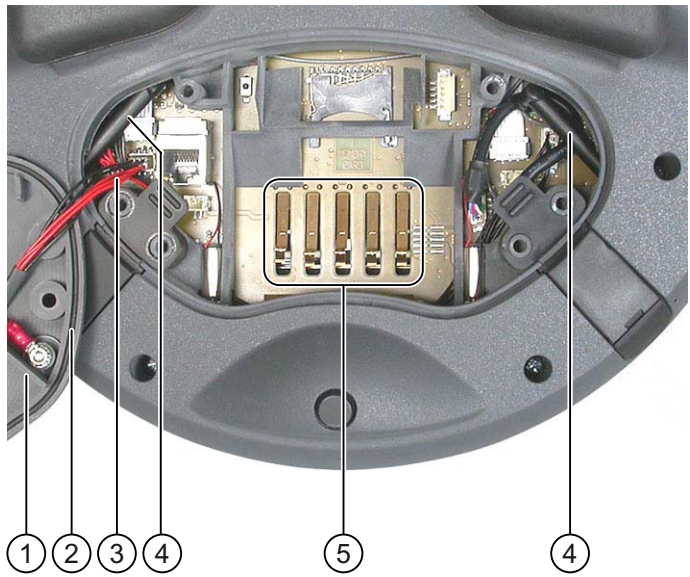
If you have connected a tabletop power supply unit, isolate the unit from the HMI device if possible.

<b>CAUTION</b>
<b>Damage to the HMI device</b>
When the connection bay is open the HMI device is vulnerable to damage from electrostatic discharge.
<b>ESD</b>
When working in the open housing, ensure that current-carrying conductors do not come into contact with electrical circuits.
Note the ESD instructions.

1. Remove the main battery (if fitted) using the ribbon.  
The bridging battery and the memory card, if fitted, are now visible.
2. Unscrew the six screws approximately 1 cm out of the cover.  
The cover is designed in such a way that the screws cannot be lost.
3. Open the cover.

**Result**

The connection bay is open.



- ① Connection bay cover
- ② Rubber seal
- ③ Wiring to charging contacts
- ④ Antenna
- ⑤ Contacts for main battery

**Note**

Only use the connection bay to insert the memory card and bridging battery! Do not insert any other objects in the connection bay.

## Notes for closing

<b>CAUTION</b>
<b>Damage to thread</b> The HMI device housing is made of plastic. Therefore, the mounting hole threads cannot handle the same amount of stress as a comparable metallic housing. If the screws are tightened more than 20 times, there is risk of damage to the threads. Do not exceed 0.4 to 0.5 Nm of torque when tightening the screws.

<b>NOTICE</b>
<b>Damage to wiring at charging contacts</b> When closing the connection bay cover, be careful not to trap the wiring at the charging contacts.

<b>CAUTION</b>
<b>IP65 degree of protection not fulfilled</b> Ensure that the seals belonging to the connection bay cover and battery compartment cover are present during mounting. After completing the connections, check whether the covers are fitted on the USB interface and the terminal for the tabletop power supply unit.

## Procedure for closing the connection bay and battery compartment

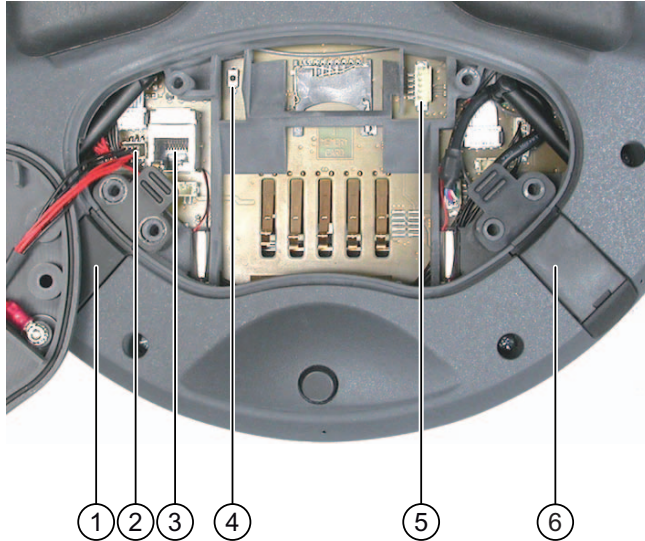
1. Place the cover on the connection bay.  
Be careful with the wiring to the charging contacts.
2. Tighten the 6 cover screws.
3. Insert the main battery.
4. Replace the cover on the battery compartment.  
The fastener of the battery compartment cover must engage below the locking latch.

## Result

The connection bay and battery compartment of the HMI device are now closed.

### 4.7.2 Interfaces of the HMI device

The following figure shows the interfaces of the HMI device.



- ① Connection for tabletop power supply unit
- ② Cable connector for wiring to charging contacts
- ③ RJ45 jack for PROFINET
- ④ Reset button
- ⑤ Connection for bridging battery
- ⑥ USB interface

**CAUTION**

**IP65 degree of protection not fulfilled**

If you want to use the RJ45 interface, you must first open the connection bay. If the connection bay is open, degree of protection IP 65 is not fulfilled.

Only use the RJ45 jack for the connector of the configuring PC when resetting to factory settings.

**⚠ CAUTION**

**Shutdown or rampdown of the system**

Triggering the reset button results in the following:

- The HMI device switching off and restarting
- If the HMI device has been integrated, the F-CPU triggers a local shutdown or a global rampdown.

Only press the reset button in an emergency.

#### USB jack and connector for tabletop power supply unit

The USB jack and the connector for the tabletop power supply unit are shown as plugs.

#### See also

Description of interfaces on the HMI device (Page 323)

### 4.7.3 Connecting the configuring PC

#### Requirements

- For connection via PROFINET (LAN via RJ 45 interface):  
The connection bay on the HMI device is open.
- For connection via PROFINET (WLAN):

---

#### Note

You must connect the HMI device to the configuring PC in infrastructure mode. An ad hoc network is not possible.

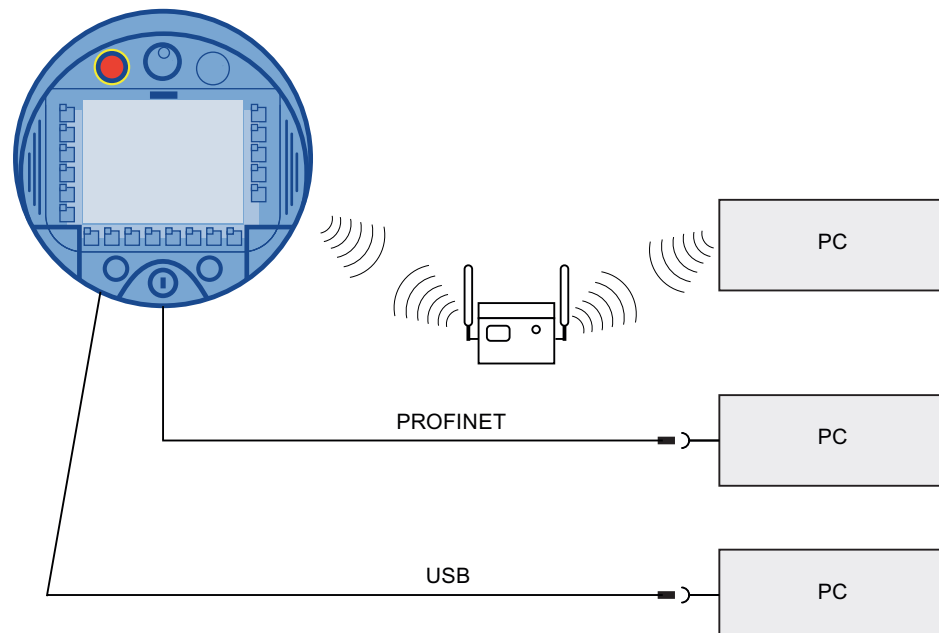
---

The HMI device must be in an area with sufficient WLAN quality. It must be possible for the configuring PC to be contacted via WLAN.

#### Connection graphic

The following figure illustrates the connection between the HMI device and the configuring PC. You can transfer the following data between the HMI device and a configuring PC:

- Project
- HMI device image
- Additional project data



<b>NOTICE</b>
<b>USB connection sequence</b> Observe the following sequence when connecting by USB: 1. HMI device 2. PC
<b>USB Host-to-Host cable</b> Only use the driver for the USB host cable, which is included in the WinCC flexible package. Never use the driver supplied with the USB Host-to-Host cable.

### Restoring factory settings

---

**Note**  
To update the operating system and reset to factory settings, you must connect the HMI device to the configuring PC via the RJ45 interface.

---

**Note**  
For a point-to-point connection, use a cross cable. The HMI device and the PC can also be part of a LAN network.

---

<b>CAUTION</b>
<b>IP65 degree of protection not fulfilled</b> If you connect the configuring PC directly to the HMI device through the RJ45 interface, you must open the connection bay. If the connection bay is open, degree of protection IP 65 is not fulfilled.

<b>NOTICE</b>
<b>Damage to the HMI device</b> Pay attention to cleanliness. Foreign bodies or liquids must not come into contact with the printed circuit board or penetrate the inside of the HMI device.

Only connect a configuring PC directly to the HMI device for a short period.  
The ports are described in the specifications.

### See also

Interfaces of the HMI device (Page 76)

## 4.7.4 Connecting the PLC

### Introduction

Only use approved components to connect a SIMATIC S7 PLC. You can find more information about this, for example on the Internet at: "<http://mall.automation.siemens.com>".

---

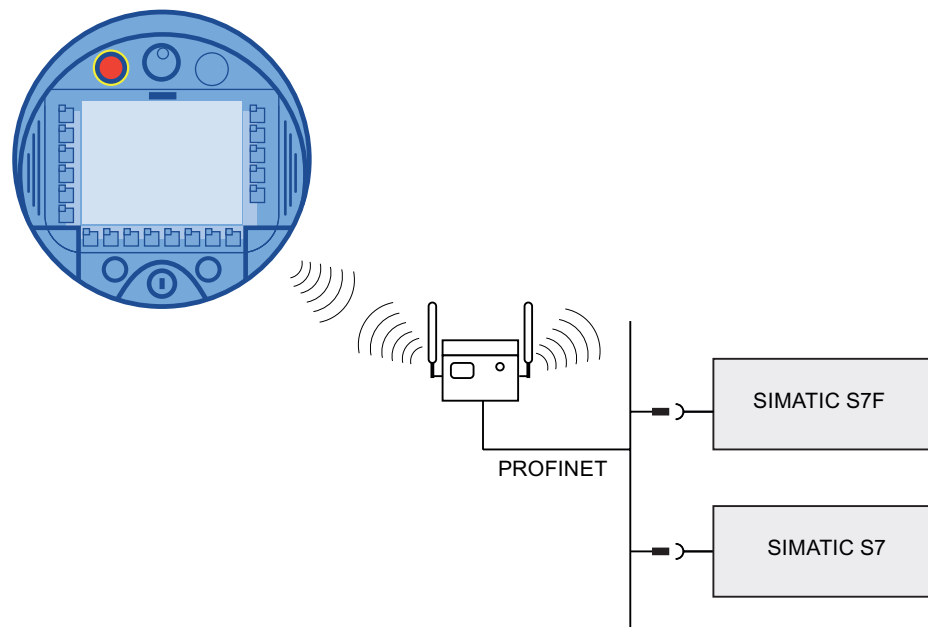
### Note

A SIMATIC S7F is vital for fail-safe functionality. The HMI device cannot be operated without fail-safe communication.

---

### Connection graphic

The following figure shows the connection between the PLC and the HMI device.



### See also

Interfaces of the HMI device (Page 76)

Communication (Page 33)

## 4.7.5 Connecting the printer

### Introduction

Printers are connected to the HMI device via WLAN.

The current list of recommended printers for the HMI devices can be found on the Internet under "<http://support.automation.siemens.com/WW/view/en/11376409>".

Observe the supplied printer documentation when you connect the printer.

### Connection graphic

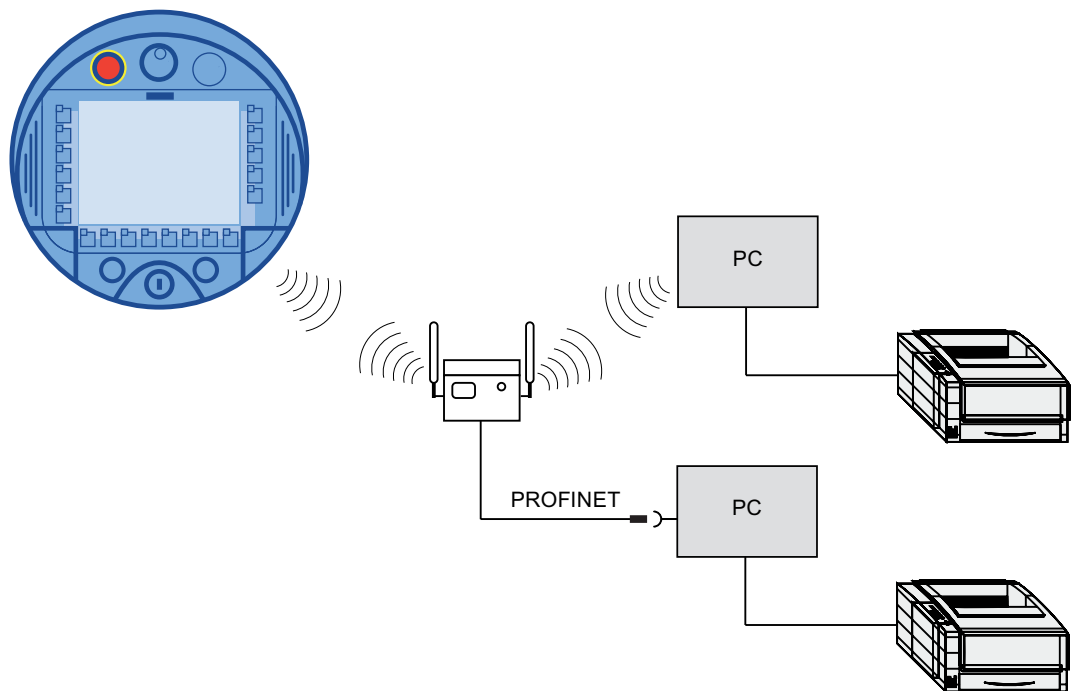
---

#### Note

It is not possible to connect a printer to the HMI device's USB interface.

---

The following figure illustrates the connection between the HMI device and a printer.





## 4.7.6 Connecting USB devices

The following devices can be connected to the USB port of the HMI device:

- External mouse
- External keyboard
- USB memory stick

### Note when connecting

<b>NOTICE</b>
<b>Devices with a separate power supply</b>
Except for the configuring PC or PC, do not connect any device with a separate power supply to the USB interface. You can connect the configuring PC or PC to the USB interface for transferring, saving and restoring data.

<b>NOTICE</b>
<b>Additional load for battery</b>
Devices without a separate power supply cause additional load on the battery when they are connected to the USB interface. This will reduce the battery's operation time.

<b>NOTICE</b>
<b>Functional problem</b>
If USB devices overload the interface, malfunctions might occur.
Observe the values for the maximum load of the USB interface. You will find the values in the technical specifications.

<b>NOTICE</b>
<b>Access to USB interface is not possible</b>
The USB interface is disabled while the main battery is being changed.
During a main battery change it is not possible to export recipes and archives to a USB memory stick, for example.
Make sure no one tries to access the USB interface while the main battery is being changed.

### See also

Interfaces of the HMI device (Page 76)

### 4.7.7 Connecting the tabletop power supply unit

#### Introduction

The tabletop power supply unit is used to power the HMI device and to charge the battery in the HMI device in 120 V and 230 V networks. The setting of the voltage range takes place automatically. The tabletop power supply unit is connected with the power supply cable by the input connector.

<b>CAUTION</b>
----------------

<b>Danger of overheating</b>
------------------------------

Do not cover the tabletop power supply unit.
--

<b>CAUTION</b>
----------------

Please note that the mains connector must be removed for a complete disconnection from the mains.
---

<b>NOTICE</b>
---------------

Only use the tabletop power supply unit approved for the HMI device. The tabletop power supply unit is only suitable for an office environment.
---

The tabletop power supply unit is supplied with power supply cables for the following countries:

- UK
- US
- EU
- Japan

#### Procedure


1. Remove the cover from the plug of the HMI device.
2. Connect the tabletop power supply unit to the HMI device.
3. Connect the tabletop power supply unit to the mains with the correct power supply cable.


#### See also


Rated voltages (Page 56)

## 4.8 Inserting, charging and changing the battery

### 4.8.1 Safety instructions

 <b>CAUTION</b>
<b>Charging and discharging the battery</b> In the following cases, there is a risk of fire and, in extreme cases, explosion! <ul style="list-style-type: none"><li>• Incorrect charging and discharging of the battery</li><li>• Reverse polarity</li><li>• Short-circuit</li></ul> Only charge the bridging battery in the HMI device. Only charge the main battery in the HMI device or in the charging compartment of the charging station.

 <b>CAUTION</b>
<b>Danger of injury</b> If used incorrectly, fluid can leak from the battery. Avoid contact with the battery fluid. If fluid comes into contact with the skin, rinse with water. If fluid comes into contact with the eyes, rinse with water and seek medical advice.

 <b>CAUTION</b>
The battery is a lithium ion battery. The following safety notes apply to these rechargeable batteries: <ul style="list-style-type: none"><li>• Do not crush</li><li>• Do not expose to heat and do not burn</li><li>• Do not short-circuit</li><li>• Do not take apart</li><li>• Do not submerge in liquids - the battery could crack or explode.</li><li>• Store unused batteries away from the following items, which can cause the contacts to be bridged.<ul style="list-style-type: none"><li>– Paper clips</li><li>– Coins</li><li>– Keys</li><li>– Nails</li><li>– Screws or other small metal objects</li></ul></li></ul>

<b>CAUTION</b>
<b>Possibility of rampdown while logging onto effective range</b> If the HMI device no longer recognizes the transponder and, therefore, the measuring range, it triggers a rampdown. To change the battery, rest the HMI device on its front. Align the HMI device so that it is still possible to measure the distance between the HMI device and the transponder. If possible, log the HMI device off from the effective range.

<b>CAUTION</b>
<b>Malfunctions</b> If the HMI device is resting on its front, the following can be activated: <ul style="list-style-type: none"><li>• The emergency stop button This can bring the system to a standstill unintentionally.</li><li>• The key-operated switch or an illuminated pushbutton This can result in malfunctions.</li></ul> <b>ESD</b> When working in the open housing, ensure that current-carrying conductors do not come into contact with electrical circuits. Note the ESD instructions.

<b>NOTICE</b>
Only use batteries that are approved for the HMI device.

<b>NOTICE</b>
Pay attention to cleanliness. Foreign bodies or liquids must not come into contact with the printed circuit board or penetrate the inside of the HMI device. Place the HMI device with the front side facing down on a flat, clean surface to protect against damage.

**Disposal**

Used lithium ion batteries are special waste. Please dispose of used lithium ion batteries properly according to the appropriate regulations. Label transport packaging with the words: "USED LITHIUM BATTERIES".

**See also**

Distance measurement between HMI device and transponder (Page 60)

## 4.8.2 Inserting batteries for the first time

### NOTICE

To charge the batteries, the ambient temperature / battery temperature must not exceed 40 °C. The higher the temperature, the longer it will take for the battery to charge.

Find a place with a cool ambient temperature for the charging station. If necessary, allow the battery to cool first.

The batteries are delivered uncharged.

Please note that a battery is subject to a natural self-discharge. The self-discharge can lead to a complete discharge over long periods of disuse.

### Requirements for inserting the bridging battery

You have opened the battery compartment and connection compartment of the HMI device.

### Procedure for inserting the bridging battery

Observe the safety information!

Proceed as follows:

1. Plug the bridging battery's plug connector into the interface in the connection compartment.

The plug connector is coded. There is no risk of incorrect connection.

2. Insert the bridging battery.
3. Align the line as shown in the figure. Ensure that the line runs underneath the cable entry.

### Result

The bridging battery is now fitted.

The following figure shows the bridging battery inserted in the connection compartment.



① Cable routing

**Requirements for inserting the main battery**

The connection compartment is open.

The battery compartment is open.

**Procedure for inserting the main battery**

1. Place the main battery in the battery compartment.
2. Close the battery compartment.

**Result**

The main battery is inserted.

The following figure shows the main battery in the battery compartment.



**Charging the battery**

The batteries are charged automatically whenever the HMI device is placed in the charging station or connected to the tabletop power supply unit.

**See also**

Safety instructions (Page 83)

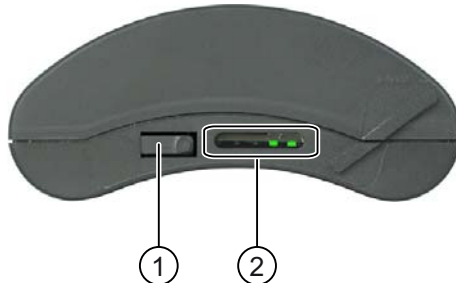
**4.8.3 Displaying battery status**

The battery's charging condition can be displayed in the following ways:

- On the main battery itself
- By the BAT LED on the HMI device
- In the "OP" dialog box, "Battery" tab in the Control Panel
- In a running project, if configured

### Procedure for displaying the charging condition on the main battery itself

The LED display on the main battery consists of 5 LEDs.



- ① Pushbutton
- ② LED display

Briefly press the pushbutton on the battery.

The LEDs on the LED display will briefly light up to show the charging condition. The LEDs will light up according to the charging status. If all the LEDs light up, the battery is fully charged. If no LEDs light up, the battery is flat.

## 4.8.4 Changing the main battery

### Introduction

#### CAUTION

##### Shutdown or global rampdown

If the bridging battery can no longer be charged, the HMI device will switch off the next time the main battery is changed.

Change the bridging battery at least every 5 years.

#### Note

Change the main battery in good time!

We recommend that you replace the battery when it can only be charged to 50%. This is the case after approximately 500 complete charging cycles.

A charging cycle is complete when the battery is fully charged.

Example:

The battery has a charging condition of 80%. It needs another 20% before it is fully charged. The battery is charged. This charging process counts as one fifth of a complete charging cycle.

We recommend keeping an inventory of spare main batteries.

You can replace the main battery during operation. The bridging battery supplies power to the HMI device while the main battery is being changed. The maximum buffer time is 5 minutes.

4.8 Inserting, charging and changing the battery

While the power is being drawn from the bridging battery, the following features are deactivated:

- Display backlighting
- The function keys and associated LEDs
- All LEDs except for "SAFE" and "RNG"
- The illuminated pushbuttons and handwheel
- USB interface

**NOTICE**

**Access to USB interface is not possible**

The USB interface is deactivated while the main battery is changed. Make sure no one tries to access the USB interface while the main battery is being changed.

**Requirements**

You have opened the battery compartment of the HMI device.

**Procedure**

Observe the safety information.

Proceed as follows:

1. If the HMI device is logged onto the effective range, log it off.
2. Remove the main battery using the ribbon.
3. Insert the new main battery.
4. Close the battery compartment.

**Result**

The main battery has been changed.

**Disposal**

Used lithium ion batteries are special waste. Please dispose of used lithium ion batteries properly according to the appropriate regulations. Label transport packaging with the words: "USED LITHIUM BATTERIES".

**See also**

Safety instructions (Page 83)

Power management (Page 97)



## 4.8.5 Changing the bridging battery

### Introduction

The bridging battery is charged automatically in the following cases:

- The HMI device is placed in the charging station.
- The main battery in the HMI device is sufficiently charged.
- The HMI device is connected to the tabletop power supply unit.

<b>CAUTION</b>
<b>Shutdown or global rampdown</b> If the bridging battery can no longer be charged, the HMI device will switch off the next time the main battery is changed. Change the bridging battery at least every 5 years.
<b>NOTICE</b>
<b>Bridging of main battery not possible</b> After the bridging battery is changed it must first be recharged before the main battery can be bridged. Do not change the main battery immediately after changing the bridging battery. Check the charging status of the bridging battery first.

The "Battery" tab in the "OP" dialog box in the Control Panel displays the charging status and temperature of the main battery and bridging battery.

### Requirements

- The project on the HMI device is complete and the HMI device is switched off.
- You have opened the battery compartment of the HMI device.

## Procedure

Observe the safety information!

Proceed as follows:

1. Remove the main battery using the ribbon.
2. Open the connection bay.
3. Disconnect the plug connector of the bridging battery.
4. Remove the bridging battery.
5. Plug the plug connector of the new bridging battery into the interface in the connection bay.

The plug connector is coded. There is no risk of incorrect connection.

6. Insert the new bridging battery.
7. Align the lines.
8. Close the connection bay.
9. Insert the main battery.
10. Replace the cover on the battery compartment.

The fastener of the battery compartment cover must engage below the locking latch.

## Result

The bridging battery has been changed.

## Disposal

Used lithium ion batteries are special waste. Please dispose of used lithium ion batteries properly according to the appropriate regulations. Label transport packaging with the words: "USED LITHIUM BATTERIES".

## See also

Safety instructions (Page 83)

## 4.9 Switching on and testing the HMI device

### Requirements

In order to switch on the Mobile Panel 277F IWLAN, one of the following requirements must be met:

- The batteries have been charged and inserted in the HMI device.
- The HMI device is placed in the charging station.
- The HMI device is connected to the tabletop power supply unit.

## Procedure

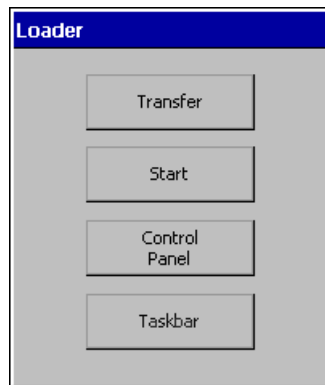
Proceed as follows:

1. To switch the HMI device on, briefly press the ON/OFF button.

The "PWR" LED lights up.

The screen lights up. A progress bar is displayed during startup.

The Loader is displayed once the operating system has started. If a charged battery is present, the BAT LED lights up green. If the HMI device does not start, it is possible that the battery is empty or no battery is fitted.



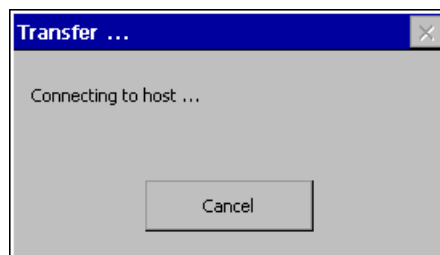
## Transfer

The HMI device automatically switches to "Transfer" mode if the following requirements have been met:

- No project is loaded on the device.
- At least one data channel has been configured.

On first commissioning, there is no project on the HMI device and no data channel has been parameterized.

While communication is being established, the following dialog box is displayed:



Press "Cancel" to stop the transfer.

## Result

The Loader appears.

## Starting and transferring a project

---

### Note

When restarting the system, a project may already be loaded on the HMI device. The project will then start either following a delay (whose duration can be adjusted) or when you press the "Start" button.

When the project starts, the following dialog boxes will appear:

- "Establishing secure connection"
- "Testing enabling button"

If you want to transfer another project, for example, proceed as follows:

- Close the project and restart the HMI device.
  - If necessary, parameterize the required data channel.
  - Select "Transfer" to start the transfer.
- 

## Function test

Check whether the HMI device is fully functional. The HMI device is fully functional when one of the following states is indicated after switching on:

- The "Transfer" dialog is displayed.
- The Loader appears.
- The "Test enabling button" dialog box appears.

## Switching off the HMI device

To switch the HMI device off, press the ON/OFF button on the HMI device for at least 4 seconds.

If the project has been started, you will first see a prompt.

1. Select "Yes."

The dialog "Confirm removal" will open.

2. You have 60 seconds to press one of the enabling buttons to confirm the dialog box.

The HMI device is removed.

The current project is terminated.

The HMI device switches off.

---

### Note

#### Global rampdown

A global rampdown will occur, if you do not confirm the dialog "Confirm removal" within 60 seconds using one of the enabling buttons.

---

## See also

Inserting batteries for the first time (Page 85)

## Operator controls and displays

### 5.1 Overview

The following figure shows the operator controls and displays of the Mobile Panel 277F IWLAN. This can vary, depending on the delivery condition of the HMI device.



- ① Emergency stop button
- ② LED display
- ③ Display with touch screen
- ④ ON/OFF button
- ⑤ Covers for the labeling strip guides
- ⑥ Key-operated switch, optional
- ⑦ Illuminated pushbutton, optional
- ⑧ Membrane keyboard
- ⑨ Handwheel, optional

### Operator control functions

The functions assigned to the function keys, the handwheel, the key-operated switch and the illuminated pushbuttons are determined during configuration. The above-mentioned operator controls do not function outside of a project.

### Evaluation and selection of the operator controls

The following information can be transferred between the HMI device and the PLC:

- Direction pulses of the handwheel
- Status of the function keys
- Status of the key-operated switch
- State of the illuminated pushbuttons
- State of the function keys and illuminated pushbutton LEDs

There are two ways of transmitting information:

- Direct keys
- System functions of WinCC flexible

### Standard input unit

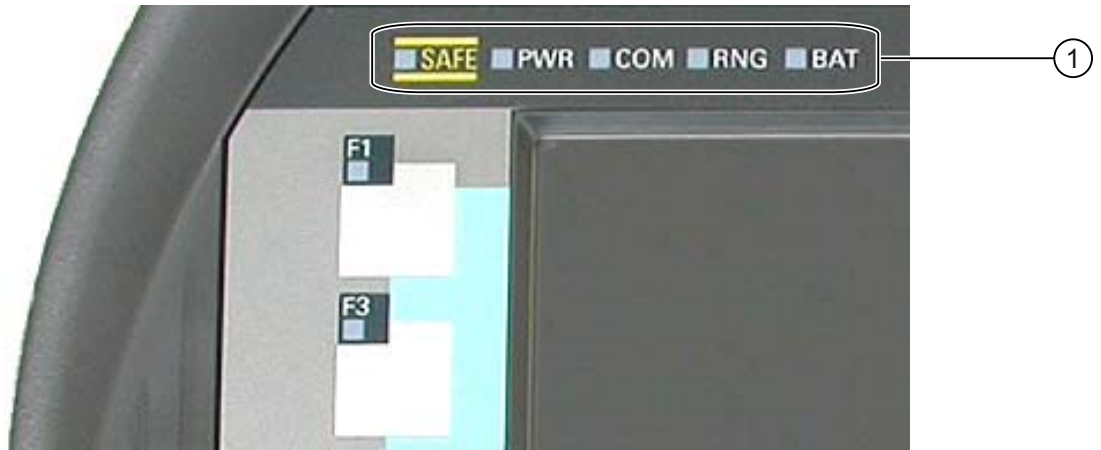
The standard input unit on the HMI device is the touch screen. All operating elements required for touch operation are displayed on the touch screen once the HMI device has started.

<b>NOTICE</b>
<b>Damage to the touch screen</b> Never touch the touch screen with pointed or sharp objects. Avoid applying excessive pressure to the touch screen with hard objects. Both these will substantially reduce the useful life of the touch screen and even lead to total failure. Always operate the HMI touch screen with your fingers or with a touch pen.
<b>Damage to the keyboard</b> Pressing the keys with a hard instrument considerably reduces the service life of the key mechanism. Always use your fingers to operate the keys of your HMI device.

## 5.2 Displays on the Mobile Panel 277F IWLAN

### Introduction

On the front of the Mobile Panel there are 5 LEDs that show the states of the HMI device and communication.



① LED display

**Meaning of the LED displays**

The LEDs are only activated when the HMI device is switched on.

Functions	Designation	Color	Meaning
PROFIsafe communication	SAFE	Yellow	<p>The "SAFE" LED lights up when the HMI device is integrated in the safety program of the F CPU. The requirement for this is that PROFIsafe communication has been established.</p> <p>If the "SAFE" LED lights up, the emergency stop button is effective.</p>
Power	PWR	Green	<p>The "PWR" LED only lights up or flashes when the HMI device is switched on.</p> <p>The "PWR" LED lights up under the following circumstances:</p> <ul style="list-style-type: none"> <li>• The battery is fitted and charged.</li> <li>• The HMI device is in the charging station.</li> <li>• The HMI device is connected to the tabletop power supply unit.</li> </ul> <p>The "PWR" LED flashes when the HMI device is in the "POWER SAVE 2" state.</p>
Communication	COM	Green	<p>The "COM" LED remains off as long as no WLAN network is configured.</p> <p>The "COM" LED flashes when the HMI device is attempting to establish a connection to a WLAN network.</p> <p>The "COM" LED lights up when the HMI device has established a connection to a WLAN network.</p>
Effective range	RNG	Green	<p>The "RNG" lights up when the HMI device is logged onto the effective range.</p> <p>If a communication error occurs after the HMI device has logged onto the effective range, the "RNG" lights up until PROFIsafe communication is reestablished and the communication error has been acknowledged.</p> <p>The "RNG" LED goes out when the HMI device logs off from the effective range.</p>
Battery status	BAT	Green/red	<p>The "BAT" LED goes out under the following circumstances:</p> <ul style="list-style-type: none"> <li>• The main battery is empty.</li> <li>• The main battery is not installed.</li> </ul> <p>The "BAT" LED flashes when the main battery is being charged.</p> <p>The "BAT" LED lights up red when the main battery has a charging status of less than 10%.</p> <p>The "BAT" LED lights up green when the main battery has a charging status of at least 10%.</p>



## 5.3 Power management

### Introduction

The HMI device is equipped with a power management function. If you do not operate the HMI device for a configurable time interval, power management will switch the HMI device to power save mode. This extends the operation time of the HMI device until the next battery change or charging of the battery.

### States

Power management has two levels of power saving:

- "Power Save 1"
  - Reduces the brightness of the touch screen.
- "Power Save 2"
  - The touch screen is switched off.
  - The function keys and associated LEDs are switched off.
  - The handwheel and the illuminated pushbuttons are switched off.
  - Other power save measures are activated.

In WinCC flexible, power management is parameterized in "Device settings" under "Power management".

- "Power Save 1" corresponds to the "Reduce brightness" setting.
- "Power Save 2" corresponds to the "Switch off screen" setting.

---

**Note**

When the HMI device is logged onto an effective range, the "Power Save 2" state is not possible.

---

Power management recognizes the following status change:

State	LED display	Successful action for resulting state	Resulting state
HMI device OFF	The "PWR" LED is off. The "BAT" LED is off.	Briefly press the ON/OFF button	HMI device ON
HMI device ON	The "PWR" LED lights up.	Automatically, after a configured time interval if no operations are carried out.	"Power Save 1"
		Briefly press the ON/OFF button	"Power Save 2"
		Press the ON/OFF button for at least 4 seconds	HMI device OFF
"Power Save 1"	The "PWR" LED lights up. Reduces the brightness of the touch screen.	Operation on touch screen or using function keys	HMI device ON
		Briefly press the ON/OFF button	"Power Save 2"
		Automatically, after a configured time interval if no operations are carried out	"Power Save 2"
		Press the ON/OFF button for at least 4 seconds	HMI device OFF
"Power Save 2"	The "PWR" LED flashes. The touch screen is switched off.	Briefly press the ON/OFF button	HMI device ON
		Press the ON/OFF button for at least 4 seconds	HMI device OFF

Pressing the ON/OFF button for at least 4 seconds initiates the following:

- The current project on the HMI device is terminated, following several prompts.
- The HMI device switches off.

**Note**

In "Power Save 2" state it is not possible to connect any devices to the RJ 45 interface.

**See also**

Setting the screen saver (Page 153)

## 5.4 Safety-related operator controls

### 5.4.1 Emergency stop button

#### Introduction

The emergency stop button is designed with 2-channels and enables an emergency stop of the configured system.

The emergency stop button satisfies the requirements specified in DIN IEC 60947-5-5;1997 Annex K.

For additional safety instructions please refer to the section titled "Safety instructions, standards and notes".

When using the emergency stop button the following F-FBs must be linked in the safety program of the F CPU:

- F\_FB\_MP
- F\_FB\_RNG\_n



- ① Fall protection
- ② Emergency stop button


Due to its position, the emergency stop button is equally accessible for both left-handed and right-handed persons.

Due to its profiled design, the emergency stop button is easily accessible. A collared enclosure serves as protection if the device falls. Thus if the Mobile Panel 277F IWLAN should fall down, the emergency stop button will not be activated. However the emergency stop button is extensively protected against damage.

## Operation


The operator triggers the emergency stop by pressing the emergency stop button. The emergency stop button engages in the emergency stop position.

## Releasing the emergency stop button

 <b>WARNING</b>
<p>If you have activated the emergency stop button and thereby brought the configured system to a standstill, the emergency stop button should only be released under the following conditions:</p> <ul style="list-style-type: none"><li>• The reasons for the emergency stop have been eliminated.</li><li>• A safe restart is possible.</li><li>• The restart should not be executed by releasing the emergency stop button.</li></ul> <p>The operator must strictly ensure that he executes a separate operator action to commence the restart. The safety program must ensure that release of the emergency stop button alone does not trigger an automatic restart of the system.</p>

In order to release the emergency stop button, turn it in a clockwise direction. The emergency stop button then returns on its own to the initial position.

<b>NOTICE</b>
<p><b>The emergency stop button can be triggered unintentionally</b></p> <p>The emergency stop button is evaluated under the following conditions:</p> <ul style="list-style-type: none"><li>• The Mobile Panel 277F IWLAN is integrated in the safety program of the F CPU.</li></ul> <p>The emergency stop button can be triggered unintentionally in the following cases, and bring the configured system to a standstill:</p> <ul style="list-style-type: none"><li>• If the HMI device falls down</li><li>• When opening one of the coverings on the rear of the HMI device</li></ul>

 <b>WARNING</b>
<p><b>Non-functional emergency stop button</b></p> <p>The emergency stop button is only effective if the HMI device is in the charging station or if is operated with the battery.</p> <p>Do not operate the HMI device in the plant with the table power supply unit.</p>

## Storing the HMI device

**⚠ WARNING**

**Non-functional emergency stop button**

If the HMI device is not integrated in the safety program of the F CPU, the emergency stop button does not function.

To avoid confusion between effective and non-effective emergency stop buttons, only one integrated HMI device should be freely accessible.

If the HMI device is not in use, it must be stored in a locked cabinet.

## See also

Safety functions of the emergency stop button (Page 45)

## 5.4.2 Enabling button

### Introduction

The enabling device consists of the two enabling buttons mounted on both sides of the Mobile Panel 277F IWLAN. The switch setting of the two enabling buttons is determined by electrical momentary contact switches.

---

### Note


The HMI device analyzes the switch settings of the two enabling buttons in the form of an OR gate.

---



① Enabling button

## Operation

 <b>WARNING</b>
<b>Unintentional enabling</b> Press the enabling button only until the operation you wish to enable is completed. Enabling is a conscious operator action. It is not permissible to continuously press the enabling button or to fix it in any way. The following happens if you leave the effective range for a period of up to 30 seconds with the enabling button pressed: Enabling is revoked 5 seconds after leaving the effective range. If you reenter the effective range within 30 seconds, you must release the enabling button and press it again for enabling to take effect again.

The enabling button has three switch settings:

- Neutral position: The enabling button is not pressed.
- Enable: The enabling button is pressed to a mid position. This switch setting is used to allow another command, for example an input with the membrane keyboard.
- Panic: The "Panic" switch setting is reached as soon as one of the two enabling buttons is fully pressed. The switch setting of the other enabling button is unimportant in this case. The "Panic" switch setting has the same effect as releasing the enabling button, namely, it revokes the enable.

You only have to activate one enabling button. The PLC gets the same signal regardless as to whether one or two enabling buttons of the Mobile Panel 277F IWLAN have been pressed.

---

### Note

The enabling button and the membrane keyboard can be operated at the same time.

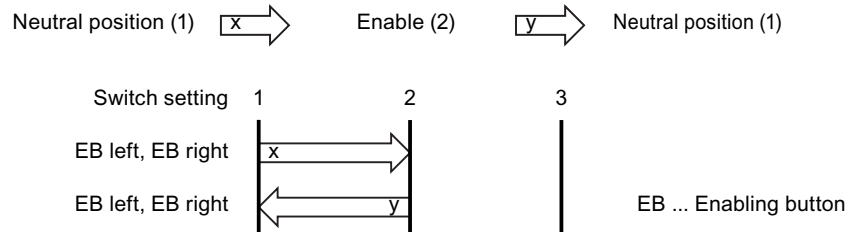
---

When using the enabling button the following F FBs must be linked in the safety program of the F CPU:

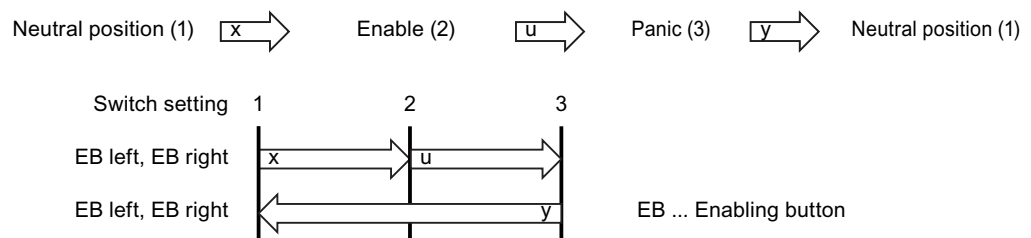
- F\_FB\_MP
- F\_FB\_RNG\_n

### Switch settings

The following figure shows the switching sequence for enable.



The following figure shows the switching sequence during panic usage.



If the operator has pressed the enabling button through to the "Panic" setting, the "Enable" setting will not be evaluated when leaving the panic setting. A new enable can only be triggered by releasing the enabling button.

## 5.5 Operator controls

### 5.5.1 Handwheel

#### Introduction

The handwheel is an optional operator control on the Mobile Panel 277F IWLAN. The handwheel can be turned without a stop and does not have a zero position.



① Handwheel with recess

#### Operation

To facilitate operation, the handwheel has a small recess.



## 5.5.2 Key-operated switch

### Introduction

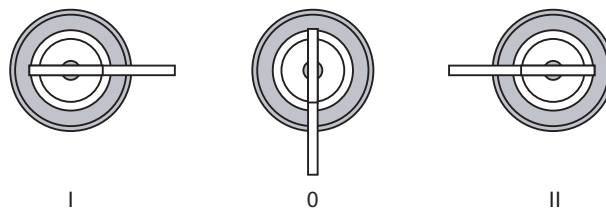
The key-operated switch is an optional operator control on the Mobile Panel 277F IWLAN. The key-operated switch is used to lock functions that can be triggered via the Mobile Panel 277F IWLAN.



① Key-operated switch

### Operation

The following figure shows the three switch positions of the key-operated switch, I-0-II.



The key can be removed in the switch setting 0.

Remove the key after use. This avoids possible damage to the key if the HMI device falls down.

---

### Note

The key to the key-operated switch is supplied together with the HMI device. The key does not have an HMI device-dependent coding. This means the key can be used on any Mobile Panel 277F IWLAN.

---

### 5.5.3 Illuminated pushbutton

#### Introduction

The illuminated pushbuttons are optional operator controls on the Mobile Panel 277F IWLAN. The illuminated pushbuttons are available for fast digital inputs.



① Illuminated pushbutton

### 5.5.4 Evaluation of the operator controls

#### 5.5.4.1 Overview

##### Operator controls

The following information can be transferred between the HMI device and the PLC:

- Direction pulses of the handwheel
- Status of the function keys
- Status of the key-operated switch
- State of the illuminated pushbuttons
- State of the function keys and illuminated pushbutton LEDs

There are two ways of transmitting information:

- Direct keys
- System functions of WinCC flexible

---

#### Note

The following sections are intended for the configuration engineer of the HMI device.

---

### 5.5.4.2 Evaluating operator controls as direct keys

#### Introduction

You can configure the operator controls of the HMI device as direct keys.

The states of the following operator controls are available directly in the I/O area of the PLC:

- Direction pulses of the handwheel
- The switching state of the function keys
- The switching state of the key-operated switch
- The switching state of the illuminated pushbuttons

#### Byte assignment

The following figure shows the assignment of the keys (inputs) and LEDs (outputs) to the bytes in the PLC process image.

Check whether additional information is available in your plant documentation.

Button bits								Byte	LED bits							
7	6	5	4	3	2	1	0		7	6	5	4	3	2	1	0
F8	F7	F6	F5	F4	F3	F2	F1	n	F8	F7	F6	F5	F4	F3	F2	F1
F16	F15	F14	F13	F12	F11	F10	F9	n + 1	F16	F15	F14	F13	F12	F11	F10	F9
						F18	F17	n + 2						F18	F17	
			T2		T1	S1	S0	n + 3					T2	T1		
I7	I6	I5	I4	I3	I2	I1	I0	n + 4								
D7	D6	D5	D4	D3	D2	D1	D0	n + 5								
7	6	5	4	3	2	1	0	n + 6								
15	14	13	12	11	10	9	8	n + 7								
23	22	21	20	19	18	17	16	n + 8								
31	30	29	28	27	26	25	24	n + 9								

- F Bit for function key  
 S Bit for key-operated switch  
 T1 Bit for left illuminated pushbutton  
 T2 Bit for right illuminated pushbutton  
 I Bit for handwheel pulses, forwards  
 D Bit for handwheel pulses, backwards

The bytes "n+6" to "n+9" contain the direct key bits for the touch buttons.

**Bit coding**

The following tables show the bit coding for function keys, key-operated switch, illuminated pushbutton and handwheel:

- Bit coding of function keys

State	F1 to F18
Not pressed	0
Pressed	1

- Bit coding of function key LEDs

State	F1 to F18
LED not illuminated	0
LED is illuminated	1

- Bit coding of key-operated switch

State	S1	S0	Key position
Position 0	0	0	In middle position
Position I	0	1	Turned in clockwise direction up to stop
Position II	1	0	Turned counter-clockwise up to stop

- Bit coding of illuminated pushbuttons

State	T1	T2
Not pressed	0	0
Pressed	1	1

- Bit coding of illuminated pushbutton LEDs

LED status	T1	T2
Off	0	0
On permanently	1	1

- Bit coding of handwheel

- A setpoint is not specified for the handwheel.
- After start-up of the HMI device, the bytes "n+4" to "n+5" are set to zero.

Rotation of the handwheel produces positive or negative pulses depending on the rotation direction. The number of positive pulses are stored in bits I0 to I7. The number of negative pulses are stored in bits D0 to D7. The values are entered in binary format, where bit 0 is the lowest and bit 7 is the highest valued bit.

A complete handwheel revolution yields 50 pulses.

- Every pulse of the handwheel is added to byte "n+4" or "n+5" depending on the direction of rotation. There are no negative values. When the possible value range is exceeded, there is an overflow:

If a value of 255 is increased by one pulse, a value of 0 results.

### Example of bit coding for handwheel

The following table includes an example for rotation direction determination. The pulses are stored in bytes "n+4" and "n+5" and are measured during the points in time  $t_1$  to  $t_4$ .

The numbers in the following table represent a byte in the PLC.

Evaluation time	Handwheel		Evaluation
	Pulses, forwards	Pulses, backwards	
$t_1$	255 ( $\Delta -1$ )	245 ( $\Delta -11$ )	--
$t_2$	10	245 ( $\Delta -11$ )	Pulses, forwards: 11 Pulses, backwards: 0 Resulting value: +11
$t_3$	10	4	Pulses, forwards: 0 Pulses, backwards: 15 Resulting value: -15
$t_4$	15	5	Pulses, forwards: 5 Pulses, backwards: 1 Resulting value: +4

The difference in pulses at times  $t_n$  and  $t_{n+1}$  allows you to determine the resulting value and thus the direction of rotation.

Establish the following values:

- Number of pulses, forwards
  - At time  $t_n$
  - At time  $t_{n+1}$
- Number of pulses, backwards
  - At time  $t_n$
  - At time  $t_{n+1}$

From this, you determine the resulting value. This is calculated as:

$$\begin{aligned}
 & \text{Pulses, forwards, } t_{n+1} \\
 - & \text{Pulses, forwards, } t_n \\
 - & \text{Pulses, backwards, } t_{n+1} \\
 + & \text{Pulses, backwards, } t_n \\
 = & \text{Resulting value}
 \end{aligned}$$

### Reaction time

The bytes "n+4" and "n+5" must be retrieved on the PLC side within a second and cyclically. This ensures that no more than 256 pulses can be added between two scans of the handwheel. For 256 pulses, approximately 4.5 revolutions of the handwheel are required.

The rotary pulse encoder supplies a maximum of 200 pulses per second.

<b>NOTICE</b>
<p><b>Sample cycle time</b></p> <p>The input pulses should take effect immediately on the PLC and cause a response in the system. Set a scan cycle <math>\leq 100</math> ms in the PLC in order to achieve this.</p>

### See also

Direct keys (Page 238)

#### 5.5.4.3 Activation of function key LEDs using system functions

### Application

LEDs are integrated in the HMI device's function keys F1 to F18. The integrated LEDs can be controlled from the PLC.

The LEDs can assume the following states:

- Off
- Flashing slowly
- Flashing quickly
- On

You can use the LED to signal to the user that a function key should be pressed, in a running project.

### Bit assignment

The following table shows the possible states of the LEDs and the corresponding entries in bit n+1 and bit n of the LED tags.

Bit n+1	Bit n	LED status
0	0	Off
0	1	Flashing quickly
1	0	Flashing slowly
1	1	ON (continuous)

#### 5.5.4.4 Evaluation of the handwheel with system functions

##### Application

The handwheel is an optional operator control of the HMI device. You can enter incremental values in a running project with the handwheel.

---

##### Note

Do not configure limit values in WinCC flexible for tags assigned to the handwheel.

---

##### Evaluation of the incremental values

If the signals of the handwheel are assigned to a WinCC flexible tag, then the forward and backward increments will be set off against each other. The absolute value of the increments is given. The maximum or minimum value of the increments until an overflow depends on the type of tags assigned.

A complete handwheel revolution yields 50 pulses. The rotary pulse encoder supplies a maximum of 200 pulses per second.

##### Example

- The handwheel has a starting value of 120 increments.
- You rotate the wheel 10 increments forwards and 3 increments backwards.  
This results in a new value of 127 increments.

#### 5.5.4.5 Evaluation of the key-operated switch with system functions

##### Application

The key-operated switch is an optional operator control of the HMI device. The key-operated switch serves to lock functions in a running project which can be triggered by means of the HMI device.

##### Bit assignment

The following table shows the bit assignment for the tag of the key-operated switch:

Bit 1	Bit 0	Key position
0	0	Central position
0	1	Turned in clockwise direction up to stop
1	0	Turned counter-clockwise up to stop

---

##### Note

If you use a tag of the "Boolean" type for the key-operated switch, the following assignment applies:

- Status "0": Central position of the key-operated switch
  - Status "1": Key-operated switch turned clockwise or counter-clockwise to the stop
-

### 5.5.4.6 Evaluation and activation of the illuminated pushbuttons with system functions

#### Application

The illuminated pushbuttons are optional operator controls of the HMI device. The integrated LEDs can be controlled from the PLC.

The LEDs can assume the following states:

- Off
- Flashing slowly
- Flashing quickly
- On

You can use the LEDs to signal to the user that a function key should be pressed in a running project.

#### Bit assignment

The following table shows the bit assignment for the status tags of the illuminated pushbuttons:

Bit 0	Status of the illuminated pushbutton
0	Not pressed
1	Pressed

The following table shows the bit assignment for the LED tags of the illuminated pushbuttons:

Bit n+1	Bit n	LED status
0	0	Off
0	1	Flashing quickly
1	0	Flashing slowly
1	1	ON (continuous)



## 5.6 Using a memory card with the HMI device

### Introduction

The following can be saved to the memory card of the HMI device:

- Logs
- Recipes
- Operating system
- Applications
- Additional specifications

The memory card can be inserted and removed during operation. Do not remove the memory card while data is being accessed by an application, for example during backup or recipe transfer.

### Instructions

#### CAUTION

##### Malfunctions

If the HMI device is resting on its front, the following can be activated:

- The emergency stop button  
This can bring the system to a standstill unintentionally.
- The key-operated switch or an illuminated pushbutton  
This can result in malfunctions.

##### ESD

When working in the open housing, ensure that current-carrying conductors do not come into contact with electrical circuits.

Note the ESD instructions.

#### CAUTION

##### Possibility of shutdown while logging onto the effective range

If the HMI device no longer recognizes the transponder and, therefore, the measuring range, it triggers a shutdown.

To remove or insert the memory card, rest the HMI device on its front. Align the HMI device so that it is still possible to measure the distance between the HMI device and the transponder. Distance measurement between HMI device and transponder (Page 60)

If possible, log the HMI device off from the effective range.

**CAUTION**

**Shutdown or rampdown of the system**

When you insert or remove the memory card, remove the main battery. This failure of the main battery is bridged by the bridge battery, if fitted. The maximum buffer time is 5 minutes. If you do not replace the main battery after 5 minutes, the HMI device will switch off. If the HMI device has been integrated, this will lead to a shutdown or rampdown of the system.

Do not exceed the buffer time!

**NOTICE**

**Multimedia card**

The multimedia card of the SIMATIC S7 PLC cannot be used.

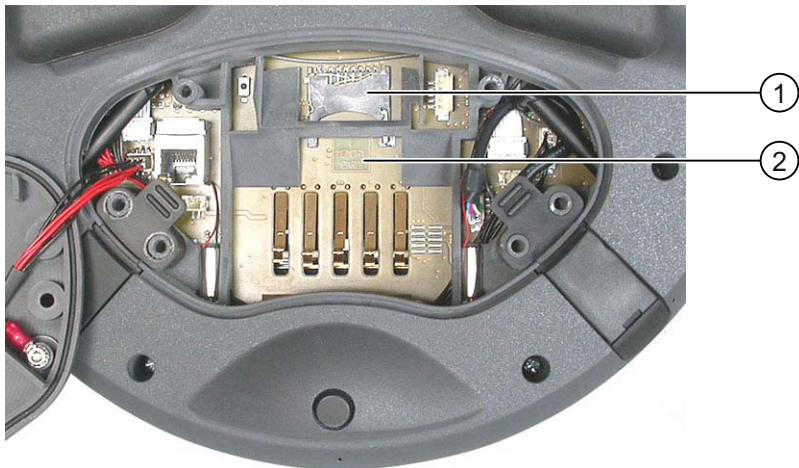
**NOTICE**

Pay attention to cleanliness. Foreign bodies or liquids must not come into contact with the printed circuit board or penetrate the inside of the HMI device.

Place the HMI device with the front side facing down on a flat, clean surface to protect against damage.

**Requirements**

- You have opened the battery compartment of the HMI device
- The main battery is removed
- You have opened the connection bay of the HMI device



- ① Slot
- ② Memory card symbol

### Procedure for inserting a memory card

Proceed as follows:

1. Insert the memory card into the slot.

Pay attention to the memory card symbol when inserting the memory card. An arrow on the memory card indicates the front side and the direction of insertion. When the memory card is correctly inserted into the slot, it stands approx. 3 mm proud of the slot.

### Using a memory card for the first time

<b>NOTICE</b>
<b>Data loss</b>
If the HMI device asks you to perform formatting the first time you use a memory card, back up any existing data on the memory card first.

Proceed as follows in order to prevent data loss:

1. Cancel the formatting procedure by pressing "ESC".
2. Remove the memory card from the HMI device.
3. Back up any data that you do not want to lose on the memory card.
4. Insert the memory card into the HMI device.
5. Format the memory card on the HMI device.

### Procedure for unplugging a memory card

Proceed as follows:

1. Pull the memory card out of the slot.
2. Close the connection bay.
3. Replace the main battery.
4. Close the HMI device's battery compartment.
5. Store the memory card in a safe place.

### See also

Distance measurement between HMI device and transponder (Page 60)

Opening and closing the terminal compartment (Page 71)

## 5.7 Labeling the function keys

### Introduction

You can label the function keys as required for your project. Use labeling strips to do so.

<b>NOTICE</b>
Do not write on the keyboard to label the function keys.

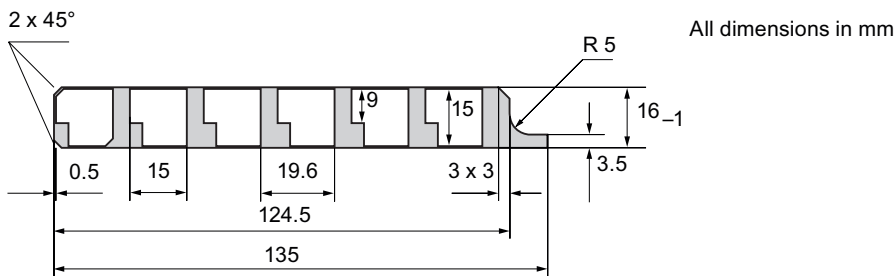
### Printing labeling strips

WinCC flexible comes with a range of labeling strip templates. You will find further information regarding the location of the templates in the WinCC flexible Online Help.

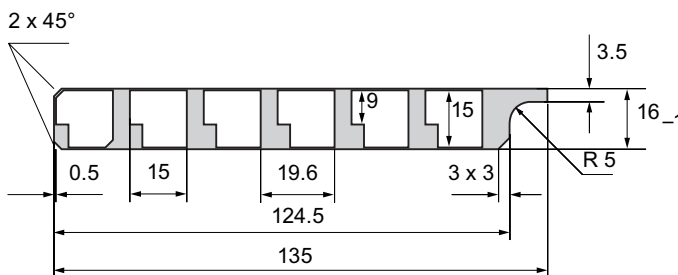
Any printable and writable foil can be used as labeling strips. Use transparent foil so that the LEDs of the function keys can be seen. The permitted thickness of the labeling strip is 0.13 mm. Paper should not be used as labeling strips.

### Labeling strip dimensions

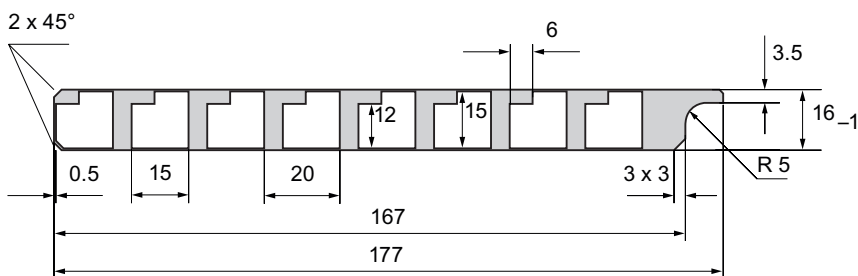
Labeling strip on right:



Labeling strip on left:



Labeling strip at bottom:

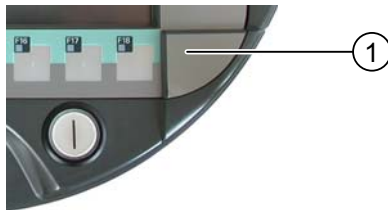


### **Procedure for attaching the labeling strips**

The following steps apply for the initial attaching of labeling strips.

Proceed as follows:

1. Lay the HMI device on its reverse side.
2. Remove the label ① from the cover caps.



3. Unscrew both cover caps.
4. Pull the labeling strips out of the guides.
5. Inscribe the labeling strips in accordance with the system.  
Wait for the printed labeling strips to dry before you insert them.
6. Push the labeling strips into the guides.
7. Screw both cover caps back on.  
Screwed on cover caps with inserted rubber seals satisfy degree of protection IP65.
8. Place the label on to the cover caps.

### **Procedure for exchanging the labeling strips**

Should the exchange of labeling strips become necessary, these can be reordered.

### **See also**

Supplementary pack and other accessories (Page 20)

## 5.8 Holding the mobile panel and fixing it to the wall

### Holding the HMI device

#### CAUTION

##### Rampdown

If the HMI device is logged onto an effective range and more than 5 seconds pass without it recognizing the effective range, the enabling button is deactivated.

If a further 25 seconds pass without the HMI device recognizing the effective range, the HMI device triggers a local rampdown.

Always align the HMI device towards the transponder.



The method of holding the HMI device illustrated above enables you, for example, to move around while servicing the system to be monitored.

#### NOTICE

##### Availability of the safety-related operator controls

If you are manually controlling potentially dangerous movements in the special operating modes, you must use the above shown forearm holding method. Holding the HMI device so that it is supported on your forearm in this way enables you, for example, to quickly reach the emergency stop button or the enabling button in the event of a dangerous situation.

### Availability of the enabling button and emergency stop button

The HMI device is equally easy to hold for right-handers and left-handers because it is designed symmetrically. The free hand can be used to operate the operator controls on the front side. The hand holding the HMI device can also be used to activate the enabling button. The acknowledgment of the control input is also given if you only press one of the enabling buttons.

The enabling button is required to confirm axis movements, for example. The enabling button is optimally accessible. The enabling button triggers a safety shutdown in the event of a panic reaction to danger (release or cramping).

The emergency stop button can also be quickly reached with your free hand.

### Holder for the HMI device

<b>NOTICE</b>
<b>Operability of the emergency stop button impaired</b>
If the HMI device is hooked into an unsuitable wall holder, the operability of the emergency stop button can be impaired.

A charging station is available for safe accommodation of the HMI device.

The HMI device is used as a stationary HMI device when it is hooked into the charging station. The HMI device's battery is charged in the charging station.



## 5.9 Charging station

### 5.9.1 Charging batteries in the charging compartment

#### Introduction

You can charge one main battery in each of the two charging compartments of the charging station. The batteries are charged independently of each other.



- ① Locking latch for charging compartment cover
- ② Charging compartment
- ③ LED display

#### Procedure for inserting the battery in the charging compartment

Proceed as follows:

1. Pull up the locking latch on the charging compartment cover.  
The cover can now be opened.
2. Place the battery in the charging compartment.
3. Close the charging compartment.

#### Result

The battery is charged automatically whenever the charging station is connected to the power supply unit. The LED display shows the battery's charging status.



## Procedure for removing the battery from the charging compartment

Proceed as follows:

1. Pull up the locking latch on the charging compartment cover.  
The cover can now be opened.
2. Remove the main battery using the ribbon.
3. Close the charging compartment.

## 5.9.2 Displays on the charging station

### Introduction

There are 3 LEDs on the charging station. The LEDs show the states of the batteries in the charging compartments and of the power supply unit.



### Meaning of the LED displays

Designation	Color	Meaning
BAT 1	Green	<p>The "BAT 1" LED is off when there is no battery in the first charging compartment.</p> <p>The "BAT 1" LED flashes when the battery in the first charging compartment is being charged.</p> <p>The "BAT 1" LED lights up when the battery in the first charging compartment is 95% charged.</p>
BAT 2	Green	<p>The "BAT 2" LED is off when there is no battery in the second charging compartment.</p> <p>The "BAT 2" LED flashes when the battery in the second charging compartment is being charged.</p> <p>The "BAT 2" LED lights up when the battery in the second charging compartment is 95% charged.</p>
POWER	Green/ red	<p>The "POWER" LED is off when there is no voltage supply to the charging station.</p> <p>The "POWER" LED lights up green when the power supply to the charging station is within the nominal range.</p> <p>The "POWER" LED lights up red when there is an overvoltage or undervoltage at the charging station.</p>

### 5.9.3 Locking the charging station

#### Introduction

The lock prevents unauthorized removal of the HMI device from the charging station.



- ① Lock barrel with key
- ② Lock
- ③ Hook for hooking in the HMI device

#### Procedure for locking the charging station

Proceed as follows:

1. Slide the lock down to the appropriate cut-out in the charging station.
2. Turn the key by 90 degrees.
3. Remove the key.

#### Result

The charging station is locked. You cannot remove the HMI device.

