

SIEMENS

SIMATIC HMI

HMI device Mobile Panel 277 IWLAN

Operating Instructions



The following supplement is part of this documentation:

No.	Designation	Drawing number	Edition
1	Product Information	A5E02098200-04	04/2009
2	Product Information	A5E01004934-02	10/2008

Order No.: 6AV6 691-1DM01-2AB0

04/2008
A5E01004199-01

Preface

Overview

1

Safety instructions, standards and notes

2

Planning application

3

Mounting and connecting

4

Operator controls and displays

5

Configuring the operating system

6

Commissioning the HMI device

7

Operating a project

8

Operating alarms

9

Operating recipes

10

Maintenance and care

11

Technical specifications

12

Appendix

A

Abbreviations

B

Safety Guidelines

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.

⚠ DANGER
indicates that death or severe personal injury will result if proper precautions are not taken.
⚠ WARNING
indicates that death or severe personal injury may result if proper precautions are not taken.
⚠ CAUTION
with a safety alert symbol, indicates that minor personal injury can result if proper precautions are not taken.
CAUTION
without a safety alert symbol, indicates that property damage can result if proper precautions are not taken.
NOTICE
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.

Prescribed Usage

Note the following:

⚠ WARNING
This device may only be used for the applications described in the catalog or the technical description and only in connection with devices or components from other manufacturers which have been approved or recommended by Siemens. Correct, reliable operation of the product requires proper transport, storage, positioning and assembly as well as careful operation and maintenance.

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
- 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, e.g. the chapter "Maintenance and care".

- 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, e.g., 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 notes" 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 277 IWLAN HMI device in combination with the WinCC flexible software package.

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.ad.siemens.de/simatic/portal/html_00/techdoku.htm"](http://www.ad.siemens.de/simatic/portal/html_00/techdoku.htm)
- SIMATIC Guide for Technical Documentation in English:
["http://www.ad.siemens.de/simatic/portal/html_76/techdoku.htm"](http://www.ad.siemens.de/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"> • Terminology that appears in the user interface, for example dialog names, tabs, buttons, menu entries • Inputs required, for example limit values, tag values • Path information
"File > Edit"	Operational sequences, for example, menu commands, context 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®

Representatives and offices

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.siemens.com/automation/partner>".

Training center

Siemens AG offers a variety of training courses to familiarize you with automation systems. Please contact your regional training center, or our central training center in 90327 Nuremberg, Germany, for details.

Phone: +49 (911) 895-3200

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

Technical support

You can find technical support for all A&D projects

Using the support request form on the web at:

"<http://www.siemens.de/automation/support-request>"

Phone: + 49 180 5050 222

Fax: + 49 180 5050 223

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 Automation & Drives representative
- Information about field service, repairs, spare parts and much more under the heading "Services"

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

	Preface	3
1	Overview	15
1.1	Product overview	15
1.2	Design of the HMI device.....	16
1.2.1	Mobile Panel 277 IWLAN.....	16
1.2.2	Accessory kit and other accessories	18
1.2.3	Battery	19
1.2.4	Charging station.....	20
1.3	Configuration and process control phase	21
1.4	Transponder.....	23
1.5	Functional scope with WinCC flexible.....	24
1.6	Software options	27
1.7	Communication	27
2	Safety instructions, standards and notes	29
2.1	Safety instructions.....	29
2.2	Standards, certificates and approvals.....	30
2.3	Operating safety.....	32
2.4	Power supply.....	33
2.5	Notes about usage.....	34
2.6	Electromagnetic compatibility	35
2.7	Transport and storage conditions	37
3	Planning application	39
3.1	Application and ambient conditions	39
3.2	Mounting location and clearance of charging station	42
3.3	Information on insulation tests, protection class and degree of protection.....	44
3.4	Rated voltages	44
3.5	Required properties of the WLAN connection	45
3.6	Zones	45
3.6.1	Division of the system into zones.....	45
3.6.2	Detecting zones	47
4	Mounting and connecting	49
4.1	Checking the package contents.....	49
4.2	Mounting the charging station.....	50

4.3	Setting transponder ID and inserting the battery	51
4.4	Mounting the transponder	54
4.5	Electrical installation.....	54
4.6	Connection of the charging station to the power supply	55
4.7	Connecting the HMI device	56
4.7.1	Opening and closing the connection compartment.....	56
4.7.2	Interfaces of the HMI device	61
4.7.3	Connecting the configuring PC	62
4.7.4	Connecting the PLC	64
4.7.5	Connecting the printer.....	65
4.7.6	Connecting USB devices	66
4.7.7	Connecting the tabletop power supply unit.....	67
4.8	Inserting, charging and changing the battery.....	68
4.8.1	Safety instructions.....	68
4.8.2	Inserting batteries for the first time.....	70
4.8.3	Displaying battery status.....	72
4.8.4	Changing the main battery.....	73
4.8.5	Changing the bridging battery.....	74
4.9	Switching on and testing the HMI device.....	76
5	Operator controls and displays	79
5.1	Overview	79
5.2	Displays on the Mobile Panel 277 IWLAN.....	81
5.3	Power management.....	82
5.4	Operator controls	84
5.4.1	Handwheel	84
5.4.2	Key-operated switch.....	85
5.4.3	Illuminated pushbutton.....	86
5.4.4	Evaluation of the operator controls	86
5.4.4.1	Overview	86
5.4.4.2	Evaluating operator controls as direct keys	87
5.4.4.3	Activation of function key LEDs using system functions.....	90
5.4.4.4	Evaluation of the handwheel with system functions	91
5.4.4.5	Evaluation of the key-operated switch with system functions.....	91
5.4.4.6	Evaluation and activation of the illuminated pushbuttons.....	92
5.5	Using a memory card with the HMI device	92
5.6	Labeling the function keys.....	95
5.7	Holding the mobile panel and fixing it to the wall.....	98
5.8	Charging station	100
5.8.1	Charging batteries in the charging compartment.....	100
5.8.2	Displays on the charging station	101
5.8.3	Locking the charging station	102
6	Configuring the operating system	105
6.1	Loader	105
6.2	WLAN.....	109
6.2.1	Overview	109
6.2.2	Parameterizing the WLAN connection	112

6.3	Control Panel	115
6.3.1	Overview	115
6.3.2	Reference.....	116
6.3.3	Operating the Control Panel	118
6.4	Changing settings for operation	121
6.4.1	Configuring the screen keyboard	121
6.4.2	Setting the character repeat rate of the screen keyboard	123
6.4.3	Setting the double-click.....	124
6.4.4	Calibrating the touch screen	125
6.5	Changing password protection	127
6.6	Changing HMI device settings	128
6.6.1	Setting the date and time	128
6.6.2	Changing regional settings	130
6.6.3	Backup registry information	131
6.6.4	Changing screen settings	132
6.6.5	Setting the screen saver	133
6.6.6	Changing the printer properties	135
6.6.7	Restarting the HMI device.....	137
6.6.8	Displaying information about the HMI device	138
6.6.9	Displaying system properties.....	139
6.6.10	Activating vibration alarm.....	140
6.7	Programming the data channel.....	141
6.8	Setting the delay time	144
6.9	Enabling PROFINET IO	145
6.10	Configuring network operation.....	147
6.10.1	Overview of network operation	147
6.10.2	Setting the device name of the HMI device	149
6.10.3	Changing the network configuration	150
6.10.4	Changing the logon data.....	152
6.10.5	Changing e-mail settings	153
6.11	Changing internet settings	154
6.11.1	Changing general internet settings	154
6.11.2	Setting the proxy server	155
6.11.3	Changing data protection settings	155
6.11.4	Importing and deleting certificates	157
6.12	Backing up and restoring with an external memory medium	158
6.13	Displaying battery status.....	162
6.14	Activate memory management	163
7	Commissioning the HMI device	165
7.1	Overview	165
7.2	Operating modes	166
7.3	Using existing projects.....	167
7.4	Data transmission options.....	168
7.5	Preparing and backing up a project.....	168
7.5.1	Overview	168
7.5.2	Transfer.....	169
7.5.2.1	Overview	169

7.5.2.2	Starting manual transfer.....	170
7.5.2.3	Starting automatic transfer.....	171
7.5.2.4	Starting backtransfer.....	172
7.5.3	Testing a project.....	173
7.5.4	Testing zones.....	175
7.5.5	Backup and restore.....	175
7.5.5.1	Overview.....	175
7.5.5.2	Backup and restore using WinCC flexible.....	176
7.5.5.3	Backup and restore using ProSave.....	178
7.5.6	Updating the operating system.....	180
7.5.6.1	Overview.....	180
7.5.6.2	Updating the operating system using WinCC flexible.....	181
7.5.6.3	Updating the operating system using ProSave.....	183
7.5.6.4	Resetting to factory settings with WinCC flexible.....	184
7.5.6.5	Resetting to factory settings with ProSave.....	186
7.5.7	Installing and removing options.....	188
7.5.7.1	Overview.....	188
7.5.7.2	Installing and removing options using WinCC flexible.....	188
7.5.7.3	Installing and removing options using ProSave.....	190
7.5.8	Transferring and transferring back license keys.....	191
7.5.8.1	Overview.....	191
7.5.8.2	Transferring and transferring back license keys.....	192
8	Operating a project.....	195
8.1	Handling the HMI device during operation.....	195
8.2	Starting the project.....	195
8.3	Direct keys.....	197
8.4	Operator input options.....	198
8.5	Function keys.....	200
8.6	Setting the project language.....	201
8.7	Input.....	201
8.7.1	Overview.....	201
8.7.2	Entering and editing numerical values.....	203
8.7.3	Entering and editing alphanumerical values.....	205
8.7.4	Entering the date and time.....	207
8.7.5	Entering symbolic values.....	207
8.8	Displaying infotext.....	208
8.9	Device-specific displays.....	209
8.9.1	Displaying battery status.....	209
8.9.2	Displaying WLAN quality.....	210
8.9.3	Displaying zone names.....	211
8.9.4	Displaying zone quality.....	211
8.10	Bar and gauge.....	212
8.11	Operating the slider control.....	214
8.12	Operating the switch.....	215
8.13	Operating the trend view.....	216
8.14	Operating the Status Force.....	218
8.14.1	Overview.....	218
8.14.2	Operation.....	219