### **Procedure for unlocking the charging station**

Proceed as follows:

1. Insert the key into the lock barrel.
2. Turn the key by 90 degrees.
3. Slide the lock upwards.

### **Result**

You can now remove the HMI device.

### **See also**

Charging station (Page 23)

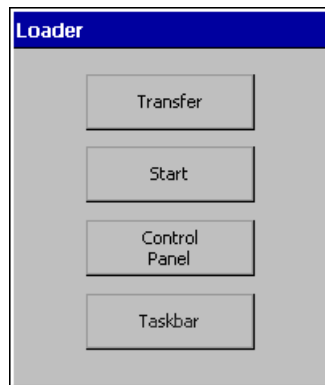


## Configuring the operating system

### 6.1 Loader

#### Loader

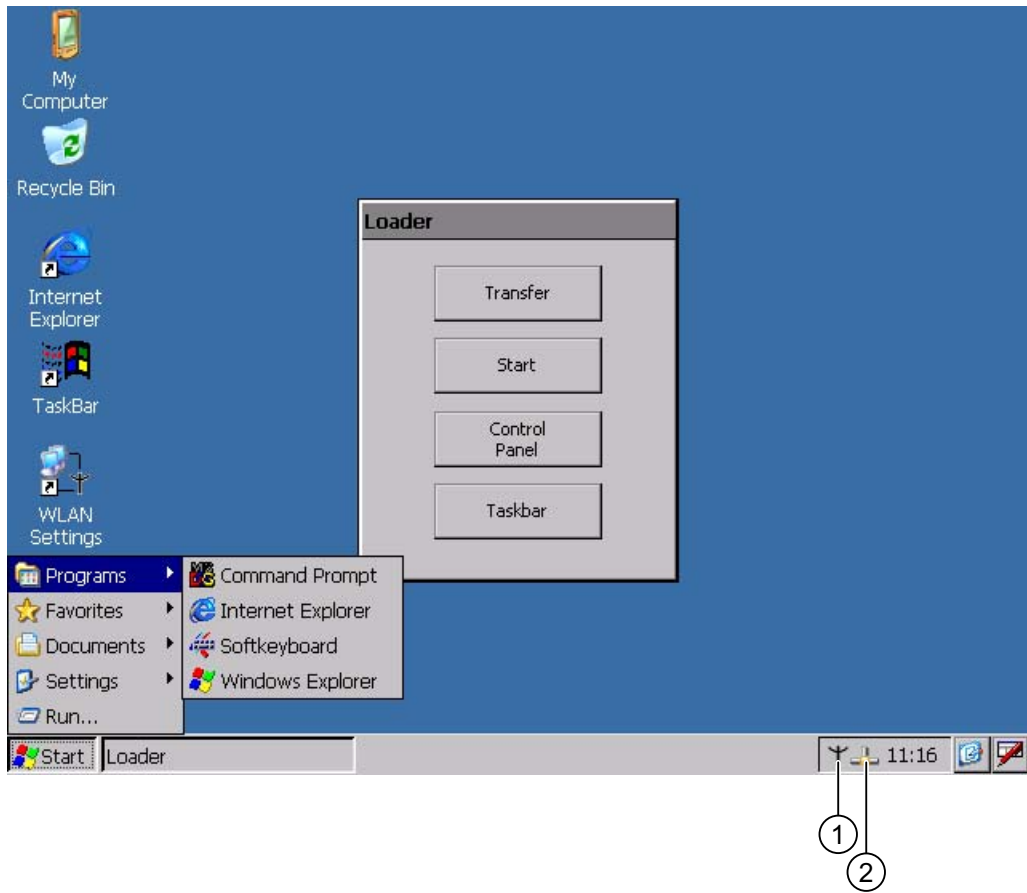
The following figure shows the Loader.



The buttons on the Loader have the following function:

- The "Transfer" button sets the HMI device to transfer mode  
The transfer mode can only be activated when at least one data channel has been enabled for the transfer.
- Press the "Start" button to start the project on the HMI device  
If you do not perform an operation, the project on the HMI device will automatically start after a delay, depending on settings.
- Press the "Control Panel" button to open the HMI device Control Panel  
You can change various settings in the Control Panel, for example the transfer settings.
- Press the "Taskbar" button to activate the taskbar with the Windows CE start menu open

The following figure shows the open start menu.



- ① Symbol for parameter assignment for the WLAN network
- ② Symbol for displaying IP information about the LAN connection

## Open Loader

The following options are available to open the Loader:

- The Loader appears briefly after starting the HMI device
- The Loader appears when the project is closed

If configured, use the relevant operating element to close the project.

Please refer to your system documentation to check whether additional information on this subject is available there.

## Password protection

NOTICE
<p>If the password is no longer available, you cannot do the following until you have updated the operating system.</p> <ul style="list-style-type: none"><li>• Making changes to the Control Panel</li><li>• Operating the Windows CE task bar</li></ul> <p>All data on the HMI device will be overwritten when you update the operating system!</p>

You can protect the Control Panel and taskbar from unauthorized access. When password protection is enabled, the message "password protect" is displayed in the Loader.

Password protection prevents maloperations and increases security for the system or machine.

If the password is not entered, only the "Transfer" and "Start" buttons are operable.

### Internet Explorer

Internet Explore for Windows CE is installed on the HMI device.



#### Note

Internet Explorer for Windows CE and the Internet Explorer version which can run on a PC differ in terms of functionality.

For further information, please refer to Microsoft's website.

#### See also

- Changing password protection (Page 147)
- Programming the data channel (Page 163)
- Switching on and testing the HMI device (Page 90)



## 6.2 WLAN

### 6.2.1 Overview

#### Introduction


The properties of the WLAN networks can be entered in the "WLAN" dialog box. Open the "WLAN" dialog box in Windows CE.

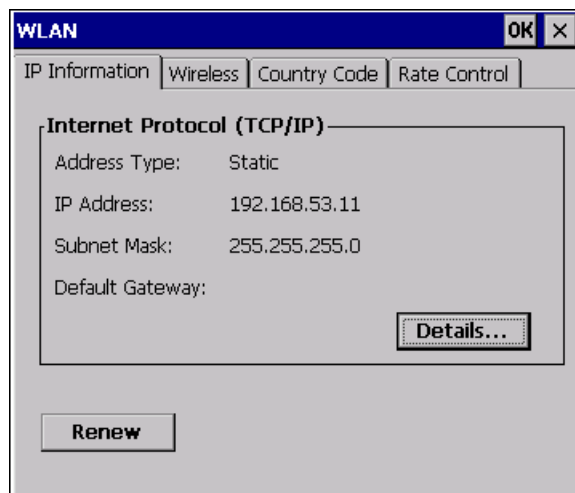
#### WLAN connection

In the case of a WLAN connection, the configuration engineer for the current project can specify the following:

- The WLAN networks to which the HMI device connects  
The configuration engineer can specify up to 3 WLAN networks
- Priority assignment of WLAN networks
- Whether the HMI device is permitted to connect with other WLAN networks

#### Procedure

You have activated the taskbar in Windows CE and opened the following dialog box with the "WLAN Settings" or  icon.



The dialog box shows the parameters of the WLAN connection that are set in the "WLAN-Settings" dialog box in the Control Panel. If you have not yet parameterized the connection, the boxes will be empty.

Select the "Details..." button to open a dialog box which provides more detailed information about the established network connection.

### Set country code

**NOTICE**

The correct country setting is essential for operation complying with the approvals. The selection of a country other than the one where you are using the system is subject to criminal penalties.

For WLAN communication, the frequency bands are split into channels differently in different countries.

1. Change to the "Country Code" tab.



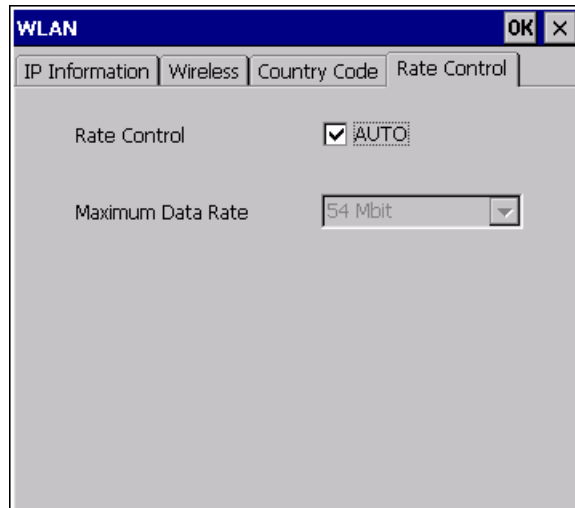
2. Select the required country code from the "Country Code" selection box.
3. Confirm your entries.  
The dialog closes.

### Result

The country code for the WLAN connection has been set.

## Setting the transmission rate for WLAN

Use the register "Rate Control" to change the transfer rate of the HMI panel, if necessary.



### NOTICE

#### Communication not possible.

Deselect the "Auto" check box only in case of transfer problems.

If you want to change the transfer rate, please contact your network administrator. Communication between HMI Panel and Access Point is not possible in case of incorrect settings.

1. Deselect the "Auto" check box.
2. Select the desired data transfer rate in the Maximum Data Rate selection box.
3. Confirm your entries.
4. Confirm the message of the HMI device.
5. Restart the HMI device.

### See also


Restarting the HMI device (Page 157)

## 6.2.2 Parameterizing the WLAN connection

### Introduction

You can define the parameters for the WLAN connection and also create new WLAN connections.

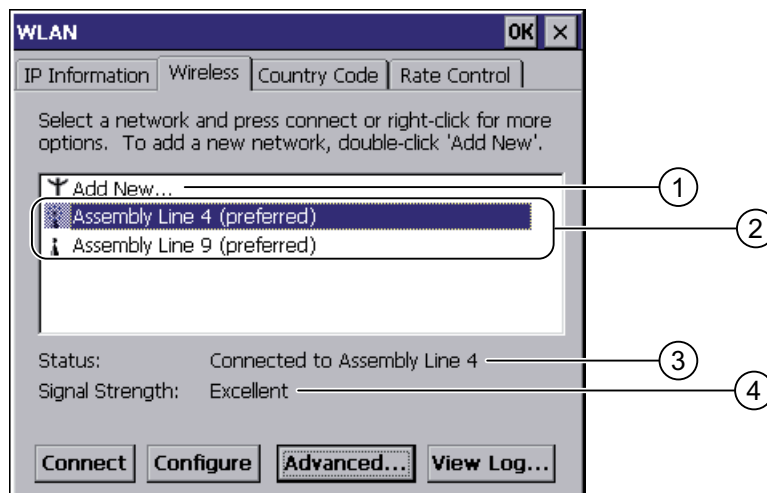
### Requirements

You have opened the "WLAN" dialog box, "Wireless" tab, by touching either the "WLAN Settings" icon or the  icon.

If no connection to a WLAN network exists, all available WLAN networks are listed.

If a connection to a WLAN network exists, the following WLAN networks are displayed:

- The WLAN network to which the connection exists
- All parameterized networks



- ① "Add New" entry
- ② Existing and parameterized WLAN networks
- ③ Status information, shows the WLAN network to which the HMI device is connected
- ④ Signal strength of the selected network

**Procedure for creating a WLAN network, parameterize the WLAN network and establish a connection**

1. If you want to create a new WLAN network, select "Add New".
2. If you want to configure an existing WLAN network or connect the HMI device to a WLAN network, select the desired network.
3. Use the "Configure" or "Connect" button to open the "Wireless Network Properties" dialog box.

**Note**

If the HMI device has detected the WLAN network, the encryption and the authentication process for this network will already be shown in the dialog box.

If necessary, you must also enter the appropriate password in the "Network key" text box. After you have entered the password, it is shown in encrypted form.

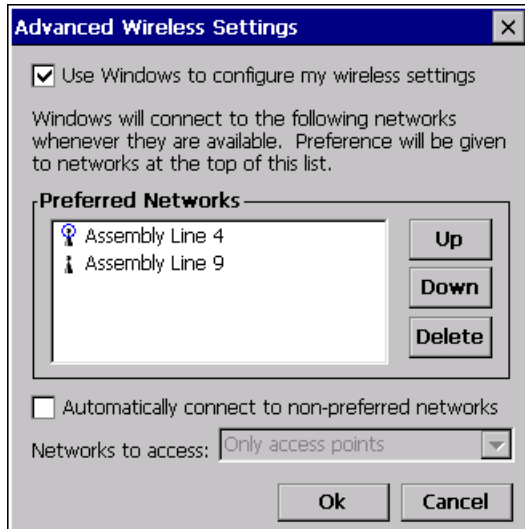
4. If necessary, select the encryption you are using under "Encryption".
5. If necessary, select the required authentication process under "Authentication".
6. If necessary, enter the password for the WLAN network under "Network key".
7. If necessary, select the type of authentication protocol under "EAP type".
8. Confirm your entries.

The dialog closes. The parameterized WLAN network is added to the list of preferred networks.

If the HMI device is connected to the WLAN network, the WLAN network is put at the top of the list of preferred networks.

### Procedure for parameterizing list of preferred networks

1. In the "WLAN" dialog box, "Wireless" tab, press Advanced... to open the "Advanced Wireless Settings" dialog box.



2. If you want to block the connection to the parameterized networks in the list of preferred networks, clear the "Use Windows to configure my wireless settings" check box.

---

#### Note

If preferred networks are configured in the project, the sequence of entries in the list of preferred networks changes when you start a project. The sequence configured in the project is set. Any networks not permitted in the project are removed from the list.

---

The HMI device attempts to connect with a WLAN network in the sequence of the preferred networks in the list.

3. Change the sequence as required.
  - Select the WLAN network you want to move.
  - Use the "Up" and "Down" buttons to select the desired position.
4. If necessary, use the "Delete" button to delete the selected WLAN entry from the list of preferred networks.
5. Select the "Automatically connect to non-preferred networks" check box if you want the HMI device to connect to other WLAN networks.
6. Confirm your entries.

The dialog closes.

#### Result

The WLAN parameters are now set.

#### Display logbook

Press "View Log..." in the "WLAN" dialog box, "Wireless" tab, to open the logbook.

The logbook provides information about connection buildup, connection cleardown and failed attempts at connection buildup.

## 6.3 Control Panel

### 6.3.1 Overview

#### Control Panel of the HMI device




The HMI device Control Panel can be used to modify the following HMI device settings:

- PROFIsafe address
- Vibration alarm
- Date/time
- Screen saver
- Regional settings
- Transfer settings
- Network settings
- Delay time
- Password

### Opening the Control Panel










The Control Panel can be opened as follows:

- In the startup phase  
Press "Control Panel" to open the HMI device Control Panel in the Loader.
- In a running project  
Select the operating element provided for the respective task, if configured.
- In the Windows CE start menu
  - Press the  key on the alphanumeric screen keyboard twice.
  - Open the Control Panel with "Settings > Control Panel".


### 6.3.2 Reference

#### Overview of functions

The following table shows the settings in the Control Panel.

Icon	Functions	Tab / entry	Chapter
	Saving and restoring with external storage device	–	
	Importing, displaying and deleting certificates	"Stores"	
	Setting the date and time	"Date/Time"	
	Configuring the screen keyboard	–	
	Changing the browser startup page and general browser settings	"General"	
	Changing connection and proxy server settings	"Connection"	
	Changing cookie settings	"Privacy"	
	Changing privacy settings	"Advanced"	
	Setting the character repeat for the keyboard	"Repeat"	
	Setting the double-click	"Double-Click"	
	Parameterizing the WLAN connection	"WLAN"	
	Setting the IP address	'WLAN' Settings'	"IP Address"
	Setting the name server	'WLAN' Settings'	"Name Servers"
	Parameterizing the LAN connection	"LAN"	
	Setting the IP address	'LAN' Settings'	"IP Address"
	Setting the name server	'LAN' Settings'	"Name Servers"



Icon	Functions	Tab / entry	Chapter
	Changing the logon data	"Identification"	
	Backup registry information	"Persistent Storage"	
	Changing monitor settings	"Display"	
	Displaying information about the HMI device	"Device"	
	Restarting the HMI device	"Device"	
	Calibrating the touch screen	"Touch"	Calibrating the touch screen (Page 145)
	Displaying battery status	"Battery"	Displaying battery status (Page 184)
	Activate memory management	"Memory Monitoring"	Activate memory management (Page 185)
Activating vibration alarm	"Vibration Alarm"	Activating vibration alarm (Page 162)	
	Changing password protection	"Password Settings"	Changing password protection (Page 147)
	Changing the printer properties	–	Changing the printer properties (Page 155)
	Changing the PROFINET IO setting	–	Enabling PROFINET IO (Page 168)
	Setting the PROFIsafe address		Setting the PROFIsafe address (Page 167)
	Changing regional settings	"Regional Settings"	Changing regional settings (Page 150)
	Changing the number format	"Number"	
	Changing the currency format	"Currency"	
	Changing the time format	"Time"	
	Changing the date format	"Date"	
	Setting the screen saver		Setting the screen saver (Page 153)
	Reducing the backlighting		
	Displaying the system information	"General"	Displaying system properties (Page 160)
	Displaying memory information	"Memory"	
	Setting the device name of the HMI device	"Device Name"	Setting the device name of the HMI device (Page 171)
	Programming the data channel	"Channel"	Programming the data channel (Page 163)
	Setting the delay time	"Directories"	Setting the delay time (Page 166)
	Changing e-mail settings <sup>1)</sup>	"Email"	Changing e-mail settings (Page 175)

<sup>1)</sup> Additional tabs may appear in the "WinCC flexible Internet Settings" dialog. This depends on the options that have been enabled for network operation in the project.

### 6.3.3 Operating the Control Panel

#### Introduction

The Control Panel is operated with the HMI device touch screen.

#### Procedure

Proceed as follows to change settings in the Control Panel:

1. Close the project.



Use the provided operating element.

The Loader appears


2. Open the Control Panel by pressing "Control Panel".
3. To open the required dialog, double-click its icon.
4. Change as required by touching the tab.
5. Now make the necessary changes.

Touch the respective input object to make entries.

- Use the screen keyboard of the HMI device to enter the new values in the text boxes.
- Touch a button to operate it.
- Touch the selection box to open a drop down list box. Touch the required entry from the drop down list box.
- Touch the check box to select or clear a check box.
- Touch a radio button to select it.

6. Confirm the entries using the button  or terminate the entries using the button .



The dialog closes.

7. Close the Control Panel with the  button.
8. Start the project with the "Start" button in the Loader.

#### Input with the screen keyboard

A screen keyboard is available for alphanumeric characters. The screen keyboard is displayed as soon as you touch a text box. You can also call up the screen keyboard directly from the Control Panel.

### Display methods for the screen keyboard

You can change the display method for the screen keyboard and fix the position on the screen. Confirm an entry using the key  or terminate the entry using the key . Either action closes the screen keyboard.

- Numerical screen keyboard



- Alphanumerical screen keyboard



The alphanumerical screen keyboard has the following levels.







- Normal level
- Shift level

The shift level includes uppercase letters.

- Reduced screen keyboard





### Changing the display of the screen keyboard

Key	Functions
	Switching between the numerical and alphanumerical keyboard
	Switching between the normal level and Shift level of the alphanumerical screen keyboard
	Switchover to special characters
	Switching from full display to reduced display
	Switching from reduced display to full display
	Closing of reduced display of the screen keyboard

### Moving the screen keyboard


In order to move the screen keyboard, proceed as follows:

1. Touch the icon .
2. Touch and move the screen keyboard on the touch screen.
3. When the desired position is reached, release the icon .

### Adjust screen keyboard size



---

#### Note

The  icon only appears on the screen keyboard if in the "Siemens HMI InputPanel" dialog box you have selected the "Show Resize button" check box.

---

To adjust the size of the screen keyboard, proceed as follows:

1. Touch the icon .
2. To adjust the size of the screen keyboard, maintain contact.
3. When the size you want is reached, release contact with the  icon.

### See also

Configuring the screen keyboard (Page 141)


## 6.4 Changing settings for operation

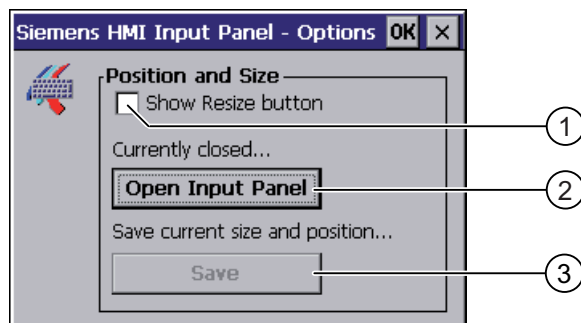
### 6.4.1 Configuring the screen keyboard


#### Introduction

You can change the layout and the position of the screen keyboard as follows.

#### Requirements

You have opened the "Siemens HMI InputPanel - Options" dialog with the "InputPanel"  icon.




- ① Check box for displaying the  button in the screen keyboard
- ② Button for displaying the screen keyboard
- ③ Button for saving the screen keyboard settings

## Procedure

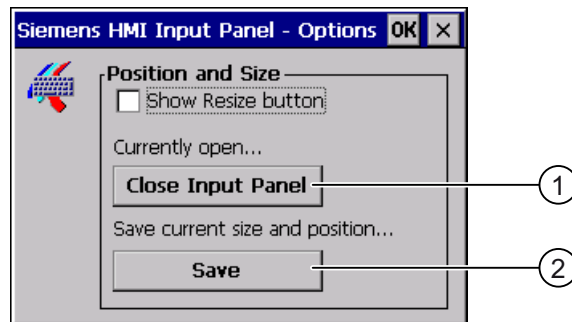
Proceed as follows:

1. If you want to change the size of the screen keyboard, activate the "Show Resize button" check box.




The  icon also appears in the screen keyboard.

2. Use the "Open Input Panel" button to open the screen keyboard.

The appearance of the dialog box changes:



- ① Button for closing the screen keyboard
- ② Button for saving the screen keyboard settings

3. If you want to switch between the numeric and alphanumeric screen keyboard, press the  key.
4. If you want to change the position of the screen keyboard, move it using the  icon. Release contact from the icon when the required position is reached.
5. If you want to increase the size of the screen keyboard, enlarge it to the size required using the  icon. Release contact from the icon when the required size is reached.
6. If you want to save the settings, press the "Save" button.
7. Close the screen keyboard by pressing the "Close Input Panel" button.
8. Confirm your entries.  
The dialog closes.

## Result

The screen keyboard settings have been modified.

## See also

Operating the Control Panel (Page 138)

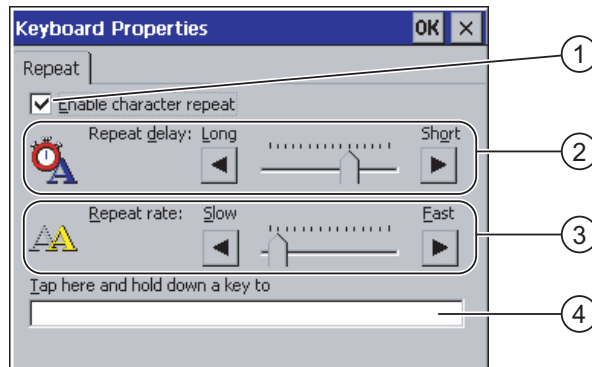
## 6.4.2 Setting the character repeat rate of the screen keyboard

### Introduction

You can set the character repeat for the screen keyboard in the Control Panel.

### Requirements

You have opened the "Keyboard Properties" dialog with the "Keyboard"  icon.



- ① Check box for selecting the character repeat
- ② Slider control and buttons for the delay time before character repeat
- ③ Slider control and buttons for the rate of the character repeat
- ④ Test box

### Procedure

Proceed as follows:

1. If you want to enable character repetition, select the "Enable character repeat" check box.
2. If you want to change the delay, press a button or the slider in the "Repeat delay" group.  
Moving the slider to the right will shorten the delay.  
Moving to the left will extend the delay.
3. If you want to change the repeat rate, press a button or the slider in the "Repeat rate" group.  
Moving the slider to the right will shorten the repeat rate.  
Moving to the left will extend the repeat rate.
4. Verify your settings.
  - Touch the test box. The screen keyboard opens.
  - Move the screen keyboard as needed.
  - Touch any character and keep it pressed.
  - Check the implementation of the character repetition and the rate of the character repetition in the test box.
  - Correct your setting if necessary.
5. Confirm your entries.  
The dialog closes.

### Result

The character repetition and delay are set.

### 6.4.3 Setting the double-click

#### Introduction

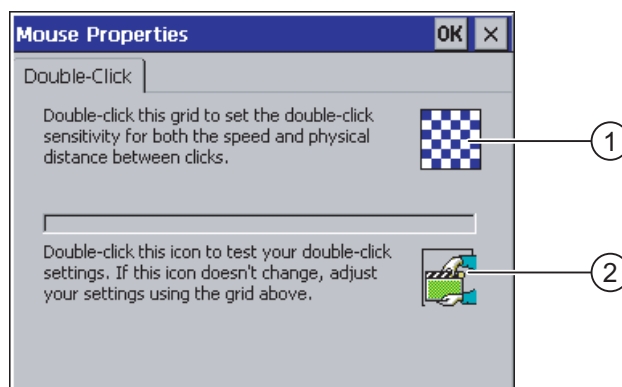
You can start applications in the Control Panel and in Windows CE by double-clicking. In the "Mouse Properties" dialog box you can change the following settings.

- The time interval between two clicks for a double-click
- The physical distance between two clicks for a double-click

A double-click corresponds to two brief touches in sequence.

#### Requirements

You have opened the "Mouse Properties" dialog with the "Mouse"  icon.



- ① Icon for setting the double-click
- ② Icon for testing the double-click

#### Procedure

Proceed as follows:

1. Double-click on the grid.

After one double-click the grid is shown in inverse colors.



2. Double-click on the icon.

If the double-click is valid, the icon is displayed as follows:



3. If the icon remains unchanged, double-click on the grid again.
4. Confirm your entries.

The dialog closes.

#### Result

The double-click adjustment is completed.




## 6.4.4 Calibrating the touch screen

### Introduction

Depending on the mounting position and viewing angle, it is possible that parallax may occur when operating the touch screen. In order to prevent any operating errors as a result, calibrate the touch screen again in the startup phase or during runtime.

### Requirements

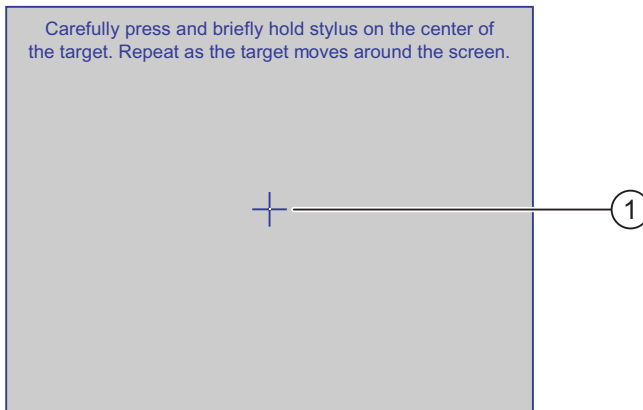
You have opened the "OP Properties" dialog box, "Touch" tab, by touching the "OP"  icon.



### Procedure

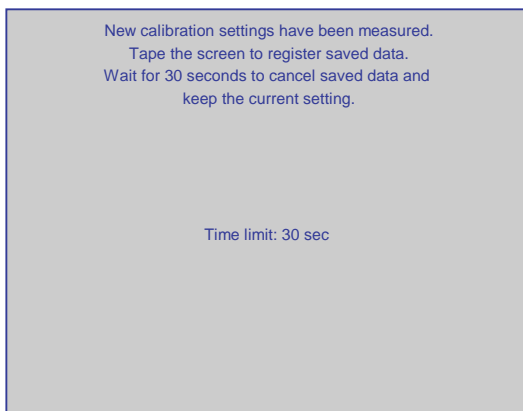
Proceed as follows:

1. Use the "Recalibrate" button to open the following dialog box:



2. Briefly touch the center of the calibration crosshairs ①.  
The calibration crosshairs is then displayed at four more positions.
3. Touch the middle of the calibration crosshairs for each position.  
If you do not touch the middle of the calibration crosshairs, the procedure is repeated.

Once you have touched the calibration crosshairs for all positions, the following dialog appears:



4. Touch the screen within 30 seconds.  
The new calibration is saved. If you wait longer than 30 seconds, the new calibration is discarded and the original calibration remains in effect.  
The "OP Properties" dialog box, "Touch" tab is displayed again.
5. Close the dialog.

### Result

The HMI device touch screen is now recalibrated.

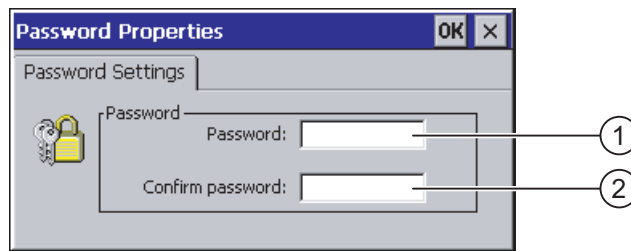
## 6.5 Changing password protection

### Introduction

You can protect the Control Panel and the Windows CE taskbar with a password.

### Requirements

You have opened the "Password Properties" dialog with the "Password"  icon.



- ① Password text box
- ② Text box for entering the password a second time

#### NOTICE

If the password is no longer available, you cannot do the following until you have updated the operating system.

- Making changes to the Control Panel
- Operating the Windows CE task bar

All data on the HMI device will be overwritten when you update the operating system!

### Procedure for activating password protection

Proceed as follows:

1. Enter a password in the "Password" text box.
2. Repeat the password entry in the "Confirm password" text box.
3. Confirm your entries.

The dialog closes.

#### NOTICE

The following characters cannot be used in passwords:

- Blank
- Special characters \* ? . % / \ ' "

### Result

You cannot open the Control Panel or Windows CE taskbar without entering a password.

### Procedure for deactivating password protection

Proceed as follows:

1. Delete the inputs in the "Password" and "Confirm password" text boxes.
2. Confirm your entries.

The dialog closes.

### Result

Password protection for the Control Panel and the Windows CE taskbar is disabled.

## 6.6 Changing HMI device settings


### 6.6.1 Setting the date and time

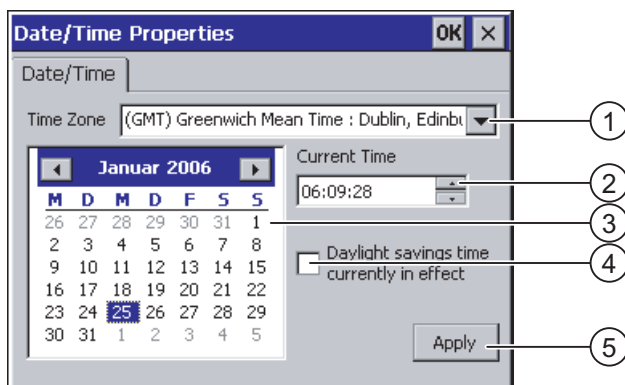
#### Introduction

You can set the date and time on the HMI device. The HMI must be restarted in the following cases:

- You have changed the time zone setting
- You have changed the "Daylight savings time currently in effect" check box setting

#### Requirements

You have opened the "Date/Time Properties" using the "Date/Time Properties"  icon.



- ① Time zone selection box
- ② Text box for the time
- ③ Date selection box
- ④ "Daylight savings" check box
- ⑤ Button for applying changes

## Procedure

Proceed as follows:

1. Select the appropriate time zone for the HMI device from the "Time Zone" selection box.
2. Touch the "Apply" button to confirm your entry.

The time of day shown in the "Current Time" box is adjusted correspondingly to the selected time zone.

3. Set the date in the selection box.
4. Set the current time of day in the "Current Time" text box.
5. Touch the "Apply" button to confirm your input.

The values you have set are now in effect.

---

### Note

The system does not automatically switch between winter and summer time.

---

6. If you want to switch from winter to summer time, select the "Daylight savings time currently in effect" check box.

When you press the "Apply" button, the time is brought forward by one hour.

7. If you want to switch from summer to winter time, clear the "Daylight savings time currently in effect" check box.

When you press the "Apply" button, the time is moved backwards by one hour.

8. Confirm your entries.

The dialog closes.

## Result

The settings for the data and time of day have now been changed.

## Internal clock

The HMI device has an internal buffered clock.

## Synchronizing the date and time with the PLC

The date and time of the HMI device can be synchronized with the PLC if this has been configured in the project and the PLC program.

Additional information on this subject is available in the "WinCC flexible" system manual.

<b>NOTICE</b>
<b>Time-dependent reactions</b>
You have to synchronize the date and time when time-controlled responses are triggered in the PLC by the HMI device.

## See also

Restarting the HMI device (Page 157)


## 6.6.2 Changing regional settings

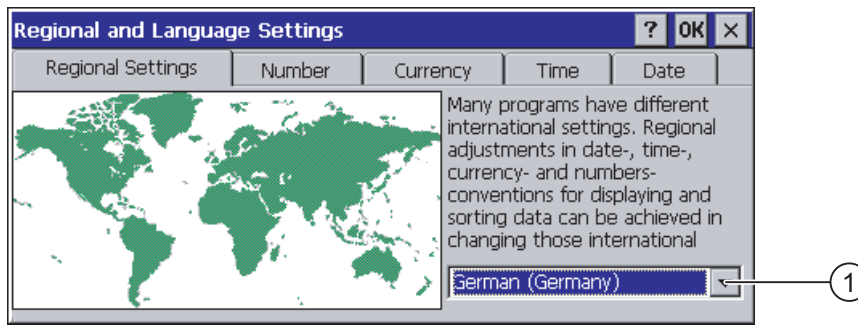
### Introduction

In different countries, for example, the date, time and decimal points are displayed differently. You can adjust the display format to meet the requirements of different regions.

The country-specific settings apply to the current project. If the project language is changed, the country-specific settings are also changed.

### Requirements

You have opened the "Regional and Language Settings" dialog with the "Regional Settings"  icon.



① Region selection box

### Procedure

Proceed as follows:

1. Select the region from the selection box.
2. Change to the "Number", "Currency", "Time" and "Date" tabs and set the selection boxes to the desired settings.
3. Confirm your entries.

The dialog closes.

### Result

The HMI device's regional settings have been changed.

### 6.6.3 Backup registry information

#### Registry information and temporary data

You can install and uninstall your own programs on the HMI devices under Windows CE. You must save the registry settings after installation or uninstallation.


You can save the following data to the flash memory:

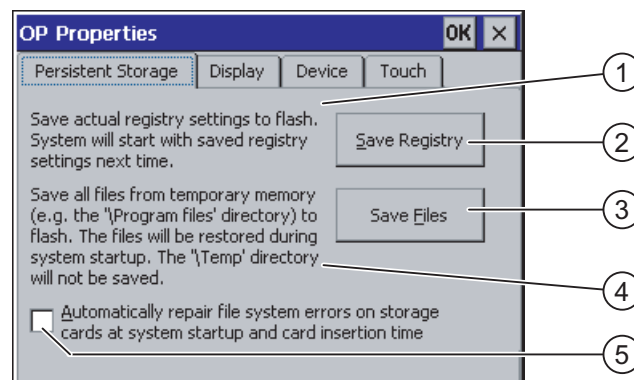
- Registry information
- Temporary files

#### Restoring the file system of a memory card

If memory cards are used, the file system on the memory card may become damaged, perhaps due to a power failure. The HMI device detects the defective file system on start-up or when the memory card is inserted. The HMI device can restore the file system automatically or on request.

#### Requirements

You have opened the "OP Properties" dialog box, "Persistent Storage" tab, by touching the "OP"  icon.



- ① Meaning of the text in the dialog:  
Saves the current registry information to the flash memory. The HMI device loads the saved registry information the next time it boots.
- ② Button for saving registry information
- ③ Button for saving temporary files
- ④ Meaning of the text in the dialog:  
Saves all the files in temporary storage to the flash memory (for example, from the "Program Files" directory). These files are written back when the HMI device is started. The "\\Temp" directory is not saved.
- ⑤ Check box for automatically restoring the file system on the memory card when the HMI device starts up and when a memory card is inserted.

### Procedure

Proceed as follows:

1. If you want to save the current registration entries, click the "Save Registry" button.
2. If you want to save the temporary files, click the "Save Files" button.
3. Specify how the file system on the memory card should be restored.
  - Activate automatic restore by selecting the "Automatically Repair ..." check box.
  - If you only want the restore to be carried out upon prompting, clear the "Automatically Repair ..." check box.
4. Confirm your entries.


The dialog closes.

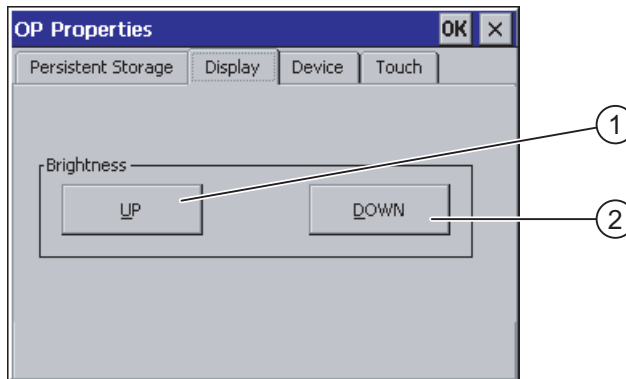
### Result

The desired data is saved.

## 6.6.4 Changing screen settings

### Requirements

You have opened the "OP Properties" dialog box, "Display" tab, by touching the "OP"  icon.



- ① Button for increasing the brightness
- ② Button for reducing the brightness



## Procedure

Proceed as follows:

1. If you want to increase the brightness of the screen, press "UP".
2. If you want to reduce the brightness of the screen, press "DOWN".
3. Confirm your entries.

The dialog closes.

## Result

The screen settings have been changed.

### 6.6.5 Setting the screen saver

#### Power management settings in the WinCC flexible project

To save power, the HMI device has a power management function with the following states:

- "Power Save 1"
  - Reduces the brightness of the backlighting.
- "Power Save 2"
  - The touch screen is switched off.
  - The function keys are not active.

The relevant time intervals are set in the project. Power management is automatically activated if the HMI device is not operated within the specified period of time.

You can clear the "Power Save 1" state by touching the touch screen or pressing the function key.

You can clear the "Power Save 2" state by briefly pressing the ON/OFF button.

#### Settings in the Control Panel

You can also set the following time intervals in the HMI device Control Panel:

- For the automatic activation of the screen saver
- For the automatic reduction in the screen's backlighting

The screen saver and the reduced screen backlighting functions are switched back off by means of the following actions:

- By pressing any key
- By touching the touch screen

The function associated to the key or button will not be executed by this.

### Validity

The time until the backlighting is reduced is always the shorter time interval.


In other words, the time interval set in the "Screensaver" dialog box applies if it is shorter than the setting for "Power Save 1" in the project.

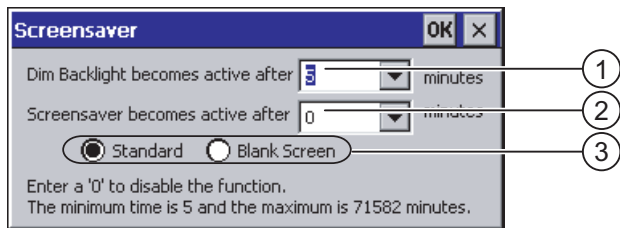
If a value of "0" is entered in the "Screensaver" dialog box for the reduction in backlighting, the value set in the project will apply.

After you have selected the screen saver and reduction of the backlighting, you must restart the HMI device. The settings become effective following a restart.

<b>NOTICE</b>
<b>Reducing the brightness of the backlighting</b>
The brightness of the backlighting decreases incrementally during its operational life. In order to increase the operational life of the backlighting, activate the backlighting reduction.
<b>Burn-in effect</b>
Screen contents may occasionally leave a burn-in effect in the background if they appear too long.
This burn-in effect will automatically disappear after a certain amount of time if the screensaver is activated, for example. The longer the same content is displayed on the screen, the longer it will take for the burn-in effect to disappear.
Generally, you should always activate the screen saver.
When the screen saver is active, the backlighting is reduced at the same time.

### Requirements

You have opened the "Screensaver" dialog with the "ScreenSaver"  icon.



- ① Time interval in minutes until backlighting is reduced
- ② Period of time in minutes before the screen saver is activated
- ③ Screen saver setting

## Procedure

Proceed as follows:

1. Enter the interval in minutes after which the backlighting is to be reduced.  
Entering "0" will deactivate the backlighting reduction.
2. Enter the number of minutes before the screen saver is to be activated.  
The minimum time is 5 minutes and the maximum time is 71582 minutes.  
Entering "0" disables the screen saver.
3. Select either the standard screen saver or an empty screen.
  - In order to select the standard screen saver, select the "Standard" option.
  - In order to select a blank screen as screen saver, select the "Blank Screen" option.
4. Confirm your entries.  
The dialog closes.

## Result

The screen saver and the reduced backlighting for the HMI device is set.  
After you have reselected the screen saver and reduction of the backlighting, you must restart the HMI device. The selection becomes effective following a restart.

## See also

Power management (Page 97)

Restarting the HMI device (Page 157)

## 6.6.6 Changing the printer properties

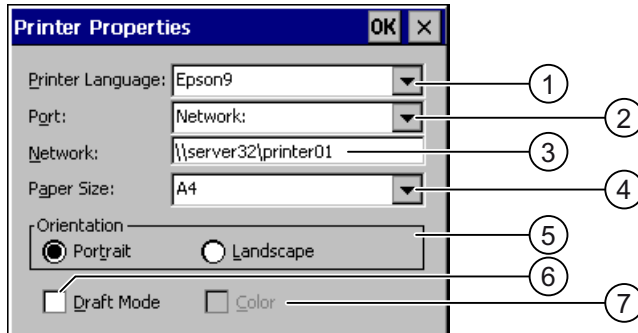
### Introduction

You can print hardcopies and reports on a network printer. Line printing of alarms is not possible on a network printer.

The list of current printers and required settings for HMI devices can be found on the Internet under "<http://support.automation.siemens.com/WW/view/en/11376409>".

## Requirements

You have opened the "Printer Properties" dialog with the "Printer"  icon.



- ① Selection box for the printer
- ② Interface selection box
- ③ Network address of the printer
- ④ Paper format selection box
- ⑤ "Orientation" group with radio buttons for print orientation
- ⑥ Print quality check box
- ⑦ Color printing check box

## Procedure

Proceed as follows:

1. Select the printer from the "Printer Language:" selection box.
2. In the "Port:" selection box, select the "Network:" interface.
3. In the "Network:" text box, enter the network address of the printer.
4. Select the paper format from the "Paper Size:" selection box.
5. Select the required radio button in the "Orientation" group:
  - "Portrait" for portrait
  - "Landscape" for landscape
6. Select the print quality.
  - Select the "Draft Mode" check box if you wish to print in draft mode.
  - Clear the "Draft Mode" check box if you wish to print with higher quality.
7. If the printer selected can print in color and you wish it to do so, select the "Color" check box.
8. Confirm your entries.

The dialog closes.

## Result

The settings for the printer have now been changed.

## 6.6.7 Restarting the HMI device


### Introduction

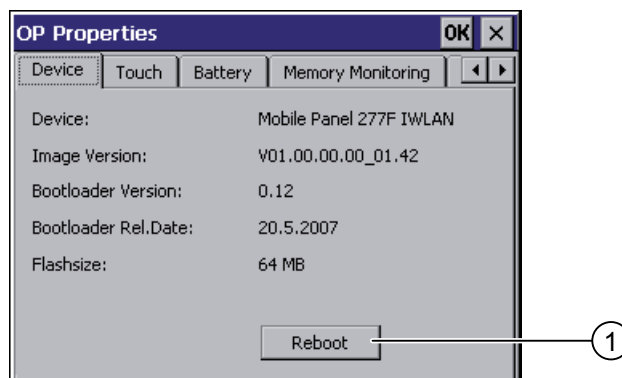
The HMI device must be restarted in the following cases:

- You have activated or deactivated the PROFINET IO direct keys.
- You have changed the time zone setting
- You have switched between summer time and winter time.
- You have reselected the screen saver and reduction of the backlighting.
- You have changed the transfer rate to the Access Point.

<b>⚠ CAUTION</b>
<b>Data loss when the HMI device is restarted</b>
All volatile data is lost when the HMI device is restarted.
Check the following:
<ul style="list-style-type: none"><li>• The project on the HMI device is complete</li><li>• No data is being written to the flash memory</li></ul>

### Requirements

You have opened the "OP Properties" dialog box , "Device" tab,  
by touching the "OP"  icon.



- ① Button for restarting the HMI device

## **Procedure**

1. Press "Reboot" to reboot the HMI device.

A warning is displayed.

Confirm this warning to execute the following:

- If no projects are active on the HMI device, it will restart immediately.
- If a project is active on the HMI device, it will output several prompts. After you have acknowledged these prompts, the HMI device will restart.

## **Result**

The HMI device starts.

## **See also**

Setting the date and time (Page 148)

Enabling PROFINET IO (Page 168)


Overview (Page 129)

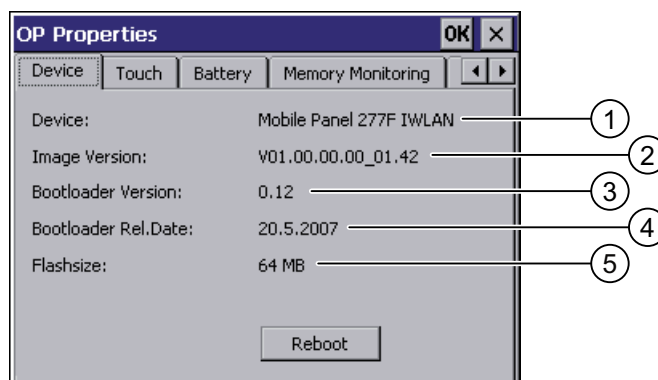
## 6.6.8 Displaying information about the HMI device

### Introduction

You will need the device-specific information when you contact Technical Support.

### Requirements

You have opened the "OP Properties" dialog box, "Device" tab, by touching the "OP"  icon.



- ① HMI device name
- ② Version of the HMI device image
- ③ Version of the boot loader
- ④ Boot loader release date
- ⑤ Size of the internal flash memory in which the HMI device image and project are stored

### Procedure

Proceed as follows:

1. The device-specific information is displayed in the "Device" tab.
2. Close the dialog when the information is no longer required.

---

#### Note

The memory available for the project is only a part of the internal flash memory displayed.

---

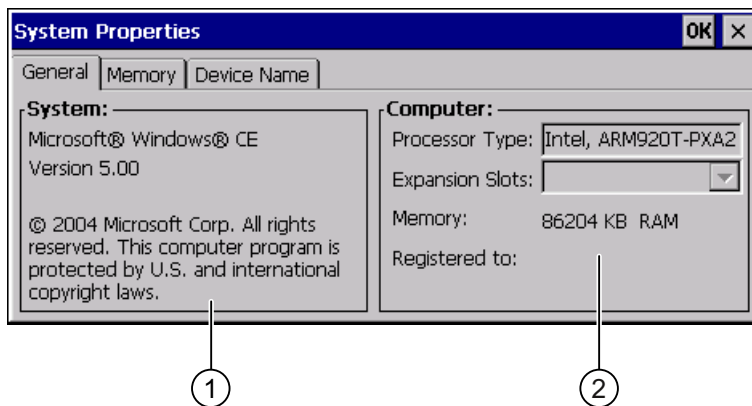
### 6.6.9 Displaying system properties

#### Introduction

The system-specific information provides you with information about the processor, operating system and memory of the HMI device.

#### Requirements

You have opened the "System Properties" dialog with the "System"  icon.



- ① Copyright for Microsoft Windows CE
- ② Information about the processor, size of the internal flash memory, and capacity of a memory card when inserted

#### Displaying system properties

The system information is displayed. This dialog is read-only.  
Close the dialog.



## Procedure for displaying memory information

### NOTICE

#### "Memory" tab

Do not change the memory distribution in the "Memory" tab.

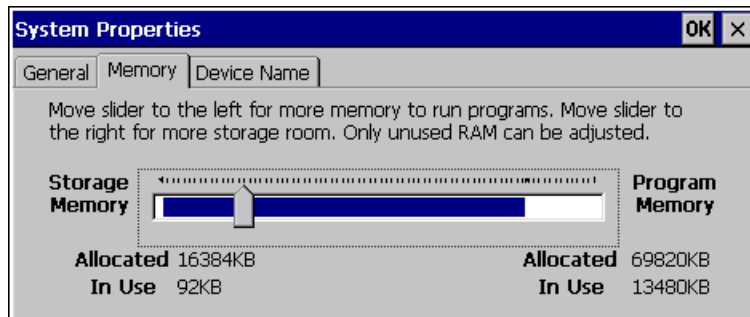
Only applies for the usage of options:

An alteration to the memory distribution may be necessary. Please refer to the accompanying documentation for the option for additional information.

Proceed as follows:

1. Change to the "Memory" tab.

The memory information is displayed.



2. Close the dialog.


### 6.6.10 Activating vibration alarm

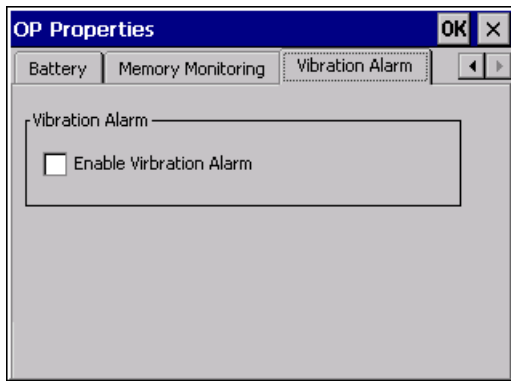
#### Introduction

You can activate a vibration alarm for the HMI device. The vibration alarm will be triggered in the current project under the following circumstances:

- You leave the effective range with the HMI device without logging the HMI device off from the effective range.
- The charging status of the main battery is critical.

#### Requirements

You have opened the "OP Properties" dialog box, "Vibration Alarm" tab, by touching the "OP"  icon.



#### Procedure

1. Select the "Enable Vibration Alarm" check box.
2. Confirm your entries.  
The dialog closes.

#### Result

The vibration alarm is activated.

## 6.7 Programming the data channel

### Introduction

You can only transfer a project if you have enabled at least one data channel.

If you block all data channels, the HMI device is protected against unintentional overwriting of the project data and HMI device image.


---

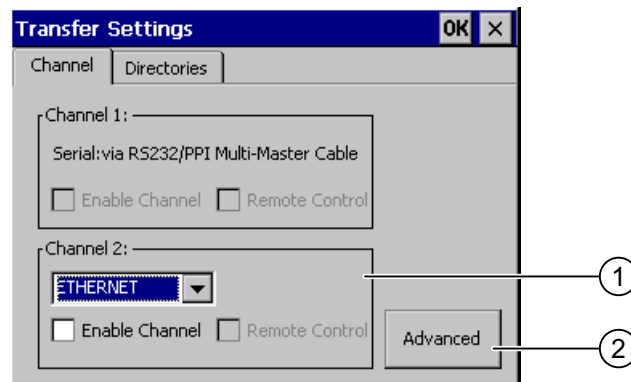
### Note

Data channel 1 is not available with the Mobile Panel 277 Wireless.

---

### Requirements

The "Transfer Settings" dialog box has been opened using the "Transfer Settings"  icon.



- ① Group for the data channel 2 (Channel 2)
- ② Button for the "Network and Dial-Up Connections" dialog box

## Procedure

Proceed as follows:

1. Select the desired interface from the selection box.

---

### Note

"ETHERNET" is for communication via LAN and WLAN.

---

2. If you want to enable the data channel, select the "Enable Channel" check box.
3. If you want to disable the data channel, clear the "Enable Channel" check box.
4. If you want to enable automatic transfer, select the "Remote Control" check box.
5. Enter further parameters if required.
  - Applies to "ETHERNET"  
Press "Advanced" to change to "Network and Dial-Up Connections".  
Open the "LAN" or "WLAN" entry. You can change the TCP/IP settings there.  
Confirm your entries.  
Close "Network and Dial-Up Connections".
  - Applies to "USB"  
No further settings are required for "USB".
6. Confirm your entries.  
The dialog closes.

## Result

The data channel is programmed.

## General information

---

### Note

#### Changes during "Transfer" mode

If changes are made to the transfer settings when the HMI device is in "Transfer" mode or while a project is running, the new settings will only take effect the next time a transfer or the project is started.

This may occur if the Control Panel is opened to change the transfer properties in an active project.

---

NOTICE
<b>Transfer mode via channel 2</b> You can change the settings for the transfer. The following steps are required: <ul style="list-style-type: none"><li>• Close the project.</li><li>• Change the settings on the HMI device.</li><li>• Then return to "Transfer" mode.</li></ul>



## See also


Changing the network configuration (Page 172)

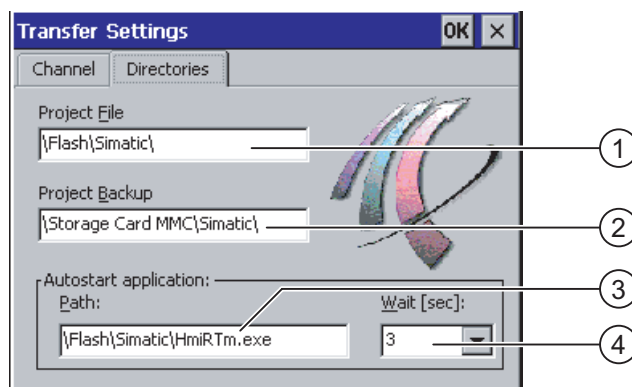
## 6.8 Setting the delay time

### Introduction

The project is opened following a delay time when the HMI device is switched on. The Loader is displayed during the delay time.

### Requirements

You have opened the "Transfer Settings" dialog box, "Directories" tab, by touching the "Transfer"  icon.



- ① Directory where the project file is saved
- ② Directory where the compressed source file of your project is saved  
The external memory card or the network connection can be defined as the storage location. During the next backup process, the project's source file is stored in the specified location.
- ③ Memory location and start file of the HMI device for the executable project file
- ④ Delay time selection box

#### NOTICE

##### Settings under "Project File" and "Path"

Do not change the setting in the "Project File" and "Path:" boxes. The project may not open at the next start of the HMI device if changes are made here.

### Procedure for setting the delay time

1. Select the desired delay time in seconds from the "Wait [sec]:" selection box.  
With the value "0", the project starts immediately. It is now no longer possible to call the Loader after switching on the HMI device. If you still do need to access the Loader an operating element must be configured to close the project.
2. Confirm your entries.  
The dialog closes.

### Result

The delay time for the HMI device is now set.

## 6.9 Setting the PROFIsafe address

### PROFIsafe address

Each participant in PROFIsafe communication has a unique PROFIsafe address. This address is used to send safety message frames between the Mobile Panel 277F IWLAN and the F CPU.

---

#### Note

Assign the HMI device a PROFIsafe address that is unique within the relevant network segment.

---

### Validity of the PROFIsafe address

The PROFIsafe address can be parameterized at the following stages:

- In the HMI device Control Panel
- In the WinCC flexible project

The PROFIsafe address that the HMI device loads depends on the parameterization in the Control Panel.

- If a valid PROFIsafe address has been parameterized in the Control Panel:  
The HMI device loads the PROFIsafe address set in the Control Panel.
- If a valid PROFIsafe address has not been parameterized in the Control Panel:  
The HMI device loads the PROFIsafe address set in the project.

---

#### Note

The invalid address 65,535 is parameterized by default in the Control Panel of the HMI device. The HMI device loads the address set in the project.

---


#### NOTICE

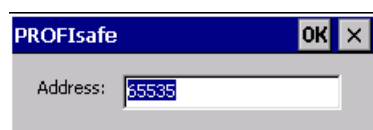
##### No integration in PROFIsafe communication

To ensure that the HMI device can be integrated in PROFIsafe communication, the following addresses must match:

- The PROFIsafe address configured in HW Config by STEP 7
- The PROFIsafe address set in the "PROFIsafe" dialog box

### Requirements

You have opened the "PROFIsafe" dialog with the "PROFIsafe"  icon.



### Procedure

Proceed as follows:

1. If you wish the HMI device to load the PROFIsafe address set in the Control Panel, enter a value between 1 and 65,534 in the "Address:" text box.
2. If you wish the HMI device to load the PROFIsafe address set in the project, enter a value between the invalid PROFIsafe address 65,535 in the "Address:" text box.

### Result


The PROFIsafe address is set.

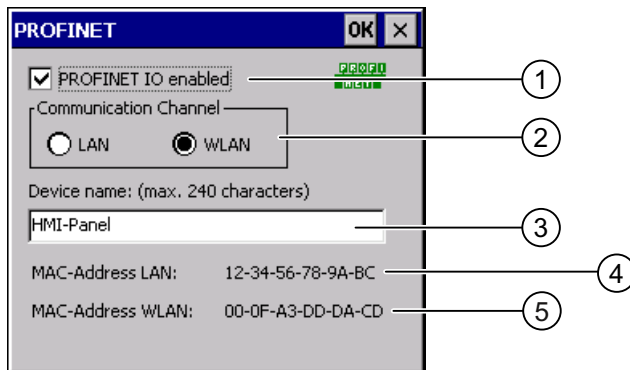
## 6.10 Enabling PROFINET IO

### PROFINET IO

Function keys or buttons can be configured as PROFINET IO direct keys. If PROFINET IO direct keys are used in the project, they must be enabled.

### Requirements

You have opened the "PROFINET" dialog with the "PROFINET"  icon.



- ① Check box to enable or block PROFINET IO direct keys
- ② Group for communications link
- ③ Text box for the device name
- ④ MAC address of the LAN interface
- ⑤ MAC address of the WLAN interface



## Procedure

1. To enable PROFINET IO direct keys, select the "PROFINET IO enabled" check box.
2. Select the communications link.

---

### Note

Select "LAN" for service purposes only. If you select "LAN", the HMI device is connected directly to the network via the RJ45 interface.

If you connect the configuring PC directly to the HMI device through the RJ45 interface, you must open the connection compartment. If the connection bay is open, degree of protection IP 65 is not fulfilled.

---

3. Enter the device name of the HMI device.

The device name can have a maximum of 240 characters.

<b>NOTICE</b>
<b>Addressing error of PROFINET IO device</b>
The device name does not correspond to the computer name in Windows CE.
The device name must match the device name entered in the HW Config of STEP 7.

4. Confirm your entries.

The dialog closes.

5. Reboot the HMI device after saving the settings.

## Result

The PROFINET IO direct keys are enabled.

## See also

Restarting the HMI device (Page 157)

Direct keys (Page 238)

Required properties of the WLAN connection (Page 57)

## 6.11 Configuring network operation

### 6.11.1 Overview of network operation

#### Introduction

You connect the HMI device to a PROFINET network.

The connection to a network offers, for example, the following options:

- Printing via a network printer
- Saving, exporting and importing of recipe data records on or from a server
- Setting up of message and data archives
- Transferring a project
- Saving data

<b>NOTICE</b>
The HMI device can only be used in PROFINET networks. The HMI device only has client functionality in the PC network. This means that users can access files of a node with TCP/IP server functionality from the HMI device via the network. However, you cannot, for example, access data on the HMI device from a PC via the network.

---

**Note**

Information on communication using SIMATIC S7 via PROFINET is provided in the "WinCC flexible communication" user manual.

---

#### Addressing

Within a PROFINET network, computers are usually addressed using device names. These device names are translated from a DNS or WINS server to TCP/IP addresses.

The corresponding servers are generally available in PROFINET networks.

---

**Note**

The use of TCP/IP addresses to address PCs is not supported by the HMI device's operating system.

So to address the HMI device using device names in a PROFINET network, you need a DNS or WINS server.

---

Consult your network administrator if you have questions in this regard

#### Printing via a network printer

The HMI device's operating system does not support line by line alarm logging via a network printer. All other printing functions, for example hardcopy or logs are available without restriction via the network.

## Preparation

Before beginning the configuration, request the following network parameters from your network administrator.

- Does the network use DHCP for dynamic assignment of network addresses?  
If not, get a new TCP/IP network address for the HMI device.
- Which TCP/IP address does the default gateway have?
- If a DNS network is used, what are the addresses of the name server?
- If a WINS network is used, what are the addresses of the name server?

## General procedure for configuring the network

The HMI device must be configured prior to network operation. The configuration is basically divided into the following steps:

Proceed as follows:

1. Enter the device name of the HMI device.
2. Configure the network address.
3. Set the logon information.
4. Save the settings.

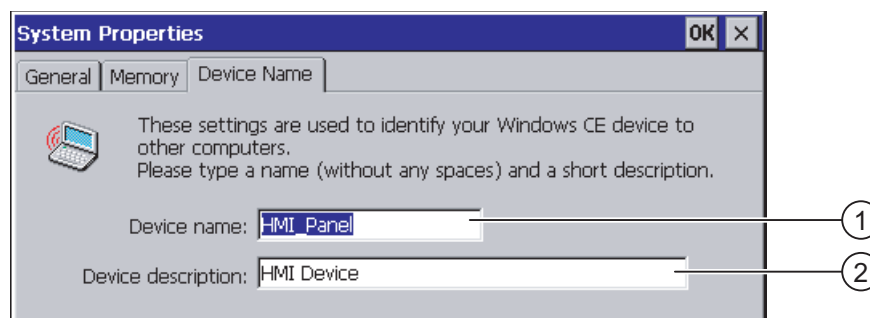
### 6.11.2 Setting the device name of the HMI device

#### Introduction

The HMI device uses the device name to identify itself in the network.

#### Requirements

You have opened the "System Properties" dialog with the "System"  icon.



- ① Device name of the HMI device
- ② Description for the HMI device (optional)

#### Note

To activate the network functions, enter a unique device name in the Device name text box.

### Procedure

Proceed as follows:

1. Enter the device name for the HMI device in the "Device name:" text box.
2. If necessary, enter a description for the HMI device in the "Device description:" text box.
3. Confirm your entries.

The dialog closes.

### Result

The device name for the HMI device is now set.

### See also


Overview of network operation (Page 170)

## 6.11.3 Changing the network configuration

### Introduction

You can change the network settings for the WLAN and LAN connection under "Network and Dial-Up Connections".

### Requirements for changing WLAN or LAN connection settings

You have opened the following display by touching the "Network and Dial-Up Connections"  icon.



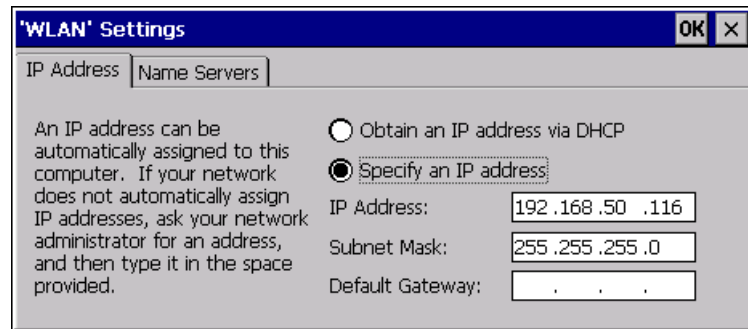
You can enter the connection parameters for the WLAN and LAN connection. The parameterization is identical.

## Procedure for setting the connection parameters

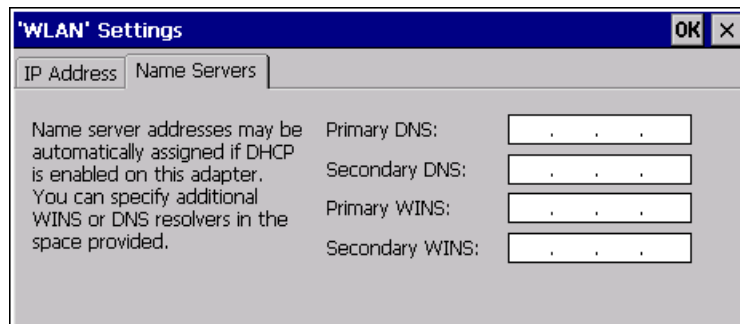
The following procedure shows how to set the connection parameters using the WLAN connection.

Proceed as follows:

1. Open the "WLAN" entry.
  - The "'WLAN' Settings" dialog box opens.



2. Select either automatic address assignment via DHCP or manual address assignment.
3. If you assign the address manually, enter the corresponding addresses in the text boxes for "IP Address", "Subnet Mask" and, if used, "Default Gateway".
4. If a name server is used in the network, change to the "Name Servers" tab.



5. Enter the appropriate addresses.
6. Confirm your entries.
  - The dialog closes.
7. Close the "Network and Dial-Up Connections" display.
  - The Control Panel is displayed again.

## Result

The WLAN / LAN connection parameters for the HMI device have been set.

## See also


Overview of network operation (Page 170)

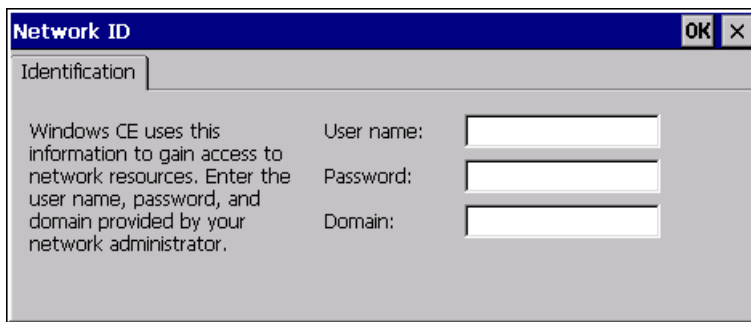
### 6.11.4 Changing the logon data

#### Introduction

In order to access certain network resources you need to log on to the network as a user. Your administrator will issue you with a user name and password and the name of the domain.

#### Requirements

You have opened the "Network ID" dialog with the "Network ID"  icon.



#### Procedure

Proceed as follows:

1. Enter the user name in the "User name" text box.
2. Enter your password in the "Password" text box.
3. Enter the domain name in the "Domain" text box.
4. Confirm your entries.

The dialog closes.

#### Result


The logon data has now been set.

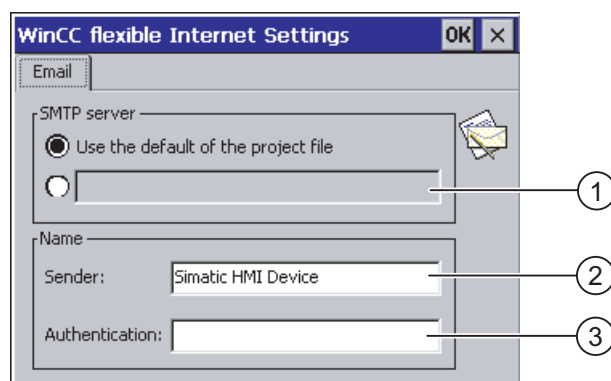
#### See also

Overview of network operation (Page 170)

## 6.11.5 Changing e-mail settings

### Requirements

You have opened the "WinCC flexible Internet Settings" dialog with the "WinCC Internet Settings"  icon.



- ① Setting the SMTP server
- ② Name for the sender
- ③ E-mail account

### Note

#### Options

Additional tabs may appear in the "WinCC flexible Internet Settings" dialog. This depends on the options that have been enabled for network operation in the project.

### Procedure for changing e-mail settings

Proceed as follows:

1. Specify the SMTP server.
  - Select the "Use the default of the project file" option button if you want to use the SMTP server configured in the project.
  - Clear the "Use the default of the project file" option button if you do not want to use the SMTP server configured in the project. Specify the required SMTP server.
2. Enter the name for the sender in the "Sender" text box.
3. Enter the e-mail account for your e-mail in the "Authentication:" text box.

Some e-mail providers only allow you to send mail if you specify the e-mail account. The "Authentication:" text box can remain empty if your e-mail provider allows you to send mail without checking the account.

4. Confirm your entries.

The dialog closes.

**Result**

The e-mail settings have been changed.


**See also**

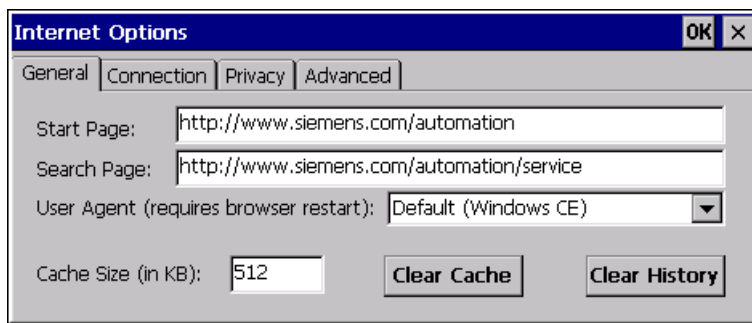
Overview of network operation (Page 170)

## 6.12 Changing internet settings

### 6.12.1 Changing internet settings

**Requirements**

You have opened the "Internet Options" dialog box, "General" tab, by touching the "Internet Options"  icon.



---

**Note**

Do not change the settings in the "User Agent" box.

---

**Procedure**

Proceed as follows:

1. Enter the homepage for the Internet browser in the "Start Page" text box.
2. Enter the address of the required search engine in the "Search Page" text box.
3. Enter the required cache memory size in the "Cache" text box.
4. If you want to delete the cache memory, press the "Clear Cache" button.
5. If you want to delete the history, press the "Clear History" button.
6. Confirm your entries.

The dialog closes.

**Result**

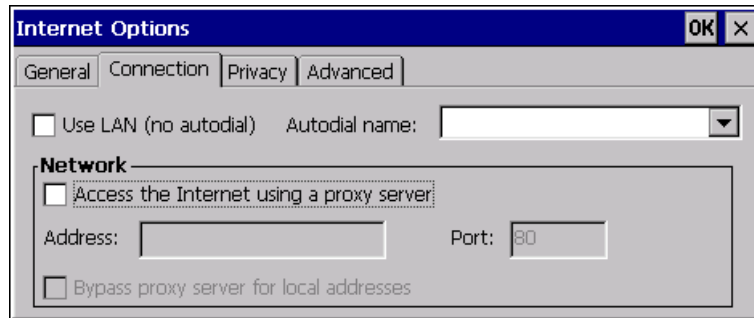
The general parameters for the Internet browser have been set.



## 6.12.2 Setting the proxy server

### Requirements

You have opened the "Internet Options" dialog box, "Connection" tab, by touching the "Internet Options"  icon.



### Procedure

Proceed as follows:

1. Select the "Use LAN (no autodial)" check box.
2. If you are using a proxy server, in the "Network" group, select the "Access the Internet using a proxy server" check box.  
Specify the address of the proxy server and the interface.
3. If you want to bypass the proxy server for local addresses, select the "Bypass proxy server for local addresses" check box.

4. Confirm your entries.

The dialog closes.

## 6.12.3 Changing data protection settings


### Cookies and encryption

Cookies are pieces of information sent by a web server to a browser. In the event of subsequent access to the web server, the cookies are sent back. This enables information to be stored between the accesses.

In order to ensure a high level of privacy, data are sent via the Internet in encrypted form. Common encryption protocols include SSL and TLS. You can activate or deactivate the usage of encryption protocols.

The required settings can be obtained from your network administrator.

### Requirements

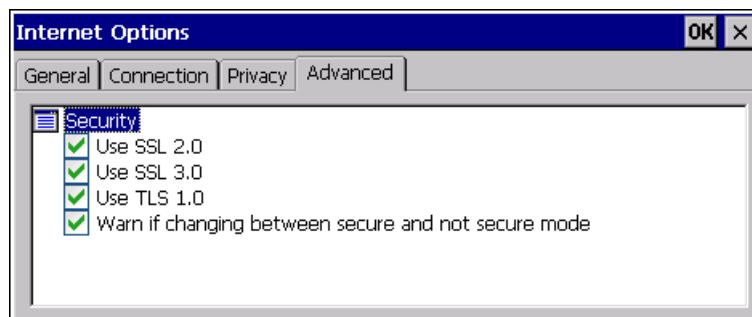
You have opened the "Internet Options" dialog box, "Privacy" tab, by touching the "Internet Options"  icon.



### Procedure

Proceed as follows:

1. Select the required cookie behavior by means of the radio buttons.
  - "Accept"  
Cookies are stored without request.
  - "Block"  
Cookies will not be stored.
  - "Prompt"  
Cookies will be stored on request.
2. If you want allow cookies which are restricted to a single session, select the "Always allow session cookies" check box.
3. Change to the "Advanced" tab.



4. Activate the required encryption protocol.
5. Confirm your entries.  
The dialog closes.

### Result

The safety settings have now been set.

## 6.12.4 Importing and deleting certificates


### Overview

You can import, view and delete certificates. The certificates differ in the following ways:

- Certificates that you trust
- Own certificates
- Other certificates

The required settings can be obtained from your network administrator.

### Requirements

You have opened the "Certificates" dialog with the "Certificates"  icon.



### Procedure

Proceed as follows:

1. Select the type of certificate from the selection box:
  - "Trusted Authorities"
  - "My Certificates"
  - "Other Certificates"
2. If required, start the importing process with the "Import.." button.  
A dialog with source details will open.
3. If required, delete the certificate.
  - Mark the desired certificate.
  - Delete the selected certificate using the "Remove" button.
4. The "View.." button enables you to list the properties of the selected certificate.
5. Close the dialog.

### Result

The changes to the certificates have been carried out.

## 6.13 Backing up and restoring with an external memory medium

### Backup

During a backup, the following data is copied from the HMI device's internal flash memory to an external memory medium.

- Operating system
- Applications
- Data

The following external storage devices are possible:

- Memory card
- USB memory stick

#### CAUTION

##### IP65 degree of protection not fulfilled


To insert or remove the memory card, you must open the HMI device's connection compartment. If the connection bay is open, degree of protection IP 65 is not fulfilled.

It is preferable to back up onto a USB memory stick.

### Requirements for backup

- The current project and all other applications are closed, except Control Panel.
- The HMI device features an external storage device with sufficient free space.

The size of the internal flash memory is displayed with information about the HMI device. If the available space on the external memory medium is insufficient, a warning is displayed and backup is aborted.

You have opened the "Backup/Restore" dialog with the "Backup/Restore"  icon.



## **Procedure for backup**

Proceed as follows:

1. Select "BACKUP" to start Backup.

The HMI device checks the external memory.

The HMI device issues messages in the following situations:

- More than one external memory is available:

Select the desired memory.

- The external memory is not available or is defective:

Acknowledge the displayed messages.

The Control Panel is displayed again.

Replace the external memory. Start the backup process again.

- Data is already stored on the external memory.

2. Follow the instructions of the HMI device.

The following messages are displayed in sequence during backup:

- "Checking Registry"

- "Backup Progress"

- "Saving CE-Image"

A progress bar shows the status of the backup process.

If backup was successful, the following message is displayed:

"Backup successfully completed. Press OK and remove your storage card."

3. Click "OK" button to acknowledge the message.

Remove the external memory medium.

## **Result**

The HMI device data is now saved on the external memory.

### Requirements for restoring

The HMI device features an external memory medium that stores the backup.

### Procedure for restoring

<b>NOTICE</b>
<b>Deleting the flash memory</b> A restore operation deletes the old data from flash memory of the HMI device on confirmation. The data stored on the external memory is then copied to the internal flash memory. Existing license keys are deleted following your confirmation.

The restore process involves the following steps:

- The Windows CE image is restored.
- The HMI device starts.
- All other data is restored.

<b>NOTICE</b>
<b>Cancel restore</b> If the external memory is removed during the restore process, the process is canceled. Ensure that the external memory is not removed at any point during the restore process.

Proceed as follows:

1. Select "RESTORE" to start Restore.

The HMI device checks the external memory.

The HMI device issues messages in the following situations:

- The external memory is not available or is defective:  
Acknowledge the displayed messages.  
The Control Panel is displayed again.  
Replace the external memory.
- More than one external memory with valid backup is available:  
Remove all external memories with backups that are not needed.  
If necessary, you can check the available external memories using the "REFRESH" button.

2. If necessary, start the restore process with the "RESTORE" button.

The data to be restored is checked.

When the check is complete, one of the following prompts is displayed:

- "You are starting RESTORE now. All files (except files on storage cards) and the registry will be erased. Are you sure?"

At this point you can cancel the restore using the "No" button to prevent the data on the HMI device from being deleted.

- You are now starting RESTORE. All files on the panel and the licenses listed below as well as the registry will be erased. Are you sure?

This query is displayed when license keys are available both on the HMI device and in the backup data. If necessary, cancel the restore process with the "No" button and first back up the HMI device's license keys. Then restart the restore process.

3. Start to restore the data by selecting "Yes".

A progress bar shows the status of the restoration of the Windows CE image.

When restore is completed, the following message is displayed:

"Restore successfully finished. Press ok, remove your storage card and reboot your device."

4. Remove the external memory.
5. Acknowledge this message.

The HMI device starts.

## Result

The backed-up data has been restored to the HMI device.

---

### Note

#### Calibrating the touch screen

After the restore, you may have to re-calibrate the touch screen.

---

## See also

Displaying information about the HMI device (Page 159)

Using a memory card with the HMI device (Page 113)

## 6.14 Displaying battery status

### Introduction

You can check the charging status and the temperature of the main battery and the bridging battery.


#### NOTICE

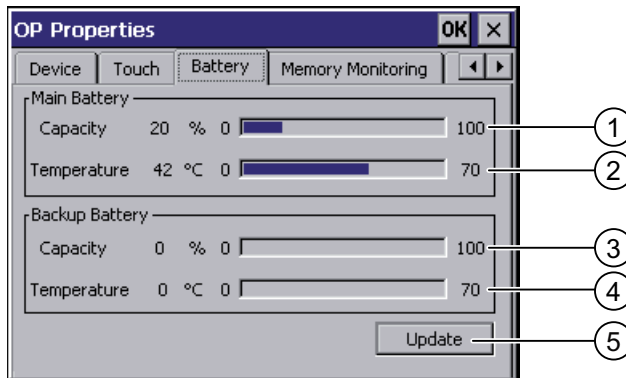
##### Battery cannot be charged

To charge the batteries, the ambient temperature / battery temperature must not exceed 40 °C. The higher the temperature, the longer it will take for the battery to charge.

Find a place with a cool ambient temperature for the charging station. If necessary, allow the battery to cool first.

### Requirements

You have opened the "OP Properties" dialog box, "Battery" tab, by touching the "OP"  icon.



- ① Charging status of main battery
- ② Temperature of main battery
- ③ Charging status of bridging battery
- ④ Temperature of bridging battery
- ⑤ Button to update the display

### Procedure

Proceed as follows:

1. Update the display if required by pressing the "Update" button.
2. Close the dialog.



## 6.15 Activate memory management


### Memory management

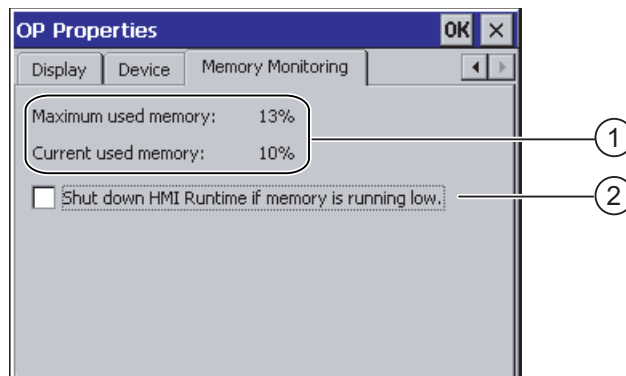
Provided the memory management is activated, the HMI device will automatically close the project if the memory needs reorganizing during an active project.

The project is shut down and the HMI device will display a message. You have to restart the project.

<b>NOTICE</b>
<b>Memory management</b>
If you do not activate memory management, undefined states can occur during the runtime of the project.
Select memory management in the "OP Properties" dialog box.

### Requirements

You have opened the "OP Properties" dialog box, "Memory Monitoring" tab, by touching the "OP"  icon.



- ① The maximum used memory since last power on of the HMI device and the current used memory in percent.
- ② Check box for selecting memory management

### Procedure

Proceed as follows:

1. In order to start memory management, select the check box.
2. Confirm your entries.

The dialog closes.

### Result

Memory management is activated.



# Commissioning the HMI device

## 7.1 Overview

### Operating the HMI device

The HMI device is operated in the system as follows:

- As mobile device, with a battery
- As stationary device, in the charging station

For transfer and testing purposes, you can operate the HMI device in an office environment as follows:

- As mobile device, with a battery
- As stationary device, with a tabletop power supply unit
- As stationary device, in the charging station

### HMI device commissioning requirements

You must take the following steps before commissioning a project on the HMI device:

1. Install and connect up charging station  
Alternatively, connect the HMI device to the tabletop power supply unit.
2. Charging the battery and inserting it in the HMI device  
To charge the battery, you have the following possibilities:
  - In the charging compartment of the charging station
  - In the HMI device, in the charging station
  - In the HMI device when connected to the tabletop power supply unit
3. Switch on the HMI device with the ON/OFF button
4. Commission and test WLAN
5. Define the settings for the transfer in the Control Panel
6. Transfer project to the HMI device

## Commissioning

Start the project once you have transferred it to the HMI device.

---

### Note

If the project contains effective ranges, you must perform an acceptance test for the effective ranges and transponders.

You can only start the project on the HMI device once the acceptance test is complete.

---

- If necessary: Testing zones

## See also

Mounting the charging station (Page 66)

Connection of the charging station to the power supply (Page 69)

Programming the data channel (Page 163)

Acceptance of the system (Page 198)

## 7.2 Operating modes

### Operating modes

The HMI device may be in the following operating modes:

- Offline
- Online
- Transfer

"Offline mode" and "Online mode" can be set on both the configuring PC and the HMI device. To set these modes on the HMI device, use a corresponding operating element of the project.

### Changing the operating mode

The configuration engineer must have configured an appropriate operating element to allow a change of the operating mode on the HMI device during ongoing operation.

Please refer to your system documentation to check whether additional information on this subject is available there.

### "Offline" operating mode

In this operating mode, the HMI device and the PLC do not communicate via the connections configured in the WinCC flexible project. You can operate the current project on the HMI device, but the project data will not be transferred.

---

#### Note

##### Emergency stop button active

In "Offline" mode, the emergency stop button is active when the following requirements are met:

- The HMI device is in an area with sufficient WLAN coverage.
  - The HMI device is integrated in the safety program of the CPU.
- 

### "Online" operating mode

In this mode, the HMI device and PLC communicate. You can operate the plant on the HMI device according to your system configuration.

### "Transfer" mode

In this mode, you can transfer a project from the configuring PC to the HMI device or backup and restore HMI device data, for example.

The following options are available for setting "Transfer" mode on the HMI device:

- When the HMI device starts up  
Start "Transfer" mode manually in the HMI device Loader.
- During ongoing operation  
Start the "Transfer" mode manually within the project using an operating element. With automatic transfer, following a prompt the HMI device toggles to "Transfer" mode when a transfer is initiated on the configuring PC.

## 7.3 Using existing projects

---

### Note

#### Safety-related operator controls

The behavior and possible fields of application of the enabling button and emergency stop button on the Mobile Panel 277F IWLAN are different from those of its predecessors, which do not have Safety Integrated functions.

In this respect, you cannot reuse existing control programs.

For additional information on the safety-related operator controls, refer to the section titled "Particular features of fail-safe operation" and the Function manual "Fail-safe operation of the Mobile Panel 277F IWLAN".

---

You can reuse WinCC flexible projects for the following HMI devices:

- Mobile Panel 177 PN
- Mobile Panel 177 DP
- Mobile Panel 277

Carry out an HMI device switch in WinCC flexible.

### Adaptations

You must adapt the following aspects of the WinCC flexible project:

- Communication via WLAN
- Zone recognition and point recognition
  - If you have used point detection with box ID in an existing project, you have the following option:  
  
Instead of using the connection box, use a zone consisting of at least one transponder and set the previous box ID as the ID in this zone.
  - If you are using zone recognition, you will need one or more transponders for one zone.

In WinCC flexible, you can parameterize zones in "Device settings".

You can use zones to configure an easy way of selecting a zone-specific screen.

In this case you may also need to modify the control program from previous devices.

Additional information on this subject can be found in the WinCC flexible online help or in the "WinCC flexible migration" user manual.

## 7.4 Data transmission options

### Overview

The following table shows the options for data transfer between Mobile Panel 277 Wireless and a configuring PC.

The Ethernet data channel is used for communication via WLAN and LAN (RJ45).

Type	Data channel	Mobile Panel 277 Wireless
Backup	USB	Yes
	Ethernet	Yes
Restoring	USB	Yes
	Ethernet	Yes
Updating the operating system	USB	Yes
	Ethernet	Yes
Updating the operating system with reset to factory settings	USB	No
	Ethernet via the RJ 45 interface	Yes
Transferring a project	USB	Yes
	Ethernet	Yes
Installing or removing an option	USB	Yes
	Ethernet	Yes
License key transferring or transferring back	USB	Yes
	Ethernet	Yes

## 7.5 Preparing and backing up a project

### 7.5.1 Overview

#### Introduction

In order to operate the system with the HMI device, you must transfer the WinCC flexible project to the HMI device.

#### Transferring the project to the HMI device

You can transfer a project to an HMI device as follows:

- Transfer from the configuring PC
- Restore from a PC using ProSave

In this case, an archived project is transferred from a PC to the HMI device.

WinCC flexible need not be installed on this PC.

### Commissioning and recommissioning

- When the HMI device is commissioned there is no project at first.  
The HMI device is also in this state after the operating system has been updated.
- When recommissioning, any project already on the HMI device is replaced.

### See also

Operating modes (Page 188)

## 7.5.2 Transfer

### 7.5.2.1 Overview

#### Transfer

At the end of the configuration phase, transfer the executable project from the configuring PC to the HMI device.

You can start the "Transfer" mode manually or automatically on the HMI device.

Transferred data is written directly to the internal flash memory on the HMI device. For the transfer, you use a data channel which you have to configure before starting a transfer.

#### Backtransfer

You have the option to transfer the compressed project file together with the runtime project to the HMI device. If necessary, the compressed project file can be transferred back to the configuring PC and edited.

The HMI device must be equipped with an external memory to which the compressed project file can be saved.

<b>NOTICE</b>
<b>No checking of the project files</b>
WinCC flexible does not check whether the compressed project file stored on the HMI device corresponds to the existing runtime project.



## 7.5.2.2 Starting manual transfer

### Introduction

You can manually switch the HMI device to "Transfer" mode as follows:

- With a configured operating element during ongoing operation
- In the Loader of the HMI device

### Requirements

- The project "\*.hmi" that you want to transfer is open in WinCC flexible on the configuring PC
- The HMI device is connected to this configuring PC
- The data channel is programmed on the HMI device
- The HMI device is in "Transfer" mode

### Procedure

Proceed as follows:

1. On the configuring PC, select the "Transfer settings" command in the menu "Project > Transfer" in WinCC flexible.  
The "Select devices for transfer" dialog opens.
2. Select the HMI device in the left area of the dialog.
3. Select the type of connection between the HMI device and the configuring PC.
4. Set the connection parameters.
5. Set the transfer parameters in the right area of the dialog.
6. If you wish to transfer the compressed project file together with the executable project to the HMI device:  
Select the "Enable backtransfer" check box.
7. Start transfer in WinCC flexible with "Transfer".

The configuring PC checks the connection to the HMI device. The project is transferred to the HMI device. If the connection is not available or is defective, an error message is displayed on the configuring PC.

### Result

When the transfer is completed successfully, the project can be found on the HMI device. The transferred project is then started automatically.

### See also

- Operating modes (Page 188)
- Data transmission options (Page 191)
- Programming the data channel (Page 163)

### 7.5.2.3 Starting automatic transfer

#### Introduction

If automatic transfer is selected, the HMI device automatically switches to "Transfer" mode during operation as soon as a transfer is initiated on the connected configuring PC.

---

**Note**

The HMI device only switches to "Transfer" mode in the current project.

---

Automatic transfer is particularly suited for the test phase of a new project since transfer is completed without interfering with the HMI device.

<b>NOTICE</b>
---------------

<b>Undesired system responses</b>
-----------------------------------

If automatic transfer has been selected on the HMI device and a transfer is then initiated on the configuring PC, the current project is automatically terminated following a prompt.
---

The HMI device then automatically switches to "Transfer" mode. The transfer mode can trigger undesired responses in the system.
---

After the commissioning phase, deactivate the automatic transfer so that the HMI device cannot be inadvertently switched to transfer mode.
--

You can issue a password in the Control Panel to restrict access to the transfer settings and thus avoid unauthorized modifications.
--

#### Requirements

- The project "\*.hmi" that you want to transfer is open in WinCC flexible on the configuring PC
- The HMI device is connected to this configuring PC
- The data channel is programmed on the HMI device
- The automatic transfer is activated in the data channel for the transfer
- The project is started on the HMI device

## Procedure

Proceed as follows:

1. On the configuring PC, select the "Transfer settings" command in the menu "Project > Transfer" in WinCC flexible.  
The "Select devices for transfer" dialog opens.
2. Select the HMI device in the left area of the dialog.
3. Select the type of connection between the HMI device and the configuring PC.
4. Set the connection parameters.
5. Set the transfer parameters in the right area of the dialog.
6. If you wish to transfer the compressed project file together with the executable project to the HMI device:  
Select the "Enable backtransfer" check box.
7. Start transfer in WinCC flexible with "Transfer".  
The configuring PC checks the connection to the HMI device.  
If the HMI device is integrated, it displays the "Start removal" dialog box.
8. Press one of the enabling buttons to confirm the dialog box.  
The HMI device is removed. The current project is terminated. The HMI device then automatically switches to transfer mode. The project is transferred to the HMI device. If the connection is not available or is defective, an error message is displayed on the configuring PC.

## Result

When the transfer is completed successfully, the project can be found on the HMI device. The transferred project is then started automatically.

## See also

- Operating modes (Page 188)
- Data transmission options (Page 191)
- Programming the data channel (Page 163)

#### **7.5.2.4 Starting backtransfer**

##### **Requirements**

- No project is open on the configuring PC in WinCC flexible
- The HMI device is connected to this configuring PC
- The data channel is programmed on the HMI device
- The HMI device is in "Transfer" mode
- The memory card containing the compressed project file is inserted into the HMI device

##### **Procedure**

Proceed as follows:

1. On the configuring PC, select the "Communication settings" command in the menu "Project > Transfer" in WinCC flexible.

The "Communication settings" dialog box opens.

2. Select the type of HMI device.
3. Select the type of connection between the HMI device and the configuring PC.
4. Set the connection parameters.
5. Close the dialog with "OK".
6. Select the "Transfer" > "Backtransfer" command in the "Project" menu.  
The "Backtransfer" dialog opens.
7. Click "OK" to start the backtransfer process.

The configuring PC checks the connection to the HMI device. The compressed project file is transferred back from the HMI device to the configuring PC. If the connection is not available or is defective, an error message is displayed on the configuring PC.

##### **Result**

After successful backtransfer, the project is opened on the configuring PC in WinCC flexible.

##### **See also**

Operating modes (Page 188)

Data transmission options (Page 191)

Programming the data channel (Page 163)

### 7.5.3 Testing a project

#### Introduction

There are two options to test a project:

- Test the project on the configuring PC

You can test a project at a configuring PC, using a simulator. For detailed information, refer to the "WinCC flexible" user manual and to the WinCC flexible online help.

- Offline testing of the project on the HMI device

Offline testing means that communication between the HMI device and PLC connections, which have been configured in WinCC flexible, is down while the test is being carried out. The PROFIsafe connection between the HMI device and PLC is also available in "Offline" mode.

- Online testing of the project on the HMI device

Online testing means that the HMI device and PLC communicate with each other during testing.

Perform the tests, starting with the "Offline test", followed by the "Online test".

---

#### **Note**

You should always test the project on the HMI device on which the project will be used.

---

Check the following:

1. WLAN coverage
2. Zone recognition, if zones have been configured
3. Check the correct layout of the screens
4. Check the screen navigation
5. Check the input objects
6. Enter the tag values

The test increases the certainty that the project will run error-free on the HMI device.

---

#### **Note**

##### **Test without effective ranges**

Perform the test without effective ranges.

A system acceptance test must be performed as soon as you have configured effective ranges in your project. The effective ranges and assigned transponders will be tested as part of the acceptance test.

Test the effective ranges separately.

---

#### Requirements for offline testing

- The project has been transferred to the HMI device
- The HMI device is in "Offline" mode.

## Procedure

In "Offline" mode, you can test individual project functions on the HMI device without them being affected by the PLC. PLC tags, therefore, are not updated.

Test the operating elements and visualization of the project as far as possible without connecting to the PLC.

## Requirements for online testing

- The project has been transferred to the HMI device
- The HMI device is in "Online" mode

## Procedure

In "Online" mode, you can test individual project functions on the HMI device without them being affected by the PLC. PLC tags are updated in this case.

You have the option to test all communication-dependent functions, for example alarms, etc.

Test the operating elements and views of the project.

## See also

Acceptance of the system (Page 198)

Testing zones (Page 202)

## 7.5.4 Acceptance of the system

### 7.5.4.1 Overview

#### Introduction

The acceptance of the plant includes the following areas:

- Configuring the F CPU and fail-safe I/O
- Safety program
- Effective ranges and transponders

Acceptance steps that you must execute in order to operate the Mobile Panel 277F IWLAN HMI device in a system with effective ranges are described in detail in these operating instructions.

The following manuals contain more detailed information on acceptance of the plant:

- Function manual "Fail-safe operation of the Mobile Panel 277F IWLAN"
- Manual "S7 distributed safety, configuring and programming", Chapter "System acceptance test".

### Acceptance of the effective ranges and transponders

- For acceptance of the effective ranges and transponders you must determine a CRC checksum in the plant and enter it in the project. After subsequent project transfer to the HMI device you can operate the plant with the HMI device.
- Generate a printed copy of the project with output format "Complete".
- Archive the project.

A detailed description about the printing and archiving of projects is provided in the WinCC flexible Online Help.

---

#### Note

If you change transponders in the plant you must execute another acceptance of the plant.

---

When executing an acceptance test of the plant, all of the relevant application-specific standards must be observed.

### 7.5.4.2 Accepting effective ranges and transponders

#### Introduction

For safe operation, the project of the HMI device must precisely match the plant.

For this reason when first starting a project in the plant, you must verify all effective ranges with all transponders. The result of the verification is a CRC checksum that you must enter in the project. Then you must transfer the project to the HMI device again.

---

#### Note

Transponders that are exclusively assigned to one zone are not considered in this verification.

---

#### Acceptance if there are changes

If you change the configuration of transponders and effective ranges in the system, then you must adjust the configuration. Then you must accept the effective ranges and transponders again.

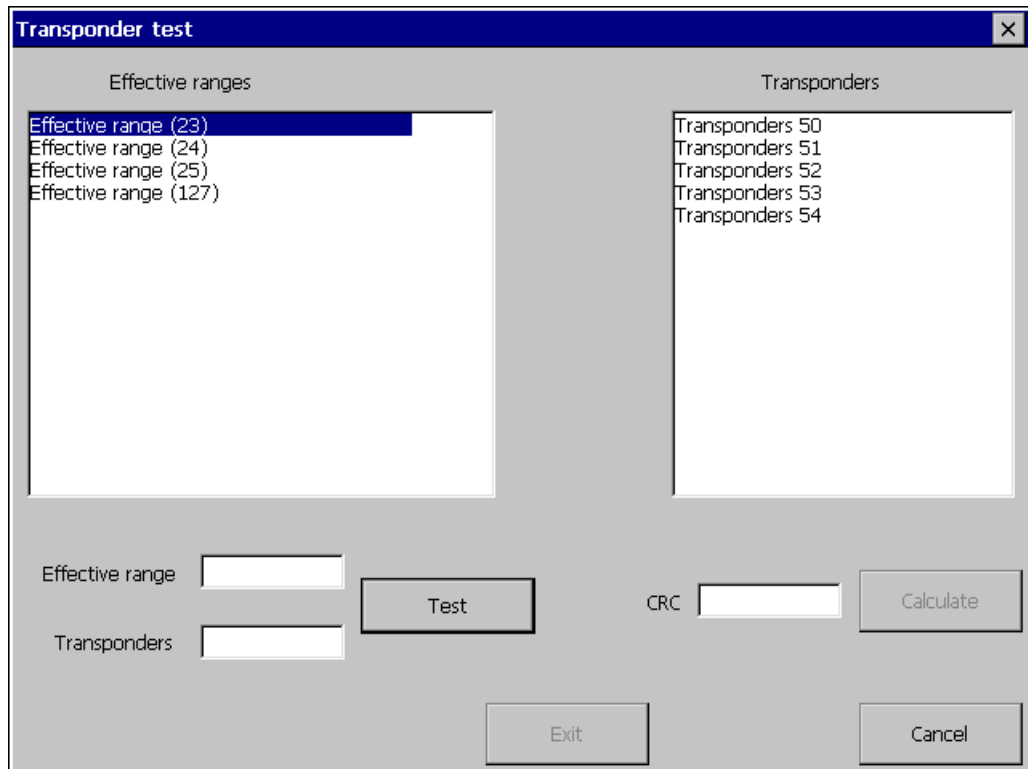
#### Requirements

- In the project:
  - Effective ranges and transponders must be configured in the project.
  - The project has been transferred to the HMI device.
- In the plant:
  - The transponders must be mounted in the plant in such a manner that the effective ranges stored in the project are formed.
  - Batteries must be inserted in the transponders. The ID must be set on the transponders that is stored in the project for these transponders.
  - The IDs of the effective ranges must be marked in the plant.
  - The quality of the WLAN range must be sufficient.

### Procedure

Proceed as follows:

1. Switch on the HMI device.  
The Windows CE desktop with Loader is displayed.
2. If the project does not start automatically, start the project.  
The "Transponder test" dialog box opens.



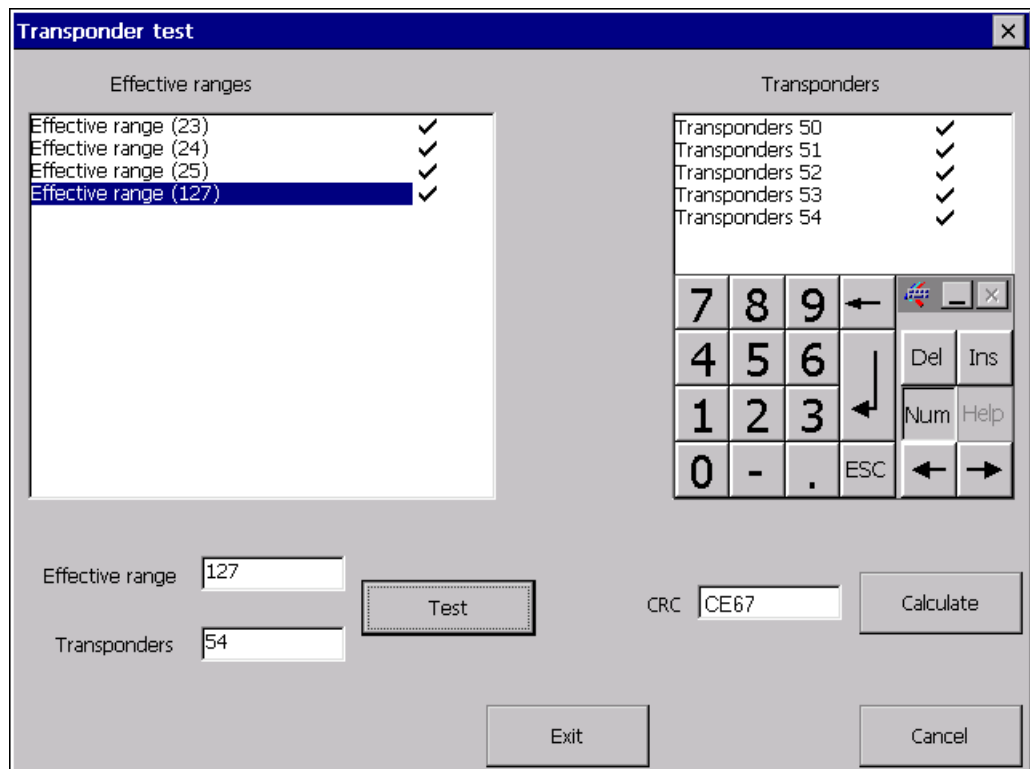
To the left you will see the list with the names of all configured effective ranges.

3. In the "Effective ranges" list highlight the first effective range that you want to verify.  
In the "Transponder" list on the right, the names of the transponders are displayed that are assigned to the effective range in the project.
4. Go to the first transponder that you want to verify in the "Transponder" list.
5. In the system, read the ID of the highlighted effective range and enter this ID in the "Effective range" box.
6. Enter the ID of the transponder where you are located in the "Transponder" box.
7. Verify the entered ID with the "Test" button.

When the HMI device receives the signal of the transponder specified, that transponder is considered to be checked. The transponder will be marked with a check mark in the list.



8. Repeat steps 4 to 7 for all transponders of this effective range.  
If you have successfully checked all transponders of an effective range, that effective range will be indicated with a check mark in the list.
9. Select the next effective range in the list.
10. Repeat steps 4 to 7 for all transponders assigned to this effective range.
11. Verify all additional effective ranges in the list to the left.
12. When you have successfully verified all effective ranges, touch the "Calculate" button.  
The HMI device calculates the CRC checksum.  
The CRC checksum is displayed in the "CRC" box.



13. Open the project in WinCC flexible ES.
14. Enter the checksum in the "Effective ranges" editor.
15. Transfer the project to the HMI device again.

## Result

The HMI device can now be used for operating and monitoring the system.

### 7.5.4.3 Testing effective ranges

After successful verification of the transponders and effective ranges you must test in the plant whether the expansion of the configured effective ranges corresponds to the planning. If the operating elements "Effective range name" and "Effective range quality" are available in the project, you can check the effective ranges on the HMI device.

In particular, check the following cases:

- Do the limits of the effective range run as planned?  
Note particularly that machine operations from excessive distances are not permitted.
- Does the indicator that belongs to the effective range show whether an HMI device is logged on at the effective range?
- Are moving machine parts influencing the reception of the transponders? Check also the extreme positions of moving machine parts.
- Is WLAN coverage ensured everywhere in the effective range?

### 7.5.5 Testing zones

If zones are present in the system, you need to test whether the HMI device is detecting them.

---

#### Note

The following requirements must be fulfilled in order to test zones:

- The project has been transferred to the HMI device and started
  - The HMI device is in online mode
  - The transponders have been fitted and the transponder IDs are set
- 

If the operating elements "Zone label" and "Zone quality" are present in the project, you can check the zones on the HMI device.

In particular, check the following cases:

- Are the zone limits operating as planned?  
Are moving machine parts influencing the reception of the transponders? Check also the extreme positions of moving machine parts.
- Is WLAN coverage ensured in all parts of the zone?

## 7.5.6 Backup and restore

### 7.5.6.1 Overview

#### Backup and restore

You can back up and restore the following data found in the internal flash memory of the HMI device with a PC:

- Project and HMI device image
- Password list
- Recipe data
- License keys

Use one of the following tools for backup and restore:

- WinCC flexible
- ProSave

---

#### Note

Alternatively, use the Control Panel to back up to an external memory device.

---

#### General information

NOTICE
<p><b>Resetting to factory defaults required</b></p> <p>If a complete restore operation is interrupted due to power failure on the HMI device, the operating system of the HMI device may be deleted! In this case, you have to reset the HMI device to its factory settings.</p> <p><b>Compatibility conflict</b></p> <p>If a message is output on the HMI device warning of a compatibility conflict during the restore operation, the operating system must be updated.</p>

### 7.5.6.2 Backup and restore using WinCC flexible

#### Requirements

- No project is open on the configuring PC in WinCC flexible
- The HMI device is connected to this configuring PC
- The data channel is programmed on the HMI device

#### Procedure for backup

Proceed as follows:

1. On the configuring PC, select the "Communication settings" command in the menu "Project > Transfer" in WinCC flexible.  
The "Communication settings" dialog box opens.
2. Select the type of HMI device.
3. Select the type of connection between the HMI device and the configuring PC.
4. Set the connection parameters.
5. Close the dialog with "OK".
6. Select the "Backup" command in the menu "Project > Transfer" in WinCC flexible.  
The "Backup settings" dialog opens.
7. Select the data to be backed up.
8. Select a destination folder and a file name for the "\*.psb" backup file.
9. Set "Transfer" mode on the HMI device.
10. Start the backup operation in WinCC flexible with "OK" on the configuring PC.  
If automatic transfer has been selected on the HMI device, following a prompt the HMI device automatically switches to "Transfer" mode when a backup is initiated.
11. Follow the instructions in WinCC flexible.  
A status view opens to indicate the progress of the operation.

#### Result

The system outputs a message when the backup is completed.

The relevant data is now backed up on the configuring PC.

## Procedure for restoring

Proceed as follows:

1. On the configuring PC, select the "Communication settings" command in the menu "Project > Transfer" in WinCC flexible.  
The "Communication settings" dialog box opens.
2. Select the type of HMI device.
3. Select the type of connection between the HMI device and the configuring PC.  
Set the connection parameters.
4. Close the dialog with "OK".
5. Select the "Restore" command in the menu "Project > Transfer" in WinCC flexible.  
The "Restore settings" dialog opens.
6. Select the "\*.psb" backup file to be restored from the "Open" field.  
You can see the HMI device for which the backup file was created and the type of backup data the file contains.
7. Set "Transfer" mode on the HMI device.  
If automatic transfer has been selected on the HMI device, following a prompt the HMI device automatically switches to "Transfer" mode when a restore operation is initiated.
8. Start the restore operation in WinCC flexible with "OK" on the configuring PC.  
If there are license keys both on the HMI device and in the backup, a dialog box will appear. Use this dialog to establish whether you want to overwrite the license keys or abort the restore process.
  - If necessary, abort the backup and first back up the HMI device's license keys.
  - Then restart the restore process.Follow the instructions in WinCC flexible.  
A status view opens to indicate the progress of the operation.

## Result

When the restore is successfully completed, the data backed up on the configuring PC is now on the HMI device.

## See also

- Operating modes (Page 188)
- Data transmission options (Page 191)
- Programming the data channel (Page 163)
- Overview (Page 203)

### **7.5.6.3 Backup and restore using ProSave**

#### **Requirements**

- The HMI device is connected to a PC on which ProSave is installed
- The data channel is programmed on the HMI device

#### **Procedure for backup**

Proceed as follows:

1. From the Windows Start menu, start ProSave on the PC.
2. Select the HMI device type in the "General" tab.
3. Select the type of connection between the HMI device and the PC.
4. Set the connection parameters.
5. Select the data to be backed up in the "Backup" tab.
6. Select a destination folder and a file name for the "\*.psb" backup file.
7. Set "Transfer" mode on the HMI device.

If automatic transfer has been selected on the HMI device, following a prompt the HMI device automatically switches to "Transfer" mode when a backup is initiated.

8. Start the backup operation in ProSave with "Start Backup".
9. Follow the instructions in ProSave.

A status view opens to indicate the progress of the operation.

#### **Result**

The system outputs a message when the backup is completed.

The relevant data is now backed up on the PC.

## Procedure for restoring

Proceed as follows:

1. From the Windows Start menu, start ProSave on the PC.
2. Select the HMI device type in the "General" tab.
3. Select the type of connection between the HMI device and the PC.
4. Set the connection parameters.
5. Select the "\*.psb" backup file to be restored from the "Restore" tab.

You can see the HMI device for which the backup file was created and the type of backup data the file contains.

6. Set "Transfer" mode on the HMI device.

If automatic transfer has been selected on the HMI device, following a prompt the HMI device automatically switches to "Transfer" mode when a restore operation is initiated.

7. Start the restore operation in ProSave on the PC with "Start Restore".

If there are license keys both on the HMI device and in the backup, a dialog box will appear. Use this dialog to establish whether you want to overwrite the license keys or abort the restore process.

- If necessary, abort the restore and first back up the HMI device's license keys.
- Then restart the restore process.

8. Follow the instructions in ProSave.

A status view opens to indicate the progress of the operation.

## Result

When the restore is successfully completed, the data backed up on the PC is now on the HMI device.

## See also

- Operating modes (Page 188)
- Data transmission options (Page 191)
- Programming the data channel (Page 163)
- Overview (Page 203)

## 7.5.7 Updating the operating system

### 7.5.7.1 Overview

#### Updating the operating system

A compatibility conflict may occur when transferring a project to the HMI device. This is caused by different versions of the configuration software used and the HMI device image available on the HMI device. If there are different versions, the transfer is aborted. A message indicating a compatibility conflict is displayed on the configuring PC.

There are two ways to match the versions:

- Update the HMI device image if the project was created with the most recent version of the configuration software
- Transfer a matching version of the HMI device image if you do not want to adapt the project for the HMI device to the most recent version of the configuration software for the project.

#### General information

<b>NOTICE</b>
<b>Resetting to factory defaults required</b>
If the update of the HMI device image is interrupted due to a power failure on the HMI device, the operating system of the HMI device may be deleted. In this case, you have to reset the HMI device to its factory settings.

<b>NOTICE</b>
<b>Data loss</b>
All data on the HMI device, such as the project and passwords, will be deleted when you update the operating system.

---

**Note**

**Calibrating the touch screen**

After updating the operating system, you may have to recalibrate the touch screen.

---



## Resetting to factory settings

In ProSave or WinCC flexible, you can update the operating system with or without resetting to factory settings.

### CAUTION

#### IP65 degree of protection not fulfilled

To update the operating system and reset to factory settings, you need an Ethernet connection over the RJ45 interface.

If you connect the configuring PC directly to the HMI device through the RJ45 interface, you must open the connection compartment. If the connection bay is open, degree of protection IP 65 is not fulfilled.

- Updating the operating system without resetting to factory settings  
First, switch into "Transfer" mode on the HMI device or use the automatic transfer function if the project is active. Then start the operating system update in ProSave or WinCC flexible.
- Updating the operating system with reset to factory setting

### NOTICE

#### Loss of license keys

The license keys on the HMI device will be deleted when resetting to factory settings. The license keys on the HMI device will be retained when updating the operating system without resetting to factory settings.

### NOTICE

#### Data channels

When resetting to factory settings, all data channel parameters are reset. The transfer can only be started following reconfiguration of the data channels.

### Note

You have to perform an operating system update with reset to factory settings if the HMI device does not yet have an operating system or if the operating system of the HMI device is corrupt.

First, start the operating system update in ProSave or WinCC flexible and switch the power on the HMI device off and on again when prompted.

### 7.5.7.2 Updating the operating system using WinCC flexible

#### Requirements

- No project is open on the configuring PC in WinCC flexible
- The HMI device is connected to this configuring PC
- The data channel is programmed on the HMI device

#### Procedure

Proceed as follows:

1. On the configuring PC, select the "Communication settings" command in the menu "Project > Transfer" in WinCC flexible.  
The "Communication settings" dialog box opens.
2. Select the type of HMI device.
3. Select the type of connection between the HMI device and the configuring PC.
4. Set the connection parameters.
5. Close the dialog with "OK".
6. In WinCC flexible, select the command "Update OS" in the "Project > Transfer" menu.
7. In "Image path", select the HMI device image file "\*.img".

The HMI device image files are available under "WinCC flexible Images" in the WinCC flexible installation folder or on the WinCC flexible installation CD.

In the output area, you are provided information on the version of the HMI device image file after it is opened.

8. Set "Transfer" mode on the HMI device.  
If automatic transfer has been activated on the HMI device, following a prompt the HMI device automatically switches to "Transfer" mode when an update is initiated.
9. In WinCC flexible, select "Update OS" on the configuring PC to run the operating system update.
10. Follow the instructions in WinCC flexible.

During the operating system update a status view opens to indicate progress.

#### Result

A message is displayed when the operating system update is successfully completed.

This operation has deleted the project data from the HMI device.

#### See also

Operating modes (Page 188)

Data transmission options (Page 191)

Programming the data channel (Page 163)

Overview (Page 208)

### 7.5.7.3 Updating the operating system using ProSave

#### Requirements

- The HMI device is connected to a PC on which ProSave is installed
- The data channel is programmed on the HMI device

#### Procedure

Proceed as follows:

1. From the Windows Start menu, start ProSave on the PC.
2. Select the HMI device type in the "General" tab.
3. Select the type of connection between the HMI device and the PC.
4. Set the connection parameters.
5. Select the "OS Update" tab.
6. In "Image path", select the HMI device image file "\*.img".

The HMI device image files are available under "WinCC flexible Images" in the WinCC flexible installation folder or on the WinCC flexible installation CD.

In the output area, you are provided information on the version of the HMI device image file after it is opened.

7. Set "Transfer" mode on the HMI device.

If automatic transfer has been activated on the HMI device, following a prompt the HMI device automatically switches to "Transfer" mode when an update is initiated.

8. Select "Update OS" on the PC to run the operating system update.
9. Follow the instructions in ProSave.

During the operating system update a status view opens to indicate progress.

#### Result

A message is displayed when the operating system update is successfully completed.

This operation has deleted the project data from the HMI device.

#### See also

Operating modes (Page 188)

Data transmission options (Page 191)

Programming the data channel (Page 163)

Overview (Page 208)

#### 7.5.7.4 Resetting to factory settings with WinCC flexible

##### Requirements

- No project is open on the configuring PC in WinCC flexible
- The HMI device is connected to this configuring PC over the Ethernet
- Have the MAC address of your HMI device's Ethernet interface to hand.
  - The MAC address is displayed briefly when the HMI device is turned on.
  - The MAC address is displayed in the "PROFINET" dialog in the Control Panel.

##### Procedure for setting the PC interface

1. Select "Start > Control Panel > Set PG/PC interface".
2. Select "S7ONLINE (STEP7) -> TCP/IP" from the "Application access point" area.
3. Select the interface which is connected to the HMI device from the "Interface parameterization used" area.
4. Confirm your entries.

##### Procedure for resetting to factory settings

Proceed as follows:

1. Turn off the power supply to the HMI device.
2. On the configuring PC, select the "Communication settings" command in the menu "Project > Transfer" in WinCC flexible.

The "Communication settings" dialog box opens.
3. Select the HMI device type from the "General" tab, and select "Ethernet" from the "Connection" area.
4. Enter an IP address.

---

##### Note

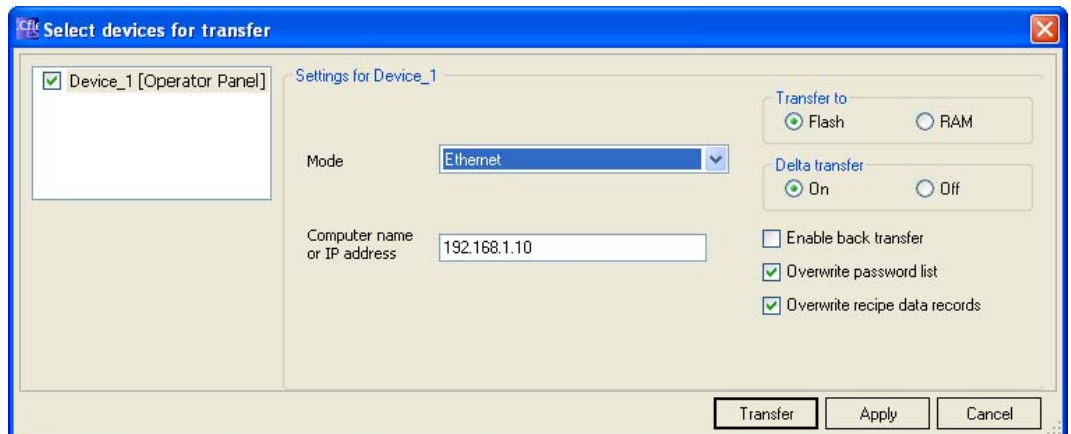
##### Possible address conflicts with incorrect IP address

Do not use a dynamic IP configuration for "Reset factory settings".

Define an IP address which the HMI device is going to receive from the configuration station during the update process.

If the HMI device has already been used with WinCC flexible or ProSave you can use the existing IP address for "Reset factory settings".

---



5. Confirm your entries.
6. In WinCC flexible, select the command "Update OS" in the "Project > Transfer" menu.
7. Select the "Reset factory settings" check box.  
A text box opens where you can enter the MAC address.
8. Enter the HMI device's MAC address in the text box.
9. In "Image path", select the HMI device image file "\*.img".  
The HMI device image files are available under "WinCC flexible Images" in the WinCC flexible installation folder or on the WinCC flexible installation CD.  
In the output area, you are provided information on the version of the HMI device image file after it is opened.
10. In WinCC flexible, select "Update OS" on the configuring PC to run the operating system update.
11. Follow the instructions in WinCC flexible.  
During the operating system update a status view opens to indicate progress.

## Result

A message is displayed when the operating system update is successfully completed. This operation has deleted the project data from the HMI device. The factory settings are reset.

---

## Note

### Calibrating the touch screen

After the restore, you may have to re-calibrate the touch screen.

---

## See also

- Operating modes (Page 188)
- Data transmission options (Page 191)
- Programming the data channel (Page 163)
- Overview (Page 208)

### 7.5.7.5 Resetting to factory settings with ProSave

#### Requirements

- The HMI device is connected over the Ethernet to a PC on which ProSave is installed
- When updating the operating system with reset to factory setting only:  
Have the MAC address of your HMI device's Ethernet interface to hand.
  - The MAC address is displayed briefly when the HMI device is turned on.
  - The MAC address is displayed in the "PROFINET" dialog in the Control Panel.

#### Procedure for setting the PC interface

1. Select "Start > Control Panel > Set PG/PC interface".
2. Select "S7ONLINE (STEP7) -> TCP/IP" from the "Application access point" area.
3. Select the interface which is connected to the HMI device from the "Interface parameterization used" area.
4. Confirm your entries.

#### Procedure for resetting factory settings

Proceed as follows:

1. Turn off the power supply to the HMI device.
2. From the Windows Start menu, start ProSave on the PC.
3. Select the HMI device type from the "General" tab, and select "Ethernet" from the "Connection" area.
4. Enter an IP address.

---

#### Note

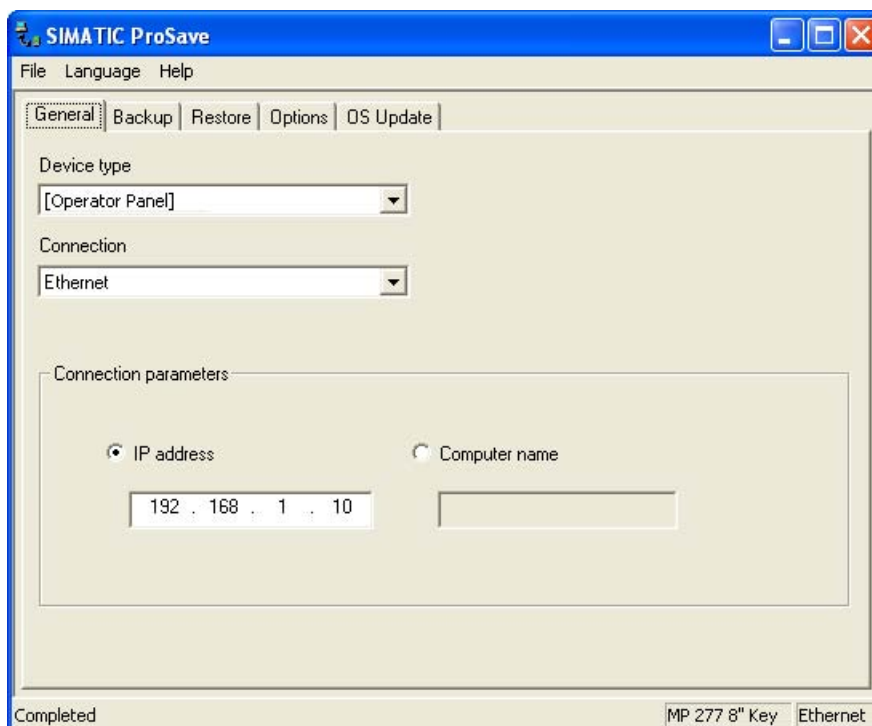
##### Possible address conflicts with incorrect IP address

Do not use a dynamic IP configuration for "Reset factory settings".

Define an IP address which the HMI device is going to receive from the configuration station during the update process.

If the HMI device has already been used with WinCC flexible or ProSave you can use the existing IP address for "Reset factory settings".

---



5. Change to the "OS Update" tab.
6. Select the "Reset factory settings" check box.  
A text box opens where you can enter the MAC address.
7. Enter the MAC address of the HMI device
8. In "Image path", select the HMI device image file "\*.img".  
The HMI device image files are available under "WinCC flexible Images" in the WinCC flexible installation folder or on the WinCC flexible installation CD.  
In the output area, you are provided information on the version of the HMI device image file after it is opened.
9. Select "Update OS" on the PC to run the operating system update.
10. Follow the instructions in ProSave.  
During the operating system update a status view opens to indicate progress.

## Result

A message is displayed when the operating system update is successfully completed.

This operation has deleted the project data from the HMI device.

The factory settings are reset.

---

### Note

#### Calibrating the touch screen

After the restore, you may have to re-calibrate the touch screen.

---

## See also

Operating modes (Page 188)

Data transmission options (Page 191)

Programming the data channel (Page 163)

Overview (Page 208)

## 7.5.8 Installing and removing options

### 7.5.8.1 Overview

#### Installing and removing options

You can install options on the HMI device, for example, additional programs developed especially for the HMI device.

You can also remove the option from the HMI device again.

---

### Note

#### License key

A license key may be needed to run an option. The license key unlocks the option for use.

---



### 7.5.8.2 Installing and removing options using WinCC flexible

#### Requirements

- No project is open on the configuring PC in WinCC flexible
- The HMI device is connected to this configuring PC
- The data channel is programmed on the HMI device

#### Procedure for installing an option

Proceed as follows:

1. On the configuring PC, select the "Communication settings" command in the menu "Project > Transfer" in WinCC flexible.  
The "Communication settings" dialog box opens.
2. Select the type of HMI device.
3. Select the type of connection between the HMI device and the configuring PC.
4. Set the connection parameters.
5. Close the dialog with "OK".
6. Select the "Options" command in the menu "Project > Transfer" in WinCC flexible.
7. Select the desired option under "Available options".
8. Set "Transfer" mode on the HMI device.

If automatic transfer is activated on the HMI device, following a prompt the HMI device automatically switches to "Transfer" mode when the installation of an option is initiated.

9. Start the installation of the option in WinCC flexible on the configuring PC with the ">>" button.
10. Follow the instructions in WinCC flexible.  
A status display appears indicating the progress of the installation.

#### Result

The option has now been installed on the HMI device.

### Procedure for removing an option

Proceed as follows:

1. On the configuring PC, select the "Communication settings" command in the menu "Project > Transfer" in WinCC flexible.  
The "Communication settings" dialog box opens.
2. Select the type of HMI device.
3. Select the type of connection between the HMI device and the configuring PC.
4. Set the connection parameters.
5. Close the dialog with "OK".
6. Select the "Options" command in the menu "Project > Transfer" in WinCC flexible.
7. Press the "Device status" button to update the display.
8. Select the desired option under "Installed options".
9. Set "Transfer" mode on the HMI device.

If automatic transfer is activated on the HMI device, following a prompt the HMI device automatically switches to "Transfer" mode when the removal of an option is initiated.

10. Start the removal of the option in WinCC flexible on the configuring PC with the "<<" button.
11. Follow the instructions in WinCC flexible.  
A status display appears indicating the progress of the removal.

### Result

The option has now been removed on the HMI device.

### See also

- Operating modes (Page 188)
- Data transmission options (Page 191)
- Programming the data channel (Page 163)
- Overview (Page 216)

### 7.5.8.3 Installing and removing options using ProSave

#### Requirements

- The HMI device is connected to a PC on which ProSave is installed
- The data channel is programmed on the HMI device

#### Procedure for installing an option

Proceed as follows:

1. From the Windows Start menu, start ProSave on the PC.
2. Select the HMI device type in the "General" tab.
3. Select the type of connection between the HMI device and the PC.
4. Set the connection parameters.
5. Select the "Options" tab.
6. Select the desired option under "Available options".
7. Set "Transfer" mode on the HMI device.

If automatic transfer is activated on the HMI device, following a prompt the HMI device automatically switches to "Transfer" mode when the installation of an option is initiated.

8. Start the installation of the option in ProSave with the ">>" button.
9. Follow the instructions in ProSave.

A status display appears indicating the progress of the installation.

#### Result

The option has now been installed on the HMI device.

### Procedure for removing an option

Proceed as follows:

1. From the Windows Start menu, start ProSave on the PC.
2. Select the HMI device type in the "General" tab.
3. Select the type of connection between the HMI device and the PC.
4. Set the connection parameters.
5. Select the "Options" tab.
6. Press the "Device status" button to update the display.
7. Select the desired option under "Installed options".
8. Set "Transfer" mode on the HMI device.

If automatic transfer is activated on the HMI device, following a prompt the HMI device automatically switches to "Transfer" mode when the removal of an option is initiated.

9. Start the removal of the option in ProSave with the "<<" button.
10. Follow the instructions in ProSave.

A status display appears indicating the progress of the removal.

### Result

The option has now been removed on the HMI device.

### See also

Operating modes (Page 188)

Data transmission options (Page 191)

Programming the data channel (Page 163)

Overview (Page 216)

## 7.5.9 Transferring and transferring back license keys

### 7.5.9.1 Overview

#### Transferring and transferring back license keys

With the purchase of an optional package, you obtain a specific user license with an associated license key. Once you have installed an option, transfer a license key to the HMI device. The license key unlocks an option for use.

You can also transfer back the license key from the HMI device to the storage location.

---

#### Note

You only transfer license keys with the Automation License Manager or WinCC flexible.

---

### 7.5.9.2 Transferring and transferring back license keys

#### Requirements

- When transferring or transferring back using WinCC flexible:  
No project is open on the configuring PC in WinCC flexible
- The HMI device is connected to this configuring PC
- The data channel is programmed on the HMI device
- The storage location and the license key awaiting transfer are ready

#### Procedure for transferring a license key

Proceed as follows:

1. Switch to "Transfer" mode on the HMI device.
2. When transferring using WinCC flexible:  
Select the "License Keys" command in the menu "Project > Transfer".  
The Automation License Manager opens.  
When transferring using the Automation License Manager:  
Start the Automation License Manager via the Windows Start menu.
3. In the Automation License Manager, select the command "Connect HMI device" in the menu "Edit > Connect target system".  
The "Connect target system" dialog opens.
4. Under "Device type", select the appropriate HMI device type.
5. Select the type of connection from the "Connection" box.
6. Set the connection parameters.
7. Select "OK".  
The connection to the HMI device is established. The connected HMI device is displayed in the left window of the Automation License Manager.
8. In the left window, select the source drive.  
The right window displays the available license keys.
9. Drag one or more license keys from the right window and drop them on the HMI device in the left window.  
The license keys are then transferred to the HMI device.

#### Result

The license key is transferred from the storage location to the HMI device.