8.15	Operating the Sm@rtClient view	220
8.15.1	Overview	220
8.15.2	Operation	221
8.16	Project security	223
8.16.1	Overview	223
8.16.2	User view	225
8.16.3	User logon.....	226
8.16.4	User logoff.....	228
8.16.5	Creating users.....	228
8.16.6	Changing user data.....	230
8.16.7	Deleting users	231
8.17	Closing the project	231
9	Operating alarms	233
9.1	Overview	233
9.2	Recognizing pending alarms.....	235
9.3	Displaying alarms.....	235
9.4	Display infotexts for an alarm.....	238
9.5	Acknowledge alarm.....	238
9.6	Edit alarm	239
10	Operating recipes	241
10.1	Overview	241
10.2	Structure of a recipe.....	242
10.3	Recipes in the project	244
10.4	Recipe displays	246
10.5	Recipe values in the HMI device and the PLC	249
10.6	Operating the recipe view	251
10.6.1	Overview	251
10.6.2	Creating a recipe data record	252
10.6.3	Editing a recipe data record	253
10.6.4	Deleting a recipe data record.....	254
10.6.5	Synchronizing tags.....	254
10.6.6	Reading a recipe data record from the PLC	255
10.6.7	Transferring a recipe data record to the PLC	256
10.7	Operating the simple recipe view.....	257
10.7.1	Overview	257
10.7.2	Creating a recipe data record	259
10.7.3	Editing a recipe data record	260
10.7.4	Deleting a recipe data record.....	261
10.7.5	Reading a recipe data record from the PLC	261
10.7.6	Transferring a recipe data record to the PLC	262
10.8	Exporting a recipe data record.....	263
10.9	Importing a recipe data record.....	264
10.10	Examples	265
10.10.1	Entering a recipe data record.....	265
10.10.2	Manual production sequence.....	266

11	Maintenance and care	267
11.1	Maintenance and care.....	267
11.2	Spare parts and repairs.....	268
12	Technical specifications	271
12.1	Dimension drawings.....	271
12.1.1	Mobile Panel 277 IWLAN.....	271
12.1.2	Charging station	273
12.1.3	Transponder.....	274
12.2	Specifications	275
12.2.1	Mobile Panel 277 IWLAN.....	275
12.2.2	Batteries	276
12.2.3	Charging station	277
12.2.4	Transponder.....	277
12.2.5	Description of interfaces on the HMI device	278
12.3	Radiation characteristic.....	279
12.3.1	Radiation characteristic of the transponder	279
12.3.2	Radiation characteristic of HMI device.....	282
A	Appendix	285
A.1	ESD guideline	285
A.2	System alarms	287
B	Abbreviations	317
B.1	Abbreviations	317
	Glossary	319
	Index	325

Overview

1.1 Product overview

Expanded possible fields of application – with Mobile Panel 277 IWLAN

The SIMATIC Mobile Panel 277 IWLAN permits mobile operation at any point in the system.

The HMI device communicates with the PLC via WLAN. The Mobile Panel 277 IWLAN is battery-powered. With the Mobile Panel 277 IWLAN the operator can operate the system wirelessly at almost any location on the machine or system.

The simple battery-powered operation and ergonomic design of the HMI device permit safe working with the Mobile Panel 277 IWLAN over extended periods.

The HMI device is equipped with a zone recognition function. The use of zone-specific process displays assists the operator when operating the system.

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

The Mobile Panel 277 IWLAN has the following features:

- Wireless operation with
 - IWLAN interface via PROFINET
 - Battery operation
- Zone recognition
- 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 277 IWLAN

Introduction

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

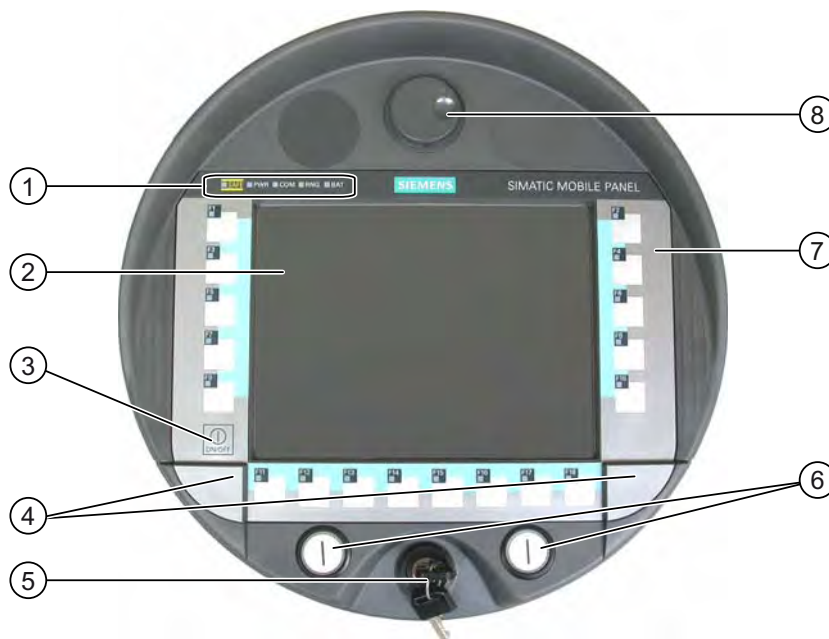
- With touch screen and function keys
- Also with handwheel, key-operated switch and two illuminated pushbuttons

Note

The Mobile Panel 277 IWLAN is intended to be operated with a battery.

Front view

The following figure shows the Mobile Panel 277 IWLAN. This can vary, depending on the delivery status of the HMI device.



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

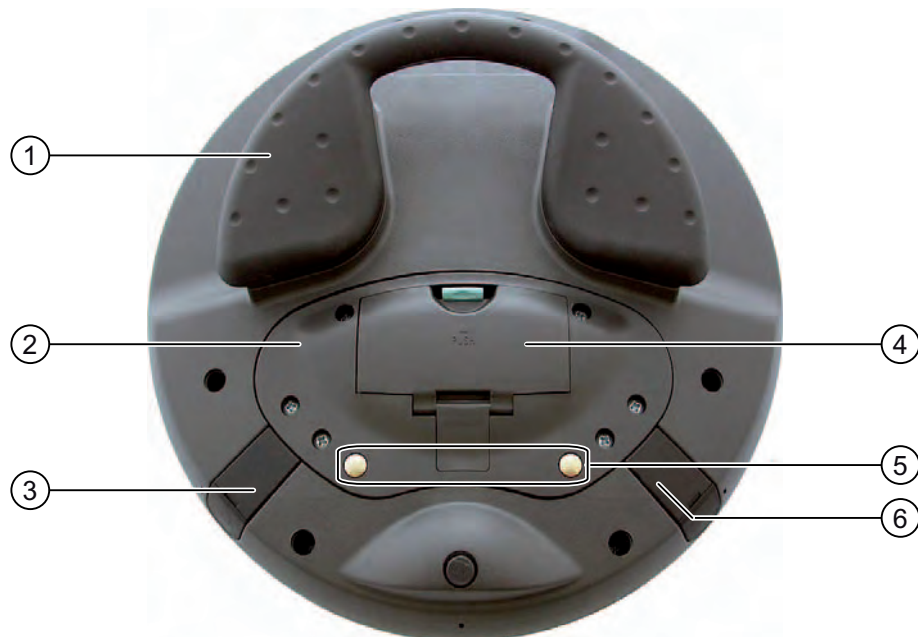
Side view



- ① 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 connector

The Mobile Panel 277 IWLAN can be securely fitted in a charging station.

1.2.2 Accessory kit and other accessories

Accessory kit

The accessory kit is supplied with the HMI device.

The accessory kit 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

Additional documents may be enclosed with the accessory kit.

Protective foil

A protective foil kit can be ordered for the HMI device with the 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 with the 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

You can operate the HMI device with a tabletop power supply unit. The tabletop power supply unit is only suitable for an office environment. 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"](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

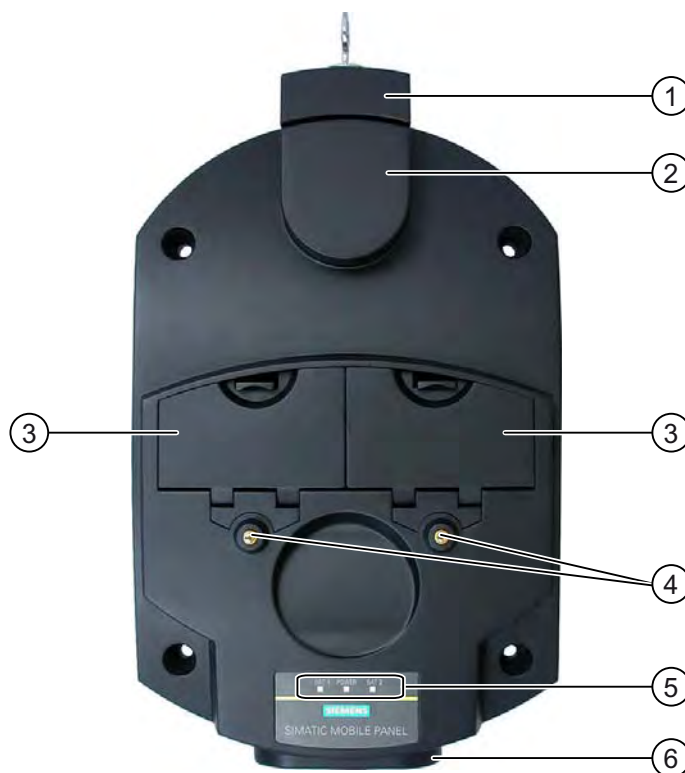
See also

Charging batteries in the charging compartment (Page 100)

Inserting, charging and changing the battery (Page 68)

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 100)

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

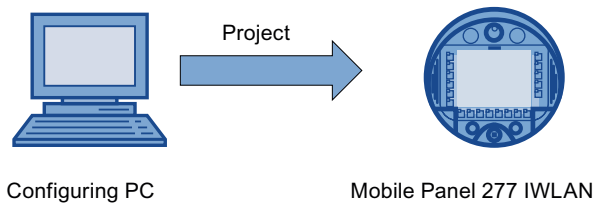
Configuration phase

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
- Testing the project
- Simulating the project
- Backing up the project