### Procedure for transferring back a license key

Proceed as follows:

1. Switch to "Transfer" mode on the HMI device.
2. When transferring back using WinCC flexible:  
Select the "License Keys" command in the menu "Project > Transfer".  
The Automation License Manager opens.  
When transferring back using the Automation License Manager:  
Start the Automation License Manager via the Windows Start menu.
3. In the Automation License Manager, select the command "Connect HMI device" in the menu "Edit > Connect target system".  
The "Connect target system" dialog opens.
4. Under "Device type", select the appropriate HMI device type.
5. Select the type of connection from the "Connection" box.
6. Set the connection parameters.
7. Select "OK".  
The connection to the HMI device is established. The connected HMI device is displayed in the left window of the Automation License Manager.
8. In the left window, select the HMI device.  
The right window displays the available license keys.
9. Drag one or more license keys from the right-hand window and drop them on the target drive in the left-hand window.  
The license keys are transferred back to the storage location.

### Result

The license key is transferred back from the HMI device to the storage location.

### See also

Operating modes (Page 188)

Programming the data channel (Page 163)

## Fail-safe mode

### 8.1 Organizational measures

The HMI device should only be operated in the system with a battery or in the charging station.

To ensure fail-safe operation of the HMI device the organizational measures described below must be complied with.

#### Storing the HMI device

 **WARNING**

**Non-functional emergency stop button**

If the HMI device is not integrated, the emergency stop button does not function.

To avoid confusion between effective and non-effective emergency stop buttons, only one integrated HMI device should be freely accessible.

If the HMI device is not in use, it must be stored in a locked area.

### Handling the HMI device during operation

<b>CAUTION</b>
<b>Shutdown or rampdown of the system due to empty battery</b> An integrated HMI device with flat battery triggers a communication error. This results in the following reaction of the F CPU: <ul style="list-style-type: none"><li>• If the HMI device is logged on at the effective range: Shutdown</li><li>• If the HMI device is not logged on at the effective range: Global rampdown</li></ul> Check the charge status of the battery of the ready-for-operation device via the "BAT" LED. <ul style="list-style-type: none"><li>• Recharge the HMI device in good time. To charge the batteries, the ambient temperature / battery temperature must not exceed 40 °C The higher the temperature, the longer it will take for the battery to charge. Find a place with a cool ambient temperature for the charging station. If necessary, allow the battery to cool first. You can check the battery temperature in the "OP" dialog box, "Battery" tab in the Control Panel. Alternatively, change the main battery.</li></ul>

The following must be noted when working with the Mobile Panel 277F IWLAN:

- Pay attention to the "SAFE" LED.  
If the HMI device is integrated in fail-safe communication, the "SAFE" lights up and the emergency stop button is active.
- Pay attention to the "COM" LED.  
If you leave the area with sufficient WLAN coverage, the "COM" LED will flash. Communication between the HMI device and PLC is down. You can no longer operate the system with the HMI device.
- Check the "RNG" LED when the HMI device is logged onto the effective range.  
The "RNG" LED indicates when the HMI device is logged onto the effective range. Logging onto the effective range is required for the enabling button to be active.

<b>CAUTION</b>
<b>Unauthorized operation possible</b> It is not permitted to leave the effective range without an HMI device while the HMI device is logged on to the effective range.



## 8.2 Switch-off behavior

### Introduction

Different switch-off behavior is possible depending on the situation in the plant:

- Emergency stop
- Shutdown
- Local rampdown
- Global rampdown

Plant switch-off differs in its triggers and effects.



#### **No triggering of safety states**

The switch-off behavior described is only triggered in the system if the F CPU has been programmed accordingly.

### Emergency stop

Press the emergency stop button to trigger the emergency stop. The emergency stop depends on the effective ranges. If the emergency stop button is pressed, the F CPU triggers an immediate stop of the machines assigned to it.

The emergency stop button is always active if there is PROFIsafe communication between HMI device and F CPU, i.e. if the HMI device is integrated in the PROFIsafe communication. If PROFIsafe communication is present the "SAFE" LED lights up.

### Shutdown

Shutdown is triggered by the F CPU. The shutdown is specific to the effective range. If the F CPU detects a communication error for an HMI device logged on in the effective range, it triggers the emergency stop of the machines that belong to the effective range.

### Local rampdown

Local rampdown is triggered if the HMI device is logged on at the effective range and if it leaves the effective range for longer than 30 seconds. Local rampdown is specific to the effective range.

Local rampdown triggers a defined slow stop of the machines of the effective range.

### Global rampdown

Global rampdown is triggered by the F CPU. Global rampdown is independent of the effective ranges.

For global rampdown the following response must be programmed in the safety program of the F CPU: If the F CPU detects a communication error for an HMI device integrated in the PROFIsafe communication, it triggers a defined slow stop of the machines subordinate to it.

### Trigger

Switch-off behavior can be triggered by the following:

- The emergency stop button is pressed.
- A communication error occurs.
- Timeout: The HMI device is logged onto the effective range and the operator leaves the effective range with the HMI device for longer than 30 seconds.

### Triggering the switch off

The following table shows the effect of the different triggers depending on the operating situation:

Operating situation			Trigger		
			Emergency stop pressed	Communication error	Timeout
HMI not integrated			---	---	---
HMI integrated	HMI device logged on at the effective range	HMI device is in the effective range	Emergency stop	Shutdown	---
		HMI device is outside of the effective range for less than 30 seconds	Emergency stop	Shutdown	---
		HMI device is outside of the effective range for longer than 30 seconds	Emergency stop	Shutdown	Local rampdown
	HMI device is logged off from the effective range		Emergency stop	Global rampdown	---

## 8.3 Integrating the HMI device

### Introduction

During fail-safe operation, a safety program runs in the F CPU. This safety program communicates with the HMI device. The F CPU monitors the communication for errors and evaluates the signals. The terms "integrate" and "remove" refer to integrating the HMI device in and removing it from the safety program of the F CPU.

### Integrating

If the HMI device is configured for the safety program, it is automatically integrated in the safety program when the project is started. The "SAFE" LED lights up to indicate that integration is complete.

The emergency stop button becomes active as soon as the HMI device is integrated.

### Requirements

- WLAN communication is established.
- The Loader is displayed on the HMI device.
- Effective ranges and transponders are accepted.

### Procedure

Proceed as follows:

1. If the project does not start automatically, start it in the Loader.  
PROFIsafe communication is established. While the connection is being established, the "Establishing secure connection" dialog box is displayed. The HMI device is integrated in the safety program of the F CPU.  
The "Test enabling button" dialog box opens.
2. The operator presses both enabling buttons until the "Panic" setting is reached.

### Result

The project start screen appears. The "SAFE" LED lights up.

## 8.4 Removing the HMI device


### Removing

This concept refers to intentionally removing the HMI device from the safety program.

You have the following options for removing the HMI device:

- Close the project.
- Press and hold the ON/OFF button for at least 4 seconds. After it has been removed, the HMI device switches off.

No side effects (such as a global rampdown) occur as a result of the operator removing the HMI device. Once the removal procedure is complete, the "SAFE" LED goes out and the emergency stop button is no longer active.

 <b>WARNING</b>
<b>Non-functional emergency stop button</b> If the HMI device is not integrated, the emergency stop button does not function. To avoid confusion between effective and non-effective emergency stop buttons, only one integrated HMI device should be freely accessible.

If the HMI device is not in use, it must be stored in a locked cabinet.

### Requirements

- The project is started.
- The HMI device is integrated in the safety program of the F CPU.

### Procedure

Proceed as follows:

1. To close the project, use the operating element designed for this purpose. Alternatively, press and hold the ON/OFF button for at least 4 seconds. Following a prompt, the "Confirm removal" dialog box is displayed.
2. Press the enabling button to confirm the dialog box.

---

#### Note

##### Global rampdown

A global rampdown will occur, if you do not confirm the dialog "Confirm removal" within 60 seconds using one of the enabling buttons.

---

## Result

The "SAFE" LED on the HMI device goes out as soon as you have pressed the enabling button to confirm the removal.

PROFIsafe communication is terminated. The HMI device is removed from the safety program of the F CPU. The project is terminated. If you have pressed the ON/OFF button, the HMI device switches off.

## Removal in the event of a communication error

In the event of a communication error, the F CPU removes the HMI device and initiates a global rampdown.

The "SAFE" LED on the HMI device goes out. The project is terminated.

# 8.5 Logging onto and off from the effective range

## Introduction

An effective range is the range in which sections of the system, for example a machine, can be operated with the enabling buttons of the HMI device. As soon as you are in an effective range with the HMI device, you can log the device onto the effective range. Fail-safe operation of the system section delimited by the effective range is only possible after the HMI device has been successfully logged on.

---

### Note

Before leaving the effective range with the HMI device, you must log it off from the effective range.

---

## Requirements for logging on

- The HMI device is integrated. The "SAFE" LED lights up.
- The ID of the effective range is marked in the system.
- The HMI device is located within the effective range.
- No other HMI devices are logged onto this effective range.
- The "Effective range name" operating element is configured and displayed as follows:

**Rangename**

"Rangename" indicates the name in the case of any effective range.

**Procedure for logging on**

1. Touch the "Effective range name" operating element.  
The "Effective range logon" dialog box opens.
2. Read the ID of the effective range from the machine or system to be operated.
3. Enter the ID of the effective range.
4. Confirm your entries.  
The dialog closes.

**Result**

- If the ID entered matches the ID configured for the effective range, the HMI device is logged onto the effective range.
- No other HMI device can log onto this effective range. The "RNG" LED lights up.
- You can use the enabling buttons to operate the machine in the effective range.
- The "Effective range name" operating element is displayed as follows:



**Behavior in the effective range following successful logging on**

<b>CAUTION</b>
<b>Shutdown</b> If the HMI device is in a state where it is constantly ready for operation, the battery will lose its charge. A flat battery will result in a communication error. The F CPU initiates a shutdown.  Under no circumstances should the effective range be left without an HMI device while the HMI device is logged onto the effective range.

<b>CAUTION</b>
<b>Rampdown</b> If you leave the effective range without logging off, or the HMI device no longer recognizes the transponder, the following steps are carried out:  After 5 seconds, the "Effective range left without logging off" dialog box appears. If you do not return to the effective range within 25 seconds, the HMI devices initiates a local rampdown and begins logging off from the effective range. The HMI device is logged off from the effective range once logging off has been confirmed. This means that other HMI devices are free to log onto the effective range.  Return to the effective range in good time.  Always align the HMI device so that it is possible to measure the distance between the HMI device and the transponder.

Note the displays of the HMI device LEDs; in particular, the "RNG" and "BAT" LEDs.

The HMI device will trigger the vibration alarm under the following circumstances (if configured):

- The charging status of the battery is < 10%.
- You leave the effective range with the HMI device without logging the HMI device off from the effective range.

### Requirements for logging off

- The HMI device is logged onto the effective range. The "RNG" LED lights up.
- The "Effective range name" operating element is configured and displayed as

follows:



### Procedure for logging off

Before leaving the effective range or project, you must log off from the effective range.

1. Touch the "Effective range name" operating element.  
The "Effective range logoff" dialog box opens.
2. Confirm logging off with the "OK" button.

### Result

- The HMI device is no longer logged onto the effective range. The "RNG" LED goes out.
- Other HMI devices can now log onto this effective range.
- The "Effective range name" operating element may be displayed as either

of the following:



or



### See also

Distance measurement between HMI device and transponder (Page 60)

Displaying the effective range name (Page 252)

## 8.6 "Override" mode

### Introduction

The effective range functionality of the HMI device can be extended with the "Override" mode.

"Override" mode can be used in the following cases:

- Application of existing protective measures instead of the effective range functionality  
If there are already safety measurements in your system, e.g. safety gates, they can be integrated into the safety concept with the "Override" mode.
- When sections of the system that are not covered by transponders (inside a robot cell, for example) are to be operated with the enabling buttons.

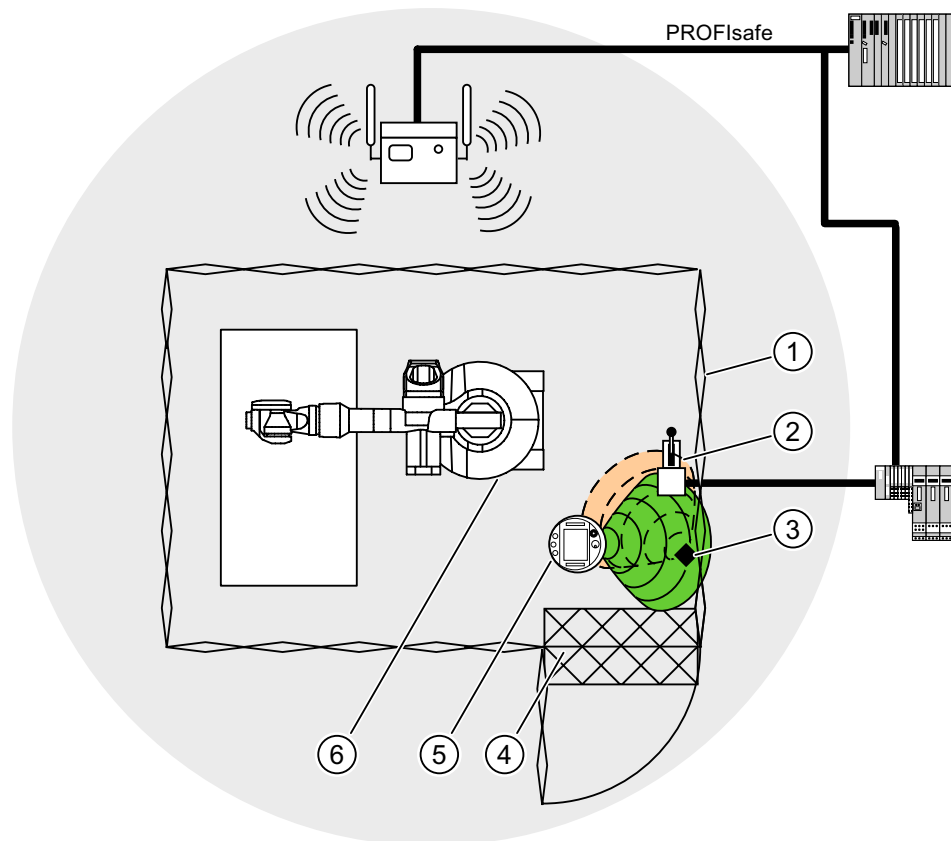
In this case the system area must be secured by additional safety measurements, with a safety gate for example.

"Override" mode must only be used in defined system zones that are secured by additional protective measures, such as a safety gate.

The switch for activating "Override" mode must be inside the protective device, and in an effective range.



Sample configuration:



- ① Safety gate
- ② Switch for activating "Override" mode
- ③ Transponder for logging onto the effective range
- ④ Foot grating for access monitoring
- ⑤ HMI device
- ⑥ Machine to be operated

For additional notes on this subject, refer to the System manual "Safety Integrated" and the Function manual "Fail-safe operation of the Mobile Panel 277F IWLAN".

### Requirements for activating "Override" mode

- The system has the protective devices specified for "Override" mode.
- The HMI device is integrated. The "SAFE" LED lights up.
- The HMI device is logged onto the same effective range in which the override switch located. The "RNG" LED lights up.

#### NOTICE

If "Override" mode is activated and you leave the defined system area, "Override" mode will be automatically deactivated. You must reactivate the override switch when you return to the defined system area.

**Procedure for activating "Override" mode**

1. Enter the protection zone.  
The protective device is thereby activated.
2. Activate the override switch.

**Result**

"Override" mode is active.

The "Effective range quality" screen object is displayed entirely in green.

The transponders are not evaluated when forming the effective range. Use the HMI device to operate the machine as though you were in the middle of the effective range. This approach applies for the entire override range.

No other HMI device can log onto the effective range.



**Requirements for deactivating "Override" mode**

"Override" mode is activated.

<b>NOTICE</b>
It is only possible to log back onto this effective range once you have performed the following actions: <ul style="list-style-type: none"><li>• You have deactivated "Override" mode using the override switch.</li><li>• You have logged the HMI device off from the effective range.</li></ul> The "RNG" LED is off.

**Procedure for deactivating "Override" mode**

1. Use the override switch to deactivate "Override" mode.

**Result**

"Override" mode is deactivated. The HMI device is still logged onto the effective range.

**See also**

Displaying the effective range quality (Page 253)

Displaying the effective range name (Page 252)

# Operating a project

## 9.1 Starting the project

### Requirements

In order to switch on the Mobile Panel 277F IWLAN and start the project, the following requirements must be met:

- The batteries have been charged and inserted in the HMI device  
If the batteries are not available, place the HMI device in the charging station
- The project has been transferred to the HMI device.
- The WLAN quality is sufficient
- Transponders, if effective ranges/zones are configured:
  - The transponders are installed
  - The batteries are fitted in the transponders
  - A unique ID has been set in the transponders that matches the project parameterization

### Switching on the HMI device

Press the ON/OFF button.

The HMI device performs the following steps:

1. The HMI device starts.
2. The "PWR" LED lights up.
3. The "BAT" LED shows the charging status of the inserted main battery.
4. If effective ranges are configured in the project, you will need to perform an acceptance test when the project is started for the first time.
5. The WLAN connection is established.

### **Establishing the WLAN connection**

SSIDs for up to 3 WLAN networks can be stored in the project.

The WLAN networks stored in the project must be parameterized on the HMI device and must be included in the list of preferred networks on the HMI device.

The WLAN connection is established as follows:

1. If one of the 3 WLAN networks is available when the HMI device is started, the HMI device connects automatically.

The "COM" LED will flash as long as the WLAN connection is established.

The configured sequence of SSIDs determines the order in which the HMI device will attempt to connect to the WLAN networks.

2. If the HMI device cannot establish a connection with any of the 3 configured WLAN networks, the HMI device will attempt to connect to other WLAN networks.

For this to happen, connection to other WLAN networks must be authorized in the project.

3. Once the HMI device has established the WLAN connection, the "COM" LED lights up.
4. If the HMI device was unable to establish a connection with any of the WLAN networks, Not Connected is displayed in the status line of the dialog box. The project cannot be started.

### **Operation**

---

#### **Note**

#### **Notes on fail-safe operation**

It is imperative that you observe the chapter titled "Fail-safe operation", and in particular the Organizational measures (Page 223).

---

### **Starting the project**

When the HMI device is in the Loader, the project can either be started manually using the "Start" button, or will start automatically, depending on how the project has been configured. An automatic start occurs either immediately or after a configured delay time.

The following steps are carried out when the project is starting:

1. The HMI device is integrated.
2. The emergency stop button becomes active.
3. The HMI device will show the project start screen or the zone-specific screen.

### **See also**

Acceptance of the system (Page 198)

Integrating the HMI device (Page 227)

## 9.2 Error cases

During fail-safe operation, you must be aware that the following error cases may arise:

### Leaving the HMI device logged onto the effective range

#### CAUTION

##### Shutdown

Under no circumstances should the effective range be left without an HMI device while the HMI device is logged onto the effective range.

If the HMI device is in a state where it is constantly ready for operation, the battery will lose its charge. A flat battery will result in a communication error. The F CPU initiates a shutdown.

- Log the HMI device off from the effective range.
- Switch off the HMI device if it is not needed. Alternatively, hook the HMI device into the charging station.

### Internal error

If an internal error occurs on the HMI device, the "SAFE" and "RNG" LEDs go out, and the project is terminated immediately. The HMI device shows a red error display.

Safety functions are no longer available.

Contact the SIEMENS hotline.

### Communication error

If a communication error occurs on the HMI device, the "SAFE" LED goes out. Safety functions are no longer available.

- If the HMI device is logged onto the effective range:
  - The F CPU initiates a shutdown. The F CPU stops the section of the system that belongs to the effective range.
- If the HMI device is not logged on to the effective range:
  - The F CPU initiates a global rampdown.
- If communication is reestablished within 60 seconds:
  - The emergency stop button becomes active again. The "SAFE" LED lights up again.
  - Acknowledge the communication error.
  - If it was logged onto the effective range, the HMI device is logged off.
  - The "RNG" LED goes out.
- If communication remains interrupted for more than 60 seconds:
  - The HMI device terminates the project. The "RNG" LED goes out.

## 9.3 Direct keys

### Introduction

Direct keys on the HMI device are used to set bits in the I/O area of a SIMATIC S7.

Direct keys enable operations with short reaction times, that are, for example, a jog mode requirement.

<b>NOTICE</b>
---------------

<b>PLC stop</b>
-----------------

Please note that leaving the WLAN area will cause the PROFINET IO device to fail and will therefore result in a PLC stop.
---

Determine suitable programming measures in the PLC, in order to prevent a PLC stop.
---

Please refer to your system documentation to check whether additional information on this subject is available there.
---

<b>NOTICE</b>
---------------

<b>Effectiveness of direct keys in offline mode</b>
---

Direct keys are active when both of the following conditions are satisfied:
---

- |  |
|--|
| <ul style="list-style-type: none"><li>• The HMI device is in an area with sufficient WLAN coverage.</li><li>• The HMI device is in "Offline" mode.</li></ul> |
|--|

<b>NOTICE</b>
---------------

If you operate a function key with direct key functionality in a running project, the direct key function is always executed, independent of the current screen contents.
---

### Direct keys

The following objects can be configured as a direct key:

- Buttons
- Function keys
- Screen numbers
- Handwheel
- Illuminated pushbutton
- Key-operated switch

---

**Note**

Direct keys result in additional basic load on the HMI device.

---

Additional information about direct keys is available in the system manual "WinCC flexible communication".

## 9.4 Operator input options

Once the project is transferred to the HMI device, current processes can be operated and monitored in the process control phase. You have the following options for operating the HMI device:

- Touch screen

The HMI device is operated by means of the touch screen. The operating elements shown in the dialogs are touch-sensitive. Touch objects are basically operated in the same way as mechanical keys. You activate operating elements by touching them with your finger. To double-click them, touch an operating element twice in succession.



Do not use any pointed or sharp objects when operating the touch screen. Otherwise this may damage the plastic membrane of the touch screen.

- External input devices

The following operator controls can be connected externally:

- Keyboard, connected via USB
- Mouse, connected via USB

The use of external input devices is recommended for commissioning.

### Operating a project with an external keyboard

An external keyboard can be used to operate a project in exactly the same way as with the HMI keyboard or screen keyboard.

---

#### Note

The function keys of the external keyboard are disabled.


---

Use other keys on the external keyboard, which correspond to the HMI device keys.

### Operating a project with an external mouse

An external mouse can be used to operate a project in exactly the same way as with the HMI touch screen. Click the described operating elements with the mouse.

### Unintentional actions

 <b>CAUTION</b>
Do not carry out several operations simultaneously. You may otherwise trigger unintentional actions. <ul style="list-style-type: none"><li>• With touch control: Always touch only one operating element on the screen</li><li>• With key operation via an external keyboard: Do not press more than two keys simultaneously</li></ul>

### Observing the plant documentation

Some operations with the project may require in-depth knowledge about the specific plant on the part of the operator. Proceed with caution, for example, when you use jog mode. Please refer to your system documentation to check whether additional information on this subject is available there.

### Operation feedback from operating elements

The HMI device provides optical feedback as soon as it detects that an operating element has been selected. The operating element receives the focus and is selected. This selection is independent of any communication with the PLC. Therefore this selection does not indicate whether the relevant action is actually executed or not.

The configuration engineer can also configure the selection of an operating element so that it deviates from the standard. Please refer to your system documentation to check whether additional information on this subject is available there.

### Optical feedback from operating elements

The type of optical feedback depends on the operating element:

- Buttons

The HMI device outputs different views of the "Pressed" and "Unpressed" states, provided the configuration engineer has configured a 3D effect:

- "Pressed" state:



- "Unpressed" state:



The configuration engineer determines the appearance of a marked field, for example, line width and color for the focus.



- Invisible buttons

By default, invisible buttons are not displayed as pressed when they are touched. No optical operation feedback is provided in this case.

The configuration engineer may, however, configure invisible buttons so that their outline appears as lines when touched. This outline remains visible until you select another operating element.

- I/O fields

When you select an I/O field, the content of the I/O field is displayed against a colored background. With touch operation, a screen keyboard is displayed for the entering of values.

## 9.5 Function keys

### Function keys

Function key assignment is defined during configuration. The configuration engineer can assign function keys globally and locally.

### Function keys with global function assignment

A globally assigned function key always triggers the same action on the HMI device or in the PLC irrespective of the screen displayed. Such an action could be, for example, the activation of a screen or the closure of an alarm window.

### Function keys with local function assignment

A function key with local function assignment is screen-specific and is therefore only effective within the active screen.


The function assigned locally to a function key can vary from screen to screen.

The function key of a screen can be assigned one function only, either a global or local one. The local assignment function takes priority over the global setting.

The configuration engineer can assign function keys in such a way that you can operate operating elements with function keys, for example, the alarm view, trend view, recipe view or status / PLC.

### Multi-key operation

Unwanted actions may be triggered, if the operator unintentionally actuates a key combination.

 <b>CAUTION</b>
<b>Unintentional actions</b>
In "Online" mode, simultaneous operation of more than two keys may cause unintentional actions in the plant.
Do not press more than two keys simultaneously.

## 9.6 Setting the project language

### Introduction

The HMI device supports multilingual projects. You must have configured a corresponding operating element which lets you change the language setting on the HMI device during runtime.

The project always starts with the language set in the previous session.

### Requirements

- The required language for the project must be available on the HMI device
- The language switching function must be logically linked to a configured operating element such as a button

### Selecting a language

You can change project languages at any time. Language-specific objects are immediately output to the screen in the new language when you switch languages.

The following options are available for switching the language:

- A configured operating element switches from one language to the next in a list
- A configured operating element directly sets the desired language

Please refer to your system documentation to check whether additional information on this subject is available there.

## 9.7 Input

### 9.7.1 Overview

#### Screen keyboard

When you touch an operating element requiring entry on the HMI device touch screen, a screen keyboard appears. The screen keyboard is displayed in the following cases:

- An I/O field is selected for input
- A password must be entered for accessing a password-protected function

The screen keyboard is automatically hidden again when input is complete.

Based on the configuration of the operating element, the system displays different screen keyboards for entering numerical or alphanumerical values.

---

#### Note

The screen keyboard display is independent of the configured project language.

---

## General procedure

The operating elements of a screen are operated by touching the touch screen.

Proceed as follows:

1. Touch the desired operating element within the screen.
2. Depending on the operating element, perform further actions. Detailed descriptions can be found under the respective operating element.

Examples:

- I/O field: Enter numerical, alphanumerical or symbolic values in the I/O field
- Symbolic I/O field: Select an entry from the drop down list box
- Slider control: Move the slider control

## Procedure for text boxes

Values are entered in the project text boxes. Based on your configuration, the values are saved to tags and transferred, for example, to the PLC.

Proceed as follows:



1. Touch the desired text box within the screen.

The screen keyboard opens.

Depending on your configuration, you can enter values in the text box in the following manner:

- Numerical values, for example decimal numbers, hexadecimal numbers, binary values
- Alphanumerical values, for example digits and letters
- Date/time

2. Enter the value.

3. Confirm your entry with  or discard your entry with the button .

## 9.7.2 Entering and editing numerical values

### Numerical screen keyboard

When you touch an operating element for numerical input on the HMI-device touch screen, the numerical screen keyboard appears. This is the case, for example, for a text box. The screen keyboard is automatically hidden again when input is complete.



Numerical screen keyboard

---

#### Note

##### Opened screen keyboard

When the screen keyboard is open, PLC job 51, "Select screen" has no function.

---

### Formats for numerical values

You can enter values in numerical text boxes based on the following formats:

- Decimal
- Binary
- Hexadecimal

---

#### Note

##### Entry of hexadecimal values

When you enter values in hexadecimal format, the alphanumerical screen keyboard opens.

---

### Limit value test of numerical values

Tags can be assigned limit values. If you enter a value that lies outside of this limit, it will not be accepted, for example, 80 with a limit value of 78. In this case the HMI device will deliver a system alarm, if an alarm window is configured. The original value is displayed again.

## Decimal places for numerical values

The configuration engineer can define the number of decimal places for a numerical text box. The number of decimal places is checked when you enter a value in this type of I/O field.

- Decimal places in excess of the limit are ignored
- Empty decimal places are filled with "0"

## Procedure

Numerical values can be entered character-by-character via the buttons on the numerical screen keyboard.

Proceed as follows:

1. Touch the desired operating element within the screen.



The numerical screen keyboard opens. The existing value is displayed in the screen keyboard and is selected.


2. Enter the value.


When entering hexadecimal values, the keys with letters "G" to "Z" are operable, but the characters will not be entered.

You have the following options to enter a value:

- The selected value is deleted when you enter the first character. Completely reenter the value.



- Use the  and  keys to move the cursor within the current value. You can now edit the characters of the current value or add characters.

Use the  key to delete the character to the left of the cursor. If the value is selected, use this key to delete the selected part of the value.

The  key deletes the character positioned to the right of the cursor. If the value is selected, use this key to delete the selected part of the value.

- Use the  key to display the infotext of the I/O field.

This key is only enabled if infotext has been configured for the input object or the current screen.

3. Use the  key to confirm your entry or cancel it with . Either action closes the screen keyboard.

## Result

You have changed the numerical value or entered a new one.

### 9.7.3 Entering and editing alphanumerical values

#### Alphanumerical screen keyboard

When you touch an operating element for alphanumerical input on the HMI-device touch screen, the alphanumerical screen keyboard appears. This is the case, for example, for a text box. The screen keyboard is automatically hidden again when input is complete.



Alphanumerical screen keyboard, normal level

---

#### Note

##### Opened screen keyboard

When the screen keyboard is open, PLC job 51, "Select screen" has no function.

##### Language change

Language change in the project has no influence on the alphanumerical screen keyboard. The entry of Cyrillic or Asian characters is therefore not possible.

---

#### Keyboard levels

The alphanumerical screen keyboard has various levels.

- Normal level
- Shift level

If you change the levels with key , the key assignments change.

## Procedure

Alphanumerical values can be entered character-by-character via the buttons on the alphanumerical screen keyboard.

Proceed as follows:



1. Touch the desired operating element within the screen.


The alphanumerical screen keyboard opens. The existing value is displayed in the screen keyboard and is selected.


2. Enter the value.



You have the following options to enter a value:

- The selected value is deleted when you enter the first character. Completely reenter the value.



- Use the  and  keys to move the cursor within the current value. You can now edit the characters of the current value or add characters.

Use the  key to delete the character to the left of the cursor. If the value is selected, use this key to delete the selected part of the value.

The  key deletes the character positioned to the right of the cursor. If the value is selected, use this key to delete the selected part of the value.

- Using key  it is possible to switch between the keyboard levels of the screen keyboard. On switchover, the key assignments of the screen keyboard change.
- Use the  key to display the infotext of the I/O field.

This key is only enabled if infotext has been configured for the input object or the current screen.

3. Use the  key to confirm your entry or cancel it with . Either action closes the screen keyboard.

## Result

You have changed the alphanumeric value or entered a new one.

## 9.7.4 Entering the date and time

### Entering the date and time

Enter the date and time in the same way you enter alphanumerical values.

---

**Note**

When entering the date and time, please note that the format is determined by the configured project language.

---

### See also

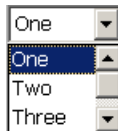
Entering and editing alphanumerical values (Page 246)

Setting the project language (Page 242)

## 9.7.5 Entering symbolic values

### Drop down list box

Operating elements for entering symbolic values offer you a list from which you can select the input values. When you touch a symbolic I/O field on the HMI device touch screen, the following drop down list box opens.





Symbolic I/O field after touch, example

### Procedure

Proceed as follows:

1. Touch the required operating element.

The drop down list box of the operating element opens. Select  and  to scroll in the drop down list box.

2. Touch the required entry in the drop down list box.

The selected entry is accepted as an entry.

### Result

You have changed the symbolic value or entered a new one.

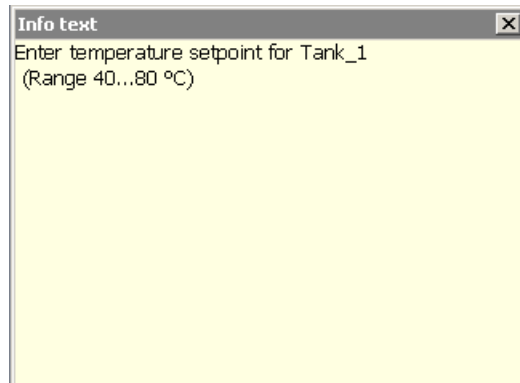


## 9.8 Displaying infotext

### Purpose

The configuration engineer uses infotext to provide additional information and operating instructions. The configuration engineer can configure infotext on screens and operating elements.

The infotext of an I/O field may contain, for example, information on the value to be entered.



Infotext for an I/O field, example

### Opening infotext for operating elements

1. Touch the required operating element.

The screen keyboard opens. You can see from the appearance of the **Help** key whether infotext has been configured for the operating element or the current screen.

2. Touch the **Help** key on the screen keyboard.

The infotext for the operating element is displayed. If there is no infotext for the selected screen object, the infotext for the current screen is displayed, if it has been configured.

You can scroll through the contents of long infotext with  and .


---

#### Note

##### Switching between displayed infotext

The configuration engineer can configure infotext for an I/O field and the associated screen. You can switch between two infotexts by touching the infotext window.

---

3. Close the displayed infotext by pressing .

### Alternative procedure

Depending on your configuration, infotext can also be called via a configured operating element.

Please refer to your system documentation to check whether additional information on this subject is available there.




## 9.9 Device-specific displays

### 9.9.1 Displaying battery status

#### Application

The "Battery" object indicates the charging status of the main battery. Charge the battery in good time. Alternatively, change the main battery.

#### Layout

Symbol	Color	Meaning	Charging status
	Green	The battery is sufficiently charged.	>20 %
	Yellow	The battery is weak. The battery must be charged. Alternatively, insert a charged spare battery.	10 % to 20 %
	Red	Battery is very weak. The battery must be charged. Alternatively, insert a charged spare battery.	<10 %

#### Operation







The object is for display only and cannot be operated.

## 9.9.2 Displaying WLAN quality

### Application

The "WLAN quality" object displays the signal strength of the WLAN wireless connection. The HMI device measures the signal strength and indicates the quality using 5 bars.

### Layout

Symbol	Meaning	Signal strength
	No wireless connection	No signal
	Very poor wireless connection	≤20 %
	Poor wireless connection	≤40 % >20 %
	Wireless connection OK	≤60 % >40 %
	Good wireless connection	≤80 % >60 %
	Very good wireless connection	>80 %

### Operation

The "WLAN quality" object is purely for display purposes. You cannot operate the "WLAN quality" object.

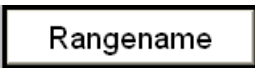
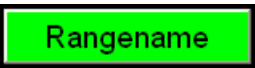


### 9.9.3 Displaying the effective range name

#### Application

The "Effective range name" object indicates the following:

- Name of the effective range in which the HMI device is currently located.
- Logon status

#### Layout

Symbol	Description	Logon
	The HMI device is within the effective range shown. The HMI device is not logged onto the effective range. The enabling button is not active.	It is possible to log onto the effective range.
	The HMI device is within the effective range shown and is logged onto the effective range. Using the enabling buttons, safe operation in the effective range is possible.	The HMI device is logged onto the effective range.
	The HMI device is within the effective range shown. The enabling button is not active.	Logon to the effective range is rejected because a different HMI device is already logged on. Note: When using the "Override" mode: Although no other HMI device is still logged on to the effective range, logon is rejected because the override switch is still set.
	The HMI device is outside all of the effective ranges. The enabling button is not active.	It is not possible to log onto the effective range. Note: You can only log on within the effective range

#### See also

Logging onto and off from the effective range (Page 229)





## 9.9.4 Displaying the effective range quality

### Application

The "Effective range quality" object indicates how accurately the Mobile Panel 277F IWLAN is still within an effective range. In contrast to the "WLAN quality" object, the HMI device does not measure signal strength. The HMI device calculates the effective range quality on the basis of the distance between it and the assigned transponders.

The "Effective range quality" is then also updated if the HMI device is not logged onto the effective range.

### Layout

Symbol	Meaning	Quality
	The HMI device is in the middle of the effective range.	>15 %
	The HMI device is at the limits of an effective range.	1% to 15%
	The HMI device is not within the effective range.	0 %
	"Override" mode is active. The distance of the HMI device to the transponders is not evaluated. "Override" mode (Page 232)	–

The "Effective range name" object indicates which effective range this concerns.

### Calculating the quality

The quality within an effective range depends on the measured distance to the transponder, as shown below:

- In the center of the effective range the quality is 100 %.
- The quality decreases as you approach the limits of the effective range.
- On the transponder and on the border of the effective range, the quality is 0 %.

### Operation



The object is for display only and cannot be operated.

### 9.9.5 Displaying zone names

#### Application

The "Zone name" object shows the names of the zone in which the HMI device is currently located.

#### Layout

Symbol	Meaning
	The HMI device is within the indicated zone.
	The HMI device is not inside any zone.

#### Operation




The "Zone name" object is purely for display purposes. You cannot operate the "Zone name" object.

### 9.9.6 Displaying zone quality

#### Application

The "Zone quality" object shows how close the HMI device is to the limits of a zone. Unlike with "WLAN quality", the HMI device does not measure signal strength. The HMI device calculates the zone quality from the distance between it and the assigned transponders.

#### Layout

Symbol	Meaning	Quality
	The HMI device is within a zone.	>15 %
	The HMI device is at the limits of a zone.	1% to 15%
	The HMI device is not within any zone.	0 %

The "Zone quality" object indicates which zone this concerns.

## Calculating the quality

The quality within a zone depends on the measured distance to the transponder:

- In the center of the zone the quality is 100%
- The quality decreases as you approach the limits of the zone
- On the transponder and on the border of the zone, the quality is 0%

## Operation

The "Zone quality" object is purely for display purposes. You cannot operate the "Zone quality" object.

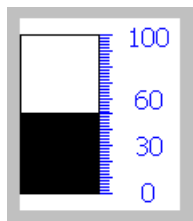
# 9.10 Bar and gauge

## Bar

The bar is a dynamic display object. The bar displays a value from the PLC as a rectangular area. The bar allows you to recognize the following at a glance:

- The distance of the current value from the configured limit values
- Whether a set point value has been reached

The bar can display values such as fill levels or batch counts.



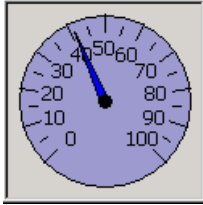
## Layout

The layout of the bar depends on the configuration:

- The bar may feature a scale of values
- The configured limit values can be indicated by lines
- Color changes can signal when a limit value has been exceeded or has not been reached

## Gauge

The gauge is a dynamic display object. The gauge displays numerical values in analog form by means of a pointer. This enables an operator at the HMI device to see at a glance if the boiler pressure is in the normal range, for example.



## Layout

The layout of the gauge depends on the configuration:

- A trailing pointer can display the maximum value reached so far on the scale. The trailing pointer is reset when the screen is reloaded.
- The label on the scale can show the measured variable, for example boiler pressure and the physical unit, for example bar.

## Operation

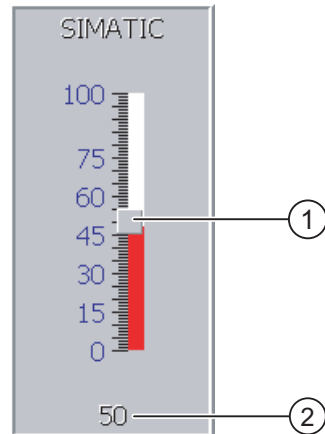
The bar and the gauge are for display only. Both objects cannot be controlled by the operator.



## 9.11 Operating the slider control

### Introduction

The slider control can be used to monitor and change process values within a defined range. The slider control can also be configured without a slider. In this case, you cannot enter a value. The slider control is then only used for displaying values.



- ① Slider control for entering values
- ② Value display with current value

Slider control – example

### Layout

The layout of the slider control depends on the configuration:

- The slider control can contain a label and a setting range
- The current value can be displayed below the area of the slider control

### Procedure

Proceed as follows:

1. Touch the slider of the desired slider control.
2. Move the slider to the required value.

If a value display has been configured, you can check the exact value that has been set.

3. Release the slider.

### Result

The set value is applied.

## 9.12 Operating the switch

### Introduction

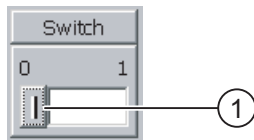
The switch is an operating element and display object with two predefined switching states, for example "On" and "Off". Switches can signalize the state of a plant section, for example if a motor is running or not. At the same time, you can use the switch to change the state of the corresponding plant section via the HMI device, for example from "On" to "Off".

### Layout

The layout of the switch depends on the configuration:

- Switch with slider

The two states are displayed by the position of the slider



① Slider

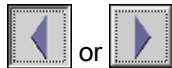
- Switch with text or graphic

The two states are displayed by the label on the slider

Depending on the switching state, the switch is labeled with one of two texts or one of two graphics.

Examples:

"Backward" or "Forward"



### Procedure

- Switch with slider

Proceed as follows:

Move the slider to the other position or double-click the slider area

- Switch with text or graphic

Proceed as follows:

Touch the switch

### Result

The switch changes its appearance. The associated value is switched.

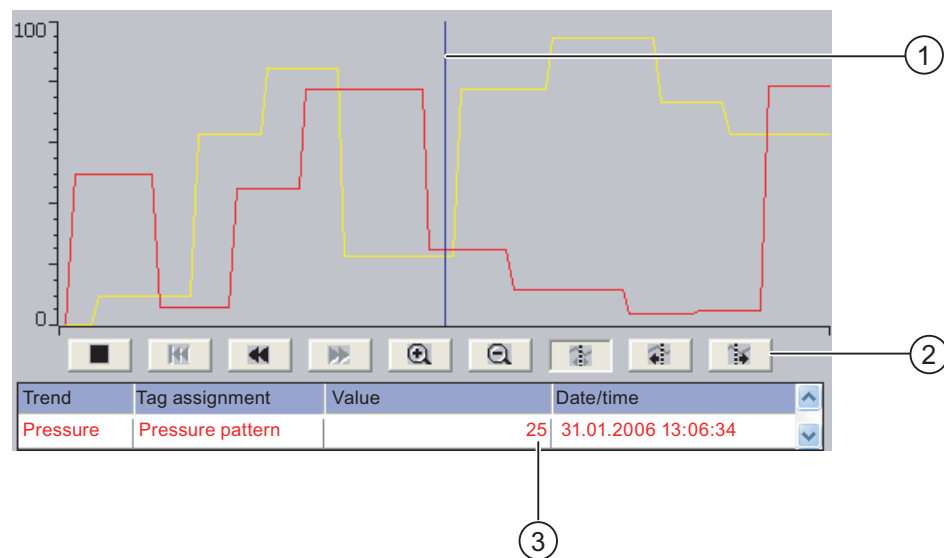
## 9.13 Operating the trend view

### Trends

Trends continuously display the current process data or process data from a log.

### Trend view

Trends are displayed in the trend view. A trend view can display several trends simultaneously.



- ① Ruler
- ② Buttons for trend operation
- ③ Trend value in the value table

Trend view, example

### Layout and operation

The layout and operation of the trend view depends on the configuration. The configuration engineer determines, for example, the following:

- Appearance of the trend view, the axes, value ranges and labels
- Operating options of the trend view
- Limit values for the trend values
- The change of color of the trend in the event of limit violation

Please refer to your system documentation to check whether additional information on this subject is available there.

### Value table

The trend values can be read from the value table if this is configured:

- When the ruler is displayed, the trend values are shown at a position of the ruler in the value table
- When the ruler is hidden, the latest trend values are displayed in the value table

### Ruler

When configured, a ruler is available to provide an exact reading of the trend values in the value table.










You can move the ruler to the desired position of the trend view.

### Operation

The trend view can be operated as follows:

- Enlarge or reduce the time interval displayed
- Scroll forward or back by one display width
- Stop and resume trend recording
- Move the ruler
- Hide and display the ruler

The following table shows the trend view buttons:

Buttons	Functions
	Stops or continues trend recording.
	Enlarges the displayed time section.
	Reduces the displayed time section.
	Scrolls one display width backwards (to the left)
	Scrolls one display width forwards (to the right)
	Scrolls back to the beginning of the trend recording. The start values of the trend recording are displayed there.
	Moves the ruler backwards (to the left)
	Moves the ruler forwards (to the right)
	Shows or hides the ruler.

In addition, the configuration engineer can configure function keys or operating elements with which you can control trend views.

Please refer to your system documentation to check whether additional information on this subject is available there.



## Touch operation

Touch the required button in the trend view.

The position of the ruler can also be changed by means of touching and dragging the ruler on the touch screen.

## Procedure using the keys

Proceed as follows:

1. Using the key  select the desired button within the trend view.
2. Confirm your entry by pressing the key .

# 9.14 Operating the Status Force

## 9.14.1 Overview

### Application

You read or write access values of the connected PLC directly with Status Force. Status force allows you to monitor or change addresses of the PLC program, etc. You don't need to connect an additional programming device or additional PC to the PLC.

---

### Note

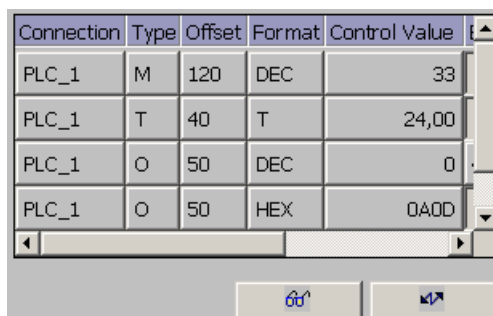
Status force can only be used in combination with SIMATIC S7.

---

### Layout

The layout of Status Force depends on the configuration.

The figure shows the general layout of Status Force. A value can be monitored or controlled on every line.



Connection	Type	Offset	Format	Control Value
PLC_1	M	120	DEC	33
PLC_1	T	40	T	24,00
PLC_1	O	50	DEC	0
PLC_1	O	50	HEX	0A0D

Status Force, example

The configuration engineer specifies which columns appear in Status Force.



The table shows the significance of all configurable columns.

Column	Functions
"Connection"	The PLC whose address ranges must be displayed.
"Type", "DB Number", "Offset", "Bit"	The address range of the value
"Data type", "Format"	The data type of the value
"Status value"	The value read from the specified address.
"Control value"	The value to be written to the specified address.

Please refer to your system documentation to check whether additional information on this subject is available there.

### Operator controls

Depending on your configuration, you can operate the trend view using the following buttons:

Buttons	Functions
	"Read" button Updates the display in the "Status value" column. This button engages when it is pressed. You cannot operate any text boxes until the button is actuated again and the refresh is stopped.
	"Write" button Applies the new value in the "Control value" column. The control value is written to the PLC.

### 9.14.2 Operation

#### Operator input options

Status Force can be operated as follows:

- Change the column sequence
- Read the status values of the connected PLC
- Enter values and transfer them to the PLC

#### Change column sequence

Depending on the configuration, you can change the column sequence of Status Force.

Proceed as follows:


1. Touch the column header which you wish to exchange with a different column header
2. Keeping the touch screen pressed, move the column heading to the column heading you wish to exchange it with

## Result


The columns are displayed in the modified sequence.

## Procedure for reading the status value

Proceed as follows:

1. Enter the address and the desired format of a value for each line. Touch the respective columns to display the screen keyboard.
2. Once you have entered all of the desired values, touch the  button.

## Result

All values are read cyclically by the PLC and entered in the "Status value" column until the  button is touched again.


## Requirements for forcing

The following requirements must be fulfilled in order to force values:

- The "Control value" column must be available
- The "Write" button must be available

## Procedure for forcing a value

Proceed as follows:

1. Enter the address of a value for each line. Enter the desired value in the "Control value" column. Touch the respective columns to display the screen keyboard.
2. Once you have entered all of the desired values, touch the  button.

## Result

The values from the "Control value" column are transferred once to the PLC.

## 9.15 Operating the Sm@rtClient view

### 9.15.1 Overview

#### Application

The Sm@rtClient view enables you to monitor and remotely operate the current project of a remote HMI device. With the correct configuration, several equal priority HMI devices can access a remote HMI device.

---

#### Note

If another HMI device accesses your HMI device via the Sm@rtClient view, this leads to an additional load on your HMI device.

---

#### Layout

In the Sm@rtClient view, the remote HMI is displayed with the complete layout.

Depending on the configuration, you can monitor and also operate this screen.

You can also operate the function keys like buttons on an HMI device with a touch screen.

#### Monitoring mode

On a Sm@rtClient view which is configured for monitoring mode, you can only monitor the remote HMI device. You cannot control its operation.

#### Operation

---

#### Note

It is not possible to operate the direct keys of the remote HMI device from the local HMI device.

---

The available operator controls depend on the HMI devices used:

- Same type of HMI devices  
You can operate the project of the remote HMI device with the operator controls of your HMI device
- Operate keys from a local touch screen  
All the keys of the remote HMI device are displayed as buttons on the touch screen. You can touch them to operate them.
- Touch operation from a local HMI device using keys  
You operate the buttons in the usual manner.



## 9.15.2 Operation

### Operator input options

The Sm@rtClient view can be operated as follows:

- Starting remote control
- Forcing permission
- Ending remote control

### Procedure for starting remote control

Proceed as follows:

1. On the HMI device change to the screen with the Sm@rtClient view.

The following options are available for establishing the connection to the remote HMI device:

- The connection is established automatically.
- The connection must be established by touching the appropriate button.

Depending on the configuration, you may be required to enter the address of the remote HMI device and a password.

2. The current screen of the project running on the remote device is displayed on the screen of your HMI device.
3. You can now monitor or control this screen depending on your configuration.  
Scroll bars are displayed if the screen of the remote HMI device is larger than that of the current HMI device.

### Procedure for forcing permission

If several HMI devices have access to a HMI device, only one HMI device has operating permission at any one time.

Two cases must be distinguished for this case:

- If another HMI device is already controlling the remote HMI device, if configured accordingly, you can force operating permission for the remote HMI device
  - You are trying to operate the remote HMI device
  - A dialog appears in which you are prompted to enter the appropriate password for forcing remote control
  - You are now authorized to operate the remote HMI device
- If another HMI device is accessing your HMI device via the Sm@rtClient view, you can force local operating permission for your HMI device
  - Touch the screen of your HMI device five times consecutively
  - You are given permission to operate your local HMI device

### Procedure for ending remote control

You can end monitoring and control of a remote HMI device with one of the following methods depending on the configuration:

- Touch a button configured for this action
- Exit the screen containing the Sm@rtClient view
- If configured, a menu is displayed after you have touched an empty space over a longer period. Select the "Close" menu item.

Please refer to your system documentation to check whether additional information on this subject is available there.

## 9.16 Project security

### 9.16.1 Overview

#### Design of the security system

The configuration engineer can protect the operation of a project by implementing a security system.

The security system is based on authorizations, user groups and users.

If operating elements protected by a password are pressed, the HMI device first requests that you log on. A logon screen is displayed in which you enter your user name and password. After logging on, you can press the operating elements for which you have the necessary authorizations.

The logon dialog can be set up by the configuration engineer via an individual operating element.

In the same way, the configuration engineer can set up an operating element to log off. After logging off, objects assigned password protection can no longer be operated; to do so, log on again.

Please refer to your system documentation to check whether additional information on this subject is available there.

#### Central user administration using SIMATIC Logon

Users, user groups and authorizations can be stored on a central server.

If user administration cannot contact the server, an error message is displayed. If this is the case, you can only log on locally. Check whether additional information is available in your plant documentation.

The operation of SIMATIC Logon differs as follows:

- The simple user display is not supported
- Users cannot be deleted
- You cannot change your logout time
- When changing the password, you must enter it twice for security reasons
- The domain name is also indicated in the "User" field

## User groups and authorizations

Project-specific user groups are created by the configuration engineer. The "Administrators" and "PLC User" groups are included in all projects by default. User groups are assigned authorizations. Authorization required for an operation is specifically defined for each individual object and function in the project.

## Users and passwords

Each user is assigned to exactly one user group.

The following persons are allowed to create users and assign them passwords:

- The configuration engineer during configuration
- The administrator on the HMI device
- A user with user management authorization on the HMI device

Irrespective of the user group, each user is allowed to change his own password.

## Logoff times

A logoff time is specified in the system for each user. If the time between any two user actions, such as entering a value or changing screens, exceeds this logoff time, the user is automatically logged off. The user must then log on again to continue to operate objects assigned password protection.

## Backup and restore

---

### Note

Backup and restore is not available to central user administration with SIMATIC Logon.

---

The user data is encrypted and saved on the HMI device to protect it from loss due to power failure.

The users, passwords, group assignments and logoff times set up on the HMI device can be backed up and restored. This prevents you having to enter all of the data again on another HMI device.

NOTICE
<p>The currently valid user data is overwritten in the following cases:</p> <ul style="list-style-type: none"><li>• Depending on the transfer settings, when the project is transferred again</li><li>• Upon restore of a backed-up project</li><li>• Upon import of the user administration via an operating element. Please refer to your system documentation to check whether additional information on this subject is available there.</li></ul> <p>The retransferred or restored user data and passwords are valid with immediate effect.</p>

### Limits for user, password and user view

	Number of characters
Length of user name, maximum	40
Length of password, minimum	3
Length of password, maximum	24
Entries in user view, maximum	50

### 9.16.2 User view

#### Application

The user view is used to display the users on the HMI device:

- All users on the HMI device are displayed in the user view to the administrator or to a user with administrator authorizations
- If you are a user without user management authorization, you can only see your personal user entry

The authorizations of a user after logging on depends on the user group to which the user is assigned.

Please refer to your system documentation to check whether additional information on this subject is available there.

#### Layout

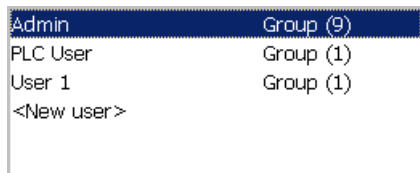
The configuration engineer can implement a simple or extended user view.

The two user views offer the same functions. They differ only in the display of information.

#### Simple user view

If you are not logged on to the HMI device, the only entry contained in the simple user view is "<ENTER>".

If you are logged on to the HMI device, the simple user view only displays the user name and user group.



Admin	Group (9)
PLC User	Group (1)
User 1	Group (1)
<New user >	

## Extended user view

The extended user view displays information about the users.

User	Password	Group	Logoff time
Admin	*****	Group (9)	5
PLC User	*****	Group (1)	5
User 1	*****	Group (1)	5

The extended user view contains the following columns:

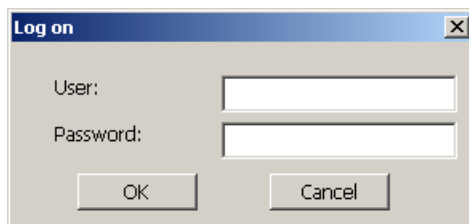
- Users
- Password
- Group
- Logoff time

The passwords are encrypted by appearing as asterisks.

### 9.16.3 User logon

#### Logon dialog

Use the logon dialog to log on to the security system of the HMI device. Enter your user name and password in the logon dialog.



The image shows a 'Log on' dialog box with a title bar containing a close button (X). Inside the dialog, there are two input fields: 'User:' and 'Password:'. Below the input fields are two buttons: 'OK' and 'Cancel'.

The logon dialog opens in the following cases:

- You press an operating element with password protection
- You press an operating element that was configured for displaying the logon dialog
- Select the "<ENTER>" entry in the simple user view
- Select a blank entry in the extended user view
- The logon dialog will be automatically displayed when the project is started, depending on the configuration

Please refer to your system documentation to check whether additional information on this subject is available there.

## Requirements

The logon dialog is open.


## Procedure using the touch screen

Proceed as follows:


1. Enter the user name and password.  
Touch the corresponding text box. The alphanumerical screen keyboard is displayed.
2. Select "OK" to confirm logon.

## Procedure using the keys

Proceed as follows:

1. Using the key  select the "User" text box within the logon dialog.
2. Enter the user name using the system keys.

To enter letters, switch the numerical keypad to letter assignment using the key .

3. Using the key  select the "Password" text box.
4. Enter the password using the system keys.
5. Touch the "OK" button to confirm your entries.

---

### Note

The user name is not case-sensitive.

The password is case-sensitive.

---

## Result

After successful logon to the security system, you can execute password-protected functions on the HMI device for which you have authorizations.

If you enter a wrong password, an error message is displayed when an alarm window has been configured.

## 9.16.4 User logoff

### Requirements

You have logged into the security system of the HMI device.

### Procedure

You have the following options for logging off:

- You press an operating element that was configured for logoff
- You will be logged off automatically if you are not operating the project and if the logoff time has been exceeded

You will also be automatically logged off if you enter an incorrect password.

### Result

You are no longer logged into the project. In order to activate an operating element with password protection, you must first log on again.

## 9.16.5 Creating users

### Requirements

You have opened a screen containing the user view.

You have user management authorization or you are the administrator.

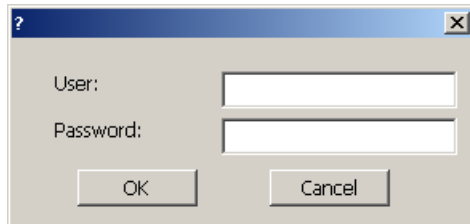
NOTICE
The following characters cannot be used in passwords: <ul style="list-style-type: none"><li>• Blank</li><li>• Special characters * ? . % / \ ' "</li></ul>

### Procedure for creating a user in the simple user view

Proceed as follows:

1. Touch the "<New User>" entry in the user view.

The following dialog opens:

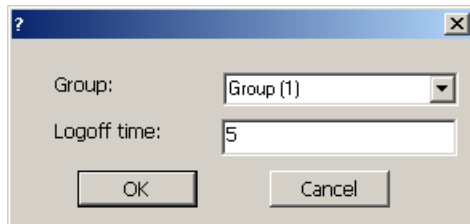


2. Enter the desired user name and password.


Touch the corresponding text box. The alphanumerical screen keyboard is displayed.



3. Touch the "OK" button.

The following dialog opens:



4. Assign the user to a group.

In order to do so, open the "Group" drop down list box by means of the  button.

Select  and  to scroll in the drop down list box.

5. Touch the required entry in the drop down list box.

The selected entry is then accepted as input.

6. Touch the text box "Logoff time". The screen keyboard is displayed.
7. Enter a value between 0 and 60 for the logoff time in minutes.  
The value 0 stands for "no automatic logoff."
8. Touch the "OK" button to confirm your entries.

### Procedure for creating a user in the extended user view

Proceed as follows:

1. Double-click the desired field in the blank line of the user view.

The appropriate screen keyboard is displayed.

2. Enter the respective user data in the field:

- Assign the user to one of the groups from the drop down list box.
- Enter a value between 0 and 60 for the logoff time in minutes.  
The value 0 stands for "no automatic logoff."

### Result

The new user is created.



## 9.16.6 Changing user data

### Requirements

You have opened a screen containing the user view.

Which data you are allowed to change depends on your authorization:

- You are an administrator or a user with user management authorization. In these cases you are allowed to change the data for all the users on the HMI device in the user view:
  - User name
  - Group assignment
  - Password
  - Logoff time
- You are a user without user management authorization. In this case you are only allowed to change your personal user data:
  - Password
  - Logoff time, if configured

---

#### Note

You can only change the logoff time and password for the "Admin" user.

You can only change the logoff time for the "PLC\_User". This user is used for logging on via the PLC.

---

### Procedure for changing user data in the simple user view

Proceed as follows:

1. In the user view, touch the user whose user data you want to change
2. When entering the data, use exactly the same procedure as for creating a user

### Procedure for changing user data in the extended user view

Proceed as follows:

1. In the user view, touch the user whose user data you want to change
2. When entering the data, use exactly the same procedure as for creating a user

### Result

The user data for the user is changed.

### 9.16.7 Deleting users

#### Requirements

You have opened a screen containing the user view.  
To delete a user, you must be an administrator or have user management authorization.

---

#### Note

The "Admin" and "PLC\_User" users exist by default. These users cannot be deleted.

---

#### Procedure

To delete a user, delete the user name entered.

#### Result

The user has been deleted and may no longer log onto the project.

## 9.17 Closing the project

#### Procedure

Proceed as follows:

1. If "Override" mode has been activated, deactivate it.
2. If you are logged onto the effective range, log off from it.
3. Use the corresponding operating element object to close the project.  
Alternatively, press and hold the ON/OFF button for at least 4 seconds.

The "Confirm removal" dialog box is displayed.

4. Press the enabling button to confirm the dialog box.

The HMI device is removed.

Wait for the Loader to open after you closed the project.

---

#### Note

##### Global rampdown

A global rampdown will occur, if you do not confirm the dialog "Confirm removal" within 60 seconds using one of the enabling buttons.

---

#### Result

The project is terminated.

## Operating alarms

### 10.1 Overview

#### Alarms

Alarms indicate events and states on the HMI device which have occurred in the system, in the process or on the HMI device itself. A status is reported when it is received.

An alarm could trigger one of the following alarm events:

- Incoming
- Outgoing
- Acknowledge

The configuration engineer defines which alarms must be acknowledged by the user.

An alarm may contain the following information:

- Date
- Time
- Alarm text
- Location of fault
- State
- Alarm class
- Alarm number
- Alarm group
- Diagnostics capability

## Alarm classes

Alarms are assigned to various alarm classes:

- Error  
Alarms in this class must always be acknowledged. Error alarms normally indicate critical errors within the plant such as "Motor temperature too high"
- Operation  
Warning alarms usually indicate states of a plant such as "Motor switched on"
- System  
System alarms indicate states or events which occur on the HMI device
- SIMATIC diagnostic alarms  
SIMATIC diagnostic alarms show states and events of the SIMATIC S7 or SIMOTION PLCs
- User-specific alarm classes  
The properties of this alarm class must be defined in the configuration

Please refer to your system documentation to check whether additional information on this subject is available there.

## Alarm groups

The configuration engineer can group alarms into alarm groups. When you acknowledge an individual alarm of an alarm group, you acknowledge all alarms which belong to the same alarm group.

## Alarm buffer

The alarm events are stored in an internal buffer. The size of this alarm buffer depends on the HMI device type.

## Alarm report

The configuration engineer can activate alarm reporting on the project. In this case, alarm events are output directly on the connected printer.

The configuration engineer can define whether each individual alarm is logged. An alarm of this type is printed when the alarm events "Incoming" and "Outgoing" occur.

If you want to print alarms of the "System" alarm class, you have to print the contents of the associated alarm buffer. For this case the configuration engineer has to configure an operating element for printing the alarm buffer.

## Alarm log

Alarm events are stored in an alarm log, provided this log file is configured. The capacity of the log file is limited by the storage medium and system limits.

## 10.2 Recognizing pending alarms

You can recognize pending alarms that must be acknowledged by means of the alarm indicator.

The alarm indicator is a graphic symbol indicating pending alarms or alarms requiring acknowledgment, depending on the configuration. The configuration determines whether an alarm has to be acknowledged or not. This is also defined by the alarm class which an alarm belongs to.



Alarm indicator with three pending alarms

The alarm indicator flashes as long as alarms are pending for acknowledgment. The number displayed indicates the number of pending alarms. The configuration engineer can assign functions to be executed when the alarm indicator is operated.

Usually, the alarm indicator is only used for error alarms. Please refer to your system documentation to check whether additional information on this subject is available there.

## 10.3 Displaying alarms

### Displaying alarms

Alarms are displayed in the alarm view or in the alarm window on the HMI device.

### Alarm view

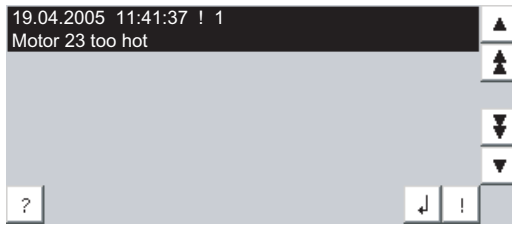
Depending on the configuration, the alarm view is displayed as follows:

- As a single line. Alarm numbers and alarm texts are displayed as single lines
- As simple alarm view
- As extended alarm view

In the simple or extended alarm views the configuration engineer specifies the alarm information to be displayed.