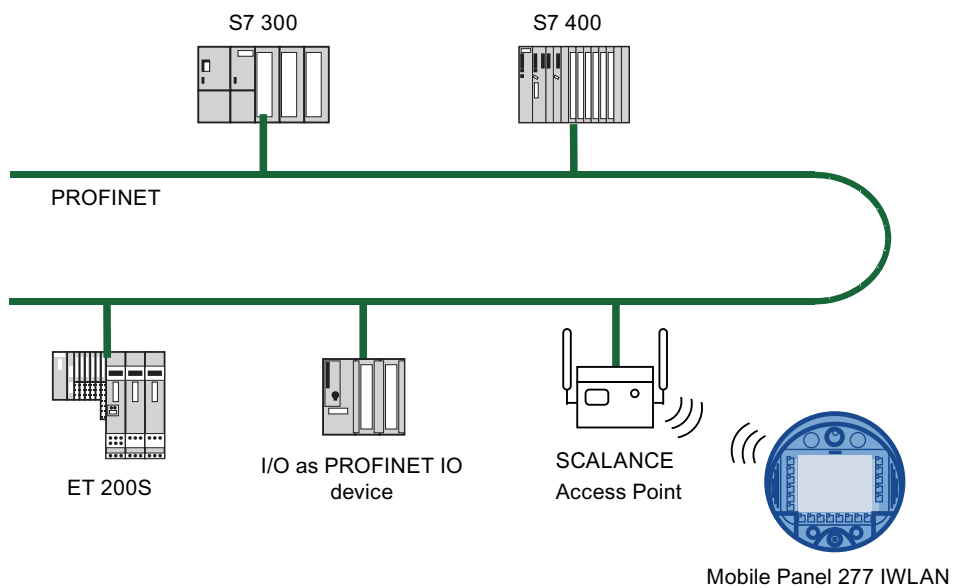
After the configuration phase, the project is transferred to the HMI device by the configuring PC.



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 277 IWLAN.



See also

Preparing and backing up a project (Page 168)

Operating a project (Page 195)

1.4 Transponder

Zones

You can divide your system into zones.

A zone is a physical range for operator control and monitoring inside a plant and which is registered by the HMI device. A zone is formed by one or more transponders.

Determining the current zone

The assignment of transponders to zones is defined 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 zone it is in.

Purpose

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.

Note

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

Installation and connection

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

The transponders are battery-operated.

Accessory kit

The accessory kit is supplied with the transponder.

The accessory kit for the transponder contains the following:

- 3 AA mignon batteries, 1.5 V

Additional documents may be enclosed with the accessory kit.

See also

Setting transponder ID and inserting the battery (Page 51)

Zones (Page 45)

Radiation characteristic of the transponder (Page 279)

1.5 Functional scope with WinCC flexible

The following tables show the objects that can be integrated into a project for a Mobile Panel 277 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 277 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
	Display	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 277 IWLAN
Tag	Number	2,048
Limit value monitoring	Input/Output	Yes
Linear scaling	Input/Output	Yes
Text list	Number	500 ¹⁾
Graphics list	Number	400 ¹⁾

¹⁾ The maximum total of text and graphics lists is 500.

Screens

Object	Specification	Mobile Panel 277 IWLAN
Screen	Number	500
	Fields per screen	200
	Tags per screen	200
	Complex objects per screen (e.g. bars)	10
	Template	Yes

Recipes

Object	Specification	Mobile Panel 277 IWLAN
Recipe	Number	300
	Data records per recipe	500
	Entries per recipe	1,000
	Recipe memory	64 KB
	Location ¹⁾	<ul style="list-style-type: none"> • Memory card • USB memory stick • Network drive

¹⁾ 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 277 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 ¹⁾	<ul style="list-style-type: none"> • Memory card • USB memory stick • Network drive

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

Safety

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

Infotexts

Object	Specification	Mobile Panel 277 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 277 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 277 IWLAN
Battery	Displaying battery status	Yes
WLAN quality	Displaying WLAN quality	Yes
Zone quality	Displaying zone quality	Yes
Zone name	Displaying zone names	Yes

1.6 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.
- 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.

1.7 Communication

Number of connections

Connection	Mobile Panel 277 IWLAN
Number using a bus connection	6
Number of connections based on "SIMATIC HMI HTTP Protocol"	8

Note

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

- Use of PLCs from other manufacturers

PLCs

The following table shows the PLCs which can be used with the HMI devices and the protocols or profiles which can be used.

PLC	Protocol	Mobile Panel 277 IWLAN
SIMATIC S7	PROFINET	Yes
SIMATIC HMI HTTP Protocol	HTTP/HTTPS (Ethernet)	Yes
Allen-Bradley E/IP C.Logix	Ethernet IP	Yes
	OPC	Yes

Safety instructions, standards and notes

2.1 Safety instructions

Safety regulations

 WARNING

Strictly observe all instructions in these operating instructions at all times. Otherwise, hazardous situations can arise or the safety mechanisms 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.

 WARNING

The configuration engineer for a machine or system PLC must take precautions so that an interrupted program can be restarted normally after communication errors, voltage dips or power failures. Dangerous operating conditions must not occur, even temporarily.

If faults in the system can cause bodily injury or significant property damage, additional measures must be taken outside of the system. These measures must also ensure safe operating conditions in the system in the event of a fault.


The system's configuration engineer must take precautions to ensure that memory changes that could lead to a dangerous situation can only be undertaken by authorized persons.

Safety measures during operation

 WARNING**Exclusive operating right**

Ensure that the system cannot be operated by another control unit while you are operating it with the HMI device.

Proper use


 WARNING
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.

High frequency radiation

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

2.2 Standards, certificates and approvals

Certifications

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

CE approval



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

- 73/23/EWG "Electrical equipment for use within specific voltage limits" (Low-Voltage Directive)
- 2004/108/EC Electromagnetic Compatibility Directive (EMC Directive)
- Specific absorption rate in accordance with EN 50932

EC Declaration of Conformity

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

Siemens Aktiengesellschaft
Automation & Drives
A&D AS RD ST PLC
PO Box 1963
D-92209 Amberg, Germany

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, tabletop 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

2.3 Operating safety

Standards

The HMI device complies with the following standards:

- EN 60204-1
Safety of Machinery – Electrical Equipment of Machines
- 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 specifications

CAUTION
<p>Damage to the HMI device</p> <p>Only operate the HMI device with approved components:</p> <ul style="list-style-type: none"> • Batteries • Charging station • Tabletop power supply unit

Charging station

<p> WARNING</p>
<p>Injury or material damage</p> <p>The charging station corresponds to safety class III according to EN 61131-2 or EN 50178.</p> <p>The 24 VDC power supply must be ensured by safely isolating the low voltage from hazardous voltages, e.g. by using a safety transformer or equivalent equipment.</p> <p>Protect the power supply circuit with a 7 A fuse.</p> <p>Allowance should be made for the loss of voltage on the connection cable during dimensional analysis of the supply!</p>

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

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

CAUTION
<p>Safe electrical separation</p> <p>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.</p> <p>The supply voltage must be within the specified voltage range. Malfunctions in the charging station may otherwise result.</p> <p>Applies to non-isolated system design:</p> <p>Connect the connection for GND 24 V from the 24 V power supply output to equipotential bonding for uniform reference potential.</p>

Tabletop power supply unit

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

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

Use in industry

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

- Requirements for emissions EN 61000-6-4: 2001
- Requirements for interference immunity DIN EN 61000-6-2: 2005

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.

2.6 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.

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 interference

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

Pulse-shaped interference	Applies to charging station with and without plugged-on HMI device and power supply (230 VAC) Checked with	Degree of severity
Electrostatic discharge in accordance with IEC 61000-4-2	Air discharge: 8 kV Contact discharge: 6 kV	3
Bursts (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 S7-300 PLC, Installation, chapter "Lightning and overvoltage protection")		
Asymmetrical coupling	2 kV power cable DC voltage with protective elements	3
Symmetrical coupling	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. This requires the HMI device to meet the specifications and directives for electrical installation.

Sinusoidal interference	Test values	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"> • to 10 V/m in the range 80 MHz to 1.0 GHz • to 10 V/m in the range 1.4 GHz to 2.0 GHz • to 1 V/m in the range from 2.0 GHz to 2.7 GHz 	3
HF conductance on cables and cable shields in accordance with IEC 61000-4-6	Test voltage 10 V, with 80 % amplitude modulation of 1 kHz in the 150 kHz to 80 MHz range	3

Emission of radio interference

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

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

2.7 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 ²
Shock in accordance with IEC 60068-2-29	250 m/s ² , 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)
- Class 3K3 (climatic requirements)

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

Mechanical ambient conditions

The following table shows the mechanical ambient conditions for the HMI device in the form of sinusoidal vibration.

Frequency range in Hz	Constant	Occasional
$10 \leq f \leq 58$	Amplitude 0.0375 mm	Amplitude 0.075 mm
$58 \leq f \leq 150$	Constant acceleration 0.5 g	Constant acceleration 1 g

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).