Depending on the configuration, alarms from alarm logs are also displayed in the alarm view.

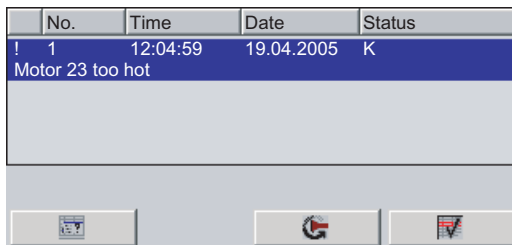
Simple alarm view



The buttons have the following functions:

Buttons	Functions
	Displaying infotext for an alarm.
	Process alarm.
	Acknowledge alarm.
	Select the next or previous alarm in the list.
	Scroll one page up or down.

Extended alarm view



The buttons have the following functions:

Buttons	Functions
	Displaying infotext for an alarm.
	Process alarm.
	Acknowledge alarm.

## Changing the column sequence and sorting in the extended alarm view

Depending on the configuration, you can change the column sequence and sorting order on HMI devices with touch operation.

- Change column sequence
  - Touch the column header which you wish to exchange with a different column header
  - Keeping the touch screen pressed, move the column heading to the column heading you wish to exchange it with

- Change sorting order

To change the sorting order of the alarms, touch the respective column header on the touch screen

## Alarm class layout

The various alarm classes are identified in order to distinguish between them in the alarm view.

Symbol	Alarm class
!	Error
Without a symbol	Operation
Symbol depending on the configuration	User-defined alarm classes
S7	SIMATIC or SIMOTION diagnostic alarms
\$	System

The configuration engineer can change the symbols for the alarm classes. Please refer to your system documentation to check whether additional information on this subject is available there.

## Alarm window

The alarm window is independent of the process screen. Depending on the configuration, the alarm window opens automatically as soon as a new alarm is pending for acknowledgment. The alarm window can be configured so that it only closes after all the alarms have been acknowledged.

The layout and the operation of the alarm window are the same as for the alarm view.

Please refer to your system documentation to check whether additional information on this subject is available there.

## 10.4 Display infotexts for an alarm

### Displaying infotext

The configuration engineer can also provide infotext for alarms.

### Procedure


Proceed as follows:

1. Touch the desired alarm in the alarm view or the alarm window.

The alarm is selected.

2. Touch the  button in the simple alarm view or  in the extended alarm view.

If configured, the infotext assigned to this alarm is displayed.

3. Close the screen for displaying the infotext by means of the  button.

### See also

Displaying alarms (Page 277)



## 10.5 Acknowledge alarm

### Requirements

The alarm to be acknowledged is displayed in the alarm window or the alarm view.

### Procedure

Proceed as follows:

1. Touch the desired alarm in the alarm view or the alarm window.

The alarm is selected.

2. Touch the  button in the simple alarm view or  in the extended alarm view.

### Alternative operation

Depending on the configuration, you can also acknowledge an alarm with a function key.

### Result

The alarm is acknowledged. If the alarm belongs to an alarm group, all the alarms of the associated group are acknowledged.

Please refer to your system documentation to check whether additional information on acknowledgment and available alarm groups is available there.

## 10.6 Edit alarm

### Introduction

The configuration engineer can assign additional functions to each alarm. These functions are executed when the alarm is processed.

---

#### Note

When you edit an unacknowledged alarm, it is acknowledged automatically.



---

### Requirements

The alarm to be edited is displayed in the alarm window or the alarm view.

### Procedure

Proceed as follows:

1. Touch the desired alarm in the alarm view or the alarm window. The alarm is selected.
2. Touch the  button in the simple alarm view or  in the extended alarm view.

### Result

The system executes the additional functions of the alarm. Please refer to your system documentation to check whether additional information on this subject is available there.

# Operating recipes

## 11.1 Overview

### Introduction

Recipes are used when different variants of a product are manufactured with the same process. In this case, the product variants differ in terms of their type and quantity of the components, but not in terms of the manufacturing process sequence. The configuration engineer can store the combination of each individual product variant in a recipe.

### Field of application

Recipes can be used everywhere the same product components are used in variable combinations to create different product variants.

Examples:

- Beverage industry
- Food processing industry
- Pharmaceutical industry
- Paint industry
- Building materials industry
- Steel industry

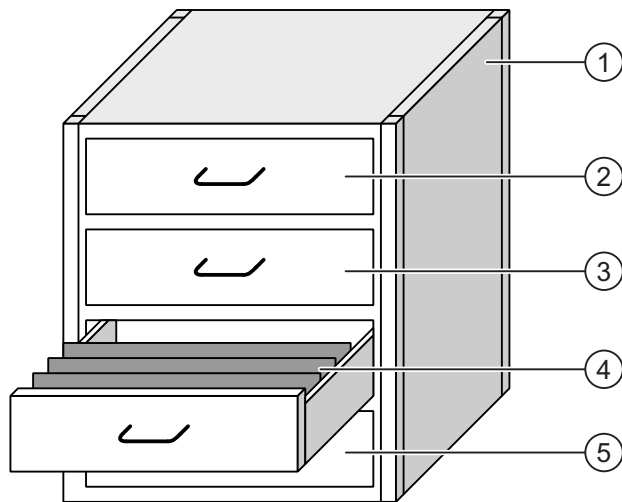
## 11.2 Structure of a recipe

### Recipes

The recipe collection for the production of a product family can be compared to a file cabinet. A recipe which is used to manufacture a product corresponds to a drawer in a file cabinet.

Example:

In a plant for producing fruit juice, recipes are required for different flavors. There is a recipe, for example, for the flavors orange, grape, apple and cherry.



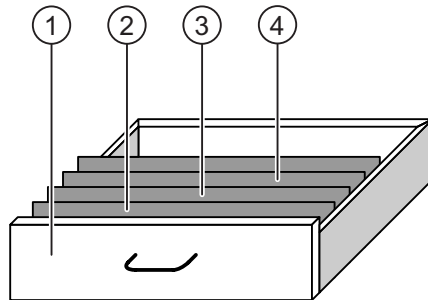
①	File cabinet	Recipe collection	Recipes for a fruit juice plant
②	Drawer	Recipe	Orange flavored drinks
③	Drawer	Recipe	Grape flavored drinks
④	Drawer	Recipe	Apple flavored drinks
⑤	Drawer	Recipe	Cherry flavored drinks

## Recipe data records

The drawers of the file cabinet are filled with suspension folders. The suspension folders in the drawers represent records required for manufacturing various product variants.

Example:

Product variants of the flavor apple might be a soft drink, a juice or nectar, for example.



①	Drawer	Recipe	Product variants of apple flavored drinks
②	Suspension folder	Recipe data record	Apple drink
③	Suspension folder	Recipe data record	Apple nectar
④	Suspension folder	Recipe data record	Apple juice

## Elements

In the figure showing the file cabinet, each suspension folder contains the same number of sheets. Each sheet in the suspension folder corresponds to an element of the recipe data record. All the records of a recipe contain the same elements. The records differ, however, in the value of the individual elements.

Example:

All drinks contain the same components: water, concentrate, sugar and flavoring. The records for soft drink, fruit juice or nectar differ, however, in the quantity of sugar used in production.

## 11.3 Recipes in the Project

### Overview

If recipes are used in a project, the following components interact:

- Recipe view / recipe screen

On the HMI device, recipes are displayed and edited in the recipe view or in a recipe screen.

- The recipe data records from the internal memory of the HMI device are displayed and edited in the recipe view.
- The values of the recipe tags are displayed and edited in the recipe screen.

Depending on the configuration, the values displayed in the recipe view are synchronized with the values of recipe tags.

- HMI device recipe memory

Recipes are saved in the form of data records in the HMI device recipe memory.

The recipe data can also be saved in recipe tags.

- Recipe tags

The recipe tags contain recipe data. When you edit recipes in a recipe screen, the recipe values are stored in recipe tags. Depending on the configuration, the values of the recipe tags are exchanged with the PLC.

The recipe tags can be synchronized with the recipe data records so that the same values are saved in both.

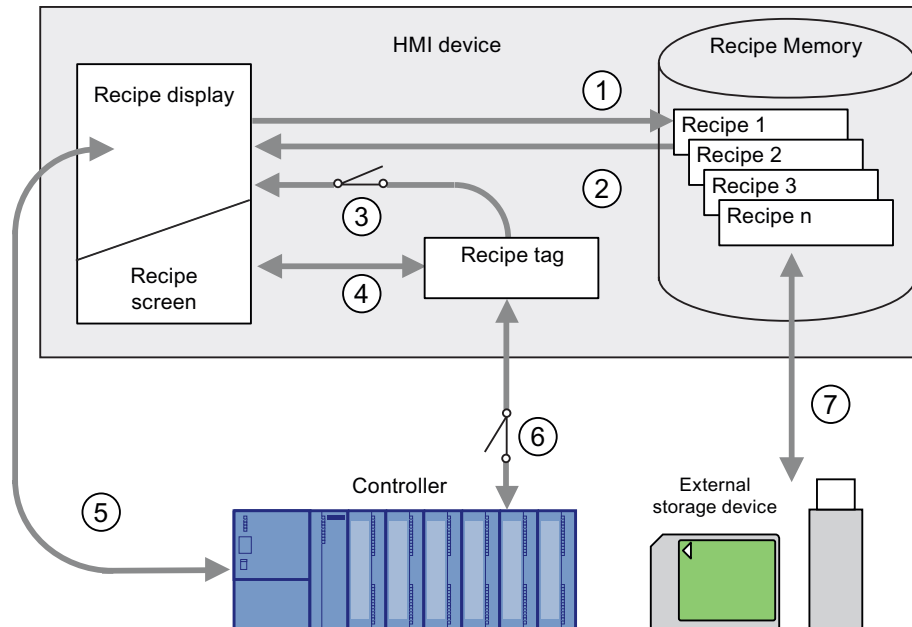
- External memory medium

Memory cards or USB sticks are external memory media for recipe data records.

The recipe data records are exported from the HMI device recipe memory and are saved on the external memory medium in a \*.csv file. The records can be reimported from the external memory medium to the recipe memory.

## Data flow

The following figure shows the data flow in a project with recipes.



- ① Editing, saving or deleting a recipe data record
- ② Display recipe data record
- ③ Synchronize or do not synchronize recipe tags
- ④ Display and edit recipe tags in the recipe screen
- ⑤ Write records from the recipe view to the PLC or read records from the PLC and display them in the recipe view
- ⑥ Recipe tags are sent to the PLC online or offline
- ⑦ Export or import recipe data record to external memory medium.

## 11.4 Recipe displays

### Displaying recipes

You can display and edit recipes on the HMI device with a recipe view or recipe screen.

### Recipe view

A recipe view is a screen object used to manage recipe data records. The recipe view shows recipe data records in tabular form.

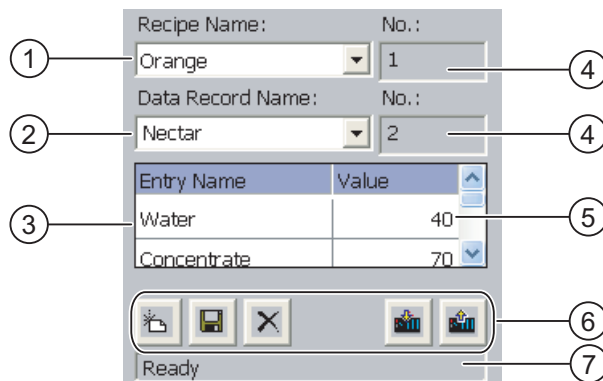
Depending on the configuration, the recipe view is displayed as follows:

- As extended recipe view
- As simple recipe view

The configuration engineer also defines which operator controls are displayed in the recipe view.

### Extended recipe view

The following figure shows an example of the extended recipe view.



- ① Selection box for the recipe
- ② Selection box for the recipe data record
- ③ Element name  
The element name designates a specific element in the recipe data record
- ④ Display field  
This show the number of the selected recipe or the selected recipe data record
- ⑤ Value of the element
- ⑥ Buttons for editing a recipe data record
- ⑦ Status bar for display of the status messages



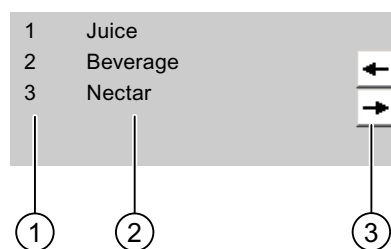
## Simple recipe view

The simple recipe view consists of three areas:

- Recipe list
- Data record list
- Element list

In the simple recipe view, each area is shown separately on the HMI device. Depending on the configuration, the simple recipe view starts with the recipe list or data record list.

The following figure shows an example of the record list.



- ① Number of the recipe data record
- ② Recipe data records
- ③ Buttons for changing the displayed list and calling the menu

## Display of values

### NOTICE

#### Changing the recipe data record in the background

Applies to the processing of a recipe data record:

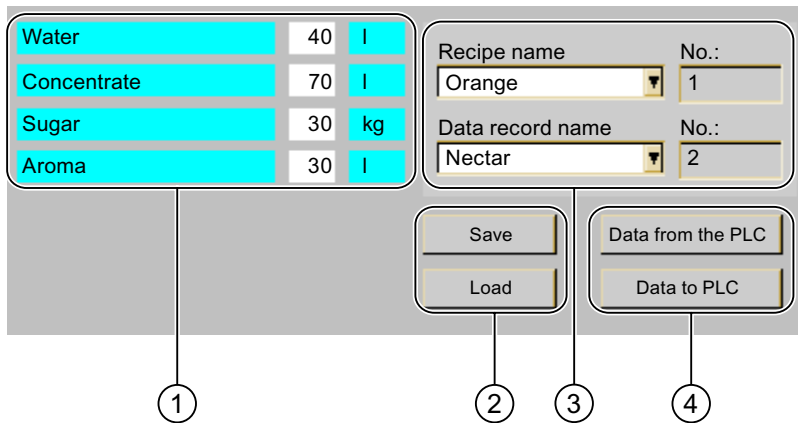
If values of the corresponding recipe data record are changed by a PLC job, the recipe view is not updated automatically.

To update the recipe view, reselect the respective recipe data record.

### Recipe screen

A recipe screen allows the correlation between the plant and the recipe data to be displayed in graphic form. The configuration engineer combines I/O fields and screen objects to form a custom input screen. The configuration engineer can distribute the I/O fields of a recipe over several recipe screens, thus allowing recipe elements to be arranged by subject. The recipe screen can be operated using buttons configured accordingly.

The following figure shows an example of the recipe screen.



- ① Element name and associated values  
The element name designates a specific element in the recipe data record
- ② Buttons for editing a recipe data record
- ③ Modified recipe view
- ④ Buttons for transferring recipe data

The values displayed or entered in the recipe screen are saved in recipe tags. The recipe values are exchanged with the PLC immediately or later via these tags.

A configured recipe view can itself be a component of a recipe screen. You must synchronize the tags in order to synchronize data between the tags of the recipe screen and the recipe data records displayed in the recipe view. Synchronization of tags is only possible in the extended recipe view.

Please refer to your system documentation to check whether additional information on this subject is available there.

## 11.5 Recipe Values in the HMI Device and the PLC

### Introduction

You can change the values of a recipe on the HMI device and therefore influence the manufacturing process or a machine.

Depending on the configuration, the recipe values are displayed, edited and saved in different ways:

- If you are editing recipes with a recipe view in your project, the values are saved in recipe data records.
- If you are editing recipes in a recipe screen in your project, the values are saved in recipe tags.

Differences may occur between the display values in the recipe view and the values saved in the associated tags in an ongoing project when you edit recipes with a recipe view and in a recipe screen. To prevent this, the recipe data record values must be synchronized with the values of the recipe tags.

You have however the option to perform synchronization operations at any time. Synchronization only takes place if the configuration engineer has activated the respective settings for a recipe.

---

### Note

Recipe tags can only be synchronized in the extended recipe view.

---


### Synchronizing recipe tags

Synchronization of the recipe tags depends on the configuration:

- Automatic synchronization:

The values of the recipe view are synchronized with the associated recipe tags. In this case, changes to values in the recipe view have an immediate effect on the values of the associated recipe tags. The values are only synchronized, when an operating element that is outside the recipe view is operated.

- Synchronization by the user:

The values of the recipe view and the associated recipe tags are not synchronized automatically. The configuration engineer has assigned the same function to the  button or a different operating element in the recipe view. The recipe tags and the recipe view are only synchronized when you operate the buttons or the appropriate operating element.

## Recipe tags online / offline

The configuration engineer can configure a recipe so that changes to the values of the recipe tags do not have an immediate effect on the current process.

Synchronization of the recipe values between the HMI device and the PLC depends on whether the configuration engineer has selected the settings "Tags online" or the setting "Tags offline" for a recipe.

- "Tags online:"

This setting has the following effect:

- When you change recipe values in the recipe screen, these changes are applied immediately by the PLC and immediately influence the process.
- If recipe values are changed in the PLC, the changed values are displayed immediately in the recipe screen.

- "Tags offline"

With this setting, changed recipe values are not synchronized immediately between the HMI device and the PLC.

In this case, the configuration engineer must configure operating elements for transferring the values to the PLC or reading them from the PLC in a recipe screen. The recipe values are only synchronized between HMI device and PLC when you operate the appropriate operating element.

## 11.6 Operating the recipe view

### 11.6.1 Overview








#### Operation

The recipe view can be operated as follows:

- Enter values for the recipe elements
- Create recipe data records
- Save recipe data records or save them under a new name
- Delete recipe data records
- Synchronize values of the recipe view with the associated recipe tags
- Transfer recipe data records from the PLC and to the PLC

### Operator controls of the recipe view

The following table shows the operator controls of the recipe view.

Buttons	Functions
	Creates a new recipe data record. If a start value is configured, it is shown in the text box.
	Saves the displayed values of the recipe data record. The storage location is predefined by the project.
	The recipe data record is saved under a different name irrespective of the recipe view. A dialog box opens in which the name is entered.
	The displayed recipe data record is deleted.
	The values of the recipe view are synchronized with the associated recipe tags. The values changed during editing are written to the associated recipe tags. Subsequently all the values of the tags are read out and updated in the table.
	The recipe values from the PLC are displayed in the recipe view.
	The values of the set recipe data record displayed in the recipe view are transferred to the PLC.

### Operating the recipe screen

You operate the recipes in a recipe screen with the operator controls provided by the configuration engineer.

Please refer to your system documentation to check whether additional information on this subject is available there.

## 11.6.2 Creating a recipe data record

### Introduction

You create a new recipe data record by modifying an existing record. You then save the modified data record under a new name.


### Requirements

A screen with a recipe view is displayed.

## Procedure

Proceed as follows:

1. If the recipe view contains several recipes: Select the recipe for which you want to create a new recipe data record.

2. Touch .

A new recipe data record with the next available number is created.

If you change the new data record number to an existing data record number, the existing data record is overwritten.

3. Enter values for the elements of the data record.

The elements of the recipe data record can be assigned default values depending on the configuration.

4. Touch .

5. Enter a name for the data record.

The data record is saved under the new name.

If the recipe data record already exists, a dialog is opened. In this dialog, specify whether the existing data record is to be overwritten.

## Result

The new recipe data record is saved to the selected recipe.

## See also


Recipes in the Project (Page 286)


### 11.6.3 Editing a recipe data record

#### Introduction

Edit the values of the recipe data records and save them in a recipe view.

#### Synchronization with the PLC

If you want to display the current recipe values from the PLC in the recipe view, you first have to read the current values from the PLC with .


The values changed in the recipe view only become effective when the amended data record is transferred to the PLC by means of the  button.


#### Requirements

A screen with a recipe view is displayed.

## Procedure

Proceed as follows:

1. If the recipe view contains several recipes: Select the recipe which contains the desired recipe data record.
2. Select the recipe data record you want to change.
3. Change the data record as required.
4. Save your changes by means of the  button.

If you want to save the recipe data record under a different name, touch the  key.

5. The recipe data record is saved.

## Result

The edited recipe data record has now been saved in the selected recipe.

## See also

Recipes in the Project (Page 286)

## 11.6.4 Deleting a recipe data record

### Introduction


You can delete all the data records of a recipe which are not required.

### Requirements

A screen with a recipe view is displayed.

### Procedure

Proceed as follows:

1. If the recipe view contains several recipes: Select the recipe which contains the desired recipe data record.
2. Select the recipe data record you want to delete.
3. Touch .

### Result

The recipe data record is deleted.

### See also

Recipes in the Project (Page 286)

### 11.6.5 Synchronizing tags

#### Introduction

The values of the recipe elements can be saved to recipe tags, depending on the configuration.

Differences may occur between the display values in the recipe view and the actual values of tags in an ongoing project. Synchronize the tags to equalize such differences.

Synchronization always includes all the variables which belong to a recipe data record.

<b>NOTICE</b>
<b>Changed tag name</b>
Tags and the value of the recipe data record cannot be assigned to each other if the tag name of the tag to be synchronized has been changed. The tags in question are not synchronized.

---

#### Note

Recipe tags can only be synchronized in the enhanced recipe view.


---

#### Requirement

A screen with a recipe view is displayed.

#### Procedure

Proceed as follows:

1. If the recipe view contains several recipes: Select the recipe which contains the desired recipe data record.
2. Select the recipe data record you want to synchronize.
3. Touch .

#### Result

The elements of the recipe data record are synchronized with the recipe tags.

If the values of the recipe view and the tag do not match, the more current value is accepted.

#### See also

Recipes in the Project (Page 286)



## 11.6.6 Reading a recipe data record from the PLC

### Introduction

In the current project, the values which are also stored in the recipes in the HMI device can be changed directly in the plant. This is the case, for example, if a valve was opened further directly at the plant than is stored in the recipe. The values of the recipe data records saved in the HMI device possibly no longer match the values in the PLC.

To synchronize the recipe values, read the values from the PLC and display them in the recipe view.

### Requirements

A screen with a recipe view is displayed.

### Procedure

Proceed as follows:

1. If the recipe view contains several recipes: Select the recipe which contains the desired recipe data record.
2. Select the recipe data record to which you want to apply the values from the PLC.

3. Touch .

The values are read from the PLC.

4. If you want to store the displayed values in the HMI device, touch the  button.

### Result

The values were read from the PLC, displayed on the HMI device and saved to the selected recipe data record.

### See also

Recipes in the Project (Page 286)

## 11.6.7 Transferring a recipe data record to the PLC

### Introduction

In order for an edited recipe data record to take effect in the process, you must transfer the values to the PLC.


The display values in the recipe view are always transferred to the PLC.

### Requirements

A screen with a recipe view is displayed.

### Procedure

Proceed as follows:

1. If the recipe view contains several recipes: Select the recipe which contains the desired recipe data record.
2. Select the recipe data record whose values you want to transfer to the PLC.
3. Touch .

### Result

The display values in the recipe view were transferred to the PLC and take effect in the process.

### See also

Recipes in the Project (Page 286)

## 11.7 Operating the simple recipe view

### 11.7.1 Overview

#### Introduction

The simple recipe view consists of three areas:

- Recipe list
- Data record list
- Element list

You can use the context menu to operate each of these display areas.

#### Operation



The simple recipe view can be operated as follows:

- Enter values for the recipe elements
- Create recipe data records
- Save recipe data records or save them under a new name
- Delete recipe data records
- Transfer recipe data records from the PLC and to the PLC


#### Operator controls of the simple recipe view

Toggle between the display areas and the context menus to operate the simple recipe views.

The following table shows the operation of the display area.

Operation	Functions
Touching an entry	The next lower display area opens.
	The next higher display area opens.
	The context menu of the display area opens.

The following table shows the operation of the context menu.

Operation	Functions
	The menu is closed. The display area opens.
Touch the menu command	The menu command is executed.

### Context menus of the simple recipe view

- Recipe list

Menu item	Functions
New	A new recipe data record is created for the selected recipe. If a start value is configured, it is shown in the text box.
Displaying infotext	The infotext configured for the simple recipe view is displayed.
Open	The record list of the selected recipe opens.

- Data record list

Menu item	Functions
New	A new recipe data record is created for the selected recipe. If a start value is configured, it is shown in the text box.
Delete	The selected record is deleted.
Save as	The selected record is saved under a different name irrespective of the simple recipe view. A dialog box opens in which the name is entered.
Rename	The selected data record is renamed. A dialog box opens in which the name is entered.

- Element list

Menu item	Functions
Save	The selected record is saved.
To PLC	The displayed values of the selected data record are transferred from the HMI device to the PLC.
From PLC	The recipe values from the PLC are displayed on the HMI device in the recipe view.
Save as	The selected data record is saved under a new name. A dialog box opens in which the name is entered.

### Operating the menu

Touch the desired menu command. The command is executed.

### Operating the recipe screen

You operate the recipes in a recipe screen with the operator controls provided by the configuration engineer.

Please refer to your system documentation to check whether additional information on this subject is available there.

## 11.7.2 Creating a recipe data record

### Introduction

Create a new recipe data record in the recipe list or in the record list. Then enter the values for the new record in the element list and save the record.

### Requirements

A screen with a simple recipe view is displayed.

### Procedure

Proceed as follows:

1. If the recipe list contains several recipes: Select the recipe for which you want to create a new recipe data record.
2. Open the recipe list menu.
3. Select the menu command "New".  
Creates a new record  
The element list of the new record opens.
4. Enter values for the elements of the data record.  
The tags of the record can be assigned default values depending on the configuration.
5. Open the menu of the element list and select the command "Save".
6. Enter a name for the new record.
7. Confirm your entries.  
If you change the new data record number to an existing data record number, the existing data record is overwritten.

### Result

The new recipe data record is saved to the selected recipe.

### See also

Recipes in the Project (Page 286)

### **11.7.3 Editing a recipe data record**

#### **Introduction**

Edit the values of the recipe data records in a simple recipe view.

#### **Synchronization with the PLC**

If you want to display the current recipe values from the PLC in the simple recipe view, you first have to read the current values from the PLC with the menu command "From PLC" in the element list.

The values changed in the recipe view only take effect in the PLC when you transfer the edited data record to the PLC with the menu command "To PLC".

#### **Requirements**

A screen with a simple recipe view is displayed.

#### **Procedure**

Proceed as follows:

1. If the recipe list contains several recipes: Select the recipe which contains the desired recipe data record.
2. Open the data record list.
3. Select the recipe data record you want to change.
4. Open the element list.
5. Change the values of the records as required.
6. Save your changes with the menu command "Save".

The recipe data record is saved.

#### **Result**

The edited recipe data record has now been saved in the selected recipe.

#### **See also**

Recipes in the Project (Page 286)

## **11.7.4 Deleting a recipe data record**

### **Introduction**

You can delete all the data records which are not required.

### **Requirements**

A screen with a simple recipe view is displayed.

### **Procedure**

Proceed as follows:

1. If the recipe list contains several recipes: Select the recipe which contains the desired recipe data record.
2. Open the data record list.
3. Select the data record you want to delete.
4. Open the menu.
5. Select the menu command "Delete".

### **Result**

The data record is deleted.

### **See also**

Recipes in the Project (Page 286)

## 11.7.5 Reading a recipe data record from the PLC

### Introduction

The values of recipe elements are exchanged with the PLC via tags.

In the current project, the values which are also stored in the recipes in the HMI device can be changed directly in the plant. This is the case, for example, if a valve was opened further directly at the plant than is stored in the recipe. The values of the tags on the HMI device possibly no longer match the values in the PLC.

To synchronize the recipe values, read the values from the PLC and display them in the recipe view.

### Requirements

A screen with a simple recipe view is displayed.

### Procedure

Proceed as follows:

1. If the recipe list contains several recipes: Select the recipe which contains the desired recipe data record.
2. Select the element list of the recipe data record to which you want to apply the values from the PLC.
3. Open the menu.
4. Select the menu item "From PLC".  
The values are read from the PLC.
5. If you want to save the displayed values in the HMI device, select the menu item "Save".

### Result

The values were read from the PLC, displayed on the HMI device and saved to the selected recipe data record.

### See also

Recipes in the Project (Page 286)



## 11.7.6 Transferring a recipe data record to the PLC

### Introduction

In order for an edited recipe data record to take effect in the process, you must transfer the values to the PLC.

The display values in the recipe view are always transferred to the PLC.

### Requirements

A screen with a simple recipe view is displayed.

### Procedure

Proceed as follows:

1. If the recipe list contains several recipes: Select the recipe which contains the desired recipe data record.
2. Select the element list of the recipe data record whose values you want to transfer to the PLC.
3. Open the menu.
4. Select the menu item "To PLC".

### Result

The values of the recipe data record were transferred to the PLC and take effect in the process.

### See also

Recipes in the Project (Page 286)

## 11.8 Exporting a recipe data record

### Introduction

You can export one or more recipe data records to a CSV file, depending on the configuration. After export, the values in the recipe data record can be further processed in a spreadsheet program such as MS Excel. The degree to which you can influence the export depends on the configuration:

<b>NOTICE</b>
<b>Export of recipe data to USB memory stick not possible</b>
The USB interface is deactivated while the main battery is changed. Make sure that no recipe data is exported to a USB memory stick while the main battery is being changed.

### Requirements

- A screen with a recipe view is displayed
- An operating element with the function "Export record" has been configured.
- The following tags are configured equally in the recipe view and for the "Export record" operating element.
  - Recipe number
  - Data record number

### Procedure

Proceed as follows:

1. If the recipe view contains several recipes: Select the recipe which contains the desired recipe data record.
2. Select the recipe data record you want to export.
3. Operate the operator control which was configured for export, for example the "Export data record" button.

The data record is exported as a CSV file to an external data medium.

Please refer to your system documentation to check whether additional information on this subject is available there.

### Result

The recipe data record is exported.

## 11.9 Importing a recipe data record

### Introduction

You can import values from a CSV file to a recipe data record, depending on the configuration.

### Requirements

- An operating element with the function "Import data record" has been configured, for example a button
- A screen with a recipe view is displayed

### Procedure

Proceed as follows:

1. If the recipe view contains several recipes: Select the recipe which contains the recipe data record to be imported.
2. Operate the operating element with the function "Import data record".

The record is imported from an external data medium as a CSV file and then displayed in the recipe view after import.

### Result

The imported recipe data record is saved on the HMI device.

### Deviating structure

If the structure of the CSV file differs from the structure of the recipe, deviations are handled as follows:

- Any additional values in the CSV file will be rejected
- The system applies the configured default value to the recipe data record if the CSV file contains an insufficient number of values
- If the CSV file contains values of the wrong data type, the configured default value is set in the recipe data record

Example:

The imported CSV file contains values that were entered as floating point numbers

However, the corresponding tag expects an integer value. In this case, the system discards the imported value and uses the configured default

## 11.10 Examples

### 11.10.1 Entering a recipe data record

#### Introduction

You would like to enter production data on the HMI device without interrupting the process in the machine or plant. For this reason, the production data should not be transferred to the PLC.

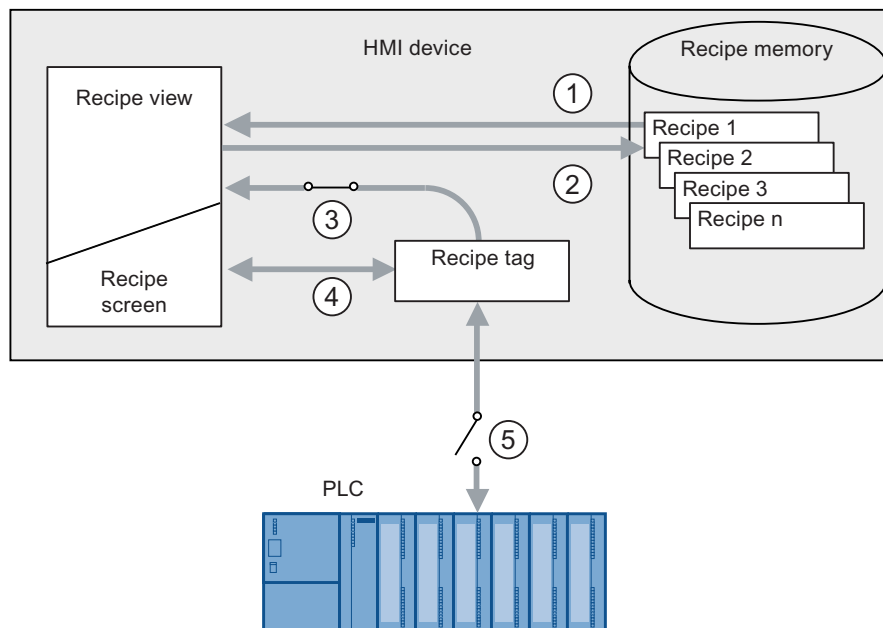
#### Procedure

Proceed as follows:

1. Call the recipe view or a recipe screen.
2. Select the desired recipe data record.
3. Enter the values of the elements.
4. Save the recipe data record.

The recipe data record is saved in the internal memory of the HMI device.

The following figure shows the data flow schematically.



- ① Display recipe data record
- ② Save recipe data record
- ③ Tags are synchronized
- ④ Display and edit recipe tags in the recipe screen
- ⑤ Tags are offline

## 11.10.2 Manual production sequence

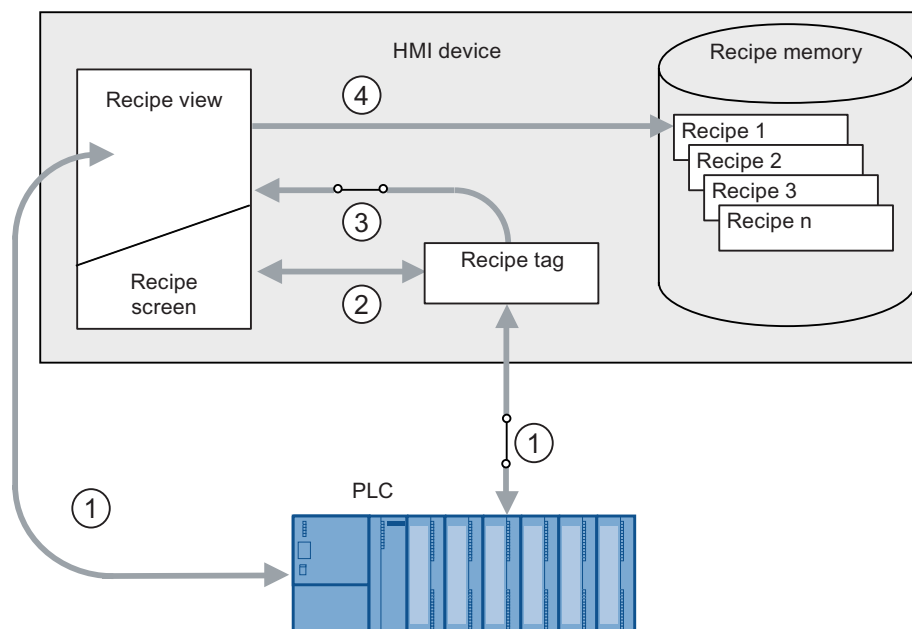
### Introduction

You request the production data of different workpieces from the PLC and display this data on the screen of the HMI device for inspection. You want to correct the transferred production data in the recipe view or the recipe screen if necessary.

### Procedure

A scanner connected to the PLC reads the barcode of a workpiece. The barcode names correspond to the names in the recipe data record. Based on the barcode name, the PLC can read the required recipe data record. The recipe data record is displayed for inspection on the HMI device. You can now edit and save the recipe data record. Then transfer the edited recipe data record to the PLC again.

The following figure shows the data flow schematically.



- ① The recipe data record is read from the PLC and written to the PLC again following changes
- ② Display and edit recipe tags in the recipe screen
- ③ Tags are synchronized
- ④ Recipe data records are saved in the recipe memory of the HMI device



## Maintenance and care

### 12.1 Maintenance and care

#### Scope of maintenance

- Function tests

Carry out the specified tests in the periods of time prescribed for each. Otherwise, the functionality of the HMI device is not guaranteed.

To perform the function tests, the HMI device must be switched on but not integrated.

- Press the emergency stop button at least once a year.
- Press both enabling buttons every time you start a project.

- HMI device

The HMI device is designed for maintenance-free operation. The touch screen and keyboard overlay should nevertheless be cleaned regularly.

- Maintenance cycle of battery

We recommend that you replace the battery when it can only be charged to 50%. This is the case after approximately 500 complete charging cycles.

A charging cycle is complete when the battery is fully charged.


Example:

The battery has a charging condition of 80%. It needs another 20% before it is fully charged. The battery is charged. This charging process counts as one fifth of a complete charging cycle.

- Transponder batteries

Replace the transponder batteries at least every 5 years.

## Cleaning the HMI device

 <b>CAUTION</b>
<b>Inadvertent operation</b> Always switch off the HMI device before cleaning it. This will ensure that you do not trigger unintended functions when you touch the keys.
<b>CAUTION</b>
Do not clean the HMI device with compressed air or steam jet blowers. Never use aggressive solvents or scouring powder. Use a cleaning cloth dampened with a cleaning agent to clean the equipment. Only use water with a little liquid soap or a screen cleaning foam.

### Procedure

Proceed as follows:

1. Switch off the HMI device.
2. Spray the cleaning solution onto a cleaning cloth.  
Do not spray directly onto the HMI device.
3. Clean the HMI device.  
When cleaning the display wipe from the screen edge inwards.

## 12.2 Spare parts and repairs

### Repairs

In case of repair, the HMI device must be shipped to the Return Center in Fürth. Repairs may only be carried out at the Return Center in Fürth.

Depending on the work necessary to repair the device, the Center may decide to give you a credit note. In this case, it is your responsibility to order a new device.

The address is:

Siemens AG  
Industry Sector  
Returns Center  
Siemensstr. 2  
90766 Fürth, Germany



## Service pack

A service pack can be ordered for servicing purposes.

The service pack includes:

- For the HMI device
  - Cover caps
  - Battery compartment cover
  - Bridging battery
- For the charging station
  - Covers for the battery compartment in the charging station.
  - Lock
  - Key set for lock
  - Counterpart for power supply connector

The service pack can be ordered from your Siemens representative.

## Replacement key set

You can order a replacement key set for the HMI device from your Siemens sales office.

## Replacement batteries

Main batteries and bridge batteries can be ordered from your Siemens sales office.

## Service & Support on the Internet

The online services of Service & Support at "<http://www.siemens.com/automation/support>" provide comprehensive information on SIMATIC products:

- Local service
- Repairs
- Replacement parts and more

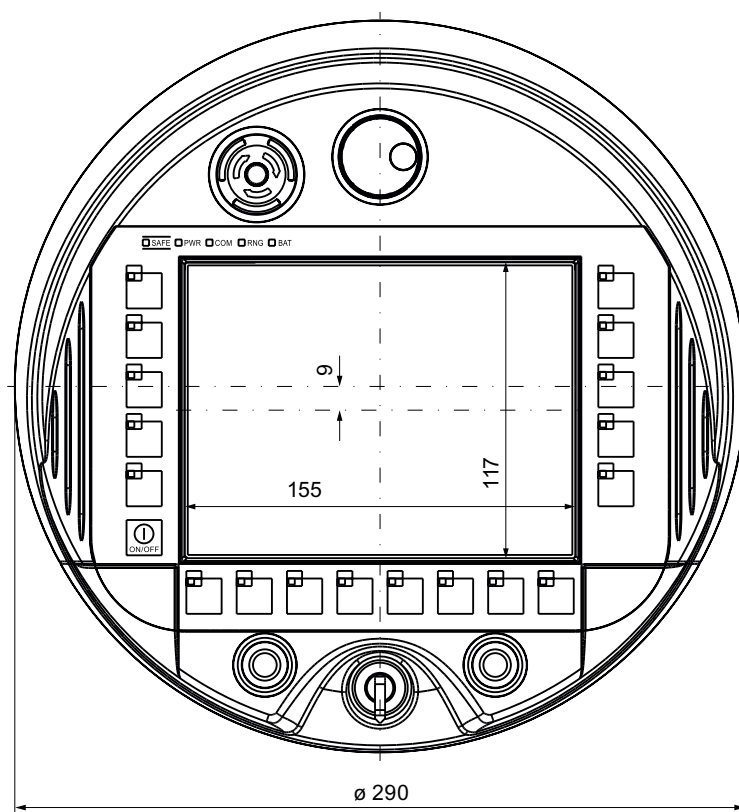


## Technical specifications

### 13.1 Dimension drawings

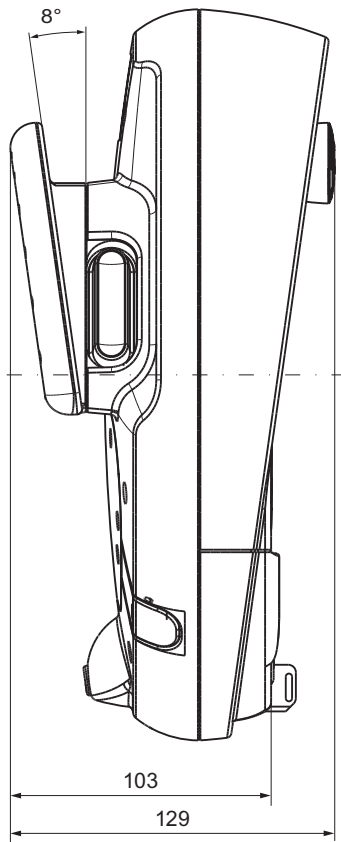
#### 13.1.1 Mobile Panel 277F IWLAN

##### Front view



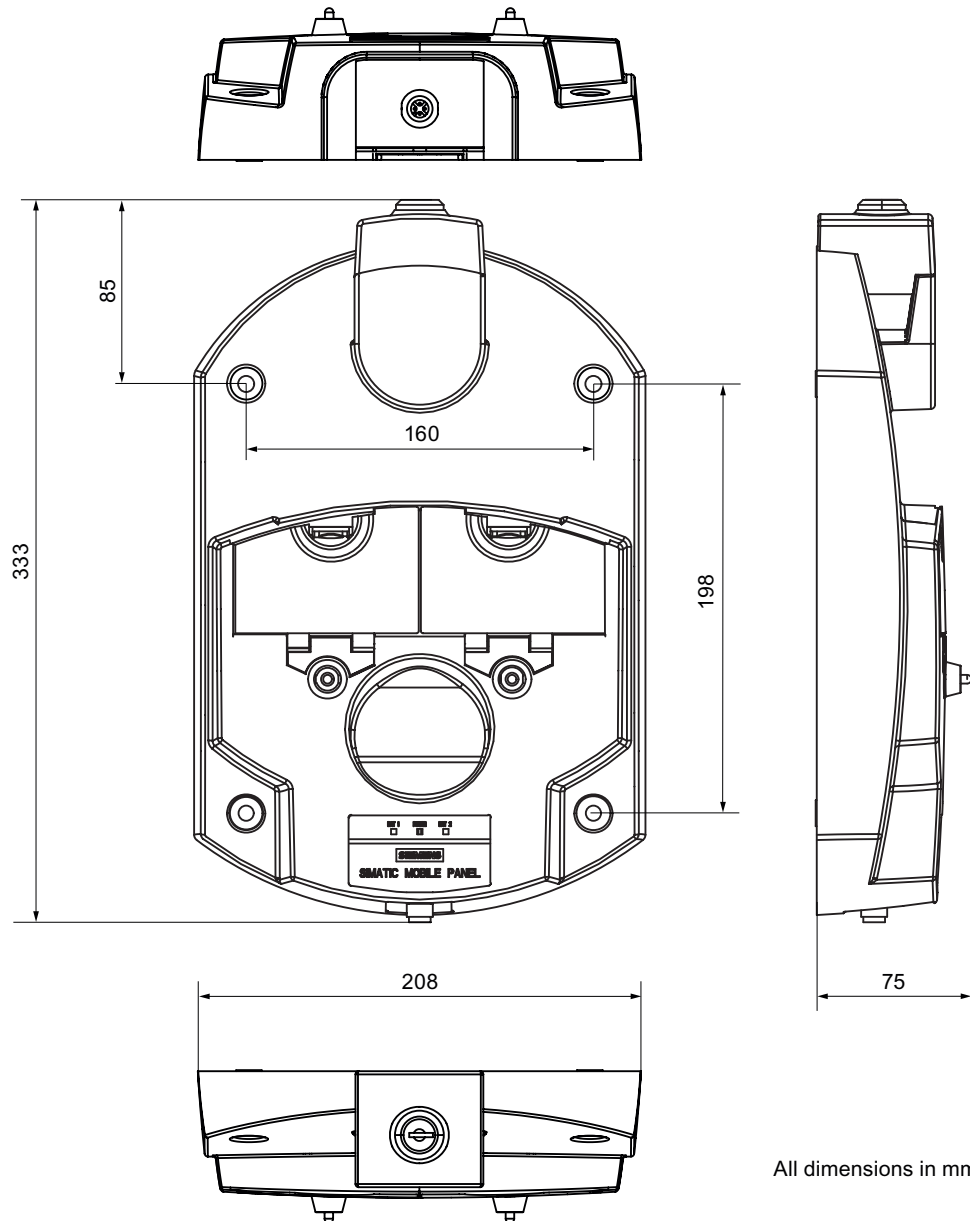
All dimensions in mm

Side view



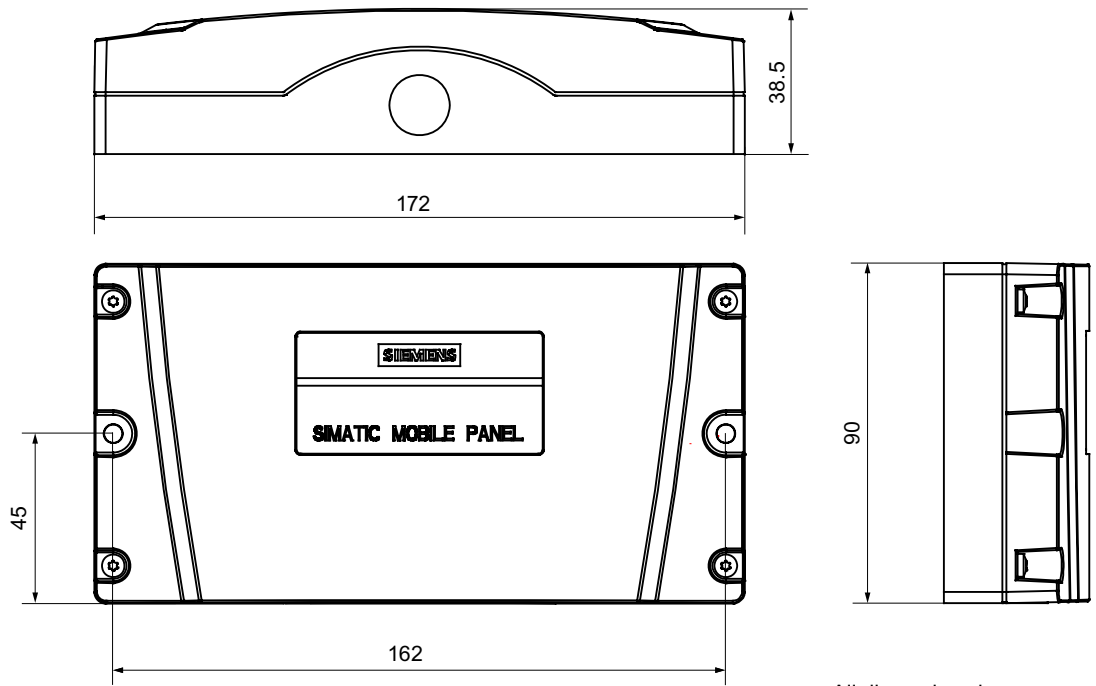
All specifications in mm

### 13.1.2 Charging station



All dimensions in mm

### 13.1.3 Transponder



All dimensions in mm

## 13.2 Specifications

### 13.2.1 Mobile Panel 277F IWLAN

#### HMI device

Weight with battery and without packaging	Max. 2.2 kg
---	-------------

#### Display

Type	Color TFT LC display
Display area, active	151.66 mm x 113.74 mm (7,5")
Resolution	640 x 480 pixels
Colors, displayable	64k colors
Brightness control	Yes
Backlighting	CCFL
Half Brightness Life Time, typical	50.000 h
Pixel error class according to DIN EN ISO 13406-2	II

#### Input device

Type	Touch screen, analog, resistive Membrane keyboard
Function keys	18, with LEDs
Enabling button	1
Emergency stop button	1
ON/OFF button	1
Handwheel (optional)	1 50 pulses per rotation
Key-operated switch (optional)	1 3 switch settings
Illuminated pushbutton (optional)	2 LED separately controllable

#### Memory

Application memory	6 MB
--------------------	------

### Interfaces

1 x USB	<ul style="list-style-type: none"> <li>• USB host; conforms to USB standard 1.1 (supporting low-speed and full-speed USB devices)</li> <li>• Maximum load 100 mA</li> </ul>
1 x WLAN	For PROFINET WLAN
1 x RJ45	For PROFINET LAN


### Supply voltage

Supply voltage	
About	<ul style="list-style-type: none"> <li>• Battery</li> <li>• Charging station</li> <li>• Tabletop power supply unit</li> </ul>

### Additional specifications

Drop height with main battery	Max. 1.2 m
Buffer time of internal clock with bridging battery inserted	Approx. 4 days
Radio link to transponder <ul style="list-style-type: none"> <li>• Frequency band</li> <li>• Transmission angle</li> </ul>	<ul style="list-style-type: none"> <li>• 2400 - 2483 MHz</li> <li>• Approx. 83°</li> </ul>

### Fail-safe operation

 <b>WARNING</b>
The safety characteristics in the specifications apply for a proof-test interval of 10 years and a mean repair time of 8 hours.

In accordance with IEC 61508	
Hardware architecture	Redundant 1oo2
Hardware error tolerance	1
Safe failure fraction	99,5 %
Diagnostic test interval	10 ms
Request rate	High demand mode
High demand (PFH: probability of a dangerous failure per hour)	8.60E-11 1/h
Maximum achievable safety class (SIL)	3
Useful life	10 years



<b>In accordance with DIN EN ISO 13849-1</b>	
Mean time to failure (MTTF <sub>d</sub> )	1.516 years
Meantime to Restoration (MTTR)	8 hours
Diagnostic coverage (DC)	99 %
Performance level (PL)	e
Safety category	4
<b>In accordance with EN 954-1</b>	
Safety category	4

<b>Other safety-related values</b>	
Acknowledgement time	40 ms
maximum reaction time in case of error-free operation	25 ms
Discrepancy time	
<ul style="list-style-type: none"> <li>• Emergency stop</li> <li>• Enabling button position "Enable"</li> <li>• Enabling button position "Panic"</li> </ul>	<ul style="list-style-type: none"> <li>• 500 ms</li> <li>• 2 s</li> <li>• 1 s</li> </ul>

### Quantity structure for the effective range concept

<b>F FBs required in safety program</b>	
F_FB_MP	1x per Mobile Panel 277F IWLAN, maximum 126
F_FB_RNG_4	1x per effective range, for which up to 4 HMI devices have logon authorization
F_FB_RNG_16	1x per effective range, for which up to 16 HMI devices have logon authorization
DB_STATES	1

<b>Configuration</b>	
Maximum number of transponders used in the project for effective ranges	127
Maximum number of effective ranges in the project	127
Maximum number of transponders per effective range	127
Maximum number of HMI devices with logging on authorization per effective range	<ul style="list-style-type: none"> <li>• When using F_FB_RNG_4: 4 HMI devices</li> <li>• When using F_FB_RNG_16: 16 HMI devices</li> </ul>
Maximum configurable distance between transponder and HMI device	8 m

### 13.2.2 Batteries

<b>Main battery</b>	
Type	Lithium ion accumulator
Operation time in normal mode	Approx. 4 h
Operation time in stand-by mode	Approx. 15 days
Charging cycles	500
Charging time	Approx. 4 h <sup>1)</sup>

<b>Bridging battery</b>	
Type	Lithium ion accumulator
Bridging time	5 min
Charging cycles	500

<sup>1)</sup> The effective charging time depends on the ambient temperature. The higher the ambient temperature, the longer the charging time.

### 13.2.3 Charging station

#### Weight

Weight without packing	Approx. 1.1 kg
------------------------	----------------

#### Supply voltage

Nominal voltage	+24 VDC
Range, permissible	19.2 V to 28.8 V (-20%, +20%)
Transients, maximum permissible	35 V (500 ms)
Time between two transients, minimum	50 sec
Current consumption with Mobile Panel <ul style="list-style-type: none"> <li>• Typical</li> <li>• Constant current, maximum</li> <li>• Power on current surge I<sup>2</sup>t</li> </ul>	<ul style="list-style-type: none"> <li>• Approx. 1.5 A</li> <li>• Approx. 1.8 A</li> <li>• Approx. 1.7 A<sup>2</sup>s</li> </ul>
Current consumption with Mobile Panel and batteries in charging compartment <ul style="list-style-type: none"> <li>• Typical</li> <li>• Constant current, maximum</li> <li>• Power on current surge I<sup>2</sup>t</li> </ul>	<ul style="list-style-type: none"> <li>• Approx. 2.8 A</li> <li>• Approx. 3.4 A</li> <li>• Approx. 1.7 A<sup>2</sup>s</li> </ul>
Fuse, internal	Electronic

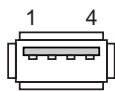
### 13.2.4 Transponder

Weight without batteries	0,3 kg
Power supply	3 AA mignon batteries, 1.5 V
Operating life of batteries in normal operation	5 years
Radio link to HMI device <ul style="list-style-type: none"> <li>• Frequency band</li> <li>• Transmission angle</li> </ul>	<ul style="list-style-type: none"> <li>• 2400 - 2483 MHz</li> <li>• Approx. 93°</li> </ul>
Type	Passive

### 13.2.5 Description of interfaces on the HMI device

#### USB

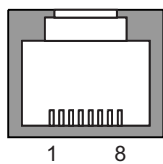
The figure below shows the pin assignment of the USB interface.



Pin	Assignment
1	+5 VDC, out (max. 100 mA)
2	USB-DN
3	USB-DP
4	GND

#### RJ45

The figure below shows the pin assignment of the RJ45 interface.



Pin	Assignment
1	TD+
2	TD-
3	RD+
4	n. c.
5	n. c.
6	RD-
7	ICD+
8	ICD-

**WLAN**

WLAN in accordance with IEEE 802.11 a

**See also**

Interfaces of the HMI device (Page 76)

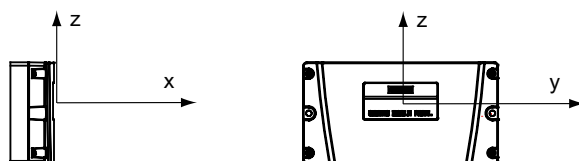
**13.3 Radiation characteristic**

**13.3.1 Radiation characteristic of the transponder**

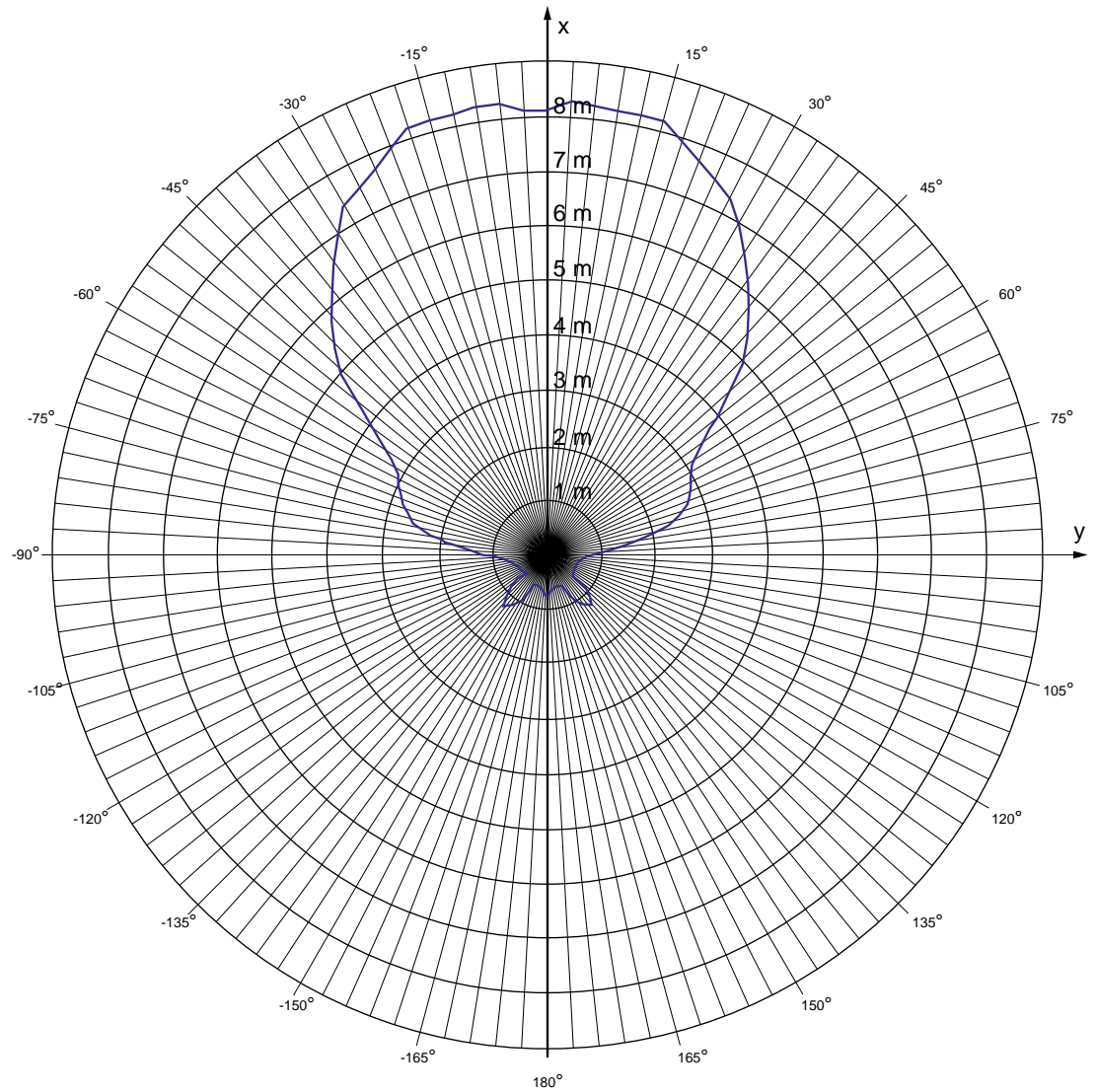
Antenna type	Dual port patch antenna
Polarization	Vertical and horizontal
Frequency band	2400 - 2483 MHz
Antenna gain	Max. in main count direction <ul style="list-style-type: none"> <li>• Port 1: 2,6 dBic</li> <li>• Port 2: 2.7 dBic</li> </ul>
Impedance	50 Ω
Full widths at half maximum, horizontal at 2.45 GHz	93°
Full widths at half maximum, vertical at 2.45 GHz	90°

**Ranges depending on angular displacement to main count direction**

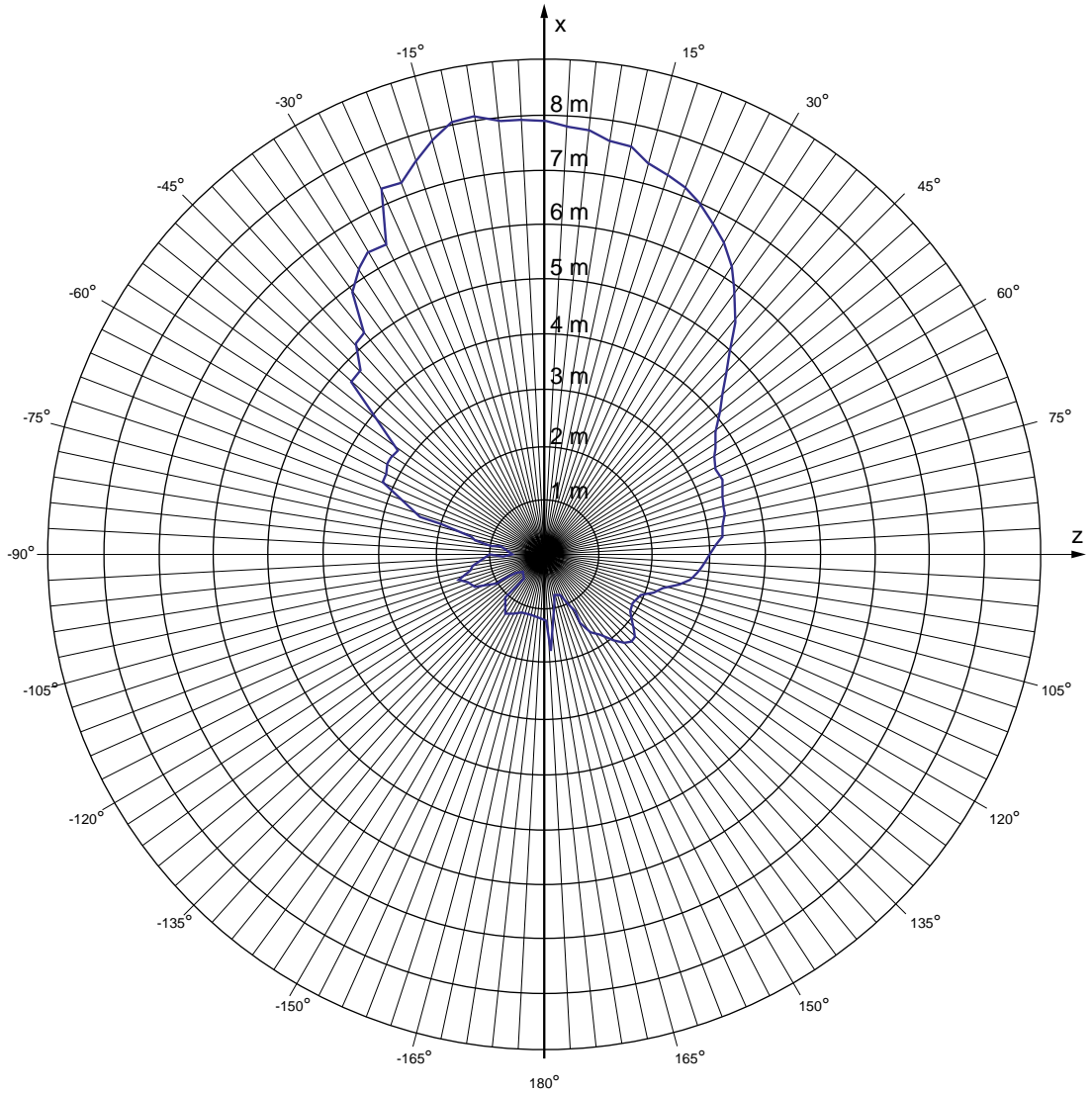
The following figure shows the coordinate system applied to the transponder.