Testing mechanical ambient conditions

The following table provides information on the type and scope of tests for mechanical ambient conditions:

Tested for	Test standard	Comments
Vibrations	Vibration test in accordance with IEC 60068, part 2-6 (sinusoidal)	Applies to HMI device, charging station and transponder: Type of vibration: Transitional rate of the frequency: 1 octave/minute. 10 ≤ f ≤ 58, constant amplitude 0.075 mm 58 ≤ f ≤ 150, constant acceleration 1 g Vibration duration: 10 frequency cycles per axis in each of the three mutually vertical axes.
Shock	Shock testing in accordance with IEC 60068, Part 2 -27	Applies to HMI device, charging station and transponder: Type of shock: half-sine Shock intensity: Peak value 15 g, duration 11 ms Direction of impact: 3 shocks in ± directions in each of the three mutually vertical axes
Falling	Drop testing in accordance with EN 60068-2-32	Applies only to the HMI device, with and without battery: 1.2 m

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 • Operation • Storage/transport	• From 0 to 40 °C • From -20 to 60 °C	
Relative humidity	10 to 80 %, without condensation	Corresponds to relative humidity, load degree 2 in accordance with IEC 61131, part 2
Atmospheric pressure	1,080 hPa to 795 hPa	Corresponds to an elevation of -1,000 to 2,000 m
Pollutant concentration	SO ₂ : < 0.5 vpm; Relative humidity < 60 %, no condensation	Check: 10 cm ³ /m ³ ; 10 days
	H ₂ S: < 0.1 vpm; Relative humidity < 60 %, no condensation	Check: 1 cm ³ /m ³ ; 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"> • Operation • Storage/transport 	<ul style="list-style-type: none"> • From 0 to 40 °C • From -20 to 60 °C 	
Relative humidity	10 to 80 %, without condensation	Corresponds to relative humidity, load degree 2 in accordance with IEC 61131, part 2
Atmospheric pressure	1,080 hPa to 795 hPa	Corresponds to an elevation of -1,000 to 2,000 m
Pollutant concentration	SO ₂ : < 0.5 vpm; Relative humidity < 60 %, no condensation	Check: 10 cm ³ /m ³ ; 10 days
	H ₂ S: < 0.1 vpm; Relative humidity < 60 %, no condensation	Check: 1 cm ³ /m ³ ; 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"> • Operation • Storage/transport 	<ul style="list-style-type: none"> • From 0 to 50 °C • From -20 to 60 °C 	
Relative humidity	10 to 80 %, without condensation	Corresponds to relative humidity, load degree 2 in accordance with IEC 61131, part 2
Atmospheric pressure	1,080 hPa to 795 hPa	Corresponds to an elevation of -1,000 to 2,000 m
Pollutant concentration	SO ₂ : < 0.5 vpm; Relative humidity < 60 %, no condensation	Check: 10 cm ³ /m ³ ; 10 days
	H ₂ S: < 0.1 vpm; Relative humidity < 60 %, no condensation	Check: 1 cm ³ /m ³ ; 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.

CAUTION
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. The HMI device can fall down if it is not securely hooked in.

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.

Note

Positioning

Observe the following points when selecting the mounting location:

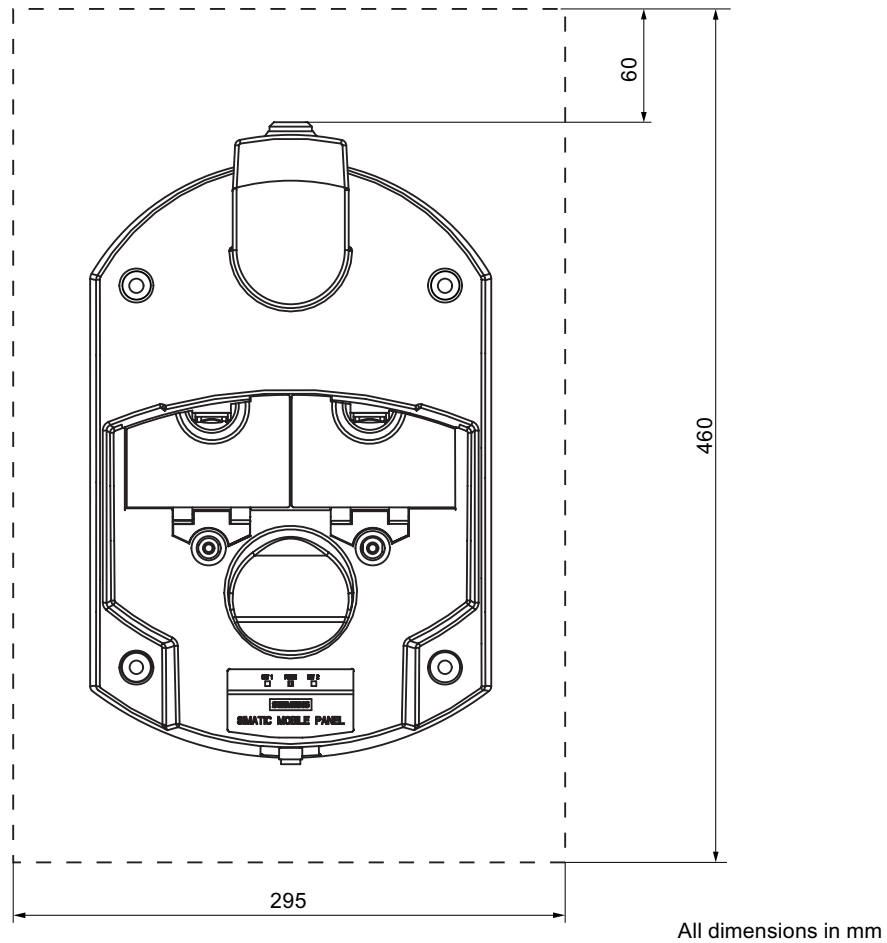
- The display must not be exposed to direct sunlight
- Ergonomic mounting height

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 60529	Description
Front panel and rear panel	HMI device: <ul style="list-style-type: none">• IP65 For the charging station and transponder: <ul style="list-style-type: none">• IP65

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. You will find more details on this in the system manual "SIMATIC NET, Fundamentals - Industrial Wireless LAN", Chapter "Network architecture".

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.

Wireless standard

As a general rule the use of WLAN according to IEEE 802.11a is recommended.

Use of transponders

If the system is divided into zones and transponders are in use, WLAN according to IEEE 802.11a must be used.

Ad hoc mode

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

3.6 Zones

3.6.1 Division of the system into zones

Zone

You can divide your system into zones.

A zone might be where part of a particular industrial process is carried out, e.g. assembly of parts. Zone-specific process displays and possible operations can be configured in the project.

Note

You can also operate the HMI device in a system without any zones being defined in the system. In this case, no transponders are required in the system.

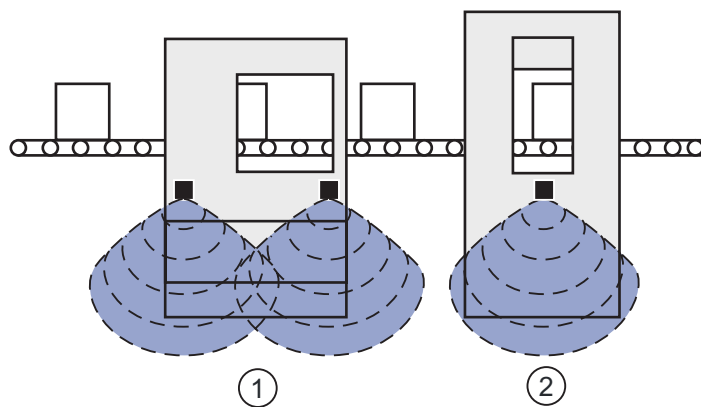
Rules governing zones

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. Each transponder can only be assigned to one zone. 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 following figure 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 configured transponder(s)

Thus the HMI device determines which zone it is in.

See also

Setting transponder ID and inserting the battery (Page 51)

3.6.2 Detecting zones

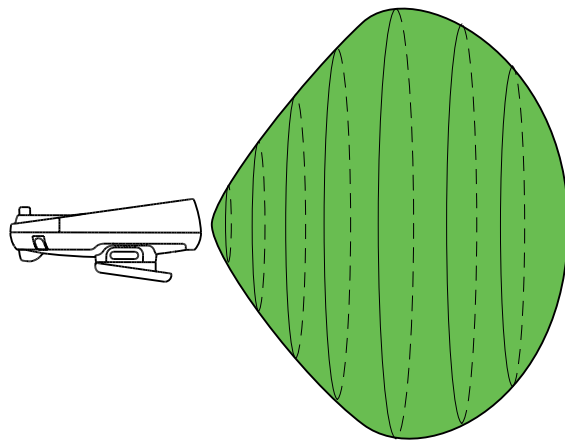
Overview

All zones are within the WLAN area. The WLAN area is the area in the system where the HMI device can communicate with other communication devices over a wireless local area network.

Zones must not overlap. Zones are formed by transponders.

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 279) .



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
Result	Distance measurement successful	Distance measurement not possible	Distance measurement not possible

Aligning the HMI device to the transponder

In order for the HMI device and the transponder to be able to detect one other, the HMI device must be aligned to the transponder so that the transponder is in the main count direction of the HMI device's antenna.

The HMI device's antenna has a lobe-shaped beam. An illustration can be found in Chapter Radiation characteristic (Page 279).

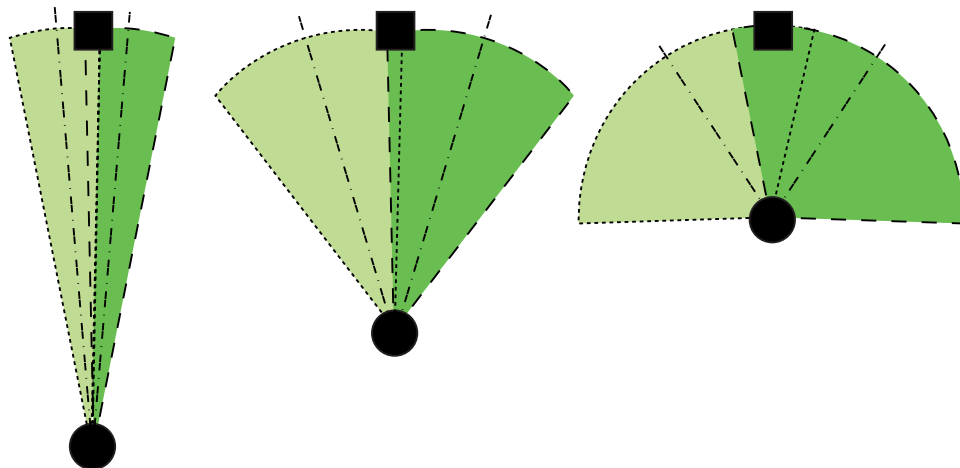
The lobe shape of the beam means that the permissible angle of deviation from the main count direction before the HMI device loses connection with the transponder depends on how far the HMI device is from the transponder.

The further away the HMI device is from the transponder, the more accurately it must be aligned to the transponder. Only a very small angle of deviation from the main count direction of the HMI device is permissible.

The closer the HMI device is to the transponder, the greater the deviation from the main count direction can be.

At a distance of 8 m, the permissible angle of deviation is about 20°. At a distance of 4 m, the permissible angle of deviation is about 110°.

The diagram below shows an example of the possible angle of deviation from the main count direction, depending on the distance from the transponder.



Mounting and connecting

4.1 Checking the package contents

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

NOTICE
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
- 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 42)

4.3 Setting transponder ID and inserting the battery

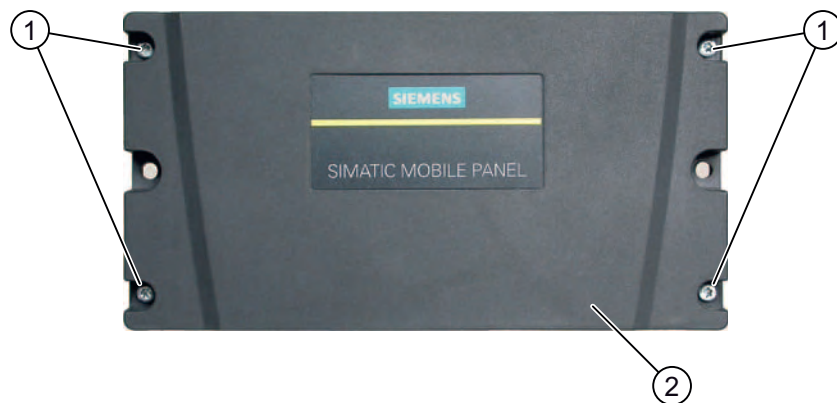
Introduction

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



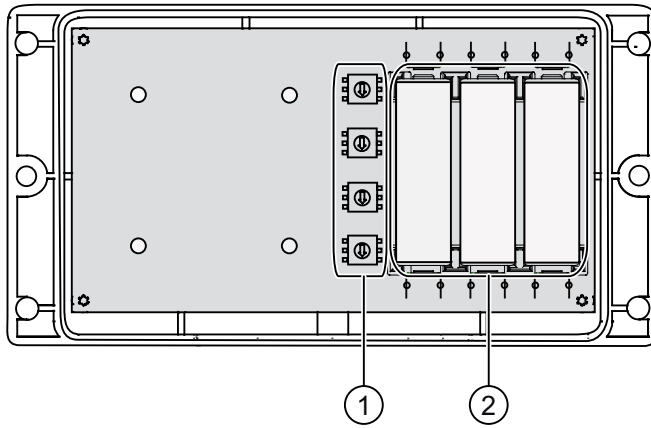
- ① Screws
- ② Cover

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.

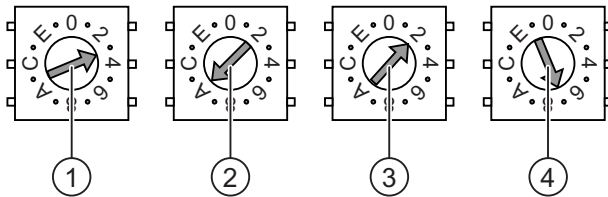
Rotary coding switch and batteries

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

CAUTION
ESD 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.

NOTICE
Damage to thread 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

Detecting zones (Page 47)

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 279) .

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.

See also

Detecting zones (Page 47)

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 mm²
- End sleeves

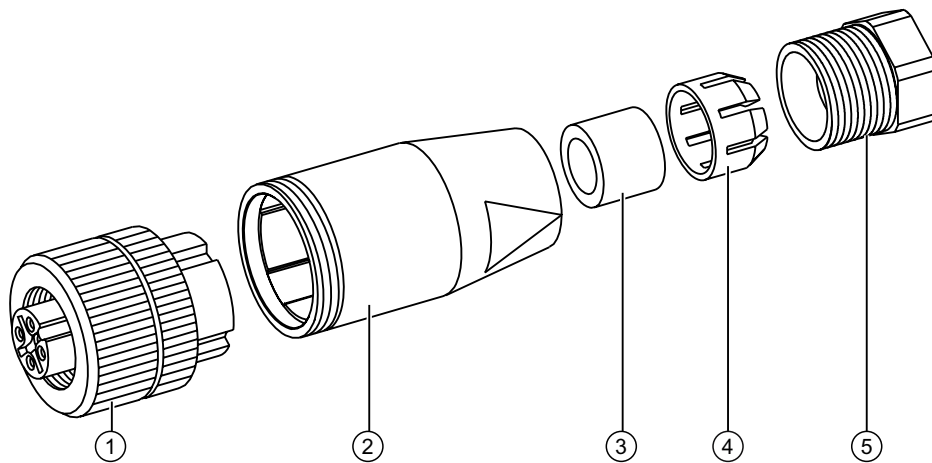
Pin assignment

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:



- ① Socket insert
- ② Coupling bush
- ③ Seal
- ④ Fastening case
- ⑤ Cable seal

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 44)

4.7 Connecting the HMI device

4.7.1 Opening and closing the connection compartment

Introduction

Before you begin:

CAUTION
Malfunctions If the HMI device is switched on and lying on its front, the key-operated switch or illuminated pushbutton can trigger. This can result in malfunctions. Place the HMI device with the front side facing down on a flat, clean surface to protect against damage.

NOTICE
Unintentional switching off of the HMI device When you open the connection compartment, remove the main battery. This failure of the main battery is bridged by the bridging battery, if fitted. The maximum bridging time is 5 minutes. If you exceed the bridging time, the HMI device will switch off. Do not exceed the bridging time!

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.

Requirements

Cross-head screwdriver, size 2

Battery compartment and connection compartment



- ① Locking latch
- ② Connection compartment 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 compartment 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.



CAUTION
Damage to the HMI device The connection compartment cover is connected to the HMI device's housing by wiring. Open the connection compartment cover carefully.

Procedure for opening the connection compartment

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

CAUTION
Damage to the HMI device When the connection compartment 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.

CAUTION

Damage to the HMI device

When the connection compartment is open the HMI device is vulnerable to damage from electrostatic discharge.

ESD

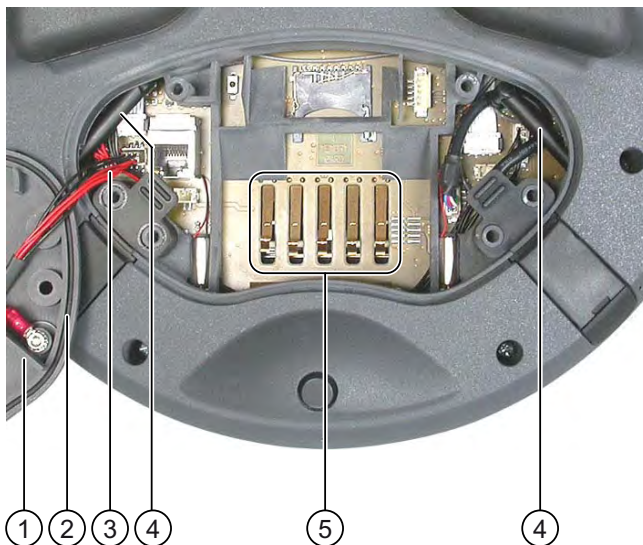
When working in the open housing, ensure that current-carrying conductors do not come into contact with electrical circuits.

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 compartment is open.



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

Note

Only insert the memory card and bridging battery into the connection compartment!
Do not insert any other objects in the connection compartment.

Notes for closing

NOTICE
Damage to thread 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. Only tighten the screws with the permitted torque of 0.4–0.5 Nm.
NOTICE
Damage to wiring at charging contacts When closing the connection compartment cover, be careful not to trap the wiring at the charging contacts.
NOTICE
IP65 degree of protection not fulfilled Ensure that the seals belonging to the connection compartment 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 compartment and battery compartment

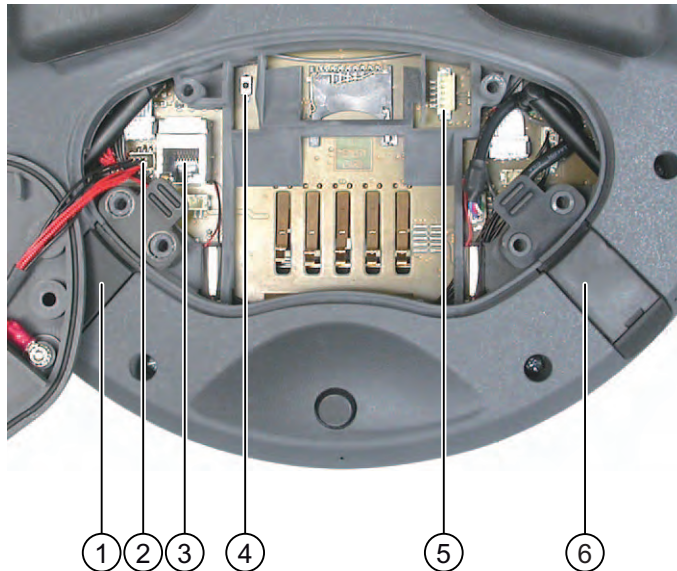
1. Place the cover on the connection compartment.
Be careful with the wiring to the charging contacts.
2. Tighten the 6 cover screws.
3. Insert the main battery.
4. Replace the cover on the battery compartment.
The fastener of the battery compartment cover must engage below the locking latch.

Result

The connection compartment 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 compartment. If the connection bay is open, degree of protection IP65 is not fulfilled.

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

NOTICE

Switching off the HMI device

Pressing the reset button will cause the HMI device to switch off completely.

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.

4.7.3 Connecting the configuring PC

Requirements

- For connection via PROFINET (LAN via RJ45 interface):
The connection compartment on the HMI device is open.
- For connection via PROFINET (WLAN):

Note

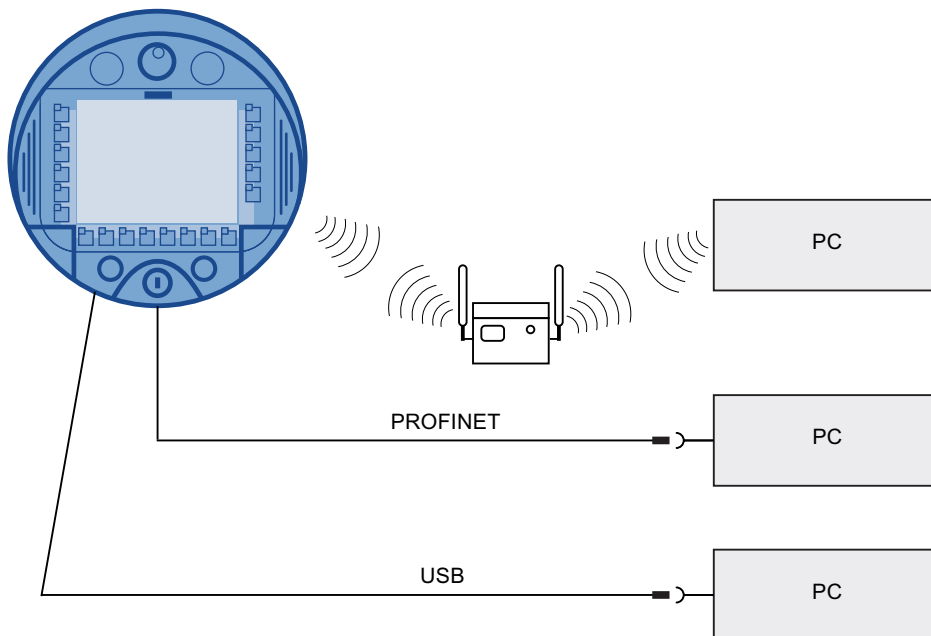
You must connect the HMI device to the configuring PC in infrastructure mode.
An ad hoc network is not possible.