The figure below shows the transponder range depending on the angular displacement to the main count direction in the y direction:



The following figure shows the transponder range depending on the angular displacement to the main count direction in the z direction:

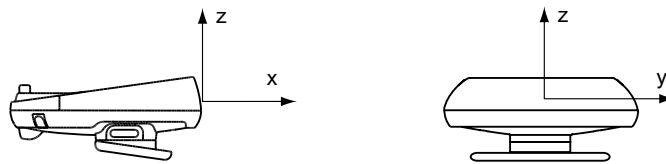


### 13.3.2 Radiation characteristic of HMI device

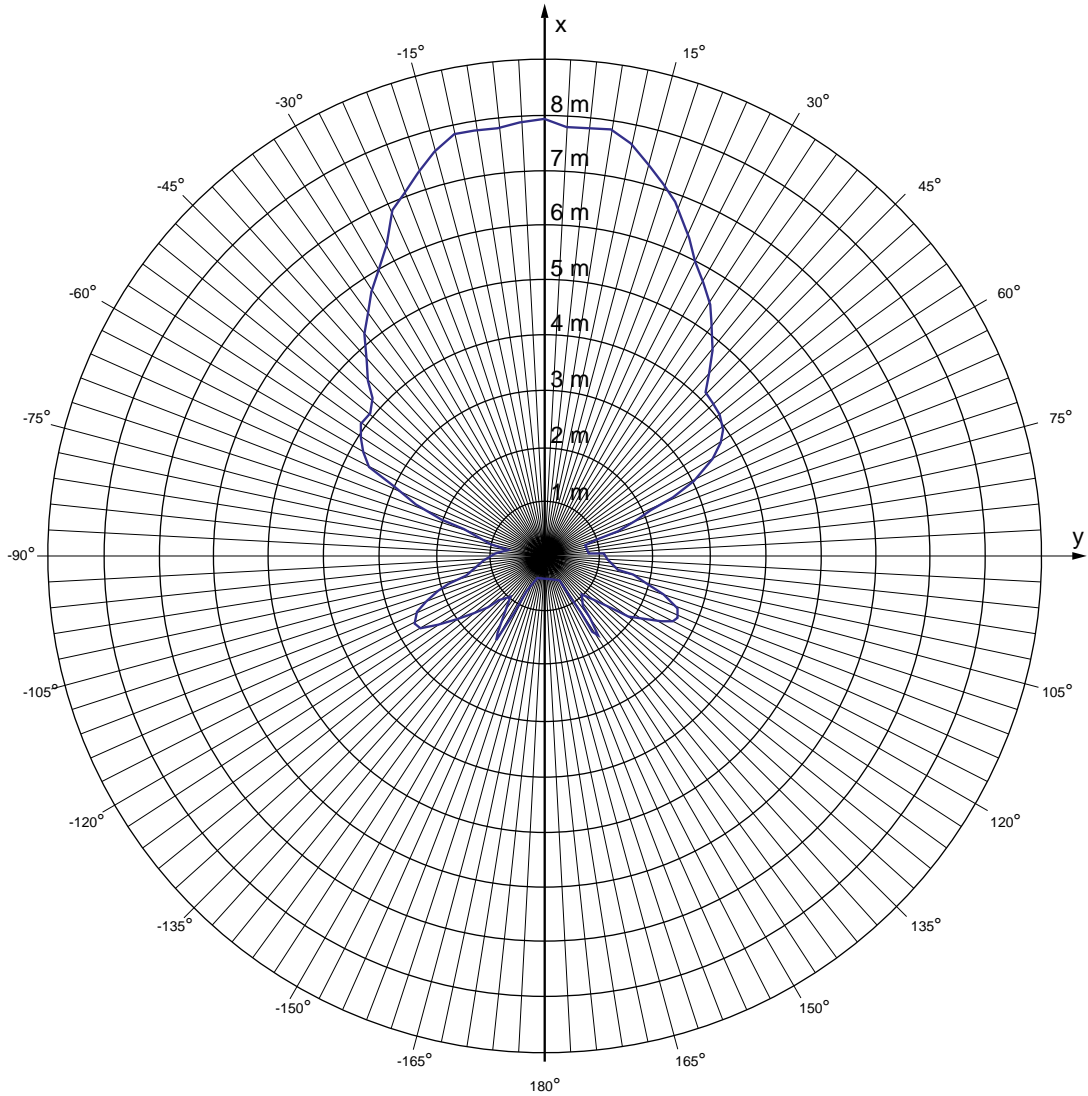
Antenna type	Dual port patch antenna
Polarization	Vertical and horizontal
Frequency band	2400 - 2483 MHz
Antenna gain	Max. in main count direction <ul style="list-style-type: none"> <li>• Port 1: 2,6 dBic</li> <li>• Port 2: 2.7 dBic</li> </ul>
Impedance	50 $\Omega$
Full widths at half maximum, horizontal at 2.45 GHz	83°
Full widths at half maximum, vertical at 2.45 GHz	80°

#### Ranges depending on angular displacement to main count direction

The figure below shows the coordinate system applied to the HMI device.

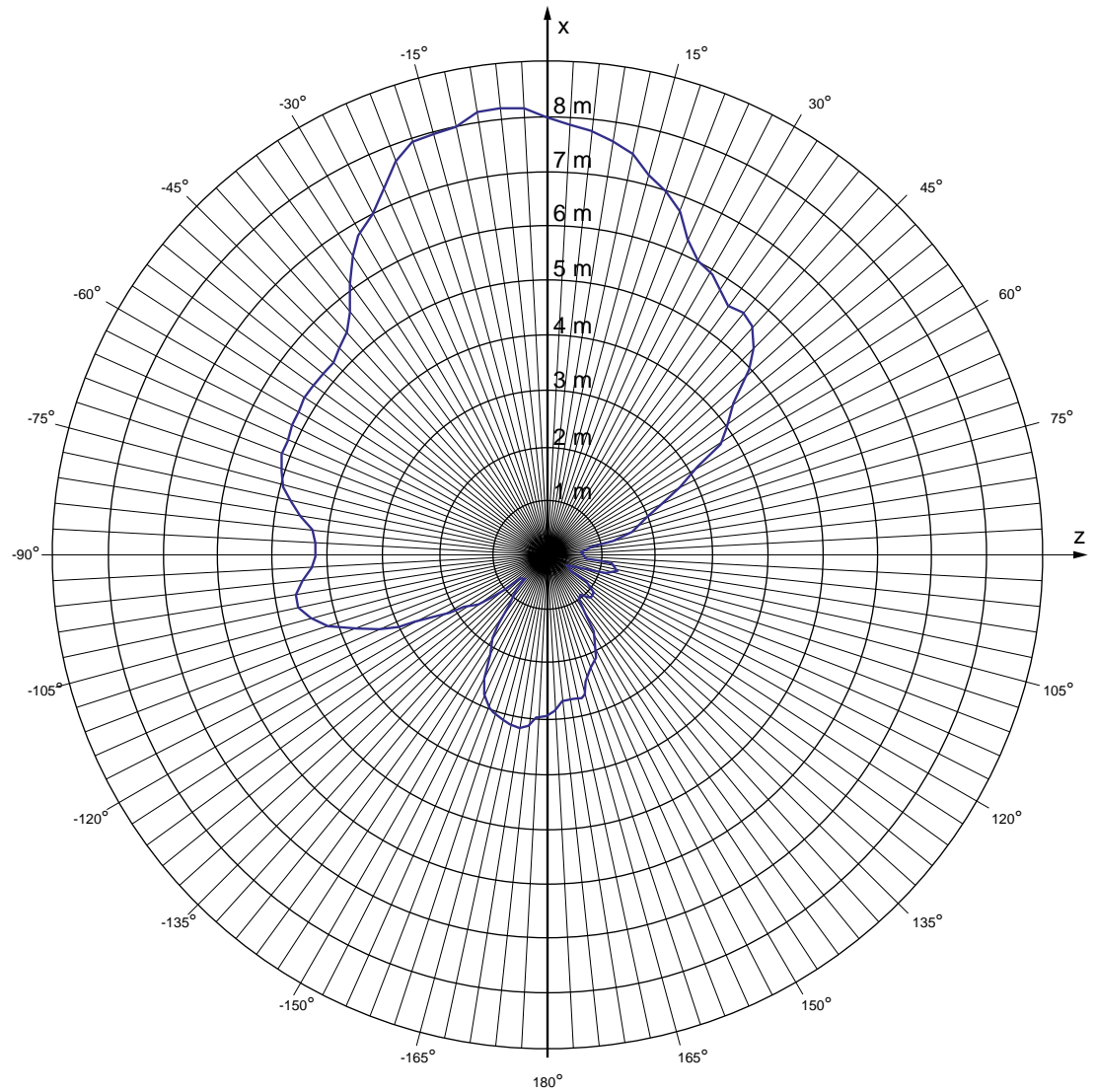


The figure below shows the HMI device range depending on the angular displacement to the main count direction in the y direction:





The figure below shows the HMI device range depending on the angular displacement to the main count direction in the z direction:





## Appendix

### A.1 ESD guideline

#### Definition of ESD

All electronic modules are equipped with large-scale integrated ICs or components. Due to their design, these electronic elements are highly sensitive to overvoltage, and thus to any electrostatic discharge. These electronic components are therefore specially identified as ESDs.

#### Abbreviations

The following abbreviation is commonly used for electrostatic sensitive devices:

- EGB – Elektrostatisch Gefährdete Bauteile/Baugruppen (Germany)
- ESD – Electrostatic Sensitive Device (internationally recognized term)

#### Labeling

ESDs are labeled with the following symbol:

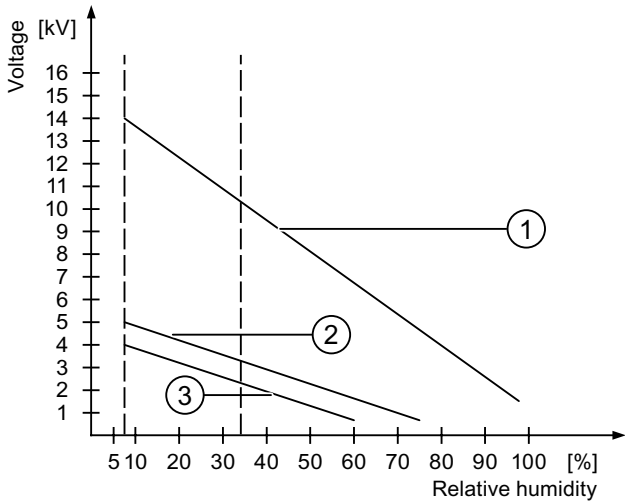


### Electrostatic charging

<b>CAUTION</b>
<b>Electrostatic charging</b>
ESDs may be destroyed by voltages far below the level perceived by human beings. Voltages of this kind develop when a component or an assembly is touched by a person who is not grounded against static electricity. Usually, it is unlikely that damage to an ESD as a result of overvoltage is detected immediately but may become apparent only after a longer period of operation.
Prevent electrostatic charging of your body before you touch the ESD!

Anyone who is not connected to the electrical potential of their surroundings is subjected to electrostatic charging.

The following figure indicates the maximum electrostatic charge anyone is subjected to when coming into contact with the materials shown. These values correspond with specifications to IEC 801-2.



- ① Synthetic materials
- ② Wool
- ③ Antistatic materials such as wood or concrete

## Protective measures against electrostatic discharge

<b>CAUTION</b>
<b>Observe grounding measures</b> When working with electrostatic sensitive devices, make sure that the person, the workplace and the packaging are properly grounded. This helps to avoid electrostatic charging.

As a rule, only touch the ESD if this is unavoidable, for example for maintenance. When you touch modules, make sure that you do not touch the pins on the modules or the PCB tracks. In this way, the discharged energy cannot reach and damage the sensitive devices.

Discharge electrostatic electricity from your body if you are performing measurements on an ESD. Do so by touching grounded metallic parts.

Always use grounded measuring instruments.

## A.2 System alarms

### Introduction

System alarms on the HMI device provide information about internal states of the HMI device and PLC.

The following overview shows the causes of system alarms and how to eliminate the cause of error.

Some of the system alarms described in this section are relevant to individual HMI devices based on their range of features.

---

#### Note

System alarms are only indicated if an alarm window was configured. System alarms are output in the language currently set on your HMI device.

---

### System alarm parameters

System alarms may contain encrypted parameters which are relevant to troubleshooting because they provide a reference to the source code of the runtime software. These parameters are output after the text "Error code:"

### Meaning of the system alarms

All the system alarms that can be displayed are listed below. The system alarms are divided into different ranges:

#### 10000 - Printer alarms

Number	Effect/cause	Remedy
10000	The print job could not be started or was canceled due to an unknown error. Faulty printer setup. Or: No authorization is available for accessing the network printer. Power supply failure during data transfer.	Check the printer settings, cable connections and the power supply. Set up the printer once again. Obtain a network printer authorization. If the error persists, contact the Hotline!
10001	No printer is installed or a default printer has not been set up.	Install a printer and/or select it as the default printer.
10002	Overflow of the graphics buffer for printing. Up to two images are buffered.	Allow sufficient intervals between successive print jobs.
10003	Images can now be buffered again.	--
10004	Overflow of the buffer for printing lines in text mode (e.g. alarms). Up to 1000 lines are buffered.	Allow sufficient intervals between successive print jobs.
10005	Text lines can now be buffered again.	--
10006	The Windows printing system reports an error. Refer to the output text and the error ID to determine the possible causes. Nothing is printed or the print is faulty.	Repeat the action if necessary.

#### 20000 - Global script alarms

Number	Effect/causes	Remedy
20010	An error has occurred in the specified script line. Execution of the script was therefore aborted. Note the system alarm that may have occurred prior to this.	Select the specified script line in the configuration. Ensure that the tags used are of the allowed types. Check system functions for the correct number and types of parameters.
20011	An error has occurred in a script that was called by the specified script. Execution of the script was therefore aborted in the called script. Note the system alarm that may have occurred prior to this.	In the configuration, select the script that has been called directly or indirectly by the specified script. Ensure that the tags used are of the allowed types. Check system functions for the correct number and types of parameters.
20012	The configuration data is inconsistent. The script could therefore not be generated.	Recompile the configuration.
20013	The scripting component of WinCC flexible Runtime is not correctly installed. Therefore, no scripts can be executed.	Reinstall WinCC flexible Runtime on your PC. Rebuild your project with "Project > Generator > Generate" and transfer the project to the HMI device.
20014	The system function returns a value that is not written in any return tag.	Select the specified script in the configuration. Check whether the script name has been assigned a value.
20015	Too many successive scripts have been triggered in short intervals. When more than 20 scripts are queued for processing, any subsequent scripts are rejected. In this case, the script indicated in the alarm is not executed.	Find what is triggering the scripts. Extend the times, e.g. the polling time of the tags which trigger the scripts.

## 30000 - Alarms for IFwSetValue: SetValue()

Number	Effect/causes	Remedy
30010	The tag could not accept the function result, e.g. when it has exceeded the value range.	Check the tag type of the system function parameter.
30011	A system function could not be executed because the function was assigned an invalid value or type in the parameter.	Check the parameter value and tag type of the invalid parameter. If a tag is used as a parameter, check its value.
30012	A system function could not be executed because the function was assigned an invalid value or type in the parameter.	Check the parameter value and tag type of the invalid parameter. If a tag is used as a parameter, check its value.

## 40000 - Linear scaling alarms

Number	Effect/causes	Remedy
40010	The system function could not be executed since the parameters could not be converted to a common tag type.	Check the parameter types in the configuration.
40011	The system function could not be executed since the parameters could not be converted to a common tag type.	Check the parameter types in the configuration.

## 50000 - Data server alarms

Number	Effect/causes	Remedy
50000	The HMI device is receiving data faster than it is capable of processing. Therefore, no further data is accepted until all current data have been processed. Data exchange then resumes.	--
50001	Data exchange has been resumed.	--

## 60000 - Win32 function alarms

Number	Effect/causes	Remedy
60000	This alarm is generated by the "DisplaySystemAlarms" function. The text to be displayed is transferred to the function as a parameter.	--
60010	The file could not be copied in the direction defined because one of the two files is currently open or the source/target path is not available. It is possible that the Windows user has no access rights to one of the two files.	Restart the system function or check the paths of the source/target files. Using Windows NT/2000/XP: The user executing WinCC flexible Runtime must be granted access rights for the files.
60011	An attempt was made to copy a file to itself. It is possible that the Windows user has no access rights to one of the two files.	Check the path of the source/target file. Using Windows NT/2000/XP with NTFS: The user executing WinCC flexible Runtime must be granted access rights for the files.

## 70000 - Win32 function alarms

Number	Effect/causes	Remedy
70010	The application could not be started because it could not be found in the path specified or there is insufficient memory space.	Check whether the application exists in the specified path or close other applications.
70011	The system time could not be modified. The error alarm only appears in connection with area pointer "Date/time PLC". Possible causes: <ul style="list-style-type: none"> <li>An invalid time was transferred in the job mailbox.</li> <li>The Windows user has no right to modify the system time.</li> </ul> If the first parameter in the system alarm is displayed with the value 13, the second parameter indicates the byte containing the incorrect value.	Check the time which is to be set. Using Windows NT/2000/XP: The user executing WinCC flexible Runtime must be granted the right to change the system time of the operating system.
70012	An error occurred when executing the function "StopRuntime" with the option "Runtime and operating system". Windows and WinCC flexible Runtime are not closed. One possible cause is that other programs cannot be closed.	Close all programs currently running. Then close Windows.
70013	The system time could not be modified because an invalid value was entered. Incorrect separators may have been used.	Check the time which is to be set.
70014	The system time could not be modified. Possible causes: <ul style="list-style-type: none"> <li>An invalid time was transferred.</li> <li>The Windows user has no right to modify the system time.</li> </ul> Windows rejects the setting request.	Check the time which is to be set. Using Windows NT/2000/XP: The user executing WinCC flexible Runtime must be granted the right to change the system time of the operating system.
70015	The system time could not be read because Windows rejects the reading function.	--
70016	An attempt was made to select a screen by means of a system function or job. This is not possible because the screen number specified does not exist. Or: A screen could not be generated due to insufficient system memory. Or: The screen is blocked. Or: Screen call has not been executed correctly.	Check the screen number in the function or job with the screen numbers configured. Assign the number to a screen if necessary. Check the details for the screen call and whether the screen is blocked for specific users.
70017	Date/time is not read from the area pointer because the address set in the PLC is either not available or has not been set up.	Change the address or set up the address in the PLC.
70018	Acknowledgment that the password list has been successfully imported.	--
70019	Acknowledgment that the password list has been successfully exported.	--
70020	Acknowledgment for activation of alarm reporting.	--
70021	Acknowledgment for deactivation of alarm reporting.	--



Number	Effect/causes	Remedy
70022	Acknowledgment to starting the Import Password List action.	--
70023	Acknowledgment to starting the Export Password List action.	--
70024	The value range of the tag has been exceeded in the system function. The calculation of the system function is not performed.	Check the desired calculation and correct it if necessary.
70025	The value range of the tag has been exceeded in the system function. The calculation of the system function is not performed.	Check the desired calculation and correct it if necessary.
70026	No other screens are stored in the internal screen memory. No other screens can be selected.	--
70027	The backup of the RAM file system has been started.	--
70028	The files from the RAM have been copied in the Flash memory. The files from the RAM have been copied in the Flash memory. Following a restart, these saved files are copied back to the RAM file system.	--
70029	Backup of the RAM file system has failed. No backup copy of the RAM file system has been made.	Check the settings in the "Control Panel > OP" dialog and save the RAM file system using the "Save Files" button in the "Persistent Storage" tab.
70030	The parameters configured for the system function are faulty. The connection to the new PLC was not established.	Compare the parameters configured for the system function with the parameters configured for the PLCs and correct them as necessary.
70031	The PLC configured in the system function is not an S7 PLC. The connection to the new PLC was not established.	Compare the S7 PLC name parameter configured for the system function with the parameters configured for the PLC and correct them as necessary.
70032	The object configured with this number in the tab order is not available in the selected screen. The screen changes but the focus is set to the first object.	Check the number of the tab order and correct it if necessary.
70033	An e-mail cannot be sent because a TCP/IP connection to the SMTP server no longer exists. This system alarm is generated only at the first attempt. All subsequent unsuccessful attempts to send an e-mail will no longer generate a system alarm. The event is regenerated when an e-mail has been successfully sent in the meantime. The central e-mail component in WinCC flexible Runtime attempts, in regular intervals (1 minute), to establish the connection to the SMTP server and to send the remaining e-mails.	Check the network connection to the SMTP server and re-establish it if necessary.
70034	Following a disruption, the TCP/IP connection to the SMTP server could be re-established. The queued e-mails are then sent.	--

Number	Effect/causes	Remedy
70036	No SMTP server for sending e-mails is configured. An attempt to connect to an SMTP server has failed and it is not possible to send e-mails. WinCC flexible Runtime generates the system alarm after the first attempt to send an e-mail.	Configure an SMTP server: In WinCC flexible Engineering System using "Device settings > Device settings" In the Windows CE operating system using "Control Panel > Internet Settings > E-mail > SMTP Server"
70037	An e-mail cannot be sent for unknown reasons. The contents of the e-mail are lost.	Check the e-mail parameters (recipient etc.).
70038	The SMTP server has rejected sending or forwarding an e-mail because the domain of the recipient is unknown to the server or because the SMTP server requires authentication. The contents of the e-mail are lost.	Check the domain of the recipient address or deactivate the authentication on the SMTP server if possible. SMTP authentication is currently not used in WinCC flexible Runtime.
70039	The syntax of the e-mail address is incorrect or contains illegal characters. The contents of the e-mail are discarded.	Check the e-mail address of the recipient.
70040	The syntax of the e-mail address is incorrect or contains illegal characters.	--
70041	The import of the user management was aborted due to an error. Nothing was imported.	Check your user management or transfer it again to the panel.
70042	The value range for the tags has been exceeded while executing the system function. The system function calculation has not been carried out.	Check the desired calculation and correct it if necessary.
70043	The value range for the tags has been exceeded while executing the system function. The system function calculation has not been carried out.	Check the desired calculation and correct it if necessary.

## 80000 - Archive alarms

Number	Effect/causes	Remedy
80001	The log specified is filled to the size defined (in percent) and must be stored elsewhere.	Store the file or table by executing a 'move' or 'copy' function.
80002	A line is missing in the specified log.	--
80003	The copying process for logging was not successful. In this case, it is advisable to check any subsequent system alarms, too.	--
80006	Since logging is not possible, this causes a permanent loss of the functionality.	In the case of databases, check whether the corresponding data source exists and start up the system again.
80009	A copying action has been completed successfully.	--
80010	Since the storage location was incorrectly entered in WinCC flexible, this causes a permanent loss of the functionality.	Configure the storage location for the respective log again and restart the system when the full functionality is required.

Number	Effect/causes	Remedy
80012	Log entries are stored in a buffer. If the values are read to the buffer faster than they can be physically written (using a hard disk, for example), overloading may occur and recording is then stopped.	Archive fewer values. Or: Increase the logging cycle.
80013	The overload status no longer applies. Archiving resumes the recording of all values.	--
80014	The same action was triggered twice in quick succession. Since the process is already in operation, the action is only carried out once.	--
80015	This system alarm is used to report DOS or database errors to the user.	--
80016	The logs are separated by the system function "CloseAllLogs" and the incoming entries exceed the defined buffer size. All entries in the buffer are deleted.	Reconnect the logs.
80017	The number of incoming events cause a buffer overflow. This can be caused, for example, by several copying actions being activated at the same time. All copy jobs are deleted.	Stop the copy action.
80019	The connection between WinCC flexible and all logs were closed, for example, after executing the system function "CloseAllLogs". Entries are written to the buffer and are then written to the logs when a connection is re-established. There is no connection to the storage location and the storage medium may be replaced, for example.	--
80020	The maximum number of simultaneously copy operations has been exceeded. Copying is not executed.	Wait until the current copying actions have been completed, then restart the last copy action.
80021	An attempt was made to delete a log which is still busy with a copy action. Deletion has not been executed.	Wait until the current copying actions have been completed, then restart the last action
80022	An attempt was made to use the system function "StartSequenceLog" to start a sequence log for a log which is not configured as a sequence log. No sequence log file is created.	In the project, check <ul style="list-style-type: none"> <li>• If the "StartSequenceLog" system function was properly configured</li> <li>• if the tag parameters are properly provided with data on the HMI device</li> </ul>
80023	An attempt was made to copy a log to itself. The log is not copied.	In the project, check <ul style="list-style-type: none"> <li>• if the "CopyLog" system function was properly configured</li> <li>• if the tag parameters are properly provided with data on the HMI device</li> </ul>
80024	The "CopyLog" system function does not allow copying when the target log already contains data ("Mode" parameter). The log is not copied.	Edit the "CopyLog" system function in the project if necessary. Before you initiate the system function, delete the destination log file.

Number	Effect/causes	Remedy
80025	You have canceled the copy operation. Data written up to this point are retained. The destination log file (if configured) is not deleted. The cancellation is reported by an error entry \$RT_ERR\$ at the end of the destination log.	--
80026	This alarm is output after all logs are initialized. Values are written to the logs from then on. Prior to this, no entries are written to the logs, irrespective whether WinCC flexible Runtime is active or not.	--
80027	The internal Flash memory has been specified as the storage location for a log. This is not permissible. No values are written to this log and the log file is not created.	Configure "Storage Card" or a network path as the storage location.
80028	The alarm returns a status report indicating that the logs are currently being initialized. No values are logged until the alarm 80026 is output.	--
80029	The number of logs specified in the alarm could not be initialized. The logs are initialized. The faulty log files are not available for logging jobs.	Evaluate the additional system alarms related to this alarm. Check the configuration, the ODBC (Open Database Connectivity) and the specified drive.
80030	The structure of the existing log file does not match the expected structure. Logging is stopped for this log.	Delete the existing log data manually, in advance.
80031	The log in CSV format is corrupted. The log cannot be used.	Delete the faulty file.
80032	Logs can be assigned events. These are triggered as soon as the log is full. If WinCC flexible Runtime is started and the log is already full, the event is not triggered. The log specified no longer logs data because it is full.	Close WinCC flexible Runtime, delete the log, then restart WinCC flexible Runtime. Or: Configure a button which contains the same actions as the event and press it.
80033	"System Defined" is set in the data log file as the data source name. This causes an error. No data is written to the database logs, whereas the logging to the CSV logs works.	Install MSDE again.
80034	An error has occurred in the initialization of the logs. An attempt has been made to create the tables as a backup. This action was successful. A backup has been made of the tables of the corrupted log file and the cleared log was restarted.	No action is necessary. However, it is recommended to save the backup files or delete them in order to make the space available again.
80035	An error has occurred in the initialization of the logs. An attempt has been made to create backups of the tables and this has failed. No logging or backup has been performed.	It is recommended to save the backups or to delete them in order to release memory.
80044	The export of a log was interrupted because Runtime was closed or due to a power failure. It was detected that the export needed to be resume when Runtime restarted.	The export resumes automatically.

Number	Effect/causes	Remedy
80045	The export of a log was interrupted due to an error in the connection to the server or at the server itself.	The export is repeated automatically. Check: <ul style="list-style-type: none"> <li>• The connection to the server</li> <li>• If the server is running</li> <li>• If there is enough free space on the server</li> </ul>
80046	The destination file could not be written while exporting the log.	Check whether there is enough space on the server and if you have permission to create the log file.
80047	The log could not be read while exporting it.	Check whether the storage medium is correctly inserted.
80049	The log could not be renamed while preparing to export it. The job can not be completed."	Check whether the storage medium is correctly inserted and if there is sufficient space on the medium.
80050	The log which shall be exported is not closed. The job can not be completed.	Make sure the "CloseAll Logs" system function is called before using the "ExportLog" system function. Change the configuration as required.

## 90000 - FDA alarms

Number	Effect/causes	Remedy
90024	No operator actions can be logged due to lack of space on the storage medium for log. The operator action will therefore not be executed.	Make more space available by inserting an empty storage medium or swapping out the log files on the server using "ExportLog".
90025	No user actions can be logged because of error state of the archive. Therefore the user action will not be executed.	Check whether the storage medium is correctly inserted.
90026	No operator actions can be logged because the log is closed. The operator action will therefore not be executed.	Before further operator actions are carried out, the log must be opened again using the system function "OpenAllLogs". Change the configuration as required.
90028	The password you entered is incorrect.	Enter the correct password.
90029	Runtime was closed during ongoing operation (perhaps due to a power failure) or a storage medium in use is incompatible with Audit Trail. An Audit Trail is not suitable if it belongs to another project or has already be archived.	Ensure that you are using the correct storage medium.
90030	Runtime was closed during ongoing operation (perhaps due to a power failure).	--
90031	Runtime was closed during ongoing operation (perhaps due to a power failure).	--
90032	Running out of space on the storage medium for log.	Make more space available by inserting an empty storage medium or swapping out the log files on the server using "ExportLog".
90033	No more space on the storage medium for log. As of now, no more operator actions requiring logging will be executed.	Make more space available by inserting an empty storage medium or swapping out the log files on the server using "ExportLog".
90039	You do not have the necessary authorization to perform this action.	Adapt or upgrade your authorizations.
90040	Audit Trail is switched off because of a forced user action.	Activate the "Audit Trail" again using the system function "StartLog".

Appendix

A.2 System alarms

Number	Effect/causes	Remedy
90041	A user action which has to be logged has been executed without a logged on user.	A user action requiring logging should only be possible with permission. Change the configuration by setting a required permission for the input object.
90044	A user action which has to be confirmed was blocked, because there is another user action pending.	Repeat the user action if necessary.

110000 - Offline function alarms

Number	Effect/causes	Remedy
110000	The operating mode was changed. "Offline" mode is now set.	--
110001	The operating mode was changed. "Online" mode is now set.	--
110002	The operating mode was not changed.	Check the connection to the PLCs. Check whether the address area for the area pointer 88 "Coordination" in the PLC is available.
110003	The operating mode of the specified PLC was changed by the system function "SetConnectionMode". The operating mode is now "offline".	--
110004	The operating mode of the specified PLC has been changed by the system function "SetConnectionMode". The operating mode is now "online".	--
110005	An attempt was made to use the system function SetConnectionMode to switch the specified PLC to "online" mode, although the entire system is in "offline" mode. This changeover is not allowed. The PLC remains in "offline" mode.	Switch the complete system to "online" mode, then execute the system function again.
110006	The content of the "project version" area pointer does not match the user version configured in WinCC flexible. WinCC flexible Runtime is therefore closed.	Check: <ul style="list-style-type: none"> <li>• The project ID entered on the PLC.</li> <li>• The project ID entered in WinCC flexible.</li> </ul>

120000 - Trend alarms

Number	Effect/causes	Remedy
120000	The trend is not displayed because you configured an incorrect axis to the trend or an incorrect trend.	Change the configuration.
120001	The trend is not displayed because you configured an incorrect axis to the trend or an incorrect trend.	Change the configuration.
120002	The trend is not displayed because the tag assigned attempts to access an invalid PLC address.	Check whether the data area for the tag exists in the PLC, the configured address is correct and the value range for the tag is correct.

## 130000 - System information alarms

Number	Effect/causes	Remedy
130000	The action was not executed.	Close all other programs. Delete files no longer required from the hard disk.
130001	The action was not executed.	Delete files no longer required from the hard disk.
130002	The action was not executed.	Close all other programs. Delete files no longer required from the hard disk.
130003	No data medium found. The operation is canceled.	Check, for example, if <ul style="list-style-type: none"> <li>• The correct data medium is being accessed</li> <li>• The data medium is inserted</li> </ul>
130004	The data medium is write-protected. The operation is canceled.	Check whether access has been made to the correct data carrier. Remove the write protection.
130005	The file is read only. The operation is canceled.	Check whether access has been made to the correct file. Edit the file attributes if necessary.
130006	Access to file failed. The operation is canceled.	Check, for example, if <ul style="list-style-type: none"> <li>• The correct file is being accessed</li> <li>• The file exists</li> <li>• Another action is preventing simultaneous access to the file</li> </ul>
130007	The network connection is interrupted. Records cannot be saved or read over the network connection.	Check the network connection and eliminate the cause of error.
130008	The storage card is not available. Records cannot be saved to / read from the storage card.	Insert the storage card.
130009	The specified folder does not exist on the storage card. Any files saved to this directory are not backed up when you switch off the HMI device.	Insert the storage card.
130010	The maximum nesting depth can be exhausted when, for example, a value change in a script results in the call of another script and the second script in turn has a value change that results in the call of yet a further script etc. The configured functionality is not supported.	Check the configuration.

## 140000 - Connection alarms chns7: Connection + device

Number	Effect/causes	Remedy
140000	An online connection to the PLC is established.	--
140001	The online connection to the PLC was shut down.	--
140003	No tag updating or writing is executed.	Check the connection and if the PLC is switched on. Check the parameter definitions in the Control Panel using "Set PG/PC interface". Restart the system.

Number	Effect/causes	Remedy
140004	No tag update or write operations are executed because the access point or the module configuration is faulty.	Verify the connection and check whether the PLC is switched on. Check the access point or the module configuration (MPI, PPI, PROFIBUS) in the Control Panel with "Set PG/PC interface". Restart the system.
140005	No tag updating or writing is executed because the HMI device address is incorrect (possibly too high).	Use a different HMI device address. Verify the connection and check whether the PLC is switched on. Check the parameter definitions in the Control Panel using "Set PG/PC interface". Restart the system.
140006	No tag updating or writing is executed because the baud rate is incorrect.	Select a different baud rate in WinCC flexible (according to module, profile, communication peer, etc.).
140007	Tags are not updated or written because the bus profile is incorrect (see %1). The following parameters could not be written to the registry: 1: Tslot 2: Tqui 3: Tset 4: MinTsdr 5: MaxTsdr 6: Trdy 7: Tid1 8: Tid2 9: Gap Factor 10: Retry Limit	Check the user-defined bus profile. Check the connection and if the PLC is switched on. Check the parameter definitions in the Control Panel using "Set PG/PC interface". Restart the system.
140008	No tag updating or writing is executed because baud rate is incorrect. The following parameters could not be written to the registry: 0: General error 1: Wrong version 2: Profile cannot be written to the registry. 3: The subnet type cannot be written to the registry. 4: The Target Rotation Time cannot be written to the registry. 5: Faulty Highest Address (HSA).	Check the connection and if the PLC is switched on. Check the parameter definitions in the Control Panel using "Set PG/PC interface". Restart the system.
140009	Tags are not updated or written because the module for S7 communication was not found.	Reinstall the module in the Control Panel using "Set PG/PC interface".
140010	No S7 communication partner found because the PLC is shut down. DP/T: The option "PG/PC is the only master" is not set in the Control Panel under "Set PG/PC interface."	Switch the PLC on. DP/T: If only one master is connected to the network, disable "PG/PC is the only master" in "Set PG/PC interface". If several masters are connected to the network, enable these. Do not change any settings, for this will cause bus errors.
140011	No tag updating or writing is executed because communication is down.	Check the connection and that the communication partner is switched on.



Number	Effect/causes	Remedy
140012	There is an initialization problem (e.g. when WinCC flexible Runtime was closed in Task Manager). Or: Another application (e.g. STEP7) with different bus parameters is active and the driver cannot be started with the new bus parameters (transmission rate, for example).	Restart the HMI device. Or: Run WinCC flexible Runtime, then start your other applications.
140013	The MPI cable is disconnected and, thus, there is no power supply.	Check the connections.
140014	The configured bus address is already in use by another application.	Edit the HMI device address in the PLC configuration.
140015	Wrong transmission rate Or: Faulty bus parameters (e.g. HSA) Or: OP address > HSA or: Wrong interrupt vector (interrupt does not arrive at the driver)	Correct the relevant parameters.
140016	The hardware does not support the configured interrupt.	Change the interrupt number.
140017	The set interrupt is in use by another driver.	Change the interrupt number.
140018	The consistency check was disabled by SIMOTION Scout. Only a corresponding note appears.	Enable the consistency check with SIMOTION Scout and once again download the project to the PLC.
140019	SIMOTION Scout is downloading a new project to the PLC. Connection to the PLC is canceled.	Wait until the end of the reconfiguration.
140020	The version in the PLC and that of the project (FWX file) do not match. Connection to the PLC is canceled	The following remedies are available: Download the current version to the PLC using SIMOTION Scout. Regenerate the project using WinCC flexible ES, close WinCC flexible Runtime and restart with a new configuration.

## 150000 - Connection alarms chnAS511: Connection

Number	Effect/causes	Remedy
150000	No more data is read or written. Possible causes: <ul style="list-style-type: none"> <li>• The cable is defective</li> <li>• The PLC does not respond, is defective, etc.</li> <li>• The wrong port is used for the connection</li> <li>• System overload</li> </ul>	Ensure that the cable is plugged in, the PLC is operational, the correct port is being used. Restart the system if the system alarm persists.
150001	Connection is up because the cause of the interruption has been eliminated.	--

## 160000 - Connection alarms IVar (WinLC) / OPC: Connection

Number	Effect/causes	Remedy
160000	No more data is read or written. Possible causes: <ul style="list-style-type: none"> <li>• The cable is defective</li> <li>• The PLC does not respond, is defective, etc.</li> <li>• The wrong port is used for the connection</li> <li>• System overload</li> </ul>	Ensure that the cable is plugged in, the PLC is operational, the correct port is being used. Restart the system if the system alarm persists.
160001	Connection is up because the cause of the interruption has been eliminated.	--
160010	No connection to the server because the server identification (CLS-ID) cannot be determined. Values cannot be read or written.	Check access rights.
160011	No connection to the server because the server identification (CLS-ID) cannot be determined. Values cannot be read or written.	Check, for example, if <ul style="list-style-type: none"> <li>• The server name is correct</li> <li>• The computer name is correct</li> <li>• The server is registered</li> </ul>
160012	No connection to the server because the server identification (CLS-ID) cannot be determined. Values cannot be read or written.	Check, for example, if <ul style="list-style-type: none"> <li>• The server name is correct</li> <li>• The computer name is correct</li> <li>• The server is registered</li> </ul> Note for advanced users: Interpret the value from HRESULT.
160013	The specified server was started as InProc server. This has not been released and may possibly lead to incorrect behavior because the server is running in the same process area as the WinCC flexible Runtime software.	Configure the server as OutProc Server or Local Server.
160014	Only one OPC server project can be started on a PC/MP. An alarm is output when an attempt is made to start a second project. The second project has no OPC server functionality and cannot be located as an OPC server by external sources.	Do not start a second project with OPC server functionality on the computer.

## 170000 - S7 dialog alarms

Number	Effect/causes	Remedy
170000	S7 diagnostics events are not indicated because it is not possible to log on to the S7 diagnostics functions at this device. The service is not supported.	--
170001	The S7 diagnostics buffer cannot be viewed because communication with the PLC is shut down.	Set the PLC to online mode.
170002	The S7 diagnostics buffer cannot be viewed because reading of the diagnostics buffer (SSL) was canceled with error.	--
170003	An S7 diagnostics event cannot be visualized. The system returns internal error %2.	--

Number	Effect/causes	Remedy
170004	An S7 diagnostics event cannot be visualized. The system returns an internal error of error class %2, error number %3.	--
170007	It is not possible to read the S7 diagnostics buffer (SSL) because this operation was canceled with an internal error of class %2 and error code %3.	--

180000 - Misc/common alarms

Number	Effect/causes	Remedy
180000	A component/OCX received configuration data with a version ID which is not supported.	Install a newer component.
180001	System overload because too many actions running in parallel. Not all the actions can be executed, some are rejected.	Several remedies are available: <ul style="list-style-type: none"> <li>• Generate the alarms at a slower rate (polling)</li> <li>• Initiate scripts and functions at greater intervals</li> </ul> If the alarm appears more frequently: Restart the HMI device.
180002	The screen keyboard could not be activated. Possible causes: "TouchInputPC.exe" was not registered due to a faulty Setup.	Reinstall WinCC flexible Runtime.

190000 - Tag alarms

Number	Effect/causes	Remedy
190000	It is possible that the tag is not updated.	--
190001	The tag is updated after the cause of the last error state has been eliminated (return to normal operation).	--
190002	The tag is not updated because communication with the PLC is down.	Select the system function "SetOnline" to go online.
190004	The tag is not updated because the configured tag address does not exist.	Check the configuration.
190005	The tag is not updated because the configured PLC type does not exist for this tag.	Check the configuration.
190006	The tag is not updated because it is not possible to map the PLC type in the data type of the tag.	Check the configuration.
190007	The tag value is not modified because the connection to the PLC is interrupted or the tag is offline.	Set online mode or reconnect to the PLC.
190008	The threshold values configured for the tag have been violated, for example, by <ul style="list-style-type: none"> <li>• A value entered</li> <li>• A system function</li> <li>• A script</li> </ul>	Observe the configured or current threshold values of the tag.

A.2 System alarms

Number	Effect/causes	Remedy
190009	An attempt has been made to assign the tag a value which is outside the permitted range of values for this data type. For example, a value of 260 was entered for a byte tag or a value of -3 for an unsigned word tag.	Observe the range of values for the data type of the tags.
190010	Too many values are written to the tag (for example, in a loop triggered by a script). Values are lost because only up to 100 actions are saved to the buffer.	The following remedies are available: <ul style="list-style-type: none"> <li>• Increase the time interval between multiple write actions.</li> <li>• Do not use an array tag longer than 6 words when you configure an acknowledgment on the HMI device using "Acknowledgment HMI".</li> </ul>
190011	Possible cause 1: The value entered could not be written to the configured PLC tag because the high or low limit was exceeded. The system discards the entry and restores the original value. Possible cause 2: The connection to the PLC was interrupted.	Make sure that the value entered lies within the range of values of the control tags.  Check the connection to the PLC.
190012	It is not possible to convert a value from a source format to a target format, for example: An attempt is being made to assign a value to a counter that is outside the valid, PLC-specific value range. A tag of the type Integer should be assigned a value of the type String.	Check the range of values or the data type of the tags.
190013	The user has entered a string that is longer than the tag. The string is automatically shortened to the permitted length.	Only enter strings that do not exceed the permitted tag length.

190100 - Area pointer alarms

Number	Effect/causes	Remedy
190100	The area pointer is not updated because the address configured for this pointer does not exist. Type 1 Warnings 2 Errors 3 PLC acknowledgment 4 HMI device acknowledgment 5 LED mapping 6 Trend request 7 Trend transfer 1 8 Trend transfer 2 No.: Consecutive number displayed in WinCC flexible ES.	Check the configuration.

Number	Effect/causes	Remedy
190101	The area pointer is not updated because it is not possible to map the PLC type to the area pointer type. Parameter type and no.: See alarm 190100	--
190102	The area pointer is updated after the cause of the last error state has been eliminated (return to normal operation). Parameter type and no.: See alarm 190100.	--

200000 - PLC coordination alarms

Number	Effect/causes	Remedy
200000	Coordination is not executed because the address configured in the PLC does not exist/is not set.	Change the address or set up the address in the PLC.
200001	Coordination is canceled because the write access to the address configured in the PLC is not possible.	Change the address or set the address in the PLC at an area which allows write access.
200002	Coordination is not carried out at the moment because the address format of the area pointer does not match the internal storage format.	Internal error
200003	Coordination can be executed again because the last error state is eliminated (return to normal operation).	--
200004	The coordination may not be executed.	--
200005	No more data is read or written. Possible causes: <ul style="list-style-type: none"> <li>• The cable is defective</li> <li>• The PLC does not respond, is defective, etc.</li> <li>• System overload</li> </ul>	Ensure that the cable is plugged in and the PLC is operational. Restart the system if the system alarm persists.

200100 - PLC user version alarms

Number	Effect/causes	Remedy
200100	Coordination is not executed because the address configured in the PLC does not exist/is not set.	Change the address or set up the address in the PLC.
200101	Coordination is canceled because the write access to the address configured in the PLC is not possible.	Change the address or set the address in the PLC at an area which allows write access.
200102	Coordination is not carried out at the moment because the address format of the area pointer does not match the internal storage format.	Internal error
200103	Coordination can be executed again because the last error state is eliminated (return to normal operation).	--
200104	The coordination may not be executed.	--
200105	No more data is read or written. Possible causes: <ul style="list-style-type: none"> <li>• The cable is defective</li> <li>• The PLC does not respond, is defective, etc.</li> <li>• System overload</li> </ul>	Ensure that the cable is plugged in and the PLC is operational. Restart the system if the system alarm persists.

## 210000 - PLC job alarms

Number	Effect/causes	Remedy
210000	Jobs are not processed because the address configured in the PLC does not exist/has not been set up.	Change the address or set up the address in the PLC.
210001	Jobs are not processed because read/write access to the address configured in the PLC is not possible.	Change the address or set up the address in the PLC in an area which allows read/write access.
210002	Jobs are not executed because the address format of the area pointer does not match the internal storage format.	Internal error
210003	The job buffer is processed again because the last error status has been eliminated (return to normal operation).	--
210004	It is possible that the job buffer will not be processed.	--
210005	A control request with an illegal number was initiated.	Check the PLC program.
210006	An error occurred while attempting to execute the control request. As a result, the control request is not executed. Observe the next/previous system alarms.	Check the parameters of the control request. Recompile the configuration.

## 220000 - WinCC channel adapter alarms

Number	Effect/causes	Remedy
220001	The tag is not downloaded because the associated communication driver / HMI device does not support the download of Boolean/discrete data types.	Change the configuration.
220002	The tag is not downloaded because the associated communication driver / HMI device does not support write access to the data type BYTE.	Change the configuration.
220003	The communication driver cannot be loaded. The driver may not be installed.	Install the driver by reinstalling WinCC flexible Runtime.
220004	Communication is down and no update data is transferred because the cable is not connected or defective etc.	Check the connection.
220005	Communication is up.	--
220006	The connection between the specified PLC and the specified port is active.	--
220007	The connection to the specified PLC is interrupted at the specified port.	Check whether <ul style="list-style-type: none"> <li>• The cable is plugged in</li> <li>• The PLC is OK</li> <li>• The correct port is used</li> <li>• Your configuration is OK (port parameters, protocol settings, PLC address)</li> </ul> Restart the system if the system alarm persists.
220008	The communication driver cannot access or open the specified port. The port may be in use by another application or the port used is not available on the destination device. There is no communication with the PLC.	Close all the applications which access this port and restart the computer. Use another port of the system.

230000 - View alarms

<b>Number</b>	<b>Effect/causes</b>	<b>Remedy</b>
230000	The value entered could not be accepted. The system discards the entry and restores the previous value. Either <ul style="list-style-type: none"> <li>• The value range has been exceeded</li> <li>• Illegal characters have been entered</li> <li>• The maximum permitted number of users has been exceeded</li> </ul>	Enter a practical value or delete any unneeded users.
230002	The currently logged in user has not the required authorization. The system therefore discards the input and restored the previous value.	Log on as a user with appropriate authorization.
230003	Changeover to the specified screen failed because the screen is not available/configured. The current screen remains selected.	Configure the screen and check the screen selection function.
230005	The value range of the tag has been exceeded in the I/O field. The original value of the tag is retained.	Observe the range of values for the tag when entering a value.
230100	During navigation in the web browser, the system returned a message which may be of interest to the user. The web browser continues to run but may not (fully) show the new page.	Navigate to another page.
230200	The connection to the HTTP channel was interrupted due to an error. This error is explained in detail by another system alarm. Data is no longer exchanged.	Check the network connection. Check the server configuration.
230201	The connection to HTTP channel was established. Data is exchanged.	--

Number	Effect/causes	Remedy
230202	<p>WININET.DLL has detected an error. This error usually occurs when an attempt to connect to the server fails or the server refuses to connect because the client lacks the proper authorization. An unknown server certificate may also be the cause if the connection is encrypted by means of SSL. The alarm text provides details. This text is always in the language of the Windows installation because it is returned by the Windows OS. Process values are no longer exchanged.</p>	<p>Depending on the cause:</p> <p>When an attempt to connect fails or a timeout error occurs:</p> <ul style="list-style-type: none"> <li>• Check the network connection and the network</li> <li>• Check the server address</li> <li>• Check whether the WebServer is actually running on the destination station.</li> </ul> <p>Faulty authorization:</p> <ul style="list-style-type: none"> <li>• The configured user name and/or password do not match those on the server. Establish consistency</li> </ul> <p>When the server certificate is rejected: Certificate signed by an unknown CA ( ):</p> <ul style="list-style-type: none"> <li>• Either ignore this item in your project, or</li> <li>• Install a certificate that has been signed with a root certificate known to the client computer</li> </ul> <p>The date of the certificate is invalid:</p> <ul style="list-style-type: none"> <li>• Either ignore this item in your project, or</li> <li>• Install a certificate with a valid date on the server</li> </ul> <p>Invalid CN (Common Name or Computer Name):</p> <ul style="list-style-type: none"> <li>• Either ignore this item in your project, or</li> <li>• Install a certificate with a name that corresponds to that of the server address</li> </ul>
230203	<p>Although a connection can be made to the server, the HTTP server refuses to connect because</p> <ul style="list-style-type: none"> <li>• WinCC flexible Runtime is not running on the server, or</li> <li>• The HTTP channel is not supported (503 Service unavailable)</li> </ul> <p>Other errors can only occur if the Webserver does not support the HTTP channel. The language of the alarm text depends on the Webserver. Data is not exchanged.</p>	<p>Error 503 Service unavailable:</p> <p>Check that WinCC flexible Runtime is running on the server and the HTTP channel is supported.</p>
230301	<p>An internal error has occurred. An English text explains the error in more detail. This may be caused by insufficient memory. OCX does not work.</p>	--
230302	<p>The name of the remote server cannot be resolved. The attempt to connect failed.</p>	<p>Check the configured server address. Check whether the DNS service is available on the network.</p>
230303	<p>The remote server is not running on the addressed computer. Wrong server address. The attempt to connect failed</p>	<p>Check the configured server address. Check whether the remote server is running on the target computer.</p>
230304	<p>The remote server on the addressed computer is incompatible with VNCOCX. The attempt to connect failed.</p>	<p>Use a compatible remote server.</p>
230305	<p>The authentication has failed because the password is incorrect. The attempt to connect failed.</p>	<p>Configure the correct password.</p>



Number	Effect/causes	Remedy
230306	Error in the connection to the remote server. This may occur as a result of network problems. The attempt to connect failed.	Check whether <ul style="list-style-type: none"> <li>• The bus cable is plugged in</li> <li>• There are network problems</li> </ul>
230307	The connection to the remote server was shut down because <ul style="list-style-type: none"> <li>• The remote server was shut down, or</li> <li>• The user instructed the server to close all connections</li> </ul> The connection is closed.	--
230308	This alarm provides information on the connection status. An attempt is made to connect.	--

## 240000 - Authorization alarms

Number	Effect/causes	Remedy
240000	WinCC flexible Runtime is operating in demo mode. You have no authorization or your authorization is corrupted.	Install the authorization.
240001	WinCC flexible Runtime is operating in demo mode. Too many tags are configured for the installed version.	Load an adequate authorization / powerpack.
240002	WinCC flexible Runtime is operating with a time-limited emergency authorization.	Restore the full authorization.
240004	Error while reading the emergency authorization. WinCC flexible Runtime is operating in demo mode.	Restart WinCC flexible Runtime, install the authorization or repair the authorization (see Commissioning Instructions Software Protection).
240005	The Automation License Manager has detected an internal system fault. Possible causes: <ul style="list-style-type: none"> <li>• A corrupt file</li> <li>• A defective installation</li> <li>• No free space for the Automation License Manager etc.</li> </ul>	Reboot the HMI device or PC. If this does not solve the problem, remove the Automation License Manager and install it again.

## 250000 - S7 Force alarms

Number	Effect/causes	Remedy
250000	The tag in the specified line in "Status Force" is not updated because the address configured for this tag is not available.	Check the set address and then verify that the address is set up in the PLC.
250001	The tag in the specified line in "Status Force" is not updated because the PLC type configured for this tag does not exist.	Check the set address.
250002	The tag in the specified line in "Status Force" is not updated because it is not possible to map the PLC type in the tag type.	Check the set address.
250003	An attempt to connect to the PLC failed. The tags are not updated.	Check the connection to the PLC. Check that the PLC is switched on and is online.

## 260000 - Password system alarms

Number	Effect/causes	Remedy
260000	An unknown user or an unknown password has been entered in the system. The current user is logged off from the system.	Log on to the system as a user with a valid password.
260001	The logged in user does not have sufficient authorization to execute the protected functions on the system.	Log on to the system as a user with sufficient authorization.
260002	This alarm is triggered by the system function "TrackUserChange".	--
260003	The user has logged off from the system.	--
260004	The user name entered into the user view already exists in the user management.	Select another user name because user names have to be unique in the user management.
260005	The entry is discarded.	Enter a shorter user name.
260006	The entry is discarded.	Use a shorter or longer password.
260007	The logon timeout value entered is outside the valid range of 0 to 60 minutes. The new value is discarded and the original value is retained.	Enter a logon timeout value between 0 and 60 minutes.
260008	An attempt was made to read a PTPProRun.pwl file created with ProTool V 6.0 in WinCC flexible. Reading the file was canceled due to incompatibility of the format.	--
260009	You have attempted to delete the user "Admin" or "PLC User". These users are fixed components of the user management and cannot be deleted.	If you need to delete a user, because perhaps you have exceeded the maximum number permitted, delete another user.
260012	The passwords entered in the "Change Password" dialog and the confirmation field are not identical. The password has not been changed. User will be logged off.	You have to log on to the system again. Then enter the identical password twice to be able to change the password.
260013	The password entered in the "Change Password" dialog is invalid because it is already in use. The password has not been changed. User will be logged off.	You have to log on to the system again. Then enter a new password that has not been used before.
260014	You have tried unsuccessfully to log on 3 times in succession. You will be locked out and assigned to group no. 0.	You can log on to the system with your correct password. Only an administrator can change the assignment to a group.
260023	The password you entered does not meet the necessary security guidelines.	Enter a password that contains at least one number.
260024	The password you entered does not meet the necessary security guidelines.	Enter a password that contains at least one character.
260025	The password you entered does not meet the necessary security guidelines.	Enter a password that contains at least one special character.
260028	Upon system start-up, an attempt to log on, or when trying to change the password of a SIMATIC log-on user, the system attempts to access the SIMATIC Logon Server.  If attempting to log on, the new user is not logged in. If a different user was logged on before, then this user is logged off.	Check the connection to the SIMATIC Logon Server and its configuration; for example:  1. Port number 2. IP address 3. Server name 4. Functional transfer cable  Or use a local user.

Number	Effect/causes	Remedy
260029	The SIMATIC Logon user is not associated to any or several groups. The new user is not logged in. If a different user was logged on before, then this user is logged off.	Check the user data on the SIMATIC Logon Server and the configuration in your WinCC flexible project. A user may only be assigned to one group.
260030	The SIMATIC Logon user could not change his password on the SIMATIC Logon Server. The new password may not comply with the password regulations on the server or the user does not have the right to change his password. The old password remains and the user is logged off.	Log in again and choose a different password. Check the password rules on the SIMATIC Logon Server.
260031	It was not possible to log the user on to the SIMATIC Logon Server. The user name or the password could be incorrect or the user does not have sufficient rights to log on. The new user is not logged in. If a different user was logged on before, then this user is logged off.	Try again. If necessary, check the password data on the SIMATIC Logon Server.
260032	It was not possible to log the user on to the SIMATIC Logon Server as his account is blocked. The new user is not logged in. If a different user was logged on before, then this user is logged off.	Check the user data on the SIMATIC Logon Server.
260033	The action change password or log on user could not be carried out.	Check the connection to the SIMATIC Logon Server and its configuration; for example: 1. Port number 2. IP address 3. Server name 4. Functional transfer cable Or use a local user.
260034	The last logon operation has not yet ended. A user action or a logon dialog can therefore not be called. The logon dialog is not opened. The user action is not executed.	Wait until the logon operation is complete.
260035	The last attempt to change the password was not completed. A user action or a logon dialog can therefore not be called. The logon dialog is not opened. The user action is not executed.	Wait until the procedure is complete.
260036	There are insufficient licenses on the SIMATIC Logon Sever. The logon is not authorized.	Check the licensing on the SIMATIC Logon Server.
260037	There is no license on the SIMATIC Logon Sever. A logon is not possible. It is not possible to log on via the SIMATIC Logon Server, only via a local user.	Check the licensing on the SIMATIC Logon Server.

## 270000 - System alarms

Number	Effect/causes	Remedy
270000	A tag is not indicated in the alarm because it attempts to access an invalid address in the PLC.	Check whether the data area for the tag exists in the PLC, the configured address is correct and the value range for the tag is correct.

Number	Effect/causes	Remedy
270001	There is a device-specific limit as to how many alarms may be queued for output (see the operating instructions). This limit has been exceeded. The view no longer contains all the alarms. However, all alarms are written to the alarm buffer.	--
270002	The view shows alarms of a log for which there is no data in the current project. Wildcards are output for the alarms.	Delete older log data if necessary.
270003	The service cannot be set up because too many devices want to use this service. A maximum of four devices may execute this action.	Reduce the number of HMI devices which want to use the service.
270004	Access to persistent buffer is not possible. Alarms cannot be restored or saved.	If the problems persist at the next startup, contact Customer Support (delete Flash).
270005	Persistent buffer damaged: Alarms cannot be restored.	If the problems persist at the next startup, contact Customer Support (delete Flash).
270006	Project modified: Alarms cannot be restored from the persistent buffer.	The project was generated and transferred new to the HMI device; The error should no longer occur when the device starts again.
270007	A configuration problem is preventing the restore (a DLL is missing, a directory is unknown, etc.).	Update the operating system and then transfer your project again to the HMI device.

## 280000 - DPHMI alarms Connection

Number	Effect/causes	Remedy
280000	Connection is up because the cause of the interruption has been eliminated.	--
280001	No more data is read or written. Possible causes: <ul style="list-style-type: none"> <li>• The cable is defective</li> <li>• The PLC does not respond, is defective, etc.</li> <li>• The wrong port is used for the connection</li> <li>• System overload</li> </ul>	Check whether <ul style="list-style-type: none"> <li>• The cable is plugged in</li> <li>• The PLC is OK</li> <li>• The correct port is used</li> </ul> Restart the system if the system alarm persists.
280002	The connection used requires a function block in the PLC. The function block has responded. Communication is now enabled.	--
280003	The connection used requires a function block in the PLC. The function block has not responded.	Check whether <ul style="list-style-type: none"> <li>• The cable is plugged in</li> <li>• The PLC is OK</li> <li>• The correct port is used</li> </ul> Restart the system if the system alarm persists. Remedy depends on the error code: <ol style="list-style-type: none"> <li>1: The function block must set the COM bit in the response container.</li> <li>2: The function block must not set the ERROR bit in the response container.</li> <li>3: The function block must respond within the specified time (timeout).</li> <li>4: Go online to the PLC.</li> </ol>

Number	Effect/causes	Remedy
280004	The connection to the PLC is interrupted. There is no data exchange at present.	Check the connection parameters in WinCC flexible. Ensure that the cable is plugged in, the PLC is operational, the correct port is being used. Restart the system if the system alarm persists.

## 290000 - Recipe system alarms

Number	Effect/causes	Remedy
290000	The recipe tag could not be read or written. It is assigned the start value. The alarm can be entered in the alarm buffer for up to four more failed tags if necessary. After that, alarm 290003 is output.	Check in the configuration that the address has been set up in the PLC.
290001	An attempt has been made to assign a value to a recipe tag which is outside the value range permitted for this type. The alarm can be entered in the alarm buffer for up to four more failed tags if necessary. After that, alarm 290004 is output.	Observe the value range for the tag type.
290002	It is not possible to convert a value from a source format to a target format. The alarm can be entered in the alarm buffer for up to four more failed recipe tags if necessary. After that, alarm 290005 is output.	Check the value range or type of the tag.
290003	This alarm is output when alarm number 290000 is triggered more than five times. In this case, no further separate alarms are generated.	Check in the configuration that the tag addresses have been set up in the PLC.
290004	This alarm is output when alarm number 290001 is triggered more than five times. In this case, no further separate alarms are generated.	Observe the value range for the tag type.
290005	This alarm is output when alarm number 290002 is triggered more than five times. In this case, no further separate alarms are generated.	Check the value range or type of the tag.
290006	The threshold values configured for the tag have been violated by values entered.	Observe the configured or current threshold values of the tag.
290007	There is a difference between the source and target structure of the recipe currently being processed. The target structure contains an additional data recipe tag which is not available in the source structure. The data recipe tag specified is assigned its start value.	Insert the specified data recipe tag in the source structure.
290008	There is a difference between the source and target structure of the recipe currently being processed. The source structure contains an additional data recipe tag which is not available in the target structure and therefore cannot be assigned. The value is rejected.	Remove the specified data recipe tag in the specified recipe from the project.

Number	Effect/causes	Remedy
290010	The storage location configured for the recipe is not permitted. Possible causes: Illegal characters, write protection, data carrier out of space or does not exist.	Check the configured storage location.
290011	The record with the specified number does not exist.	Check the source for the number (constant or tag value)
290012	The recipe with the specified number does not exist.	Check the source for the number (constant or tag value)
290013	An attempt was made to save a record under a record number which already exists. The action is not executed.	The following remedies are available: <ul style="list-style-type: none"> <li>• Check the source for the number (constant or tag value)</li> <li>• First, delete the record</li> <li>• Change the "Overwrite" function parameter</li> </ul>
290014	The file specified to be imported could not be found.	Check: <ul style="list-style-type: none"> <li>• The file name</li> <li>• Ensure that the file is in the specified directory</li> </ul>
290020	Alarm reporting that the download of records from the HMI device to the PLC has started.	--
290021	Alarm reporting that the download of records from the HMI device to the PLC was completed.	--
290022	Alarm reporting that the download of records from the HMI device to the PLC was canceled due to an error.	Check in the configuration whether: <ul style="list-style-type: none"> <li>• The tag addresses are configured in the PLC</li> <li>• The recipe number exists</li> <li>• The record number exist</li> <li>• The "Overwrite" function parameter is set</li> </ul>
290023	Alarm reporting that the download of records from the PLC to the HMI device has started.	--
290024	Alarm reporting that the download of records from the PLC to the HMI device was completed.	---
290025	Alarm reporting that the download of records from the PLC to the HMI device was canceled due to an error.	Check in the configuration whether: <ul style="list-style-type: none"> <li>• The tag addresses are configured in the PLC</li> <li>• The recipe number exists</li> <li>• The record number exist</li> <li>• The "Overwrite" function parameter is set</li> </ul>
290026	An attempt has been made to read/write a record although the record is not free at present. This error may occur in the case of recipes for which downloading with synchronization has been configured.	Set the record status to zero.
290027	Unable to connect to the PLC at present. As a result, the record can neither be read nor written. Possible causes: No physical connection to the PLC (no cable plugged in, cable is defect) or the PLC is switched off.	Check the connection to the PLC.
290030	This alarm is output after you selected screen which contains a recipe view in which a record is already selected.	Reload the record from the storage location or retain the current values.