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



NOTICE

USB connection sequence

Observe the following sequence when connecting by USB:

1. HMI device
2. PC

USB Host-to-Host cable

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.

NOTICE

IP65 degree of protection not fulfilled

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 IP65 is not fulfilled.

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.

Only connect a configuring PC directly to the HMI device for a short period.

The ports are described in the specifications.

See also

Description of interfaces on the HMI device (Page 278)

Interfaces of the HMI device (Page 61)

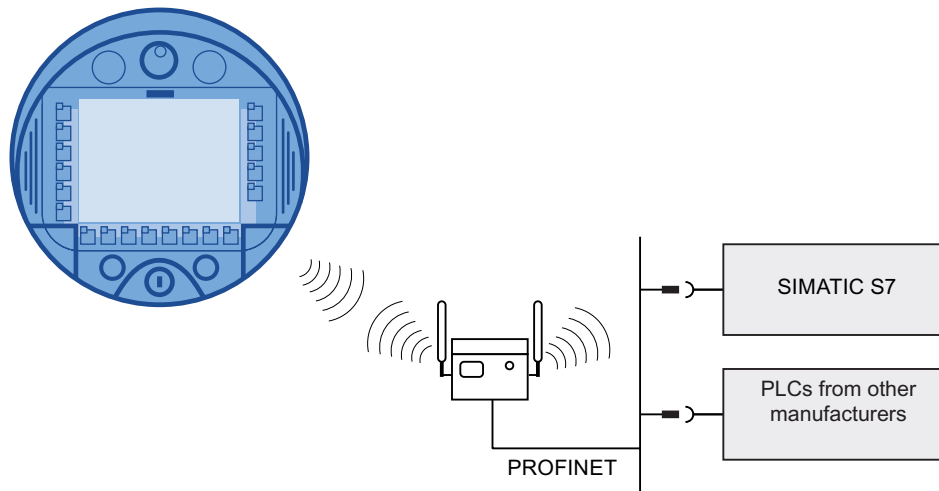
4.7.4 Connecting the PLC

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>".

Connection graphic

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



See also

Description of interfaces on the HMI device (Page 278)

Interfaces of the HMI device (Page 61)

Communication (Page 27)

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/de/11376409>".

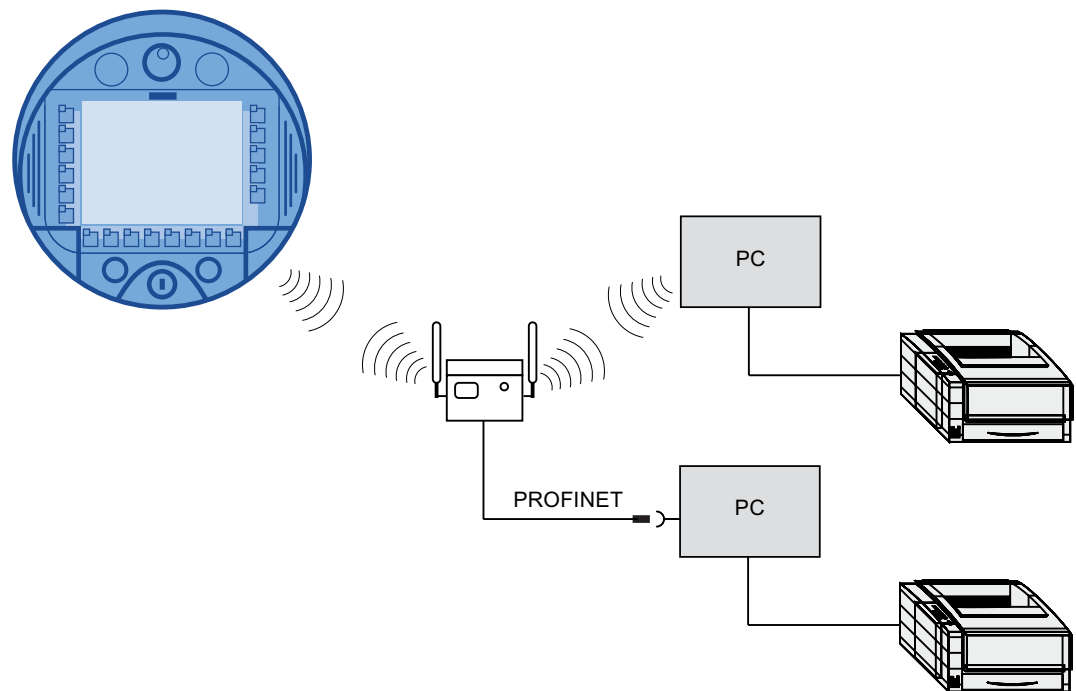
Observe the supplied printer documentation when you connect the printer.

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.



See also

Description of interfaces on the HMI device (Page 278)

Interfaces of the HMI device (Page 61)

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

NOTICE
Devices with a separate power supply 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.
NOTICE
Additional load for battery 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.
NOTICE
Functional problem 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.
NOTICE
Access to USB interface is not possible 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

- Description of interfaces on the HMI device (Page 278)
- Interfaces of the HMI device (Page 61)

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.

CAUTION

Danger of overheating

Do not cover the tabletop power supply unit.
--

CAUTION

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

NOTICE

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 44)

4.8 Inserting, charging and changing the battery

4.8.1 Safety instructions

 CAUTION
Fire and explosion hazard In the following cases, there is a risk of fire and, in extreme cases, explosion! <ul style="list-style-type: none">• Incorrect charging and discharging of the battery• Reverse polarity• Short-circuit 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.

 CAUTION
Danger of injury 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.

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

CAUTION

Malfunctions

If the HMI device lies on its front, the key-operated switch or illuminated pushbutton can trigger. 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.

NOTICE

Only use batteries that are approved for the HMI device.
--

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.
--

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

ESD guideline (Page 285)

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 68)
- Opening and closing the connection compartment (Page 56)

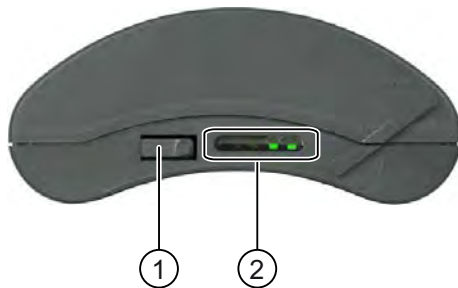
4.8.3 Displaying battery status

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.

See also

Displaying battery status (Page 162)

Displaying battery status (Page 209)

4.8.4 Changing the main battery

Introduction

 CAUTION
--

Possible failure of HMI device while main battery is changed

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 once 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.

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

- Display backlighting
- Touch screen
- The function keys and associated LEDs
- 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. Remove the main battery using the ribbon.
2. Insert the new main battery.
3. 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 68)

Maintenance and care (Page 267)

Inserting batteries for the first time (Page 70)


Opening and closing the connection compartment (Page 56)

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

 CAUTION
Possible failure of HMI device while main battery is changed 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.

NOTICE

Bridging of main battery not possible
--

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 compartment.
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 compartment.
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 compartment.
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 68)

Inserting batteries for the first time (Page 70)

4.9 Switching on and testing the HMI device

Requirements

In order to switch on the Mobile Panel 277 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

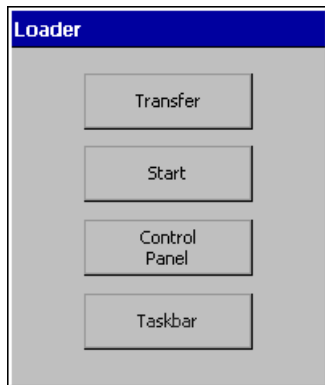
Proceed as follows:

- 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.



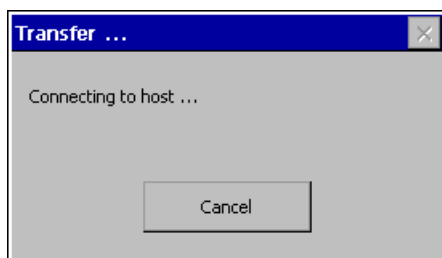
Transfer

The HMI device automatically switches to "Transfer" mode during initial startup under the following conditions:

- 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:



1. Press "Cancel" to stop the transfer.

Result

The Loader appears again.

Starting and transferring a project

Note

When restarting the system, a project may already be loaded on the HMI device. The system then skips Transfer mode and starts the project.

If you want to transfer another project, for example, exit the project. To do this, use the corresponding operating element.

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

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 box is displayed
- The Loader appears
- A project is started

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. Any active project is automatically terminated.

See also

Inserting batteries for the first time (Page 70)

Operator controls and displays

5.1 Overview

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



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

NOTICE
Damage to the touch screen 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.
Damage to the keyboard 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 277 IWLAN

Introduction

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



① LED display

Note

The SAFE and RNG LEDs have no function on the Mobile Panel 277 IWLAN.

Meaning of the LED displays

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

Functions	Designation	Color	Meaning
PROFIsafe communication	SAFE		The SAFE LED is always off.
Power	PWR	Green	The "PWR" LED only lights up or flashes when the HMI device is switched on. The PWR LED lights up in the following instances: <ul style="list-style-type: none">• The main battery is fitted and charged• The HMI device is in the charging station• The HMI device is connected to the tabletop power supply unit The "PWR" LED flashes when the HMI device is in the "Power Save 2" state.
Communication	COM	Green	The "COM" LED remains off as long as no WLAN network is configured. The "COM" LED flashes when the HMI device is attempting to establish a connection to a WLAN network. The "COM" LED lights up when the HMI device has established a connection to a WLAN network.
Effective range	RNG		The RNG LED is always off.
Battery status	BAT	Green/red	The "BAT" LED goes out under the following circumstances: <ul style="list-style-type: none">• The main battery is empty• The main battery is not installed The "BAT" LED flashes when the main battery is being charged. The "BAT" LED lights up red when the main battery has a charging status of less than 10 %. The "BAT" LED lights up green when the main battery has a charging status of at least 10 %.

See also

Power management (Page 82)

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.

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

If you press the ON/OFF button for at least 4 seconds, the current project on the HMI device will be terminated and the HMI device will switch off.

Note

In "Power Save 2" state it is not possible to connect any devices to the RJ45 interface.

See also

Setting the screen saver (Page 133)

5.4 Operator controls

5.4.1 Handwheel

Introduction

The hand wheel is an optional operator control on the Mobile Panel 277 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.

5.4.2 Key-operated switch

Introduction

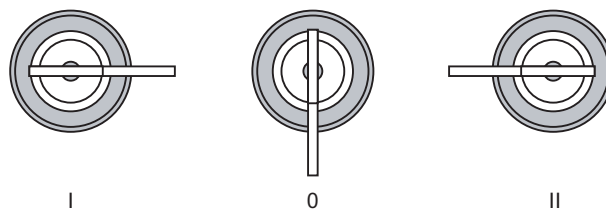
The key-operated switch is an optional operator control on the Mobile Panel 277 IWLAN. The key-operated switch is used to lock functions that can be triggered from the Mobile Panel 277 IWLAN.



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 is usable on any Mobile Panel 277 IWLAN.

5.4.3 Illuminated pushbutton

Introduction

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



① Illuminated pushbutton

5.4.4 Evaluation of the operator controls

5.4.4.1 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.

5.4.4.2 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.

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

See also

Direct keys (Page 197)

5.4.4.3 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)

5.4.4.4 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.

5.4.4.5 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
-

5.4.4.6 Evaluation and activation of the illuminated pushbuttons

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)

5.5 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, e.g. during backup or recipe transfer.

Instructions

CAUTION**Malfunctions**

If the HMI device lies on its front, the key-operated switch or illuminated pushbutton can trigger. This can result in malfunctions.

NOTICE**Switching off the HMI device**

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.

Do not exceed the buffer time!

ESD guideline

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

Note the ESD instructions.

Note**Multimedia card**

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

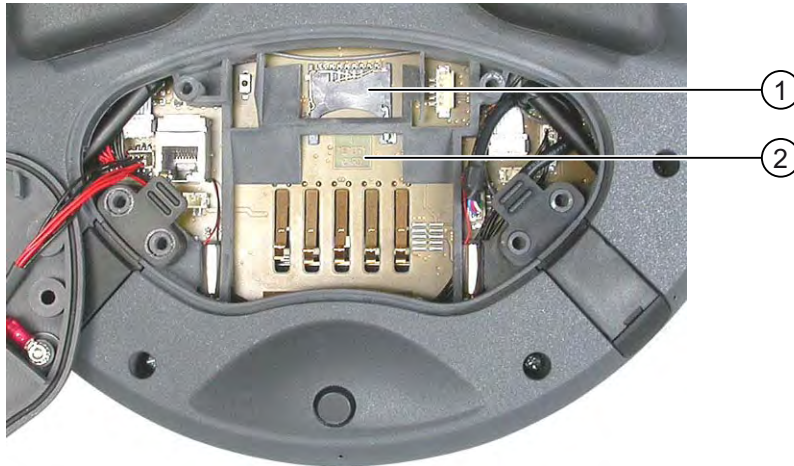
NOTICE

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 compartment 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

NOTICE
Data loss 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 removing a memory card

Proceed as follows:

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

See also

Opening and closing the connection compartment (Page 56)

5.6 Labeling the function keys

Introduction

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

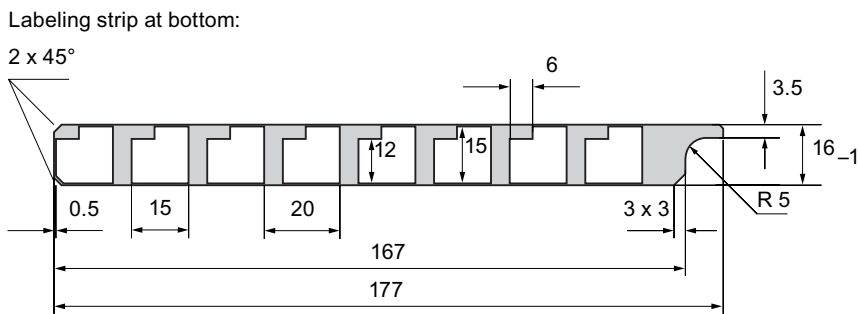
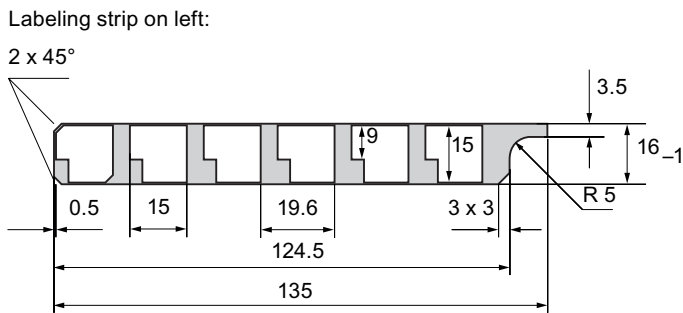
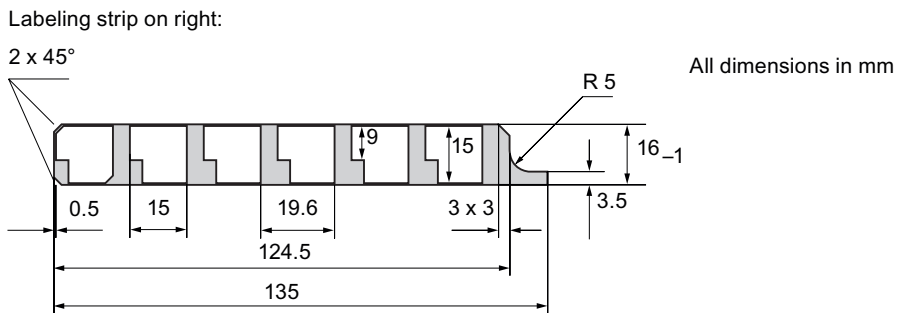
NOTICE
Do not write on the keyboard to label the function keys.

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



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

Accessory kit and other accessories (Page 18)

5.7 Holding the mobile panel and fixing it to the wall

Holding the HMI device

The following figure shows the position of the arms relative to the HMI device, taking the example of the Mobile Panel 277F IWLAN.



The depicted posture enables you, for example, to have freedom of movement while servicing the monitored system.

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.

Note

Holding the HMI device

Please observe the following:

To allow the HMI device to evaluate the current zone, the HMI device and the transponder must be able to detect each other. Always align the HMI device towards the transponder.

Accommodating the HMI device

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



See also

Detecting zones (Page 47)

5.8 Charging station

5.8.1 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.

5.8.2 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>

5.8.3 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

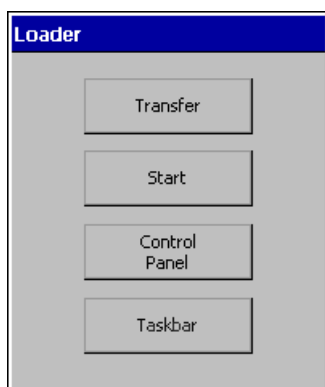
Charging station (Page 20)

Configuring the operating system

6.1 Loader

Loader

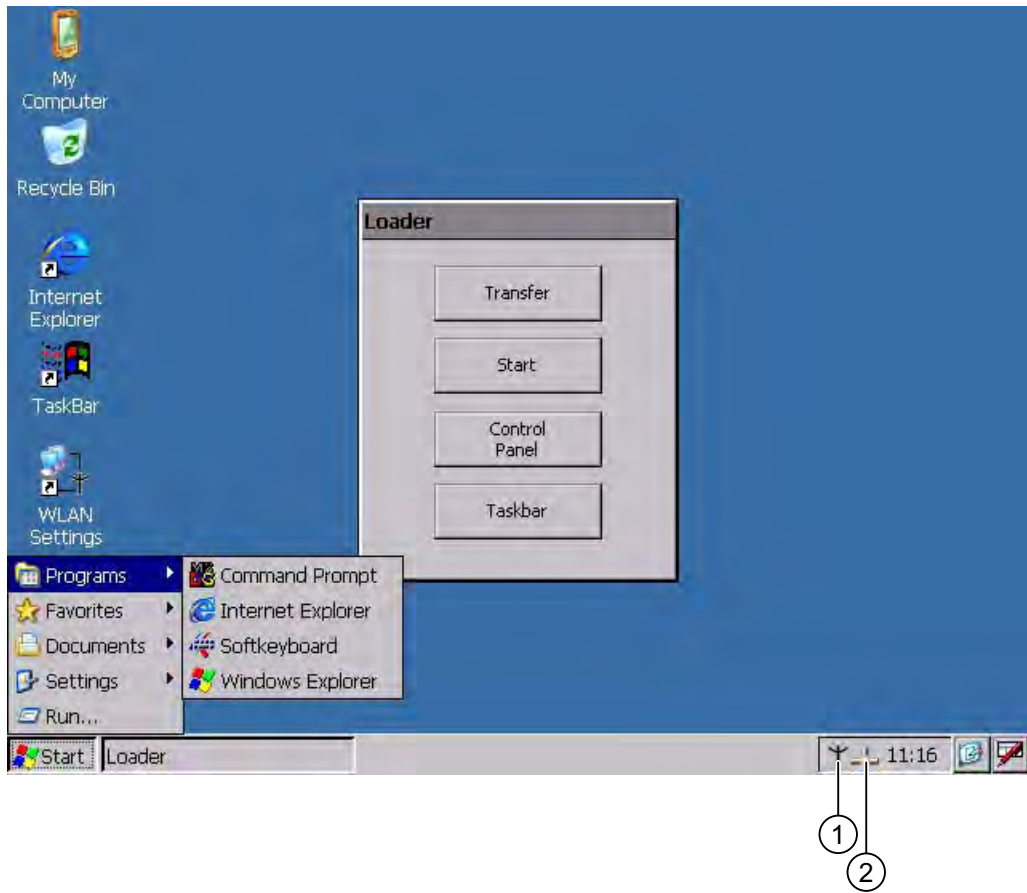
The following figure shows the Loader.