Number	Effect/causes	Remedy
290031	While saving, it was detected that a record with the specified number already exists.	Overwrite the record or cancel the action.
290032	While exporting records it was detected that a file with the specified name already exists.	Overwrite the file or cancel the process.
290033	Confirmation request before deleting records.	--
290040	A record error with error code %1 that cannot be described in more detail occurred. The action is canceled. It is possible that the record was not installed correctly on the PLC.	Check the storage location, the record, the "Data record" area pointer and if necessary, the connection to the PLC. Restart the action after a short time. If the error persists, contact Customer Support. Forward the relevant error code to Customer Support.
290041	A record or file cannot be saved because the storage location is full.	Delete files no longer required.
290042	An attempt was made to execute several recipe actions simultaneously. The last action was not executed.	Trigger the action again after waiting a short period.
290043	Confirmation request before storing records.	--
290044	The data store for the recipe has been destroyed and is deleted.	--
290050	Alarm reporting that the export of records has started.	--
290051	Alarm reporting that the export of records was completed.	--
290052	Alarm reporting that the export of records was canceled due to an error.	Ensure that the structure of the records at the storage location and the current recipe structure on the HMI device are identical.
290053	Alarm reporting that the import of records has started.	--
290054	Alarm reporting that the import of records was completed.	--
290055	Alarm reporting that the import of records was canceled due to an error.	Ensure that the structure of the records at the storage location and the current recipe structure on the HMI device are identical.
290056	Error when reading/writing the value in the specified line/column. The action was canceled.	Check the specified line/column.
290057	The tags of the recipe specified were toggled from "offline" to "online" mode. Each change of a tag in this recipe is now immediately downloaded to the PLC.	--
290058	The tags of the specified recipe were toggled from "offline" to "online" mode. Modifications to tags in this recipe are no longer immediately transferred to the PLC but must be transferred there explicitly by downloading a record.	--
290059	Alarm reporting that the specified record was saved.	--
290060	Alarm reporting that the specified record memory was cleared.	--
290061	Alarm reporting that clearing of record memory was canceled due to an error.	--

Appendix

A.2 System alarms

Number	Effect/causes	Remedy
290062	The record number is above the maximum of 65536. This record cannot be created.	Select another number.
290063	This occurs with the system function "ExportDataRecords" when the parameter "Overwrite" is set to No. An attempt has been made to save a recipe under a file name which already exists. The export is canceled.	Check the "ExportDataRecords" system function.
290064	Alarm reporting that the deletion of records has started.	--
290065	Alarm reporting that the deletion of records has successfully completed.	--
290066	Confirmation request before deleting records.	--
290068	Security request to confirm if all records in the recipe should be deleted.	--
290069	Security request to confirm if all records in the recipe should be deleted.	--
290070	The record specified is not in the import file.	Check the source of the record number or record name (constant or tag value).
290071	During the editing of record values, a value was entered which exceeded the low limit of the recipe tag. The entry is discarded.	Enter a value within the limits of the recipe tag.
290072	When editing record values, a value was entered which exceeds the high limit of the recipe tag. The entry is discarded.	Enter a value within the limits of the recipe tag.
290073	An action (e.g. saving a record) failed due to an unknown error. The error corresponds to the status alarm IDS_OUT_CMD_EXE_ERR in the large recipe view.	--
290074	While saving, it was detected that a record with the specified number already exists but under another name.	Overwrite the record, change the record number or cancel the action.
290075	A record with this name already exists. The record is not saved.	Please select a different record name.
290110	The default values could not be set due to an error.	--
290111	The Recipes subsystem cannot be used. Recipe views have no content and recipe-specific functions will not be performed. Possible causes: <ul style="list-style-type: none"> <li>• An error occurred while transferring the recipes.</li> <li>• The recipe structure was changed in ES. When the project was downloaded again, the recipes were not transferred with it. This means that the new configuration data is not being transferred to the old recipes on the device.</li> </ul>	Transfer the project to the device again, together with the recipes (the corresponding check box in the Transfer dialog must be checked).



## 300000 - Alarm\_S alarms

Number	Effect/causes	Remedy
300000	Faulty configuration of process monitoring (e.g. using PDiag or S7-Graph): More alarms are queued than specified in the specifications of the CPU. No further ALARM_S alarms can be managed by the PLC and reported to the HMI devices.	Change the PLC configuration.
300001	ALARM_S is not registered on this PLC.	Select a controller that supports the ALARM_S service.

## 310000 - Report system alarms

Number	Effect/causes	Remedy
310000	An attempt is being made to print too many reports in parallel. Only one log file can be output to the printer at a given time; the print job is therefore rejected.	Wait until the previous active log was printed. Repeat the print job if necessary.
310001	An error occurred on triggering the printer. The report is either not printed or printed with errors.	Evaluate the additional system alarms related to this alarm. Repeat the print job if necessary.

## 320000 - Alarms

Number	Effect/causes	Remedy
320000	The movements have already been indicated by another device. The movements can no longer be controlled.	Deselect the movements on the other display units and select the motion control screen on the required display unit.
320001	The network is too complex. The faulty addresses cannot be indicated.	View the network in STL.
320002	No diagnosable alarm message (error) selected. The unit associated with the alarm message could not be selected.	Select a diagnostics alarm from the ZP_ALARM alarm screen.
320003	No alarm message (error) exists for the selected unit. The detail view cannot visualize any networks.	Select the defective unit from the overview screen.
320004	The required signal states could not be read by the PLC. The faulty addresses cannot be found.	Check the consistency between the configuration on the display unit and the PLC program.
320005	The project contains ProAgent elements which are not installed. ProAgent diagnostic functions cannot be performed	In order to run the project, install the optional ProAgent package.
320006	You have attempted to execute a function which is not supported in the current constellation.	Check the type of the selected unit.
320007	No error-triggering addresses were found on the networks. ProAgent cannot indicate any faulty addresses.	Switch the detail screen to STL layout mode and check the status of the addresses and exclusion addresses.
320008	The diagnostic data stored in the configuration are not synchronized with those in the PLC. ProAgent can only indicate the diagnostic units.	Transfer the project to the HMI device again.
320009	The diagnostic data stored in the configuration are not synchronized with those in the PLC. The diagnostic screens can be operated as usual. ProAgent may be unable to show all diagnostic texts.	Transfer the project to the HMI device again.

Number	Effect/causes	Remedy
320010	The diagnostic data stored in the configuration are not synchronized with those in STEP7. The ProAgent diagnostics data is not up-to-date.	Transfer the project to the HMI device again.
320011	A unit with the corresponding DB number and FB number does not exist. The function cannot be executed.	Check the parameters of the "SelectUnit" function and the units selected in the project.
320012	The "Step sequence mode" dialog is no longer supported.	Use the ZP_STEP step sequence screen from the corresponding standard project for your project. Instead of calling the Overview_Step_Sequence_Mode function, call the "FixedScreenSelection" function using ZP_STEP as the screen name.
320014	The selected PLC cannot be evaluated for ProAgent. The Alarm view assigned to the "EvaluateAlarmDisplayFault" system function could not be found.	Check the parameters of the "EvaluateAlarmDisplayFault" system function.

## 330000 - GUI alarms

Number	Effect/causes	Remedy
330022	Too many dialogs are open on the HMI device.	Close all dialogs you do not require on the HMI device.
330026	The password will expire after the number of days shown.	Enter a new password.

## 350000 - GUI alarms

Number	Effect/causes	Remedy
350000	PROFIsafe packages have not arrived within the necessary period. There is a communication problem with the F-CPU. RT is terminated	Check the WLAN connection.
350001	PROFIsafe packages have not arrived within the necessary period. There is a communication problem with the F-CPU. The PROFIsafe connection is re-established.	Check the WLAN connection.
350002	An internal error has occurred. Runtime is terminated	Internal error
350003	Feedback concerning the connection established with the F-CPU. The Emergency-Off buttons are active immediately.	--
350004	PROFIsafe communication was set and the connection was cleared. The Runtime can be terminated. The Emergency-Off buttons are deactivated immediately.	--
350005	Incorrect address configured for the F-slave. No PROFIsafe connection.	Check and modify the address of the F slave in WinCC flexible ES.
350006	The project has started. At the start of the project, the enabling buttons must be checked for functionality.	Press the two enabling buttons one after another in the "Enable" and "Panic" positions.

Number	Effect/causes	Remedy
350008	The wrong number of fail-safe buttons was configured. No PROFIsafe connection.	Change the number of fail-safe buttons in the project.
350009	The device is in Override mode. It may no longer be possible to detect the location because transponder detection fails.	Exit Override mode.
350010	Internal error: The device has no fail-safe buttons.	Send the device back. Worldwide contact person



## Abbreviations

### B.1 Abbreviations

ANSI	American National Standards Institution
CPU	Central Processing Unit
CSV	Comma Separated Values
CTS	Clear To Send
DC	Direct Current
DCD	Data Carrier Detect
DHCP	Dynamic Host Configuration Protocol
DIL	Dual-in-Line (electronic chip housing design)
DNS	Domain Name System
DP	Distributed I/O
DSR	Data Set Ready
DTR	Data Terminal Ready
IO	Input and Output
EAP	Extensible Authentication Protocol
ESD	Components and modules endangered by electrostatic discharge
EMC	Electromagnetic Compatibility
EN	European standard
ES	Engineering System
ESD	Components and modules endangered by electrostatic discharge
GND	Ground
HF	High Frequency
HMI	Human Machine Interface
IEC	International Electronic Commission
IEEE	Institute of Electrical and Electronics Engineers
IF	Interface
IP	Internet Protocol
IWLAN	Industrial Wireless Local Area Network
LAN	Local Area Network
LED	Light Emitting Diode
MAC	Media Access Control
MOS	Metal Oxide Semiconductor
MPI	Multipoint Interface (SIMATIC S7)
MS	Microsoft
MTBF	Mean Time Between Failures
n. c.	Not connected

## Abbreviations

### B.1 Abbreviations

---

OP	Operator Panel
PC	Personal Computer
PG	Programming device
PPI	Point-to-Point Interface (SIMATIC S7)
RAM	Random Access Memory
PELV	Protective Extra Low Voltage
RJ45	Registered Jack Type 45
RTS	Request to send
RxD	Receive Data
SAR	Specific absorption rate
SD Card	Security Digital Card
SELV	Safety Extra Low Voltage
SP	Service Pack
PLC	Programmable Logic Controller
SSID	Service set identifier
STN	Super Twisted Nematic
Sub-D	Subminiature D (plug)
TAB	Tabulator
TCP/IP	Transmission Control Protocol/Internet Protocol
TFT	Thin Film Transistor
TKIP	Temporal Key Integrity Protocol
TLS	Transport Layer Security
TxD	Transmit Data
UL	Underwriter's Laboratory
USB	Universal Serial Bus
WLAN	Wireless Local Area Network
WEP	Wired Equivalent Privacy
WINS	Windows Internet Naming Service
WPA	Wi-Fi Protected Access

# Glossary

## **"Transfer" mode**

An operating mode of the HMI device in which an executable project is transferred from the configuring PC to an HMI device.

## **Access point**

The access point is a WLAN participant that also performs administrative functions on the network.

## **Acknowledge**

Acknowledgment of an alarm confirms that it has been noted.

## **Ad hoc mode**

WLAN network without access point

## **Alarm logging**

Output of user-specific alarms to a printer, in parallel to their output to the HMI device screen.

## **Alarm, acknowledging**

Acknowledgment of an alarm confirms that it has been noted.

## **Alarm, activated**

Moment at which an alarm is triggered by the PLC or HMI device.

## **Alarm, deactivated**

Moment at which the initiation of an alarm is reset by the PLC.

## **Alarm, user-specific**

A user-specific alarm designates a certain operating status of the plant connected to the HMI device via the PLC.

## **Automation system**

Controller of the SIMATIC S7 series such as a SIMATIC S7-300

### **Bootloader**

Used to start the operating system. Automatically started when the HMI device is switched on. After the operating system has been loaded, the Loader opens.

### **Configuration software**

Software used to generate projects used for the purpose of process visualization. An example of configuring software is WinCC flexible.

### **Configuring PC**

A configuring PC is a programming device or PC on which plant projects are created using an engineering software.

### **CRC**

Cyclic redundancy check

Test values contained in a safety message frame can be backed up as follows:

- The validity of the process values contained in the safety message frame
- The accuracy of the assigned address relationships
- The safety-related parameters

### **Display duration**

Defines whether a system alarm is displayed on the HMI device and the duration of the display.

### **Effective range**

Certain safety-related operator inputs are only possible in a limited area upstream of the machine or system. This is known as the effective range. To make these inputs, the operator must log onto this effective range.

### **EMC**

Electromagnetic compatibility is the ability of electrical equipment to function properly in its electromagnetic environment without influencing this environment.

### **Event**

Functions are triggered by defined incoming events. Events can be configured. Events which can be assigned to a button include "Press" and "Release", for example.

### **Fail-safe**

Ability of a technical system to remain in a safe state or switch to another safe state immediately after certain failures occur.



### **Fail-safe mode**

See Safety mode.

### **Fail-safe system, F system**

Fail-safe systems are used to control processes in which immediate shutdown results in a safe system state. This means that an immediate shutdown does not result in danger to people or the environment. F systems are used in systems requiring higher levels of safety.

### **Field array**

Area reserved in configured screens for the input and output of values.

### **Flash memory**

Non-volatile memory with EEPROM chips, used as mobile storage medium or as memory module installed permanently on the motherboard.

### **Function keys**

Key on the HMI device which supports user-specific functions. A function is assigned to the key in the configuration. The assignment of the keys may be specific to an active screen or not.

### **Half Brightness Life Time**

Time period after which the brightness reaches 50% of the original value. The specified value is dependent on the operating temperature.

### **Hardcopy**

Output of the screen content to a printer.

### **HMI device**

An HMI device is a device used for the operation and monitoring of machines and plants. The statuses of the machine or plant are indicated by means of graphic elements or by indicator lamps on the HMI device. The operating elements of the HMI device allow the operator to interact with the processes of the machine or plant.

### **HMI device image**

A file that can be transferred from the configuring PC to the HMI device. The HMI device image contains the operating system and elements of the runtime software required to run a project.

**I/O field**

An I/O field enables the input or output of values on the HMI device which are transferred to the PLC.

**Infotext**

An infotext is a configured information on objects within a project. Infotext for an alarm, for example, may contain information on the cause of the fault and troubleshooting routines.

**Infrastructure mode**

WLAN network with access point

**Object**

An object is a component of a project. Example: screen or alarm. Objects are used to view or enter texts and values on the HMI device.

**Operating element**

Component of a project used to enter values and trigger functions. A button, for example, is an operating element.

**Plant**

General term referring to machines, processing centers, systems, plants and processes which are operated and monitored on an HMI device.

**PLC**

A PLC is a general term for devices and systems with which the HMI device communicates, for example SIMATIC S7.

**PLC job**

A PLC job triggers a function for the PLC at the HMI device.

**Process visualization**

Visualization of technical processes by means of text and graphic elements. Configured plant screens allow operator intervention in active plant processes by means of the input and output data.

## PROFINET

Within the framework of Totally Integrated Automation (TIA), PROFINET represents an enhancement of the following bus systems:

- PROFIBUS DP as well-established fieldbus
- Industrial Ethernet as the communications bus for the cell level

The experience gained from both systems has been and continues to be integrated in PROFINET. PROFINET as an Ethernet-based automation standard from PROFIBUS International (PROFIBUS Nutzerorganisation e.V.) defines a vendor-independent communications and engineering model.

## PROFINET IO controller

Device used to address the connected IO devices. That is: The IO controller exchanges input and output signals with assigned field devices. The IO controller is often the controller on which the automation program runs.

## PROFINET IO device

A decentralized field device that is assigned to one of the IO controllers (e.g. remote IO, valve terminals, frequency converters, switches)

## PROFINET IO

As part of PROFINET, PROFINET IO is a communication concept that is used to implement modular, distributed applications.

PROFINET IO allows you to create automation solutions of the type with which you are familiar from PROFIBUS.

PROFINET IO is implemented by the PROFINET standard for automation devices on the one hand, and on the other hand by the STEP 7 engineering tool.

This means that you have the same application view in STEP 7 regardless of whether you configure PROFINET devices or PROFIBUS devices. Programming your user program is essentially the same for PROFINET IO and PROFIBUS DP if you use the expanded blocks and system status lists for PROFINET IO.

## PROFIsafe

Fail-safe bus profile of PROFINET for communication between the safety program and the F I/O in an F system.

## PROFIsafe address

Every F I/O has a PROFIsafe address. The F I/O uses this address to receive safety message frames from the F CPU or send safety message frames to the F CPU.

## Project

Result of a configuration using a configuration software. The project normally contains several screens with embedded system-specific objects, basic settings and alarms. The project file of a project configured in WinCC flexible is saved under the file name extension \*.hmi.

You need to distinguish between a project on the configuring PC and that on an HMI device. A project may be available in more languages on the configuring PC than can be managed on the HMI device. The project on the configuring PC can also be set up for different HMI devices. Only the runtime project that has been generated for the respective HMI device can be transferred to it.

## Project file

File generated from the runtime project file for use on the HMI device. The project file is normally not transferred and remains on the configuring PC.

The file name extension of a source file is \*.hmi.

## Project file, compressed

Compressed format of the project file. The compressed project file can be transferred together with the runtime project file to the respective HMI device. For this purpose, backtransfer must be enabled in the project on the configuring PC. The compressed project file is normally stored on an external memory card.

The file extension of a compressed file is \*.pdz.

## Proof-test interval

The proof-test interval is the time period after which a component must be put into fail-safe state. That is, it is replaced by an unused component or it is proven to be completely error-free.

## Recipe

Combination of tags forming a fixed data structure. The data structure configured can be assigned data on the HMI device and is then referred to as a record. The use of recipes ensures that all the assigned data is transferred synchronously to the PLC during the transfer of a record.

## Runtime project file

File generated from the project file for a specific HMI device. The runtime project file is transferred to the corresponding HMI device and used to operate and monitor plants.

The extension of a compressed file is \*.pdz.

## Runtime software

The runtime software is a process visualization software used to test a project on a configuring PC.

**Safe state**

State of a unit in which safety is assured. In other words, the risk is acceptably low because it has been established that safety-related malfunctions do not occur or because of the safety measures taken to prevent possible safety-related malfunctions.

The basic principle of the safety concept in a fail-safe system is the existence of a safe state for all process variables.

**Safety function**

Safety function is a mechanism integrated in fail-safe I/Os and CPUs, enabling them to be used in fail-safe systems. In accordance with IEC 61508: A safety function is implemented by a safety system to ensure that the system is kept in a safe state or brought into a safe state in the event of a particular fault. (user safety function)

**Safety integrity level**

Safety integrity level (SIL) in accordance with IEC 61508 and prEN 50129. The higher the safety integrity level, the more comprehensive are the measures to avoid systematic errors and control systematic errors and random hardware failures.

**Safety mode**

Operating mode of the HMI device in which safety-related communication can be performed via safety message frames.

**Safety-related communication**

Communication used to exchange fail-safe data.

**Screen**

Form of the visualization of all logically related process data for a plant. The visualization of the process data can be supported by graphic objects.

**Screen object**

Configured object used to display or operate the plant, for example a rectangle, I/O field or alarm view.

**STEP 7**

STEP 7 is the programming software for SIMATIC S7, SIMATIC C7 and SIMATIC WinAC PLCs.

**Symbolic I/O field**

A symbolic I/O field is a field for the input and output of the value. Contains a list of default entries from which one can be selected.

### **System alarm**

A system alarm is assigned to the "System" alarm class. A system alarm refers to internal states on the HMI device and the PLC.

### **Tab sequence**

During configuration, this defines the sequence in which objects are activated on pressing the <TAB> key.

### **Tag**

Defined memory location to which values can be written to and read from. This can be done from the PLC or the HMI device. Based on whether the tag is interconnected with the PLC or not, we distinguish between "external" tags (process tags) and "internal" tags.

### **Transfer**

Transfer of a runtime project from the configuring PC to the HMI device.

### **Transponder**

A transponder is a – usually wireless – communications, display or control device that receives incoming signals and automatically responds to them. The term transponder is derived from transmitter and responder. Transponders can be passive or active.

### **Zone**

A zone is a defined area in the system. The HMI device recognizes the zone it is in. When entering and leaving the zone, the HMI device can display a specific system image. This allows zone-specific operator inputs to be disabled or enabled.

# Index

"

"Override" mode, 232

/

/Audit, 32

## A

Acceptance, 198, 199  
    Effective ranges and transponders, 199  
    Plant, 198, 199  
Accessories  
    Accessory kit, 20, 24, 26  
Accessory kit, 20  
    Charging station, 24  
    Transponder, 26  
Acknowledge  
    Alarm, 281  
    Error alarm, 281  
Activate  
    Password protection, 147  
Ad hoc mode, 57  
Address assignment  
    TCP/IP network, 172  
Addressing, 170  
Admin, 273, 274  
Alarm, 275  
    Acknowledge, 281  
    Alarm indicator, 277  
    Display, 277  
    Editing, 282  
    Functional scope, 29  
Alarm buffer, 276  
    Functional scope, 29  
Alarm class, 276, 279  
Alarm event, 275  
Alarm group, 276  
Alarm indicator, 277  
Alarm line, 277  
Alarm log, 276  
Alarm report, 276  
Alarm view, 277  
    Extended, 278  
    Simple, 278

Alarm window, 279  
ALARM\_S, 29  
Alphanumeric  
    Screen keyboard, 246  
Alphanumeric value  
    Changing, 247  
    Entering, 247  
Ambient conditions  
    Climatic, charging station, 53  
    Climatic, HMI device, 53  
    Climatic, transponder, 54  
    Tested for, 52  
Application case  
    Unattended in effective range, 224, 230, 237  
Applications  
    Mobile Panel 277F IWLAN, 17  
Australia  
    Approvals, 38  
Authorization, 267  
Automatic  
    Transfer, 194  
Automation License Manager, 220

## B

Backlighting  
    Reducing, 153  
    Setting, 137  
Backtransfer, 192, 196  
Backup, 136, 180, 191, 203, 204, 206, 267  
    Registry information, 137, 151  
    Temporary files, 151  
    to external memory medium, 136  
    To external storage device, 180  
    To memory card, 180  
    With ProSave, 206  
    With WinCC flexible, 204  
Backup time  
    Internal clock, 320  
Bar, 255  
Basic knowledge  
    Required, 4  
BAT  
    LED, 96  
BAT 1  
    LED, 121  
BAT 2  
    LED, 121

- Batteries
  - Charging in the charging compartment, 120
- Battery, 250
  - Application, 250
  - Charging options, 22
  - Layout, 250
  - LED display, 87
  - Maintenance cycle, 311
  - Operation, 250
  - Purpose, 22
  - State, 184
- Battery charging status
  - Vibration alarm, 162
- Battery status
  - Display, 86, 137
- Booting, 157
- Bridging battery, 21, 22
  - Changing, 89
  - Insert, 85
  - Safety instruction, 87, 89
- Brightness
  - Changing, 153
- Browser
  - Homepage, 136
  - Setting, 136
- Byte assignment
  - Direct keys, 107
- C**
- Calibrating
  - Touch screen, 145
- Care, 311
- CE approval, 37
- Certificate
  - Delete, 136, 179
  - Display, 136
  - Importing, 136, 179
- Certificates, 136
- Certifications, 37
- Changing
  - Brightness, 153
  - Screen setting, 153
  - User data, 273
- Character repeat, 136
  - Screen keyboard, 143
  - Setting, 143
- Charging
  - Electrostatic, 332
- Charging options
  - Battery, 22
- Charging station, 21
  - Charging compartment, 120
  - Clearance, 55
  - Configuration, 23
  - EMC-compliant installation, 48
  - LED display, 121
  - Lock, 122
  - Main dimensions, 317
  - Mounting location, 54
  - Mounting position, 66
- Charging status of battery
  - Vibration alarm, 162
- Climatic
  - Transport conditions, 50
- Closing
  - Project, 274
- Column sequence
  - Alarm view, 279
- COM
  - LED, 96
- Commissioning engineers, 3
- Communication error, 29, 237
- Compatibility conflict, 203
- Configuration phase, 24
- Configure
  - Network, 171
  - Operating system, 125
  - Screen keyboard, 136, 140
- Configuring PC, 24
  - Connecting, 77
  - Connection graphic, 77
- Connecting
  - Configuring PC, 77
  - PLC, 79
  - Printer, 80
  - USB device, 81
- Connection
  - Electrical, 69
- Connection graphic
  - Configuring PC, 77
  - PLC on Mobile Panel, 79
  - Printer, 80
- Connection to PLCs
  - Number, 33
- Contact person, 7
- Control Panel
  - Open, 136
  - Operating, 138
  - Password protection, 127
  - Screen keyboard, 138
- Cookies, 136, 177
- Country code, 130
- CRC checksum



- Determining, 200
- Creating
  - Recipe data record, 293, 301
  - Users, 271
- Currency, 137

**D**

- Data channel
  - Enabling, 163
  - Locking, 163
  - Parameter assignment, 137, 163
- Data flow, 287
- Data record list, 289, 300
- Data transfer rate
  - to Access Point, 131
- Date, 136
  - Entering, 248
  - Setting, 148
  - Synchronizing, 149
- Date format, 137, 150
- Date/time properties, 136, 148
- Deactivating
  - Password protection, 148
- Decimal, 245
- Default Gateway, 173
- Degree of protection
  - Safety instruction, 75, 78, 180, 209
- Delay time
  - Setting, 137, 166
- Delete
  - Certificate, 179
  - Recipe data record, 295, 303
  - Users, 274
- Design variations, 18
- Device name
  - For network operation, 171
  - Setting, 137
- DHCP, 173
- Direct key, 106, 238
  - Bit coding, 108
  - Byte assignment, 107
  - Functional scope, 32
  - Reaction time, 110
- Display
  - Alarm, 277
  - Battery status, 86
  - HMI device information, 137
  - Infotext, 249, 280
  - Memory information, 161
  - System information, 160
  - Technical data, 319

- Display format, 244
- Disposal, 8
- DNS, 173
  - Server, 170
- Documentation
  - Conventions, 6
  - Enclosed, 65
  - Getting started, 5
  - Operating instructions, 5
  - User manual, 4
- Double-click, 136
  - Setting, 144
- Drop down list box, 248

**E**

- Editing
  - Alarm, 282
  - Recipe data record, 294, 302
- Effective range
  - Calculating quality, 253
  - Detect, 61
  - Leaving without logging off, 230
  - Logoff, 231
  - Logon, 229
- Effective range name, 252
  - Layout, 252
- Effective range quality, 253
  - Application, 253
  - Operation, 253
- Effective ranges, 27
  - Acceptance, 199
  - Forming, 62
  - Rules, 58, 63
  - Specifying, 64
  - Testing, 202
- Electrical
  - Installation, 69
- Electrostatic charging, 332
- Electrostatic discharge
  - Precautions, 333
- Element list, 289, 300
- E-mail
  - Setting, 137, 175
- EMC, 48
  - Guideline, 37
- Emergency stop, 225
- Emergency stop button
  - Effectiveness, 41, 45
  - Operating, 45, 100
  - Release, 100
  - Safety instruction, 45

Emission, 43, 49  
Enabling button, 46, 101  
    Operating, 102  
    Panic activation, 103  
    Risk from improper use, 47  
    Safety instruction, 47  
    Switch settings, 103  
Enabling device, 46  
Encryption, 177  
Entering  
    Alphanumerical value, 247  
    By means of function key, 241  
    Date, 248  
    Numerical value, 245  
    Recipe data record, 308  
    Symbolic value, 248  
    Text box, 243  
    Time, 248  
Error alarm  
    Acknowledge, 281  
Error display  
    Red, 237  
ESD  
    Abbreviations, 331  
    Labeling, 331  
    Safety instruction, 68  
Ethernet settings  
    IP address, 173  
Evaluation  
    Operator control, 94  
Exporting  
    Recipe data record, 306  
Extended alarm view, 278  
Extended recipe view, 288  
Extended user view, 269  
External memory medium  
    Backup to, 180  
    Restoring from, 180  
  
**F**  
Factory settings  
    Resetting to, 209  
Fail-safe  
    Automation system, 28  
    Using the HMI device, 28  
Fail-safe operation  
    Technical data, 320  
Feedback  
    Optical, 240  
Front view, 18, 315  
Function keys

    Global function assignment, 241  
    Input via, 241  
    Labeling, 116  
    Local function assignment, 241  
Function test, 92, 311  
Functional scope  
    Alarm buffer, 29  
    ALARM\_S, 29  
    Alarms, 29  
    Device-specific, 32  
    Graphics list, 30  
    Infotext, 31  
    Limit value monitoring, 30  
    Log, 31  
    Recipe, 30  
    Safety, 31  
    Scaling, 30  
    Screen, 30  
    Tag, 30  
    Text list, 30  
Functions  
    Additional, 32  
  
**G**  
Gauge, 256  
Global rampdown, 226  
Graphics list  
    Functional scope, 30  
  
**H**  
Handwheel  
    Application, 111  
    Evaluate incremental values, 111  
    Operating, 104  
    Reaction time, 110  
High frequency radiation, 36  
HMI device  
    Emergency stop button, 99  
    Enabling button, 101  
    Holding, 118, 119  
    Information, 137, 159  
    Interfaces, 320  
    Ports, 76  
    Restart, 157  
    Restarting, 137  
    Storing, 223  
    Switch off, 92  
    Technical data, 319  
HMI Input Panel  
    Options, 141

Homepage  
 Internet, 176  
 Host cable  
 Safety instruction, 78

**I**

Identification, 174  
 Illuminated pushbutton  
 Application, 112  
 Bit assignment, 112  
 Operating, 106  
 Importing  
 Certificate, 179  
 Recipe data record, 307  
 Infotext  
 Display, 249, 280  
 Functional scope, 31  
 Initial startup, 192  
 Input device  
 Technical data, 319  
 Input Panel, 136  
 Input unit, 94  
 Installation  
 Electrical, 69  
 EMC-compatible, 48  
 Installing  
 Option, 191, 216, 217, 219  
 Integrating, 227  
 Interfaces  
 HMI device, 320  
 Interference  
 Pulse-shaped, 48  
 Sinusoidal, 49  
 Internal clock, 149, 320  
 Internal error, 237  
 Internet  
 Homepage, 176  
 Options, 136  
 Search engine, 176  
 Security settings, 136  
 Service, 8, 313  
 Settings, 137, 175  
 Support, 8, 313  
 Internet Explorer, 128  
 Internet options  
 Privacy, 178  
 IP address  
 Ethernet, 173  
 Setting, 136

**K**

Key control  
 Trend view, 261  
 Keyboard  
 Safety instruction, 94  
 Keyboard properties, 136, 143  
 Key-operated switch  
 Application, 111  
 Bit assignment, 111  
 Operating, 105

**L**

Labeling  
 Function keys, 116  
 Labeling strips, 20  
 Attaching, 117  
 Dimensions, 116  
 Exchange, 117  
 Printing, 116  
 LAN connection, 136  
 Language change  
 Functional scope, 32  
 Layout  
 Battery, 250  
 Slider control, 257  
 Sm@rtClient view, 264  
 Trend view, 259  
 Leaving the effective range  
 Vibration alarm, 162  
 LED  
 BAT, 96  
 BAT 1, 121  
 BAT 2, 121  
 COM, 96  
 POWER, 121  
 PWR, 96  
 RNG, 96  
 SAFE, 96  
 LED display  
 Battery, 87  
 Charging station, 121  
 Mobile Panel, 95  
 LED function key  
 Application, 110  
 Bit assignment, 110  
 License key, 220  
 Transferring, 191, 221  
 Transferring back, 191, 222  
 Limit value  
 For password, 268  
 For user, 268

- For user view, 268
- Limit value monitoring
  - Functional scope, 30
- Limit value test, 244
- Loader
  - Buttons, 125
  - Open, 127
- Local rampdown, 225
- Log
  - Functional scope, 31
- Logbook
  - WLAN connection, 134
- Logoff
  - Effective range, 231
  - Users, 271
- Logoff time, 267
- Logon
  - Effective range, 229
  - Users, 269
- Logon data, 174

## M

- Main battery, 21, 22
  - Changing in good time, 87
  - Insert, 86
- Main battery change
  - Block of USB interface, 81
- Main dimensions
  - Charging station, 317
  - Mobile Panel 277F IWLAN, 315
  - Transponder, 318
- Maintenance, 311, 313
- Maintenance technicians, 3
- Manual
  - Production sequence, 309
  - Transfer, 193
- Measures
  - Organizational, 223
- Mechanical
  - Transport conditions, 50
- Memory
  - Technical data, 319
- Memory card, 20
  - Inserting, 115
  - Restoring file system, 151
  - Unplug, 115
- Memory information, 137
  - Display, 161
- Memory management, 137, 185
- Mobile Panel
  - Applications, 17

- Design variations, 18
- Front view, 18
- Information, 159
- LED display, 95
- Ports, 76
- Rear view, 19
- Side view, 19
- Switching on, 91
- Testing, 91
- Mobile Panel 277F IWLAN
  - Main dimensions, 315
- Monitor setting
  - Changing, 137
- Monitoring mode
  - Sm@rtClient view, 264
- Mounting location
  - Charging station, 54
- Mounting position
  - Charging station, 66
- Mouse properties, 136, 144
- Multi-key operation, 240, 241
- Multimedia card, 20, 114

## N

- Name server, 173
  - Setting, 136
- Network
  - Configure, 171
  - Logon data, 137
  - Set up, 170
  - Setting, 172
- Network & dial-up connections, 136
- Network and dial-up connections, 136
- Network ID, 137
- Network operation
  - Device name, 171
  - Options, 137, 175
- Nominal voltage, 56
- NOTE
  - License key, 216
- Number format, 137, 150
- Numerical
  - Screen keyboard, 244
- Numerical value
  - Changing, 245
  - Decimal places, 245
  - Display format, 244
  - Entering, 245
  - Limit value test, 244

**O**

- Office location, 7
- Offline
  - Operating mode, 189
  - Recipe tag, 292
  - Test, 197
- Online
  - Operating mode, 189
  - Recipe tag, 292
  - Test, 198
- OP properties, 137
  - Device, 159
  - Memory monitoring, 185
  - Persistent storage, 151
  - Touch, 145
- Open
  - Loader, 127
- Operating
  - Control Panel, 138
  - Emergency stop button, 45, 100
  - Enabling button, 102
  - Feedback, 240
  - Handwheel, 104
  - Illuminated pushbutton, 106
  - Key-operated switch, 105
  - Recipe menu, 300
  - Recipe screen, 293, 300
  - Safety instruction, 119
  - Slider control, 257
  - Switches, 258
  - Trend view, 260
  - With external keyboard, 239
  - With external mouse, 239
- Operating instructions
  - Purpose of, 3
  - Scope, 4
- Operating mode, 188
  - Changing, 188
  - Offline, 189
  - Online, 189
  - Transfer, 91, 189
- Operating safety
  - Standards, 40, 44
- Operating system
  - Configure, 125
  - Update via ProSave, 211
  - Updating, 208, 209
  - Updating using WinCC flexible, 210
- Operation
  - Battery, 250
- Operation feedback, 240
- Operator control

- Evaluation, 94
- Functions, 94
- Recipe view, 293
- Selection, 94
- Simple recipe view, 299
- Operators, 3
- Optical feedback, 240
- Option
  - Installing, 191, 216
  - Installing with ProSave, 219
  - Installing with WinCC flexible, 217
  - Removing, 191, 216
  - Removing with ProSave, 220
  - Removing with WinCC flexible, 218
- Options, 32
  - Network operation, 137, 175

**P**

- Panic activation
  - Enabling button, 103
- Parameter assignment
  - Data channel, 137, 163
- Password, 267
  - Backup, 267
  - Restoring, 267
  - Specifying, 147
- Password list, 267
- Password properties, 137, 147
- Password protection, 127, 137
  - Activate, 147
  - Deactivating, 148
- PELV, 42
- Peripherals
  - Rated load, 81
- Permission in remote control, 265
- Pin assignment
  - RJ45 socket, 323
  - USB socket, 323
- Plant
  - Acceptance, 198, 199
- PLC
  - Connecting, 79
  - Connection graphic, 79
  - Number, 33
  - Reading recipe data record, 297, 304
  - Transferring recipe data record, 298, 305
- PLC, 33
- PLC\_User, 273, 274
- Ports, 76
- POWER
  - LED, 121

Power failure, 203, 208  
Power Save 1, 97, 153  
Power Save 2, 97, 153  
Precautions  
    Electrostatic discharge, 333  
Printer  
    Connecting, 80  
    Connection graphic, 80  
    Setting, 137  
Printer connection  
    Setting, 155  
Printer properties, 137, 156  
Printing  
    Labeling strips, 116  
    Via network printer, 170  
Production sequence  
    Manual, 309  
PROFINET, 170  
    Addressing, 170  
PROFINET IO  
    Disabling direct keys, 168  
    Enabling direct keys, 168  
    Setting, 137  
PROFIsafe, 33  
PROFIsafe address  
    Setting, 137  
Project  
    Closing, 274  
    Offline testing, 197  
    Reuse, 190  
    Testing online, 198  
    Transferring, 191  
Project file, compressed  
    Memory location, 166  
Proper use, 35  
Protection against ingress of solid foreign bodies, 56  
Protection against water, 56  
Protective foil, 20  
Protocol, 33  
Proxy  
    Server, 136, 175, 177  
    Setting, 136  
PWR  
    LED, 96

## R

Radiation  
    High frequency, 36  
Radio interference, 43  
    Emission, 49  
Rampdown

Safety instruction, 118  
Rate Control, 131  
Rated load  
    USB interface, 81  
Reading  
    Recipe data record, 297  
Reading out  
    Recipe data record, 304  
Real-time clock  
    Internal, 149  
Rear view, 19  
Recipe, 284  
    Control, 285  
    Data flow, 287  
    Data record, 285  
    Field of application, 283  
    Functional scope, 30  
    Recipe screen, 288  
    Recipe view, 288  
    Synchronizing tags, 296  
Recipe data record  
    Creating, 293, 301  
    Delete, 295, 303  
    Editing, 294, 302  
    Entering, 308  
    Exporting, 306  
    Importing, 307  
    Reading from PLC, 297, 304  
    Synchronize with PLC, 294  
    Transferring to PLC, 298, 305  
Recipe list, 289, 300  
Recipe menu  
    Operating, 300  
Recipe screen, 290  
    Operating, 293, 300  
    Overview, 290  
Recipe tag  
    Offline, 292  
    Online, 292  
    Synchronizing, 291, 296  
Recipe view, 288  
    Extended, 288  
    Menu items, 300  
    Operator control, 293, 299  
    Simple, 289  
Recommissioning, 192  
Recycling, 8  
Red error display, 237  
Regional and language settings, 137, 150  
Regional settings, 150  
Registered trademarks, 7  
Registry information  
    Backup, 137, 151

- Regulations for the prevention of accidents, 35
  - Remote control
    - Forcing permission, 265
    - Start, 265
  - Removing, 228
    - Option, 191, 216, 218, 220
  - Repairs, 312
  - Replacement key set, 313
  - Reset button, 76
  - Resetting to factory settings with ProSave, 214
  - Resetting to factory settings with WinCC flexible, 212
  - Restore, 136, 180
  - Restoring, 191, 203, 205, 207, 267
    - From external memory medium, 136
    - From external storage device, 180
    - From memory card, 151
    - With ProSave, 207
    - With WinCC flexible, 205
  - Restoring factory settings, 78, 191, 209
  - Returns Center, 312
  - Risk analysis, 44
  - Risk evaluation
    - Special mode, 46
  - Risk from improper use
    - Enabling button, 47
  - RJ45 socket
    - Safety instruction, 76
  - RNG
    - LED, 96
  - Rotary coding switch
    - Transponder, 66
  - Ruler
    - Trend view, 260
- S**
- S7, 33
  - SAFE
    - LED, 96
  - Safe electrical isolation, 42
  - Safe state, 28
  - Safety
    - Functional scope, 31
    - Standards, 40, 44
  - Safety instruction, 35, 113
    - Backlighting, 154
    - Bridging battery, 87, 89
    - Category 0 Stop, 45
    - Category 1 Stop, 45
    - Changed tag name, 296
    - Compatibility conflict, 203
    - Compressed project file, 192
    - Data channel, 209
    - Data loss, 208
    - Degree of protection, 75, 180
    - Degree of protection, 78
    - Degree of protection, 209
    - Direct key, 238
    - Electrostatic charging, 332
    - Emergency stop button, 36, 45, 54, 71, 84, 100, 113
    - Enabling button, 36, 46, 47
    - ESD, 68
    - General, 43
    - High frequency radiation, 36
    - Impact effect, 36
    - Keyboard, 94
    - Leaving the WLAN coverage area, 238
    - License keys, 209
    - Malfunctions, 84
    - Memory card, first use, 115
    - Memory distribution, 161
    - Multi-key operation, 240
    - Observe grounding measures, 333
    - Operating the HMI device, 119
    - Path, 166
    - Power failure, 203, 208
    - Preventing inadvertent operation, 312
    - Project file, 166
    - Rampdown, 118
    - Recipe data record in the background, 289
    - Restart, 157
    - RJ45 socket, 76
    - Sample cycle time, 110
    - Shutdown, 230
    - Storage, 50
    - Switching infotext, 249
    - Time-dependent reactions, 149
    - Touch screen, 94
    - Transfer mode, 165
    - Transfer mode channel 2, 165
    - Transport, 50
    - Unintentional action, 241
    - USB connection sequence, 78
    - USB Host-to-Host cable, 78
    - USB interface, 81
    - Voltage supply, 41
  - SAR, 49
  - Scaling
    - Functional scope, 30
  - Scope of delivery, 65
  - Screen
    - Functional scope, 30
  - Screen keyboard, 136, 242
    - Adjust size, 140
    - Alphanumerical, 246

- Change layout, 139
- Character repeat, 143
- Configure, 141
- For Control Panel, 138
- Keyboard level, 246
- Language change, 246
- Move, 140
- Numerical, 244
- Representation types, 139
- Screen saver, 137, 154
  - Setting, 153
- Screen setting
  - Changing, 153
- Search engine
  - Internet, 176
- Security settings, 136
- Security system, 266
- Selection
  - Operator control, 94
- Service
  - In the Internet, 8, 313
- Service pack, 313
- Service technicians, 3
- Set up
  - Network, 170
- Setting
  - Backlighting, 137
  - Browser, 136
  - Character repeat, 143
  - Date, 148
  - Date format, 150
  - Date/Time, 136
  - Delay time, 137, 166
  - Device name, 137
  - Double-click, 144
  - E-mail, 137
  - E-mail connection, 175
  - IP address, 136
  - Language, 242
  - Name server, 136
  - Network, 172
  - Number format, 150
  - Printer connection, 155
  - PROFINET IO, 137
  - PROFIsafe address, 137
  - Proxy, 136
  - Regional data, 150
  - Screen saver, 153
  - Time, 148
  - Time format, 150
  - Transponder ID, 68
- Setting language, 242
- Settings
  - Internet, 137
  - Language, 137
  - Regional, 137
  - Shutdown, 225
    - Safety instruction, 230
  - Side view, 19, 316
  - Siemens HMI input panel options, 136
  - SIMATIC Logon, 266
  - SIMATIC S7, 33
  - Simple alarm view, 278
  - Simple recipe view, 289
    - Menu items, 300
    - Operator control, 299
  - Simple user view, 268
  - Slider control, 257
  - Sm@rtAccess, 32
  - Sm@rtClient view, 264, 265
    - Monitoring mode, 264
    - Usage, 264
  - Sm@rtService, 32
  - SMTP server, 175
  - Software options, 32
  - Sort order
    - Alarm view, 279
  - Special mode
    - Risk evaluation, 46
  - Specifications
    - Supply voltage, 322
    - Weight, 322
  - Standard input unit, 94
  - Standards, 39
  - Start
    - HMI device, 157
  - Status Force, 261
    - Touch operation, 262
  - Stop
    - Safety instruction, 45
  - Subnet Mask, 173
  - Supply voltage, 322
    - Technical data, 320
  - Support
    - In the Internet, 8, 313
  - Switch off
    - HMI device, 92
  - Switch setting
    - Enabling button, 103
  - Switches, 258
  - Switching on
    - Mobile Panel, 91
  - Switch-off behavior
    - Emergency stop, 225
    - Global rampdown, 226
    - In the plant, 225



- Local rampdown, 225
  - Shutdown, 225
  - Trigger, 226
  - Symbolic value
    - Changing, 248
    - Entering, 248
  - Synchronizing
    - Date and time, 149
    - Recipe tag, 291, 296
  - System, 160
  - System alarm
    - Meaning, 334
    - Parameters, 333
  - System functions, 106
  - System information, 137
    - Display, 160
  - System properties, 137
    - Device name, 171
    - General, 160
    - Memory, 161
- T**
- Tabletop power supply unit, 21, 76
    - Connecting, 82
  - Tag
    - Functional scope, 30
  - Task planner
    - Functional scope, 32
  - TCP/IP address, 172
  - Technical data
    - Display, 319
    - Fail-safe operation, 320
    - HMI device, 319
    - Input device, 319
    - Memory, 319
    - Supply voltage, 320
  - Technical Support, 7
  - Temporary files
    - Backup, 151
  - Test
    - For ambient conditions, 52
  - Test voltages, 56
  - Testing
    - Mobile Panel, 91
  - Text box, 243
  - Text list
    - Functional scope, 30
  - Time, 136
    - Entering, 248
    - Setting, 148
    - Synchronizing, 149
  - Time format, 137, 150
  - Time zone
    - Setting, 148
  - Time-dependent reactions, 149
  - Touch operation
    - Trend view, 261
  - Touch screen
    - Calibrating, 137, 145
    - Safety instruction, 94
  - Training Center, 7
  - Transfer, 189, 191, 192
    - Automatic, 194
    - Cancel, 91
    - Manual, 193
  - Transfer settings, 137, 163
  - Transfer Settings
    - Channel, 163
    - Directories, 166
  - Transferring
    - License key, 191, 221
    - Project, 191
    - Recipe data record, 298, 305
  - Transferring back
    - License key, 191, 222
  - Transponder, 21
    - Acceptance, 199
    - Detect, 61
    - Inserting the battery, 68
    - Installation, 69
    - Main dimensions, 318
    - Rotary coding switch, 66
    - Rules, 60
    - Rules, 60
  - Transponder ID
    - Setting, 68
  - Transport conditions, 50
  - Transport damage, 65
  - Trend view, 259
    - Key control, 261
    - Touch operation, 261
  - Trends
    - Functional scope, 32
    - Limit violation, 259
  - TÜV, 39
- U**
- UL approval, 37
  - Unattended in effective range
    - Application case, 224, 230, 237
  - Unintentional action, 240, 241
  - Updating

- About ProSave, 211
  - Operating system, 208
  - Using WinCC flexible, 210
- Updating the operating system, 191
- Usage
  - Conditions, 51
  - Geographical, 43
  - In industry, 43
  - In residential areas, 43
  - With additional measures, 51
- USB
  - Connection sequence, 78
- USB connection sequence
  - Safety instruction, 78
- USB device
  - Connecting, 81
- USB FlashDrive, 21
- USB interface
  - Block during main battery change, 81
  - Rated load, 81
- USB socket, 76
  - Pin assignment, 323
- USB stick, 21
- User data
  - Backup, 267
  - Changing, 273
  - Restoring, 267
- User group, 267
- User manual, 4
- User name, 174
- User view, 268
  - Extended, 269
  - Simple, 268
- Users, 267
  - Admin, 273, 274
  - Creating, touch operation, 271
  - Delete, 274
  - Logoff, 271
  - Logon, 269
  - PLC\_User, 273, 274

## V

- Value table
  - Trend view, 260
- VBScript
  - Functional scope, 32
- Vibration alarm, 137
  - Activate, 162
- Voltage supply, 41

- Charging station, 41
- Tabletop power supply unit, 42

## W

- Weight, 322
- WinCC flexible internet settings, 137
  - E-mail, 175
- Windows CE taskbar, 125
  - Password protection, 127
- WINS, 173
  - Server, 170
- Wireless approval, 38
- WLAN
  - Authentication, 133
  - Encryption, 133
  - Interface, 324
  - Network key, 133
  - Password, 133
- WLAN connection
  - Logbook, 134
- WLAN network
  - Connect, 133
- WLAN networks
  - Connection sequence, 134
  - Creating new, 133
  - Display available, 132
  - Parameter assignment, 133
- WLAN quality, 251
  - Application, 251
  - Operation, 251
- WLAN range, 27

## Z

- Zone
  - Calculating quality, 255
  - Detect, 61
- Zone name, 254
  - Layout, 254
  - Operation, 254
- Zone quality, 254
  - Application, 254
  - Layout, 254
  - Operation, 255
- Zones
  - Rules, 59
  - Testing, 202

## SIMATIC HMI

### Mobile Panel 277 IWLAN, Mobile Panel 277F IWLAN

#### Produktinformation

#### Gültigkeit

Diese Produktinformation gilt für folgende Bediengeräte:

- Mobile Panel 277 IWLAN

Bestellnummern:

- 6AV6 645-0DD01-0AX0
- 6AV6 645-0DE01-0AX0
- 6AV6 645-0FD01-0AX0
- 6AV6 645-0FE01-0AX0



- Mobile Panel 277F IWLAN

Bestellnummern:

- 6AV6 645-0DB01-0AX0
- 6AV6 645-0DC01-0AX0
- 6AV6 645-0GB01-0AX0
- 6AV6 645-0GC01-0AX0



Diese Produktinformation enthält wichtige Hinweise. Diese Hinweise ergänzen die Betriebsanleitung für das Bediengerät und sind den Aussagen in der Betriebsanleitung, in den Release Notes und in der Online-Hilfe in der Verbindlichkeit übergeordnet.

Beachten Sie insbesondere Zulassungen und Zertifikate.

---

#### Hinweis

Für das Bediengerät gelten nur die Zulassungen, die auf der Geräterückseite angegeben sind.

---



# Sicherheitshinweise für Mobile Panel 277 IWLAN und Mobile Panel 277F IWLAN

## Powermanagement

### ACHTUNG

#### Meldungen im Energiesparmodus unsichtbar

Im Energiesparmodus wird das Display des Bediengeräts je nach Einstellung abgedunkelt ("Power Save 1") oder ausgeschaltet ("Power Save 2"). Wenn Meldungen auftreten, während der Energiesparmodus aktiv ist, dann bleibt die Anzeige abgedunkelt oder ausgeschaltet. In diesem Fall sind Meldungen nur schwer oder nicht erkennbar.

### Hinweis

Wenn Sie das Bediengerät mit externer Stromversorgung betreiben, dann wird nach zwei Minuten ohne Bedienung automatisch der Energiesparmodus "Power Save 1" aktiviert. Das Display wird abgedunkelt.

### Hinweis

Wenn Sie eine externe USB-Tastatur an das Bediengerät angeschlossen haben, dann bleibt die externe USB-Tastatur im Energiesparmodus "Power Save 2" aktiv.

## Betriebssystem aktualisieren über ProSave

### ACHTUNG

#### Betriebssystem aktualisieren nur über Ethernet und USB

Das Aktualisieren des Betriebssystems über ProSave ist nur über Ethernet und USB freigegeben.  
Verwenden Sie ProSave, Version 7.4.2 oder höher.

## Projektierung

### ACHTUNG

#### Passende Projektierungs-Software erforderlich

Verwenden Sie zur Projektierung des Bediengeräts die Software "WinCC flexible 2008 SP1".

Die Bediengeräte mit folgenden Bestellnummern können bei Verwendung der Software "HSP Mobile Panel 277 Wireless V1.1" auch mit WinCC flexible 2007 projektiert werden:

- 6AV6 645 0DD01 0AX0
- 6AV6 645 0DE01 0AX0
- 6AV6 645-0DB01-0AX0
- 6AV6 645-0DC01-0AX0

## Überbrückungsbatterie

### Hinweis

Das Bediengerät wird in der ersten Lieferstufe ohne Überbrückungsbatterie geliefert.

Um die Hauptbatterie zu wechseln, beenden Sie das laufende Projekt und schalten Sie das Bediengerät aus.

## Umgebungstemperatur

Das Bediengerät ist für den Betrieb bei einer Umgebungstemperatur von 0 °C bis 40 °C ausgelegt.

---

### Hinweis

#### Laden der Batterien

Befindet sich das Bediengerät im produktiven Betrieb, dann werden beide Batterien in der Ladestation bis zu einer Umgebungstemperatur von 40 °C vollständig geladen.

Ist das Bediengerät eingeschaltet und in der Ladestation eingehängt, dann gilt:

- Die Ladung der Batterien im Bediengerät bleibt bis zu einer Umgebungstemperatur von 40 °C erhalten.
  - Die Batterien in der Ladestation werden bis zu einer Umgebungstemperatur von 35 °C vollständig geladen.
- 

## LED-Anzeigen

### Hinweis

Sobald sich das Bediengerät in der Ladestation befindet und Ladekontakt hat, blinkt die LED "BAT". Stellen Sie sicher, dass das Bediengerät zum Laden der Batterien korrekt in die Ladestation eingehängt ist.

---

## Spezifikation der USB-Schnittstelle

### Hinweis

Die USB-Schnittstelle darf ausschließlich zur Inbetriebnahme und für Wartungszwecke verwendet werden.

Die Leitungslänge der angeschlossenen USB-Geräte darf maximal 3 m betragen.

---

## Transponderbetrieb – Frequenzbänder

### Hinweis

Beim Transponderbetrieb mit automatischer Zonenerkennung wird das 2,4-GHz-Band exklusiv vom Mobile Panel IWLAN genutzt.

Für den WLAN-Betrieb muss das 5-GHz-Band (IEEE 802.11a) verwendet werden.

Der gleichzeitige Einsatz anderer RFID-Systeme im 2,4-GHz-Band ist nicht möglich (z. B. MOBY U oder MOBY R-Systeme).

---

## Access Point – drahtlose Kommunikation

### Hinweis

Die Kommunikation mit mehr als einem Access Point zur Abdeckung eines größeren WLAN-Bereichs ist nicht unterbrechungsfrei möglich.

Bei drahtloser Ethernet-basierter Kommunikation, z. B. bei PROFINET IO, HTTP, Sm@rtAccess, Sm@rtService und OPC, ist der Endnutzer für die Sicherheit des Datennetzes verantwortlich. Das sichere Funktionieren des Bediengerätes kann nicht unter allen Umständen garantiert werden. Störungen, die von außen auf das Funknetz wirken, können z. B. zu einer Überlastung des Bediengeräts führen.

Die "Storm Threshold"-Funktion beim Siemens Access Point SCALANCE muss aktiviert sein. Diese Aktivierung ist für einen stabilen Anlagenbetrieb auch bei hoher Netzlast notwendig. Für Broadcast-Telegramme ist Folgendes einzustellen:

- Address Threshold: 255
  - Wireless: 255.
- 

## PROFINET IO

### Hinweis

Um die Sicherheit Ihrer Applikation zu verbessern, fragen Sie in Ihrer CPU-Applikation das Lebensbit ab.

---

## Ladestation

Die Ladestation entspricht der Schutzklasse III nach EN 61131-2:2007 und EN 60950-1:2006

# Sicherheitshinweise nur für Mobile Panel 277F IWLAN

## WARNUNG

### **Funktionshandbuch "Fehlersicherer Betrieb des Mobile Panel 277F IWLAN" beachten**

Beachten Sie das Funktionshandbuch "Fehlersicherer Betrieb des Mobile Panel 277F IWLAN" und die darin enthaltenen Sicherheitshinweise, sowie weitere Informationen im Internet unter:

Gesamtdokumentation zum Mobile Panel 277 IWLAN und Mobile Panel 277F IWLAN  
(<http://support.automation.siemens.com/WW/view/de/26268960>)

Das Funktionshandbuch "Fehlersicherer Betrieb des Mobile Panel 277F IWLAN" liegt in den Sprachen deutsch, englisch und japanisch vor.

## Automatischer Transfer

## WARNUNG

### **Automatischen Transfer nicht verwenden**

Der automatische Transfer (Control Panel, Option "Remote Control") darf bei dem Bediengerät nicht verwendet werden. Verwenden Sie den manuellen Transfer.

## Powermanagement

## **ACHTUNG**

### **Bildschirminhalt wird nicht zuverlässig aktualisiert**

In folgender Situation wird der Bildschirminhalt des Bediengeräts nicht zuverlässig aktualisiert.


- Sie verwenden die Software "Hardware Support Package (HSP) Mobile Panel 277 IWLAN und Mobile Panel 277F IWLAN für WinCC flexible 2007" (V1.1)
- Das Bediengerät ist am Wirkbereich angemeldet.
- Folgende Einstellungen für das Powermanagement sind aktiv:
  - Für die Option "Bildschirm ausschalten" ist eine Zeitspanne eingestellt.
  - Die Option "Helligkeit verringern" ist durch den Eintrag "nie" deaktiviert.

Sie haben folgende Möglichkeiten, das beschriebene Verhalten zu vermeiden:

- Möglichkeit 1: Installieren Sie WinCC flexible 2008 SP1.
- Möglichkeit 2: Konfigurieren Sie eine Zeitspanne für die Option "Helligkeit verringern".

# Normen und Zulassungen

Dieser Abschnitt enthält wichtige Informationen zu Normen und Länderzulassungen der Bediengeräte Mobile Panel 277 IWLAN und Mobile Panel 277F IWLAN im Bezug auf das Funksystem.

 <b>VORSICHT</b>
Die folgende Übersicht informiert Sie über die möglichen Zulassungen. Für das Bediengerät gelten nur die Zulassungen, die auf der Geräterückseite angegeben sind.

## CE-Zulassung



Das Bediengerät stimmt in der von Siemens I IA in Verkehr gebrachten Ausführung mit den Vorschriften der folgenden europäischen Richtlinie überein:

### 99/5/EG

Richtlinie des europäischen Parlaments und des Rates zur Angleichung der Rechtsvorschriften der Mitgliedstaaten über Funkanlagen und Telekommunikationsendeinrichtungen und die gegenseitige Anerkennung ihrer Konformität.

Die Konformität mit den grundlegenden Anforderungen der Richtlinie wird nachgewiesen durch die Einhaltung folgender Normen:

EN 60950	Sicherheit von Einrichtungen der Informationstechnik
EN 301489-1	Elektromagnetische Verträglichkeit für Funkeinrichtungen und -dienste
EN 301489-17	Spezifische Bedingungen für Breitband-Datenübertragungssysteme und für Einrichtungen in lokalen Hochleistungs-Funknetzen (HIPERLAN)
EN 300328	Elektromagnetische Verträglichkeit und Funkspektrumangelegenheiten (ERM) - Breitband-Übertragungssysteme - Datenübertragungsgeräte, die im 2,4 GHz-ISM-Band arbeiten und Breitband-Modulationstechniken verwenden
EN 300440-1 EN 300440-2	Elektromagnetische Verträglichkeit und Funkspektrumangelegenheiten (ERM) - Funkanlagen mit geringer Reichweite - Funkgeräte zum Betrieb im Frequenzbereich von 1 GHz bis 40 GHz
EN 301893	Breitband-Funkzugangsnetze (BRAN) - 5-GHz-Hochleistungs-RLAN
EN 50371	Übereinstimmung von elektronischen und elektrischen Geräten kleiner Leistung mit den Basisgrenzwerten für die Sicherheit von Personen in elektromagnetischen Feldern (10 MHz bis 300 GHz)
1999/519/EC	Empfehlung des Rates zur Begrenzung der Exposition der Bevölkerung gegenüber elektromagnetischen Feldern (0 Hz bis 300 GHz)

An das System angeschlossene Geräte müssen die relevanten Sicherheitsbestimmungen erfüllen.

## EG-Konformitätserklärung

Die EG-Konformitätserklärung wird gemäß den obengenannten EG- Richtlinien für die zuständigen Behörden zur Verfügung gehalten bei:

Siemens Aktiengesellschaft  
Bereich Automatisierungstechnik  
I IA AS RD ST  
Postfach 1963  
92209 Amberg  
Deutschland

Diese Erklärung bescheinigt die Übereinstimmung mit den genannten Richtlinien, ist jedoch keine Zusicherung von Eigenschaften.

Sie finden die EG-Konformitätserklärung zum Download im Internet unter:

Gesamtdokumentation zum Mobile Panel 277 IWLAN und Mobile Panel 277F IWLAN  
(<http://support.automation.siemens.com/WW/view/de/26268960>).

Filtern Sie die Beiträge nach Beitragstyp "Zertifikate".

## UL-Zulassung



Underwriters Laboratories Inc. nach

- UL 508 (Industrial Control Equipment)
- CSA C22.2 No. 142 (Process Control Equipment)

Die Zulassung wird nur bei Betrieb mit Batterie oder stationär in der Ladestation erfüllt.



## Approval according to FCC

This device complies with Part 15 of the FCC Rules

Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation.

IEEE802.11b or g operation of this product in the USA is firmware-limited to channels 1 through 11.

---

## Notice

Changes or modifications made to this equipment not expressly approved by SIEMENS may void the FCC authorization to operate this equipment.

---

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

---

## Notice

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator and your body.

---

## **This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.**

Professional Installation Notice:

To comply with FCC Part 15 rules in the United States, the system must be professionally installed to ensure compliance with the Part 15 certification. It is the responsibility of the operator and professional installer to ensure that only certified systems are deployed in the United States. The use of the system in any other combination (such as co-located antennas transmitting the same information) is expressly forbidden.

Within the 5.15-5.25 GHz band, this device is only for indoor use operations to reduce any potential for harmful interference to co-channel MSS operations.

## **RSS-210 of Industry Canada**

"Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation of the device."

"This device has been designed to operate with internal antennas with a maximum gain of 2 dBi and an antenna impedance of 50 Ohms. Other antennas are strictly prohibited for use with this device."

"To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication."

"That the device for the band 5150-5250 MHz is only for indoor usage to reduce potential for harmful interference to co-channel mobile satellite systems."

"Users should also be cautioned to take note that high power radars are allocated as primary users (meaning they have priority) of 5250-5350 MHz and 5650-5850 MHz and these radars could cause interference and/or damage to LE-LAN devices."

## Länderzulassungen



### VORSICHT

Die folgende Übersicht informiert Sie über die Funkzulassungen in verschiedenen Ländern.

Für das Bediengerät gelten nur die Zulassungen, die auf der Geräterückseite angegeben sind.

Land	Kennzeichnung	Zulassung erteilt
Australien		✓
Belgien	CE	✓
Bulgarien	CE	✓
China		
Dänemark	CE	✓
Deutschland	CE	✓
Estland	CE	✓
Finnland	CE	✓
Frankreich	CE	✓
Griechenland	CE	✓
Großbritannien	CE	✓
Hongkong		
Irland	CE	✓
Island	CE	✓
Italien	CE	✓
Japan		✓
Kanada	IC	✓
Kuwait		
Lettland	CE	✓
Liechtenstein	CE	✓
Litauen	CE	✓
Luxemburg	CE	✓
Malaysia		

Land	Kennzeichnung	Zulassung erteilt
Malta	CE	✓
Niederlande	CE	✓
Norwegen	CE	✓
Österreich	CE	✓
Polen	CE	✓
Portugal	CE	✓
Rumänien	CE	✓
Russland		
Schweden	CE	✓
Schweiz	CE	✓
Singapur		
Slowakei	CE	✓
Slowenien	CE	✓
Spanien	CE	✓
Südafrika		✓
Südkorea		
Taiwan		✓
Tschechien	CE	✓
Türkei	CE	✓
Ukraine		
Ungarn	CE	✓
Vereinigte Staaten von Amerika	FC	✓
Zypern	CE	✓

## SIMATIC HMI

### Mobile Panel 277 IWLAN, Mobile Panel 277F IWLAN

#### Product Information

#### Validity

The product information applies to the following HMI devices:

- Mobile Panel 277 IWLAN

Order numbers:

- 6AV6 645-0DD01-0AX0
- 6AV6 645-0DE01-0AX0
- 6AV6 645-0FD01-0AX0
- 6AV6 645-0FE01-0AX0



- Mobile Panel 277F IWLAN

Order numbers:

- 6AV6 645-0DB01-0AX0
- 6AV6 645-0DC01-0AX0
- 6AV6 645-0GB01-0AX0
- 6AV6 645-0GC01-0AX0



This product information contains important information. These notes supplement the operating instructions for the HMI device and take precedence over statements in the operating instructions, the release notes, and in the online help.

Observe the approvals and certificates.

---

#### Note

The HMI device itself is certified as shown on the rear panel labels.

---

# Safety notes on the Mobile Panel 277 IWLAN and Mobile Panel 277F IWLAN

## Power management

### NOTICE

#### Alarms not visible in power-save mode

Depending on the setting, the display of the HMI device will either be dimmed ("Power Save 1") or turned off ("Power Save 2"). The display will stay dimmed or turned off if there are alarms while in power-save mode. It will be difficult or impossible to see any alarms in this case.

### Note

If you operate the HMI device with external power supply, the device will switch to power-save mode "Power Save 1" after two minutes without input. The display will be dimmed.

### Note

If you connect an external USB keyboard to the HMI device, the external USB keyboard in power-save mode "Power Save 2" remains active.

## Updating the operating system using ProSave

### NOTICE

#### Update of operating system via Ethernet and USB only

Update of the operating system with ProSave has been approved via Ethernet and USB only.  
Use ProSave, Version 7.4.2 or higher.

## Configuring

### NOTICE

#### Matching configuration software required

Configure the HMI device only with the software "WinCC flexible 2008 SP1".

You can also configure the HMI devices with the following order numbers and WinCC flexible 2007 using the "HSP Mobile Panel 277 Wireless V1.1" software:

- 6AV6 645 0DD01 0AX0
- 6AV6 645 0DE01 0AX0
- 6AV6 645-0DB01-0AX0
- 6AV6 645-0DC01-0AX0

## Bridging battery

### Note

The HMI device will be supplied in delivery stage 1 without bridging battery.

To replace the main battery, exit the running project and turn off the HMI device.

## Ambient temperature

The HMI device has been designed for use with ambient temperatures ranging from 0°C to +40 °C.

---

### Note

#### Charging the batteries

With the HMI device in productive operation, the batteries will be fully charged in the docking station up to an ambient temperature of 40 °C.

When the HMI device is turned on and resting in the docking station, the following applies:

- Battery charge in the HMI device is retained up to an ambient temperature of 40 °C.
  - The batteries in the docking station will be fully charged up to an ambient temperature of 35 °C.
- 

## LED display

### Note

The "BAT" LED will start flashing as soon as the HMI device is placed in the docking station and charging begins. Make sure that the HMI device is correctly positioned in the docking station for charging of batteries.

---

## Specification of USB interface

### Note

Use the USB interface for commissioning and maintenance only.

The line length of the connected USB devices may not exceed 3 m.

---

## Transponder operation - frequency bands

### Note

For transponder operation with automatic zone detection, the 2.4 GHz band will be used exclusively by the Mobile Panel IWLAN.

WLAN operation requires the 5 GHz band (IEE 802.11a).

It is not possible to operate other RFID systems in the 2.4 GHz band at the same time (z. B. MOBY U or MOBY R systems).

---

## Access Point - wireless communication

### Note

Communication with more than one access point to cover larger WLAN areas is not possible without interruption.

For wireless Ethernet-based communication, for example, with PROFINET IO, HTTP, Sm@rtAccess, Sm@rtService and OPC, the end user is responsible for the security of the data network. The secure operation of the HMI device cannot be guaranteed under all circumstances. Interference from outside the wireless network can cause an overload of the HMI device, for example.

The "Storm Threshold" function in the Siemens Access Point SCALANCE must be selected. This option has to be selected to ensure stable plant operation when the load on the network is high. The following settings have to be made for broadcast message frames:

- Address threshold: 255
  - Wireless: 255.
- 

## PROFINET IO

### Note

To improve the safety of your application, request the life sign bit in your CPU application.

---

## Charging station

The charging station corresponds to safety class III according to EN 61131-2:2007 and EN 60950-1:2006.

# Safety notes for Mobile Panel 277F IWLAN

## WARNING

### **Note the function manual "Fail-safe operation of the Mobile Panel 277F IWLAN"**

Please pay attention to the function manual "Fail-safe operation of the Mobile Panel 277F IWLAN" as well as the warnings and additional information available in the Internet at:

Complete documentation on the Mobile Panel 277 IWLAN and Mobile Panel 277F IWLAN  
(<http://support.automation.siemens.com/WW/view/en/26268960>)

The function manual "Fail-safe operation of the Mobile Panel 277F IWLAN" is available in German, English and Japanese.

## Automatic transfer

## WARNING

### **Do not use automatic transfer**

The automatic transfer (Control Panel, option "Remote Control") for the HMI device must not be used.

Use the manual transfer.

## Power management

## NOTICE

### **Screen contents not updated reliably**

The screen contents of the HMI device are not updated reliably in the following situation.


- You use the "Hardware Support Package (HSP) Mobile Panel 277 IWLAN and Mobile Panel 277F IWLAN for WinCC flexible 2007" (V1.1) software.
- The HMI device is logged onto the effective range.
- The following settings are active for the power management:
  - A time period has been set for the "Switch off screen" option.
  - The "Reduce brightness" option has been disabled with the entry "never".

You have the following options to prevent this type of behavior:

- Option 1: Install WinCC flexible 2008 SP1.
- Option 2: Configure a time period for the "Reduce brightness" option.

## Standards and approvals

This paragraph includes important information on standards and country-specific approvals for the Mobile Panel 277 IWLAN and Mobile Panel 277F IWLAN HMI devices regarding the radio system.

 <b>CAUTION</b>
The following overview shows the approvals that may be available. The HMI device itself is certified as shown on the rear panel labels.

### CE approval



The HMI device in the version put into circulation by Siemens I IA conforms to the regulations of the following European directive:

#### 99/5/EC

Directive of the European Parliament and of the Council relating to Radio Equipment and Telecommunications Terminal Equipment and the Mutual Recognition of their Conformity.

Compatibility with the basic requirements of the guideline is verified by compliance with the following standards:

EN 60950	Safety of Information Technology Equipment
EN 301489-1	Electromagnetic Compatibility for Radio Equipment and Services
EN 301489-17	Specific requirements for broadband data transmission systems and for equipment in local high-performance radio networks (HIPERLAN)
EN 300328	Electromagnetic compatibility and Radio spectrum Matters (ERM) - Wideband transmission systems - Data transmission equipment operating in the 2.4 GHz ISM band and using wide band modulation techniques
EN 300440-1 EN 300440-2	Electromagnetic compatibility and Radio spectrum Matters (ERM) - Short range devices - Radio equipment to be used in the 1 GHz to 40 GHz frequency range.
EN 301893	Broadband radio access networks (BRAN) – 5 GHz high-performance RLAN
EN 50371	Compliance of low power electronic and electrical apparatus with the basic restrictions related to human exposure to electromagnetic fields (10 MHz to 300 GHz)
1999/519/EC	Council recommendation on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz)

Devices connected to the system must meet the relevant safety regulations.

## EC Declaration of Conformity

The EC Declaration of Conformity is available for the responsible authorities according to the above-mentioned EC Directive at the following address:

Siemens AG  
Industry Sector  
I IA AS RD ST  
PO Box 1963  
92209 Amberg  
Germany

This declaration certifies compliance with the directives named above, but does not guarantee any specific properties.

To download information on the EC Declaration of Conformity, go to:

Complete documentation on the Mobile Panel 277 IWLAN and Mobile Panel 277F IWLAN  
(<http://support.automation.siemens.com/WW/view/en/26268960>).

Filter the comments for the entry type "Certificates".

## UL approval



Underwriters Laboratories Inc., to

- UL 508 (Industrial Control Equipment)
- CSA C22.2 No. 142 (Process Control Equipment)

The approval is only valid in the case of battery operation or when stationary in the charging station.



## Approval according to FCC

This device complies with Part 15 of the FCC Rules

Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation.

IEEE802.11b or g operation of this product in the USA is firmware-limited to channels 1 through 11.

---

## Notice

Changes or modifications made to this equipment not expressly approved by SIEMENS may void the FCC authorization to operate this equipment.

---

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

---

## Notice

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator and your body.

---

## **This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.**

Professional Installation Notice:

To comply with FCC Part 15 rules in the United States, the system must be professionally installed to ensure compliance with the Part 15 certification. It is the responsibility of the operator and professional installer to ensure that only certified systems are deployed in the United States. The use of the system in any other combination (such as co-located antennas transmitting the same information) is expressly forbidden.

Within the 5.15-5.25 GHz band, this device is only for indoor use operations to reduce any potential for harmful interference to co-channel MSS operations.

## **RSS-210 of Industry Canada**

"Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation of the device."

"This device has been designed to operate with internal antennas with a maximum gain of 2 dBi and an antenna impedance of 50 Ohms. Other antennas are strictly prohibited for use with this device."

"To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication."

"That the device for the band 5150-5250 MHz is only for indoor usage to reduce potential for harmful interference to co-channel mobile satellite systems."








"Users should also be cautioned to take note that high power radars are allocated as primary users (meaning they have priority) of 5250-5350 MHz and 5650-5850 MHz and these radars could cause interference and/or damage to LE-LAN devices."

## National approvals

### CAUTION

The following overview shows wireless approvals in a number of different countries.  
The HMI device itself is certified as shown on the rear panel labels.

Country	Identification	Approval granted
Australia		✓
Belgium	CE 	✓
Bulgaria	CE 	✓
China		
Denmark	CE 	✓
Germany	CE 	✓
Estonia	CE 	✓
Finland	CE 	✓
France	CE 	✓
Greece	CE 	✓
Great Britain	CE 	✓
Hong Kong		
Ireland	CE 	✓
Iceland	CE 	✓
Italy	CE 	✓
Japan		✓
Canada	IC	✓
Kuwait		
Latvia	CE 	✓
Liechtenstein	CE 	✓
Lithuania	CE 	✓
Luxembourg	CE 	✓
Malaysia		

Country	Identification	Approval granted
Malta	CE 	✓
The Netherlands	CE 	✓
Norway	CE 	✓
Austria	CE 	✓
Poland	CE 	✓
Portugal	CE 	✓
Romania	CE 	✓
Russia		
Sweden	CE 	✓
Switzerland	CE 	✓
Singapore		
Slovakia	CE 	✓
Slovenia	CE 	✓
Spain	CE 	✓
South Africa		✓
South Korea		
Taiwan		✓
Czech Republic	CE 	✓
Turkey	CE 	✓
Ukraine		
Hungary	CE 	✓
United States of America		✓
Cyprus	CE 	✓

## SIMATIC HMI

### Mobile Panel 277 IWLAN, Mobile Panel 277F IWLAN

Information produit

#### Validité

Cette information produit est valable pour les pupitres opérateur suivants :

- Mobile Panel 277 IWLAN

Numéros de référence :

- 6AV6 645-0DD01-0AX0
- 6AV6 645-0DE01-0AX0
- 6AV6 645-0FD01-0AX0
- 6AV6 645-0FE01-0AX0



- Mobile Panel 277F IWLAN

Numéros de référence :

- 6AV6 645-0DB01-0AX0
- 6AV6 645-0DC01-0AX0
- 6AV6 645-0GB01-0AX0
- 6AV6 645-0GC01-0AX0



Cette information produit contient des indications importantes. Ces informations complètent les instructions de service du pupitre opérateur et, en cas de conflit avec les indications contenues dans les instructions de service, des Release Notes et de l'aide en ligne, c'est à elles que vous devez vous reporter.

Veillez tenir compte des autorisations et des certificats.

---

#### Remarque

Les homologations valables pour le pupitre sont uniquement celles indiquées au dos de l'appareil.

---

# Consignes de sécurité pour le Mobile Panel 277 IWLAN et le Mobile Panel 277F IWLAN

## Gestion de l'alimentation

### IMPORTANT

#### Alarmes invisibles en mode d'économie d'énergie

En mode d'économie d'énergie, l'écran du pupitre opérateur est sombre ("Power Save 1") ou éteint ("Power Save 2") selon le paramétrage. Quand des alarmes se présentent alors que le mode d'économie d'énergie est actif, l'écran reste sombre ou éteint. Dans ce cas, les alarmes sont difficilement ou pas du tout reconnaissables.

### Remarque

Quand vous utilisez le pupitre opérateur avec une alimentation externe, le mode d'économie d'énergie "Power Save 1" s'active automatiquement au bout de deux minutes sans intervention de l'opérateur. L'écran est sombre.

### Remarque

Quand vous avez connecté un clavier USB externe au pupitre opérateur, il reste actif en mode d'économie d'énergie "Power Save 2".

## Mise à jour du système d'exploitation via ProSave

### IMPORTANT

#### Mise à jour du système d'exploitation uniquement via Ethernet et USB

La mise à jour du système d'exploitation via ProSave n'est validée que via Ethernet et USB.

Utilisez ProSave, Version 7.4.2 ou une version ultérieure.

## Configuration

### IMPORTANT

#### Logiciel de configuration approprié requis

Utilisez pour la configuration du pupitre opérateur le logiciel "WinCC flexible 2008 SP1".

Les pupitres opérateurs avec les numéros de référence suivants peuvent être aussi configurés avec WinCC flexible 2007 si le logiciel "HSP Mobile Panel 277 Wireless V1.1" est utilisé :

- 6AV6 645 0DD01 0AX0
- 6AV6 645 0DE01 0AX0
- 6AV6 645-0DB01-0AX0
- 6AV6 645-0DC01-0AX0

## Pile de sauvegarde

### Remarque

Le pupitre opérateur est livré sans pile de sauvegarde à la première version.

Pour remplacer la pile principale, quittez le projet en cours et mettez le pupitre opérateur hors tension.

## Température ambiante

Le pupitre opérateur est conçu pour une utilisation à des températures ambiantes de 0 °C à 40 °C.

---

### Remarque

#### Charge des batteries

Si le pupitre opérateur est en mode de production, les deux batteries sont entièrement chargées dans le chargeur jusqu'à une température ambiante de 40 °C.

Si le pupitre opérateur est en marche et accroché dans le chargeur

- La charge des batteries dans le pupitre opérateur est conservée jusqu'à une température ambiante de 40 °C.
  - Les batteries dans le chargeur sont entièrement chargées jusqu'à une température de 35 °C.
- 

## DEL de signalisation

### Remarque

La DEL "BAT" clignote dès que le pupitre opérateur est dans le chargeur et que le contact de charge est établi. Assurez-vous que le pupitre est accroché correctement dans le chargeur pour la charge des batteries.

---

## Spécification de l'interface USB

### Remarque

L'interface USB ne peut être utilisée que pour la mise en service et à des fins de maintenance.

La longueur de câble maximale des appareils USB connectés est de 3 m.

---

## Mode transpondeur – bandes de fréquence

### Remarque

En mode transpondeur avec détection automatique de zone, la bande 2,4 GHz est utilisée exclusivement par le Mobile Panel IWLAN.

Pour le mode WLAN, il faut utiliser la bande 5 GHz (IEEE 802.11a).

L'utilisation simultanée d'autres systèmes RFID dans la bande 2,4 GHz n'est pas possible (par ex. des systèmes MOBY U ou MOBY R).

---

## Point d'accès – communication sans fil

### Remarque

La communication avec plus d'un point d'accès afin de couvrir une zone WLAN plus importante n'est pas possible sans interruption.

En cas de communication sans fil basée sur Ethernet, par ex. avec PROFINET IO, HTTP, Sm@rtAccess, Sm@rtService et OPC, c'est l'utilisateur final qui est responsable de la sécurité du réseau de données. Le fonctionnement sûr du pupitre opérateur ne peut pas être garanti dans tous les cas. Les parasites qui agissent de l'extérieur sur le réseau radio, par exemple, peuvent provoquer une surcharge du pupitre opérateur.

La fonction "Storm Threshold" doit être activée pour le point d'accès Siemens SCALANCE. Cette activation est nécessaire pour que le fonctionnement de l'installation soit stable même quand la charge du réseau est élevée. Pour les télégrammes Broadcast, il faut effectuer le paramétrage suivant :

- Address Threshold : 255
  - Wireless : 255.
- 

## PROFINET IO

### Remarque

Afin d'améliorer la sécurité de votre application, interrogez le bit de vie dans votre application CPU.

---

## Chargeur

Le chargeur correspond à la classe de protection III selon EN 61131-2:2007 et EN 60950-1:2006.

# Consignes de sécurité exclusivement pour le Mobile Panel 277F IWLAN

## ATTENTION

**Tenez compte de la description fonctionnelle "Fail-safe operation of the Mobile Panel 277F IWLAN" (Fonctionnement de sécurité du Mobile Panel 277F IWLAN)**

Veillez tenir compte de la description fonctionnelle "Fail-safe operation of the Mobile Panel 277F IWLAN" et des consignes de sécurité qui y sont contenues ainsi que des informations complémentaires sur Internet :

Documentation complète du Mobile Panel 277 IWLAN et Mobile Panel 277F IWLAN  
(<http://support.automation.siemens.com/WWW/view/fr/26268960>)

La description fonctionnelle du fonctionnement de sécurité du Mobile Panel 277F IWLAN existe en allemand, en anglais et en japonais.

## Transfert automatique

## ATTENTION

**Ne pas utiliser le transfert automatique**

Il n'est pas permis d'utiliser le transfert automatique (Control Panel, option "Remote Control") pour le pupitre opérateur.

Utilisez le transfert manuel.

## Gestion de l'alimentation

## IMPORTANT

**Le contenu de l'écran n'est pas actualisé de manière fiable**

Dans la situation suivante, le contenu de l'écran n'est pas actualisé de manière fiable.


- Vous utilisez le logiciel ""Hardware Support Package (HSP) Mobile Panel 277 IWLAN et Mobile Panel 277F IWLAN für WinCC flexible 2007" (V1.1).
- L'opérateur s'est connecté dans la plage d'action.
- Les options suivantes du Power Management sont activées :
  - Une durée a été réglée pour l'option "Eteindre l'écran".
  - L'option "Réduire la luminosité" est désactivée via l'entrée "Jamais".

Vous avez différentes possibilités pour éviter le comportement suivant :

- Possibilité 1 : Installez WinCC flexible 2008 SP1.
- Possibilité 2 : Configurez une durée pour l'option "Réduire la luminosité".

# Normes et homologations

Ce paragraphe contient des informations importantes sur les normes et homologations relatives au système radio pour les pupitres opérateur Mobile Panel 277 IWLAN et Mobile Panel 277F IWLAN.

 <b>PRUDENCE</b>
La vue d'ensemble suivante vous informe sur les homologations possibles. Les homologations valables pour le pupitre sont uniquement celles indiquées au dos de l'appareil.

## Homologation CE



Le pupitre opérateur dans la version mise en circulation par Siemens I IA est conforme aux normes de la directive européenne suivante :

### 99/5/EG

Directive du Parlement et du Conseil Européen pour l'harmonisation des directives sur les installations radioélectriques et les terminaux de télécommunications des pays membres et la reconnaissance mutuelle de leur conformité.

La conformité aux exigences fondamentales de la directive est assurée par le respect des normes suivantes :

EN 60950	Sécurité des matériels de traitement de l'information
EN 301489-1	Norme de compatibilité électromagnétique pour les équipements et les services radio
EN 301489-17	Exigences particulières pour les systèmes de transmission de données à large bande et équipements HIPERLAN
EN 300328	Télécommunications, CEM et spectre radioélectrique (ERM) - Systèmes de transmission de données large bande - Equipements de transmission de données fonctionnant dans la bande ISM à 2,4 GHz et utilisant des techniques de modulation à étalement de spectre
EN 300440-1 EN 300440-2	Télécommunications, CEM et spectre radioélectrique (ERM) - Appareils à faible portée (SDR) - Equipements radioélectriques utilisés dans les bandes de fréquences 1 à 40 GHz
EN 301893	Télécommunications. Réseaux d'accès radio large bande (BRAN). HIPERLAN de type 2
EN 50371	Norme générique pour démontrer la conformité des appareils électriques et électroniques de faible puissance aux restrictions de base concernant l'exposition des personnes aux champs électromagnétiques (10 MHz - 300 GHz)
1999/519/CE	Recommandation du Conseil visant à limiter l'exposition de la population aux champs électromagnétiques ((0 Hz à 300 GHz)

Les appareils connectés au système doivent satisfaire aux consignes de sécurité afférentes.

## Déclaration de conformité CE

La déclaration de conformité CE est tenue à la disposition des autorités compétentes, conformément aux directives CE susmentionnées, par :

Siemens Aktiengesellschaft  
Industry Sector  
I IA AS RD ST  
Postfach 1963  
92209 Amberg  
Allemagne

Cette déclaration atteste la conformité aux directives mentionnées, mais ne tient pas lieu de garantie de propriétés.

Vous trouverez la déclaration de conformité CE sur Internet à l'adresse :

Documentation complète du Mobile Panel 277 IWLAN et Mobile Panel 277F IWLAN  
(<http://support.automation.siemens.com/WW/view/fr/26268960>).

Filtrez les contributions en recherchant le type de contribution "Certificats".

## Homologation UL,



Underwriters Laboratories Inc. selon

- UL 508 (Industrial Control Equipment)
- CSA C22.2 No. 142 (Process Control Equipment)

L'homologation n'est satisfaite qu'en cas de fonctionnement sur pile ou stationnaire dans le chargeur.



## Approval according to FCC

This device complies with Part 15 of the FCC Rules

Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation.

IEEE802.11b or g operation of this product in the USA is firmware-limited to channels 1 through 11.

---

## Notice

Changes or modifications made to this equipment not expressly approved by SIEMENS may void the FCC authorization to operate this equipment.

---

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

---

## Notice

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator and your body.

---

## This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Professional Installation Notice:

To comply with FCC Part 15 rules in the United States, the system must be professionally installed to ensure compliance with the Part 15 certification. It is the responsibility of the operator and professional installer to ensure that only certified systems are deployed in the United States. The use of the system in any other combination (such as co-located antennas transmitting the same information) is expressly forbidden.

Within the 5.15-5.25 GHz band, this device is only for indoor use operations to reduce any potential for harmful interference to co-channel MSS operations.

## RSS-210 of Industry Canada

"Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation of the device."

"This device has been designed to operate with internal antennas with a maximum gain of 2 dBi and an antenna impedance of 50 Ohms. Other antennas are strictly prohibited for use with this device."

"To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication."

"That the device for the band 5150-5250 MHz is only for indoor usage to reduce potential for harmful interference to co-channel mobile satellite systems."

"Users should also be cautioned to take note that high power radars are allocated as primary users (meaning they have priority) of 5250-5350 MHz and 5650-5850 MHz and these radars could cause interference and/or damage to LE-LAN devices."

## Homologations nationales



### PRUDENCE

La vue d'ensemble suivante vous informe sur les homologations radio possibles dans les différents pays.

Les homologations valables pour le pupitre sont uniquement celles indiquées au dos de l'appareil.

Pays	Marquage	Homologation accordée
Australie		✓
Belgique	CE	✓
Bulgarie	CE	✓
Chine		
Danemark	CE	✓
Allemagne	CE	✓
Estonie	CE	✓
Finlande	CE	✓
France	CE	✓
Grèce	CE	✓
Grande-Bretagne	CE	✓
Hong Kong		
Irlande	CE	✓
Islande	CE	✓
Italie	CE	✓
Japon		✓
Canada	IC	✓
Koweït		
Lettonie	CE	✓
Liechtenstein	CE	✓
Lithuanie	CE	✓
Luxembourg	CE	✓
Malaisie		

Pays	Marquage	Homologation accordée
Malte	CE	✓
Pays-Bas	CE	✓
Norvège	CE	✓
Autriche	CE	✓
Pologne	CE	✓
Portugal	CE	✓
Roumanie	CE	✓
Russie		
Suède	CE	✓
Suisse	CE	✓
Singapour		
Slovaquie	CE	✓
Slovénie	CE	✓
Espagne	CE	✓
Afrique du Sud		✓
Corée du Sud		
Taiwan		✓
République tchèque	CE	✓
Turquie	CE	✓
Ukraine		
Hongrie	CE	✓
Etats-Unis d'Amérique	FC	✓
Chypre	CE	✓

## SIMATIC HMI

### Mobile Panel 277 IWLAN, Mobile Panel 277F IWLAN

Informazioni sul prodotto

#### Validità

Le presenti informazioni sul prodotto sono applicabili ai seguenti pannelli operatore:

- Mobile Panel 277 IWLAN

Numeri di ordinazione:

- 6AV6 645-0DD01-0AX0
- 6AV6 645-0DE01-0AX0
- 6AV6 645-0FD01-0AX0
- 6AV6 645-0FE01-0AX0



- Mobile Panel 277F IWLAN

Numeri di ordinazione:

- 6AV6 645-0DB01-0AX0
- 6AV6 645-0DC01-0AX0
- 6AV6 645-0GB01-0AX0
- 6AV6 645-0GC01-0AX0



Le presenti informazioni sul prodotto contengono avvertenze importanti. Tali avvertenze sono parte integrante delle istruzioni operative del pannello operatore e sono da considerarsi prioritarie rispetto a quanto affermato nelle Istruzioni operative, nelle Release Notes e nella Guida in linea.

In particolare è importante tener conto delle omologazioni e dei certificati.

---

#### Nota

Per un dato pannello operatore sono valide solo le omologazioni indicate sul retro dell'apparecchiatura.

---

# Avvertenze di sicurezza per il Mobile Panel 277 IWLAN e il Mobile Panel 277F IWLAN

## Power Management

### ATTENZIONE

#### Segnalazioni non visualizzate nella modalità a risparmio energetico

Nella modalità a risparmio energetico il display del pannello operatore viene oscurato ("Power Save 1") o disattivato ("Power Save 2") a seconda dell'impostazione. Quando la modalità a risparmio energetico è attiva, la visualizzazione rimane oscurata o disattivata anche in presenza di eventuali segnalazioni. In questo caso è quindi difficile o impossibile riconoscere le segnalazioni.

### Nota

Se si collega il pannello operatore a una fonte di alimentazione esterna, dopo due minuti di inattività viene impostata automaticamente la modalità a risparmio energetico "Power Save 1". Il display viene oscurato.

### Nota

Se si è collegata al pannello operatore una tastiera USB, questa rimane attiva anche nella modalità a risparmio energetico "Power Save 2".

## Aggiornamento del sistema operativo mediante ProSave

### ATTENZIONE

#### Aggiornamento del sistema operativo solo mediante Ethernet e USB

L'aggiornamento del sistema operativo mediante ProSave è abilitato solo mediante Ethernet e USB. Utilizzare ProSave, versione 7.4.2 o superiore.

## Progettazione

### ATTENZIONE

#### Utilizzo del software di progettazione adatto

Per la progettazione del pannello operatore utilizzare esclusivamente il software "WinCC flexible 2008 SP1".

Se si usa il software "HSP Mobile Panel 277 Wireless V1.1", i pannelli operatore con i seguenti numeri di ordinazione possono essere progettati anche con WinCC flexible 2007:

- 6AV6 645 0DD01 0AX0
- 6AV6 645 0DE01 0AX0
- 6AV6 645-0DB01-0AX0
- 6AV6 645-0DC01-0AX0

## Batteria tampone

### Nota

Il primo livello di fornitura del pannello operatore non contiene la batteria tampone.

Per cambiare la batteria tampone terminare il progetto in corso e spegnere il pannello operatore.

## Temperatura ambiente

Il pannello operatore è adatto al funzionamento con temperatura ambiente di 0 °C ... 40 °C.

---

### Nota

#### Caricamento delle batterie

Se il pannello operatore si trova in esercizio produttivo, entrambe le batterie vengono completamente caricate nella stazione di carica fino a una temperatura ambiente di 40 °C.

Se il pannello operatore è attivato e appeso nella stazione di carica vale quanto segue:

- Il caricamento delle batterie nel pannello operatore viene mantenuto fino a una temperatura ambiente di 40 °C.
  - Le batterie nella stazione di carica vengono caricate completamente fino a una temperatura ambiente di 35 °C.
- 

## LED

### Nota

Non appena il pannello operatore si trova nella stazione di carica e ha contatto di carica, il LED "BAT lampeggia. Per il caricamento delle batterie assicurarsi che il pannello operatore sia correttamente appeso nella stazione di carica.

---

## Specifiche dell'interfaccia USB

### Nota

L'interfaccia USB deve essere utilizzata esclusivamente per la messa in funzione e a scopo di manutenzione.

La lunghezza dei conduttori dei pannelli operatore USB collegati non deve superare i 3 m.

---

## Bande di frequenza nel funzionamento con trasponder

### Nota

Nel funzionamento con transponder con riconoscimento automatico delle zone, la banda a 2,4 GHz viene utilizzata esclusivamente dal Mobile Panel IWLAN.

Per il funzionamento WLAN deve essere utilizzata la banda a 5 GHz (IEEE 802.11a).

L'utilizzo simultaneo di altri sistemi RFID nella banda a 2,4 GHz non è possibile (ad es. sistemi MOBY U o MOBY R).

---

## Comunicazione wireless mediante access point

### Nota

La comunicazione con più di un access point per la copertura di un campo WLAN più grande non è possibile senza creare interruzioni.

Nella comunicazione wireless basata su Ethernet, come PROFINET IO, HTTP, Sm@rtAccess, Sm@rtService e OPC, l'utente finale è responsabile per la sicurezza della rete di dati. Non è possibile garantire che il pannello operatore funzionerà sempre in modo sicuro. I disturbi esterni che hanno effetto sulla rete radiofonica possono ad es. determinare un sovraccarico del pannello operatore.

La funzione "Storm Threshold" nell'Access Point SCALANCE di Siemens deve essere attivata. Questa attivazione è necessaria affinché l'impianto funzioni in modo stabile anche in caso di un elevato carico della rete. Per i telegrammi broadcast devono essere effettuate le seguenti impostazioni:

- Address Threshold: 255
  - Wireless: 255.
- 

## PROFINET IO

### Nota

Per migliorare la sicurezza dell'applicazione, interrogare il bit di attività nell'applicazione della CPU.

---

## Stazione di carica

La stazione di carica corrisponde al grado di protezione III secondo EN 61131-2:2007 e EN 60950-1:2006.

## Avvertenza di sicurezza per il Mobile Panel 277F IWLAN

### AVVERTENZA

#### Attenersi al manuale di guida alle funzioni "Fail-safe operation of the Mobile Panel 277F IWLAN"

Attenersi a quanto indicato nel manuale di guida alle funzioni "Fail-safe operation of the Mobile Panel 277F IWLAN", alle avvertenze di sicurezza che vi sono riportate e alle informazioni disponibile nella pagina Internet:

Documentazione sul Mobile Panel 277 IWLAN e il Mobile Panel 277F IWLAN

(<http://support.automation.siemens.com/WW/view/it/26268960>)

Il manuale di guida alle funzioni "Fail-safe operation of the Mobile Panel 277F IWLAN" è disponibile in tedesco, inglese e giapponese.

### Trasferimento automatico

### AVVERTENZA

#### Non utilizzare il trasferimento automatico

Il trasferimento automatico (Control Panel, opzione "Remote Control") non deve essere utilizzato con il pannello operatore.

Utilizzare il trasferimento manuale.

### Power Management

### ATTENZIONE

#### Il contenuto dello schermo non viene aggiornato in modo affidabile

Nella seguente situazione il contenuto dello schermo non viene aggiornato in modo affidabile.

- Si utilizza il software "Hardware Support Package (HSP) Mobile Panel 277 IWLAN e Mobile Panel 277F IWLAN per WinCC flexible 2007" (V1.1)
- Il pannello operatore è connesso al campo d'azione.
- Sono state attivate le seguenti impostazione per il Power Management:
  - È stato impostato un intervallo di tempo per l'opzione "Spegni schermo".
  - L'opzione "Diminuisci luminosità" è stata disattivata selezionando "mai".

Il comportamento descritto può essere evitato nei seguenti modi:

- Opzione 1: installare WinCC flexible 2008 SP1.
- Opzione 2: configurare un intervallo per l'opzione "Diminuisci luminosità".

## Norme e omologazioni

Il presente paragrafo riporta informazioni importanti sulle norme e le omologazioni relative al sistema radio in vigore nei diversi paesi per i pannelli operatore Mobile Panel 277 IWLAN e Mobile Panel 277F IWLAN.

### CAUTELE

Il seguente elenco riporta le omologazioni possibili.

Per un dato pannello operatore sono valide solo le omologazioni indicate sul retro dell'apparecchiatura.

## Omologazione CE



Il pannello operatore, nella versione commercializzata da Siemens I IA, è conforme alle prescrizioni stabilite dalle seguenti direttive europee:

### 99/5/CE

Direttiva del Parlamento europeo e del Consiglio riguardante le apparecchiature radio e le apparecchiature terminali di telecomunicazione e il reciproco riconoscimento della loro conformità.

La conformità ai requisiti fondamentali della direttiva è assicurata dal rispetto delle seguenti norme:

EN 60950	Apparecchiature per la tecnologia dell'informazione - Sicurezza
EN 301489-1	Compatibilità elettromagnetica per dispositivi radio e relativi servizi
EN 301489-17	Condizioni specifiche per sistemi di trasmissione dati a banda larga e per dispositivi in reti radio locali di grande potenza (HIPERLAN)
EN 300328	Compatibilità elettromagnetica e questioni relative allo spettro delle radiofrequenze (ERM) - Sistemi di trasmissione a banda larga - Apparecchiature di trasmissione dati che operano nella banda da 2,4 GHz ISM e che utilizzano tecniche di modulazione ad ampio spettro
EN 300440-1 EN 300440-2	Compatibilità elettromagnetica e questioni relative allo spettro delle radiofrequenze (ERM) - Dispositivi a breve portata - Apparecchiature radio da utilizzare nella gamma di frequenza da 1 GHz a 40 GHz
EN 301893	Reti di accesso radio a banda larga (BRAN) - 5GHz RLAN ad alte prestazioni
EN 50371	Conformità degli apparecchi elettronici ed elettrici di bassa potenza ai limiti di base fissati per la sicurezza delle persone esposte a campi elettromagnetici (10 MHz - 300 GHz)
1999/519/CE	Raccomandazione del Consiglio per la limitazione dell'esposizione della popolazione ai campi elettromagnetici (0 Hz - 300 GHz)

I dispositivi collegati al sistema devono soddisfare le disposizioni di sicurezza rilevanti.

## Dichiarazione di conformità CE

La dichiarazione di conformità CE è a disposizione delle autorità competenti al seguente indirizzo come stabilito dalle direttive CE sopra indicate:

Siemens Aktiengesellschaft  
Bereich Automatisierungstechnik  
I IA AS RD ST  
Postfach 1963  
92209 Amberg  
Germania

Questa dichiarazione certifica la conformità alle direttive indicate ma non costituisce una garanzia rispetto alle caratteristiche.

La dichiarazione di conformità CE può essere scaricata all'indirizzo Internet:

Documentazione sul Mobile Panel 277 IWLAN e il Mobile Panel 277F IWLAN  
(<http://support.automation.siemens.com/WW/view/it/26268960>).

Filtrare gli articoli in base al tipo "Certificati".

## Omologazione UL



Underwriters Laboratories Inc. secondo lo standard

- UL 508 (Industrial Control Equipment)
- CSA C22.2 No. 142 (Process Control Equipment)

I requisiti di omologazione vengono soddisfatti solo con funzionamento a batteria o con funzionamento stazionario nella stazione di carica.



## Approval according to FCC

This device complies with Part 15 of the FCC Rules

Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation.

IEEE802.11b or g operation of this product in the USA is firmware-limited to channels 1 through 11.

---

## Notice

Changes or modifications made to this equipment not expressly approved by SIEMENS may void the FCC authorization to operate this equipment.

---

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

---

## Notice

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator and your body.

---

## **This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.**

Professional Installation Notice:

To comply with FCC Part 15 rules in the United States, the system must be professionally installed to ensure compliance with the Part 15 certification. It is the responsibility of the operator and professional installer to ensure that only certified systems are deployed in the United States. The use of the system in any other combination (such as co-located antennas transmitting the same information) is expressly forbidden.

Within the 5.15-5.25 GHz band, this device is only for indoor use operations to reduce any potential for harmful interference to co-channel MSS operations.

## **RSS-210 of Industry Canada**

"Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation of the device."

"This device has been designed to operate with internal antennas with a maximum gain of 2 dBi and an antenna impedance of 50 Ohms. Other antennas are strictly prohibited for use with this device."

"To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication."

"That the device for the band 5150-5250 MHz is only for indoor usage to reduce potential for harmful interference to co-channel mobile satellite systems."

"Users should also be cautioned to take note that high power radars are allocated as primary users (meaning they have priority) of 5250-5350 MHz and 5650-5850 MHz and these radars could cause interference and/or damage to LE-LAN devices."

## Omologazioni nazionali



Il seguente elenco riporta le omologazioni radio in vigore nei diversi paesi.

Per un dato pannello operatore sono valide solo le omologazioni indicate sul retro dell'apparecchiatura.

Paese	Contrassegno	Omologazione assegnata
Australia		✓
Belgio	CE Ⓢ	✓
Bulgaria	CE Ⓢ	✓
Cina		
Danimarca	CE Ⓢ	✓
Germania	CE Ⓢ	✓
Estonia	CE Ⓢ	✓
Finlandia	CE Ⓢ	✓
Francia	CE Ⓢ	✓
Grecia	CE Ⓢ	✓
Gran Bretagna	CE Ⓢ	✓
Hong Kong		
Irlanda	CE Ⓢ	✓
Islanda	CE Ⓢ	✓
Italia	CE Ⓢ	✓
Giappone		✓
Canada	IC	✓
Kuwait		
Lettonia	CE Ⓢ	✓
Liechtenstein	CE Ⓢ	✓
Lituania	CE Ⓢ	✓
Lussemburgo	CE Ⓢ	✓
Malesia		

Paese	Contrassegno	Omologazione assegnata
Malta	CE Ⓢ	✓
Olanda	CE Ⓢ	✓
Norvegia	CE Ⓢ	✓
Austria	CE Ⓢ	✓
Polonia	CE Ⓢ	✓
Portogallo	CE Ⓢ	✓
Romania	CE Ⓢ	✓
Russia		
Svezia	CE Ⓢ	✓
Svizzera	CE Ⓢ	✓
Singapore		
Repubblica Slovacca	CE Ⓢ	✓
Slovenia	CE Ⓢ	✓
Spagna	CE Ⓢ	✓
Sudafrica		✓
Corea del Sud		
Taiwan		✓
Repubblica Ceca	CE Ⓢ	✓
Turchia	CE Ⓢ	✓
Ucraina		
Ungheria	CE Ⓢ	✓
Stati Uniti d'America	FC	✓
Cipro	CE Ⓢ	✓

## SIMATIC HMI

### Mobile Panel 277 IWLAN, Mobile Panel 277F IWLAN

Información del producto

#### Validez

La presente información de producto vale para los siguientes paneles de operador:

- Mobile Panel 277 IWLAN

Referencias:

- 6AV6 645-0DD01-0AX0
- 6AV6 645-0DE01-0AX0
- 6AV6 645-0FD01-0AX0
- 6AV6 645-0FE01-0AX0



- Mobile Panel 277F IWLAN

Referencias:

- 6AV6 645-0DB01-0AX0
- 6AV6 645-0DC01-0AX0
- 6AV6 645-0GB01-0AX0
- 6AV6 645-0GC01-0AX0



La presente Información de producto contiene indicaciones importantes. Las presentes indicaciones complementan las instrucciones de servicio del panel de operador y prevalecen sobre lo mencionado en las instrucciones de servicio, en las Release Notes y en la Ayuda en pantalla.

Observe especialmente las homologaciones y certificados.

---

#### Nota

Para el panel de operador son aplicables únicamente las homologaciones indicadas en el lado posterior del equipo.

---

# Consignas de seguridad para el Mobile Panel 277 IWLAN y Mobile Panel 277F IWLAN

## Opciones de energía

### ATENCIÓN

#### Mensajes no visibles en el modo de ahorro de energía

En el modo de ahorro de energía, la pantalla del panel de operador se oscurece ("Power Save 1") o se apaga ("Power Save 2") según cómo esté ajustado. Si aparecen mensajes mientras está activado el modo de ahorro de energía, la pantalla permanece oscura o apagada. En este caso, los mensajes apenas pueden reconocerse.

### Nota

Si utiliza el panel de operador con fuente de alimentación externa y transcurren dos minutos sin que se efectúe operación alguna, se activará automáticamente el modo de ahorro de energía "Power Save 1". La pantalla se oscurece.

### Nota

Si ha conectado un teclado USB externo al panel de operador, dicho teclado permanecerá activo en el modo de ahorro de energía "Power Save 2".

## Actualizar el sistema operativo mediante ProSave

### ATENCIÓN

#### Actualizar el sistema operativo sólo vía Ethernet y USB

La actualización del sistema operativo desde ProSave sólo está liberada vía Ethernet y USB.

Utilice ProSave, versión 7.4.2 o superior.

## Configuración

### ATENCIÓN

#### Se requiere el software de configuración apropiado

Para configurar el panel de operador, utilice únicamente el software "WinCC flexible 2008 SP1".

En caso de utilizar el software "HSP Mobile Panel 277 Wireless V1.1", los paneles de operador con las siguientes referencias también se pueden configurar con WinCC flexible 2007:

- 6AV6 645 0DD01 0AX0
- 6AV6 645 0DE01 0AX0
- 6AV6 645-0DB01-0AX0
- 6AV6 645-0DC01-0AX0

## Batería de puenteo

### Nota

El panel de operador se suministra en la primera versión sin batería de puenteo.

Para cambiar la batería principal cierre el proyecto activo y apague el panel de operador.

## Temperatura ambiente

El panel de operador está diseñado para utilizarse a una temperatura ambiente de entre 0 °C y 40 °C.

---

### Nota

#### Cargar las baterías

Si el panel de operador se encuentra en modo productivo, entonces las dos baterías se cargan por completo en la estación de carga hasta una temperatura ambiente de 40 °C.

Si el panel de operador está encendido y colgado en la estación de carga, rige lo siguiente:

- La carga de las baterías en el panel de operador se mantiene hasta una temperatura ambiente de 40 °C.
  - Las baterías se cargan por completo en la estación de carga hasta una temperatura ambiente de 35 °C.
- 

## LEDs

### Nota

El LED "BAT" parpadea en cuanto el panel de operador se encuentra en la estación de carga y hace contacto. Asegúrese de que el panel de operador está colgado correctamente en la estación de carga cuando se disponga a cargar las baterías.

---

## Especificación del puerto USB

### Nota

El puerto USB puede utilizarse exclusivamente para la puesta en marcha y para fines de mantenimiento.

La longitud de cable de los dispositivos USB conectados no deberá ser superior a 3 m.

---

## Modo de transpondedor – bandas de frecuencia

### Nota

En el modo de transpondedor con detección automática de la zona, la banda de 2,4 GHz es utilizada exclusivamente por el Mobile Panel IWLAN.

Para el funcionamiento con WLAN tiene que utilizarse la banda de 5 GHz (IEEE 802.11a).

El uso simultáneo de otros sistemas RFID en la banda de 2,4 GHz no es posible (p. ej. sistemas MOBY U o sistemas MOBY R).

---

## Access Point – comunicación inalámbrica

### Nota

La comunicación con más de un Access Point para cubrir una zona de WLAN más amplia no es posible sin interrupciones.

En la comunicación inalámbrica basada en Ethernet, p. ej. PROFINET IO, HTTP, Sm@rtAccess, Sm@rtService y OPC, el usuario final es el responsable de la seguridad de la red de datos. El funcionamiento correcto del panel de operador no puede garantizarse bajo toda circunstancia. Las interferencias externas sobre red inalámbrica podrían p. ej. sobrecargar el panel de operador.

La función "Storm Threshold" tiene que estar activada en el Siemens Access Point SCALANCE. Esta activación es necesaria para el funcionamiento estable de la instalación, incluso a una carga de red elevada. Ajuste lo siguiente para los telegramas broadcast:

- Address Threshold: 255
  - Wireless: 255.
- 

## PROFINET IO

### Nota

Para mejorar la seguridad de su aplicación, consulte el bit de señal de vida en la aplicación de la CPU.

---

## Estación de carga

La estación de carga cumple la clase de protección III según EN 61131-2:2007 y EN 60950-1:2006.

# Consignas de seguridad exclusivas para el Mobile Panel 277F IWLAN

## ADVERTENCIA

### Consulte el manual de funciones "Failsafe Mode of Mobile Panel 277F IWLAN"

Consulte el manual de funciones "Fail-Safe operation of the Mobile Panel 277F IWLAN" y las advertencias e informaciones adicionales que encontrará en Internet:

Consignas de seguridad para el Mobile Panel 277 IWLAN y Mobile Panel 277F IWLAN  
(<http://support.automation.siemens.com/WW/view/es/26268960>)

El manual de funciones "Fail-safe operation of the Mobile Panel 277F IWLAN" está disponible en alemán, inglés y japonés.

## Transferencia automática

## ADVERTENCIA

### No utilizar la transferencia automática

La transferencia automática (Control Panel, opción "Remote Control") no puede utilizarse en el panel de operador.  
Utilice la transferencia manual.

## Power Management

## ATENCIÓN

### El contenido de la pantalla no se actualiza con fiabilidad

En el siguiente caso, el contenido de la pantalla del panel de operador no se actualiza con fiabilidad.


- Está utilizando el software "Hardware Support Package (HSP) Mobile Panel 277 IWLAN y Mobile Panel 277F IWLAN für WinCC flexible 2007" (V1.1)
- El panel de operador ha iniciado la sesión en el rango efectivo.
- Están activados las siguientes opciones de energía:
  - Para la opción "Desactivar pantalla" se ha ajustado un intervalo de tiempo.
  - La opción "Reducir brillo" está desactivada por "nunca".

Existen varias maneras de evitar el comportamiento descrito, a saber:

- Opción 1: Instale WinCC flexible 2008 SP1.
- Opción 2: Configure un intervalo de tiempo para la opción "Reducir brillo".

# Normas y homologaciones

Este apartado contiene información importante sobre las normas y homologaciones nacionales de los paneles de operador Mobile Panel 277 IWLAN y Mobile Panel 277F IWLAN en lo que respecta al sistema radioeléctrico.

 <b>PRECAUCIÓN</b>
La siguiente relación indica las homologaciones posibles. Para el panel de operador son aplicables únicamente las homologaciones indicadas en el lado posterior del equipo.

## Homologación CE



El modelo del panel de operador comercializado por la Siemens I IA cumple con las prescripciones de la siguiente directiva europea:

### 99/5/CE

Directiva del Parlamento Europeo y del Consejo sobre la aproximación de las legislaciones de los Estados miembros sobre equipos radioeléctricos y equipos terminales de telecomunicación y reconocimiento mutuo de su conformidad).

La conformidad con los requisitos fundamentales de la Directiva queda certificada con la observancia de las siguientes normas:

EN 60950	Seguridad de los equipos de tratamiento de la información
EN 301489-1	Compatibilidad electromagnética para los equipos y servicios radioeléctricos
EN 301489-17	Condiciones específicas para sistemas de transmisión en banda ancha y para equipos en redes locales inalámbricas de alta potencia (HIPERLAN))
EN 300328	Cuestiones de compatibilidad electromagnética y espectro radioeléctrico (ERM) - Sistemas de transmisión en banda ancha - equipos de transmisión de datos que operan en banda de 2,4 GHz-ISM y utilizan técnicas de modulación en banda ancha
EN 300440-1 EN 300440-2	Cuestiones de compatibilidad electromagnética y espectro radioeléctrico (ERM) - Dispositivos de corto alcance - equipos de radio para utilizar en el rango de frecuencias entre 1 GHz a 40 GHz
EN 301893	Redes de acceso por radio de banda ancha (BRAN); RLAN de alto rendimiento en la banda de 5 GHz
EN 50371	Cumplimiento de aparatos eléctricos y electrónicos de baja potencia con las restricciones básicas relativas a la exposición de las personas a los campos electromagnéticos (10 MHz - 300 GHz))
1999/519/EC	Recomendación del Consejo Europeo sobre la limitación de la exposición del público general a campos electromagnéticos (0 Hz — 300 GHz))

Los equipos conectados al sistema deben cumplir las consignas de seguridad relevantes.

## Declaración de conformidad CE

Según exigen las directivas CE arriba mencionadas, la declaración de conformidad CE está a disposición de las autoridades competentes en:

Siemens Aktiengesellschaft  
Industry Automation Division  
I IA AS RD ST  
Postfach 1963  
92209 Amberg  
Alemania

Esta declaración certifica el cumplimiento de las directivas mencionadas pero no garantiza las características.

La declaración de conformidad CE sobre la Directiva CEM se puede descargar de Internet:

Documentación completa del Mobile Panel 277 IWLAN y Mobile Panel 277F IWLAN  
(<http://support.automation.siemens.com/WW/view/es/26268960>).

Busque los artículos con el filtro "Certificados".

## Homologación UL



Underwriters Laboratories Inc. según

- UL 508 (Industrial Control Equipment)
- CSA C22.2 No. 142 (Process Control Equipment)

La homologación sólo se cumple en el uso con batería o de forma estacionaria en la estación de carga.



## Approval according to FCC

This device complies with Part 15 of the FCC Rules

Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation.

IEEE802.11b or g operation of this product in the USA is firmware-limited to channels 1 through 11.

---

## Notice

Changes or modifications made to this equipment not expressly approved by SIEMENS may void the FCC authorization to operate this equipment.

---

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

---

## Notice

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator and your body.

---

## **This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.**

Professional Installation Notice:

To comply with FCC Part 15 rules in the United States, the system must be professionally installed to ensure compliance with the Part 15 certification. It is the responsibility of the operator and professional installer to ensure that only certified systems are deployed in the United States. The use of the system in any other combination (such as co-located antennas transmitting the same information) is expressly forbidden.

Within the 5.15-5.25 GHz band, this device is only for indoor use operations to reduce any potential for harmful interference to co-channel MSS operations.

## **RSS-210 of Industry Canada**

"Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation of the device."

"This device has been designed to operate with internal antennas with a maximum gain of 2 dBi and an antenna impedance of 50 Ohms. Other antennas are strictly prohibited for use with this device."

"To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication."

"That the device for the band 5150-5250 MHz is only for indoor usage to reduce potential for harmful interference to co-channel mobile satellite systems."

"Users should also be cautioned to take note that high power radars are allocated as primary users (meaning they have priority) of 5250-5350 MHz and 5650-5850 MHz and these radars could cause interference and/or damage to LE-LAN devices."

## Homologaciones nacionales

### PRECAUCIÓN

La siguiente relación indica las homologaciones para transmisión radioeléctrica en los distintos países.  
Para el panel de operador son aplicables únicamente las homologaciones indicadas en el lado posterior del equipo.

País	Marcado	Homologación concedida
Australia		✓
Bélgica	CE 	✓
Bulgaria	CE 	✓
China		
Dinamarca	CE 	✓
Alemania	CE 	✓
Estonia	CE 	✓
Finlandia	CE 	✓
Francia	CE 	✓
Grecia	CE 	✓
Gran Bretaña	CE 	✓
Hongkong		
Irlanda	CE 	✓
Islandia	CE 	✓
Italia	CE 	✓
Japón		✓
Canadá	IC	✓
Kuwait		
Letonia	CE 	✓
Liechtenstein	CE 	✓
Lituania	CE 	✓
Luxemburgo	CE 	✓
Malasia		

País	Marcado	Homologación concedida
Malta	CE 	✓
Países Bajos	CE 	✓
Noruega	CE 	✓
Austria	CE 	✓
Polonia	CE 	✓
Portugal	CE 	✓
Rumanía	CE 	✓
Rusia		
Suecia	CE 	✓
Suiza	CE 	✓
Singapur		
Eslovaquia	CE 	✓
Eslovenia	CE 	✓
España	CE 	✓
Sudáfrica		✓
Corea del Sur		
Taiwán		✓
República Checa	CE 	✓
Turquía	CE 	✓
Ucrania		
Hungría	CE 	✓
Estados Unidos de América	FC	✓
Chipre	CE 	✓

## SIMATIC HMI

### Mobile Panel 277 IWLAN、Mobile Panel 277F IWLAN

#### 製品情報

#### 有効性

この製品情報は、次の HMI デバイ스에適用されます。

- Mobile Panel 277 IWLAN

注文番号:

- 6AV6 645-0DD01-0AX0
- 6AV6 645-0DE01-0AX0
- 6AV6 645-0FD01-0AX0
- 6AV6 645-0FE01-0AX0



- Mobile Panel 277F IWLAN

注文番号:

- 6AV6 645-0DB01-0AX0
- 6AV6 645-0DC01-0AX0
- 6AV6 645-0GB01-0AX0
- 6AV6 645-0GC01-0AX0



この製品情報には、重要な情報が含まれています。この注意事項は、HMI デバイスの操作説明書を補足し、操作説明書、リリースノート、オンラインヘルプの記述より優先されます。

承認と認定書を確認してください。

---

#### 注記

HMI デバイス自体の認証は、背面パネルのラベルに表示されています。

---

# Mobile Panel 277 IWLAN および Mobile Panel 277F IWLAN の安全に関する注意事項

## 電源管理

### 通知

#### 省電力モードでアラームが表示されない

設定によって、HMI デバイスの表示が暗くなるか("省電力 1")オフになります("省電力 2")。省電力モードの間にアラームがある場合は表示が暗いままかオフになったままになります。この状態で、アラームを確認するのは難しいか不可能です。

### 注記

外部電源を使用して HMI デバイスを操作している場合、入力が行われずに 2 分が経過すると、デバイスは「省電力 1」の省電力モードに切り替わります。表示が暗くなります。

### 注記

外部 USB キーボードを HMI デバイスに接続した場合、"省電力 2"の省電力モードの外部 USB キーボードはアクティブのままです。

## ProSave を使用したオペレーティングシステムの更新

### 通知

#### Ethernet と USB のみを使用したオペレーティングシステムの更新

ProSave を使用したオペレーティングシステムの更新が承認されているのは、Ethernet と USB を経由する場合のみです。

ProSave のバージョン 7.4.2. 以上を使用します。

## 設定

### 通知

#### 適合する設定ソフトウェアが必要です

HMI デバイスの設定は、"WinCC flexible 2008 SP1"ソフトウェアによってのみ可能です。

以下の注文番号の HMI デバイスは、"HSP Mobile Panel 277 Wireless V1.1"ソフトウェアを使用した WinCC flexible 2007 でのみ設定できます。

- 6AV6 645 0DD01 0AX0
- 6AV6 645 0DE01 0AX0
- 6AV6 645-0DB01-0AX0
- 6AV6 645-0DC01-0AX0

## 補助バッテリー

### 注記

納入ステージ 1 の HMI は、補助バッテリーなしで提供されます。

メインバッテリーを置換するには、実行中のプロジェクトを終了して、HMI デバイスの電源を切ります。

## 周囲温度

HMI デバイスは、周囲温度 0°C ~ 40°C の範囲で使用するよう設計されています。

---

### 注記

#### バッテリーの充電

生産稼働中の HMI デバイスでは、最高 40°C の周囲温度まで、バッテリーはドッキングステーションでフル充電されます。HMI デバイスの電源をオンにして、ドッキングステーションに置いたままにすると、次が適用されます。

- HMI デバイスでのバッテリーの充電は、周囲温度が 40°C になるまで保持されます。
  - ドッキングステーションのバッテリーは、最高 35°C の周囲温度までフル充電されます。
- 

## LED 表示

### 注記

HMI デバイスがドッキングステーションに置かれ充電が開始されるとすぐに、"BAT"LED の点滅が開始します。バッテリーの充電用に、HMI デバイスがドッキングステーションに正しく配置されていることを確認してください。

---

## USB インターフェースの仕様

### 注記

この USB インターフェースは、試運転と保守用のみに使用します。  
接続されている USB デバイスのラインの長さは 3 m を超えてはいけません。

---

## トランスポンダの操作 - 周波数帯域

### 注記

自動ゼロ検出を使用したトランスポンダの操作の場合、Mobile Panel IWLAN で 2.4 GHz が独占的に使用されます。WLAN 操作には、5 GHz (IEE 802.11a) が必要です。  
同時に 2.4 GHz の他の RFID システムを操作することはできません(例: MOBY U または MOBY R システム)。

---

## アクセスポイント - ワイヤレス通信

### 注記

より広い WLAN エリアをカバーするために、複数のアクセスポイントとの通信を障害なく行うことはできません。PROFINET IO、HTTP、Sm@rtAccess、Sm@rtService、OPC などのワイヤレス Ethernet ベースの通信の場合、エンドユーザーが自分のデータネットワークのセキュリティに責任を負います。どんな環境でも、HMI デバイスの安全な操作を完全に保証することはできません。たとえば、無線ネットワークの外からの干渉によって、HMI 装置の過負荷が引き起こされることがあります。

Siemens アクセスポイント SCALANCE の「ストームしきい値」機能を選択する必要があります。このオプションを選択すれば、ネットワークの負荷が高い場合でも、安定したプラント操業を保証できます。ブロードキャスト メッセージ フレームを作るには、以下の設定を行ないます：

- アドレスしきい値: 255
  - ワイヤレス: 255.
- 

## PROFINET IO

### 注記

使用しているアプリケーションの安全性を高めるには、CPU アプリケーションでライフサインビットを要求します。

---

## 充電ステーション

充電ステーションは、EN 61131-2:2007 および EN 60950-1:2006 に準拠した安全等級 III に対応しています。

# Mobile Panel 277F IWLAN に関する安全注意事項



## 警告

**機能マニュアル『Mobile Panel 277F IWLAN のフェールセーフ操作』をお読みください**

機能マニュアル『Mobile Panel 277F IWLAN のフェールセーフ操作』および次の Web サイトにある警告と追加情報を熟読してください。

Mobile Panel 277 IWLAN および Mobile Panel 277F IWLAN に関する総合的なマニュアル  
(<http://support.automation.siemens.com/WW/view/en/26268960>)

機能マニュアル『Mobile Panel 277F IWLAN のフェールセーフ操作』はドイツ語版、英語版、日本語版で提供されていません。

## 自動転送



## 警告

**自動転送は使用しないでください**

HMI デバイスでは自動転送(コントロールパネル、オプション「リモートコントロール」)は使用しないでください。  
手動転送を使用してください。

## 電源管理

### 通知

**画面内容が最新情報に更新されない**

HMI デバイスの画面内容は、以下の場合に最新情報に更新されない場合があります。


- "Hardware Support Package (HSP) Mobile Panel 277 IWLAN and Mobile Panel 277F IWLAN for WinCC flexible 2007" (V1.1)ソフトウェアを使用している場合。
- HMI デバイスが有効範囲にログオンしている場合。
- 電源管理に以下の設定を使用できます。
  - [画面の切り替え]オプションに期間が設定されている。
  - [明るさの低減]オプションが[低減しない]になっていて無効化されている。

この種の動作は以下のオプションを使って防止できます。

- オプション 1: WinCC flexible 2008 SP1 をインストールします。
- オプション 2: [明るさの低減]オプションに期間を設定します。

## 規格と承認

この節には、無線システムに関する Mobile Panel 277 IWLAN および Mobile Panel 277F IWLAN HMI デバイスの規格と各国における承認に関する重要な情報が記載されています。

 <b>注意</b>
以下に、使用できる承認の概要を示します。 HMI デバイス自体の認証は、背面パネルのラベルに表示されています。

### CE 承認



Siemens I IA が提供するバージョンの HMI デバイスは、以下の欧州指令の規制に準拠します。

#### 99/5/EC

無線装置と通信端末装置および適合性の相互承認に関する欧州議会および欧州理事会指令。

ガイドラインの基本要件との互換性は、以下の規格に準拠することによって証明されています。

EN 60950	情報テクノロジー装置の安全性
EN 301489-1	無線装置とサービスの電磁互換性
EN 301489-17	ブロードバンドデータ伝送システムとローカル高性能無線ネットワークの装置のための固有の要件 (HIPERLAN)
EN 300328	電磁両立性および周波数問題(ERM) - 広帯域伝送システム - 2.4 GHz ISM 帯域で動作し、広帯域変調技術を使用するデータ伝送装置
EN 300440-1 EN 300440-2	電磁両立性および周波数問題(ERM) - 短波装置 - 1 GHz から 40 GHz の周波数範囲で使用される無線装置
EN 301893	広帯域無線アクセスネットワーク(BRAN) - 5 GHz の高性能 RLAN
EN 50371	電磁界への人体のばく露に関し基本制限のある低電力電子および電気装置の準拠(10 MHz から 300 GHz)
1999/519/EC	電磁界への公衆のばく露の限界に関する議会の推奨事項(0 Hz から 300 GHz)

システムに接続されているデバイスは、該当する安全規制に適合する必要があります。

## EC 適合性宣言

EC 適合性宣言は、上記の EC 指令に従う下記の住所にある担当機関から入手できます。

Siemens AG  
Industry Sector  
I IA AS RD ST  
PO Box 1963  
92209 Amberg  
Germany

この宣言は、上記の指令に準拠していることを認定するものであり、特定の特性を保証するものではありません。

EC 適合性宣言をダウンロードするには、次のアドレスにアクセスしてください。

Mobile Panel 277 IWLAN および Mobile Panel 277F IWLAN に関する総合的なマニュアル  
(<http://support.automation.siemens.com/WW/view/en/26268960>)

入力タイプ「認定書」のコメントをフィルタします。

## UL 承認



Underwriters Laboratories Inc.

- UL 508 に準拠(産業用制御機器)
- CSA C22.2 No. 142 (『Process Control Equipment』)

承認が有効なのは、バッテリー駆動または充電ステーションで据え置きとなっている場合だけです。



## Approval according to FCC

This device complies with Part 15 of the FCC Rules

Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation.

IEEE802.11b or g operation of this product in the USA is firmware-limited to channels 1 through 11.

---

## Notice

Changes or modifications made to this equipment not expressly approved by SIEMENS may void the FCC authorization to operate this equipment.

---

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

---

## Notice

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator and your body.

---

## **This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.**

Professional Installation Notice:

To comply with FCC Part 15 rules in the United States, the system must be professionally installed to ensure compliance with the Part 15 certification. It is the responsibility of the operator and professional installer to ensure that only certified systems are deployed in the United States. The use of the system in any other combination (such as co-located antennas transmitting the same information) is expressly forbidden.

Within the 5.15-5.25 GHz band, this device is only for indoor use operations to reduce any potential for harmful interference to co-channel MSS operations.

## **RSS-210 of Industry Canada**

"Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation of the device."

"This device has been designed to operate with internal antennas with a maximum gain of 2 dBi and an antenna impedance of 50 Ohms. Other antennas are strictly prohibited for use with this device."

"To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication."

"That the device for the band 5150-5250 MHz is only for indoor usage to reduce potential for harmful interference to co-channel mobile satellite systems."

"Users should also be cautioned to take note that high power radars are allocated as primary users (meaning they have priority) of 5250-5350 MHz and 5650-5850 MHz and these radars could cause interference and/or damage to LE-LAN devices."

国による承認



注意

各国の無線承認の概要は以下の通りです。  
HMI デバイス自体の認証は、背面パネルのラベルに表示されています。

国	ID	承認取得
オーストラリア		✓
ベルギー	CE	✓
ブルガリア	CE	✓
中国		
デンマーク	CE	✓
ドイツ	CE	✓
エストニア	CE	✓
フィンランド	CE	✓
フランス	CE	✓
ギリシャ	CE	✓
英国	CE	✓
香港		
アイルランド	CE	✓
アイスランド	CE	✓
イタリア	CE	✓
日本		✓
カナダ	IC	✓
クウェート		
ラトビア	CE	✓
リヒテンシュタイン	CE	✓
リトアニア	CE	✓
ルクセンブルグ	CE	✓
マレーシア		

国	ID	承認取得
マルタ	CE	✓
オランダ	CE	✓
ノルウェー	CE	✓
オーストリア	CE	✓
ポーランド	CE	✓
ポルトガル	CE	✓
ルーマニア	CE	✓
ロシア		
スウェーデン	CE	✓
スイス	CE	✓
シンガポール		
スロバキア	CE	✓
スロバニア	CE	✓
スペイン	CE	✓
南アフリカ		✓
韓国		
台湾		✓
チェコ共和国	CE	✓
トルコ	CE	✓
ウクライナ		
ハンガリー	CE	✓
アメリカ合衆国		✓
キプロス	CE	✓