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

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!

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

Switching on and testing the HMI device (Page 76)

Changing password protection (Page 127)

Programming the data channel (Page 141)

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.

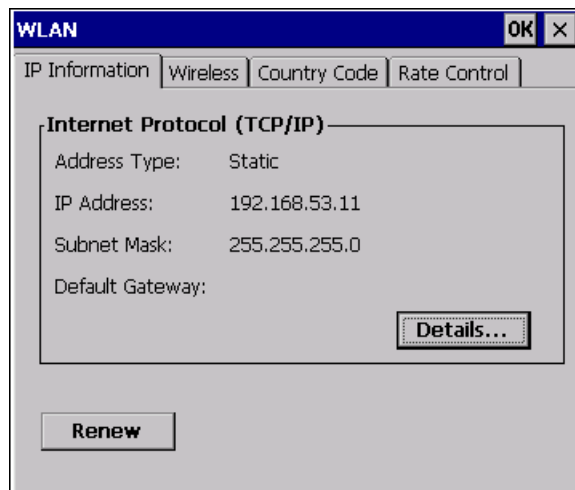
WLAN connection

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.



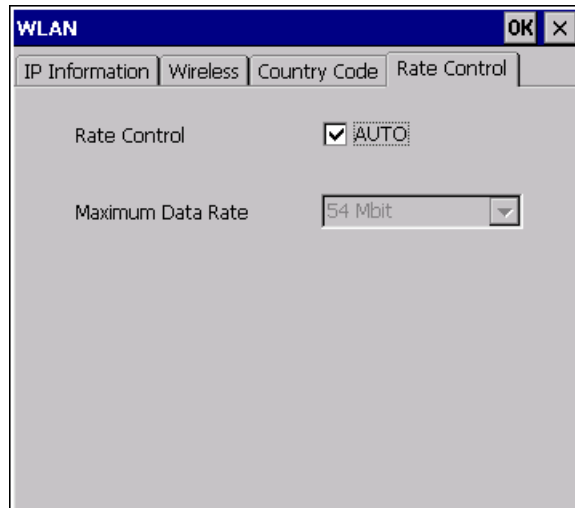
2. Select the required country code from the "Country Code" selection box.
3. Confirm your entries.
The dialog closes.

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

Required properties of the WLAN connection (Page 45)


Restarting the HMI device (Page 137)

6.2.2 Parameterizing the WLAN connection

Introduction

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

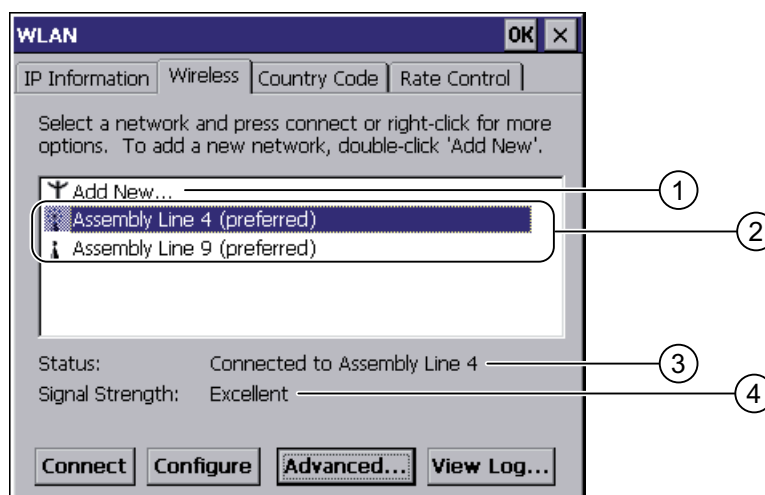
Requirements

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:

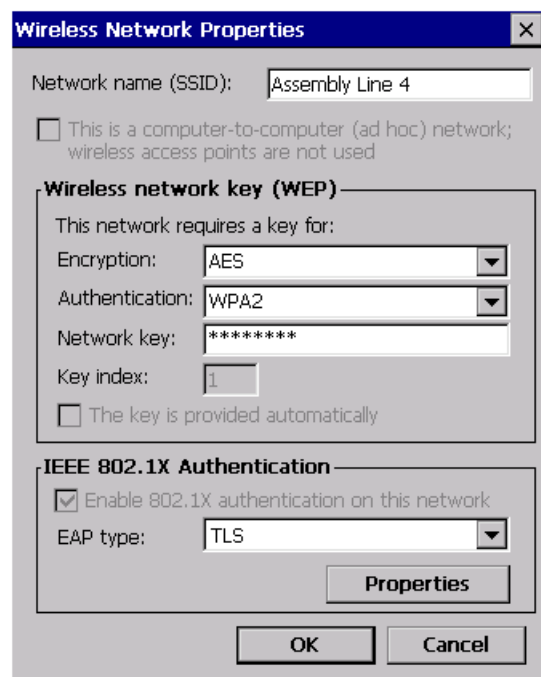
- The WLAN network to which the connection exists
- All parameterized networks



- 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.

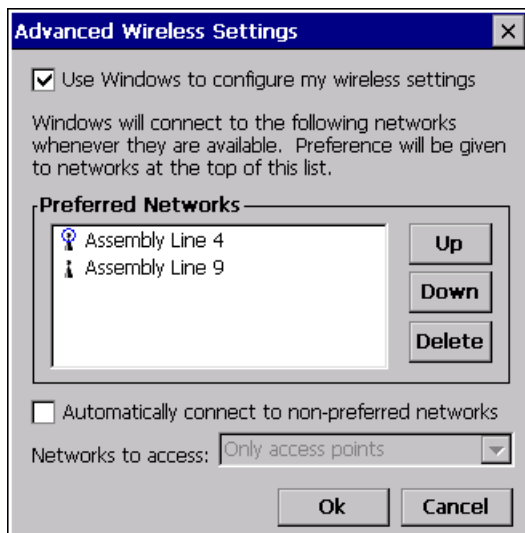
4. If necessary, select the encryption you are using under "Encryption".
5. If necessary, select the required authentication process under "Authentication".
6. If necessary, enter the password for the WLAN network under "Network key".
7. If necessary, select the type of authentication protocol under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

See also

Required properties of the WLAN connection (Page 45)

6.3 Control Panel

6.3.1 Overview

Control Panel of the HMI device




You can configure the following settings in the Control Panel of the HMI device:

- 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
 - Open the Windows CE start menu. Alternatively, press the  key twice on the alphanumerical screen keyboard.












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.

Symbol	Functions	Tab/entry	Chapter
	Saving and restoring with external storage device	–	Backing up and restoring with an external memory medium (Page 158)
	Importing, displaying and deleting certificates	"Stores"	Importing and deleting certificates (Page 157)
	Setting the date and time	"Date/Time"	Setting the date and time (Page 128)
	Configuring the screen keyboard	–	Configuring the screen keyboard (Page 121)
	Changing the browser startup page and general browser settings	"General"	Changing internet settings (Page 154)
	Changing connection and proxy server settings	"Connection"	Setting the proxy server (Page 155)
	Changing cookie settings	"Privacy"	Changing data protection settings (Page 155)
	Changing security settings	"Advanced"	Changing data protection settings (Page 155)
	Setting the character repeat for the keyboard	"Repeat"	Setting the character repeat rate of the screen keyboard (Page 123)
	Setting the double-click	"Double-Click"	Setting the double-click (Page 124)
	Parameterizing the WLAN connection	"WLAN"	Changing the network configuration (Page 150)
	Setting the IP address	'WLAN' Settings'	"IP Address"
	Setting the name server	'WLAN' Settings'	"Name Servers"

Symbol	Functions	Tab/entry	Chapter
	Parameterizing the LAN connection	"LAN"	Changing the network configuration (Page 150)
	Setting the IP address	'LAN' Settings'	"IP Address"
	Setting the name server	'LAN' Settings'	"Name Servers"
	Changing the logon data	"Identification"	Changing the logon data (Page 152)
	Backup registry information	"Persistent Storage"	Backup registry information (Page 131)
	Changing monitor settings	"Display"	Changing screen settings (Page 132)
	Displaying information about the HMI device	"Device"	Displaying information about the HMI device (Page 138)
	Restarting the HMI device	"Device"	Restarting the HMI device (Page 137)
	Calibrating the touch screen	"Touch"	Calibrating the touch screen (Page 125)
	Displaying battery status	"Battery"	Displaying battery status (Page 162)
	Activate memory management	"Memory Monitoring"	Activate memory management (Page 163)
	Activating vibration alarm	"Vibration Alarm"	Activating vibration alarm (Page 140)
	Changing password protection	"Password Settings"	Changing password protection (Page 127)
	Changing the printer properties	–	Changing the printer properties (Page 135)
	Changing the PROFINET IO setting	–	Enabling PROFINET IO (Page 145)
	Changing regional settings	"Regional Settings"	Changing regional settings (Page 130)
	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 133)
	Reducing the backlighting		
	Displaying the system information	"General"	Displaying system properties (Page 139)
	Displaying memory information	"Memory"	
	Setting the device name of the HMI device	"Device Name"	Setting the device name of the HMI device (Page 149)
	Programming the data channel	"Channel"	Programming the data channel (Page 141)
	Setting the delay time	"Directories"	Setting the delay time (Page 144)
	Changing e-mail settings ¹⁾	"Email"	Changing e-mail settings (Page 153)

¹⁾ 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 .
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 121)


6.4 Changing settings for operation

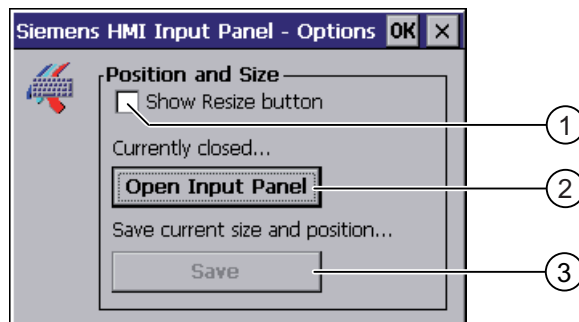
6.4.1 Configuring the screen keyboard


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

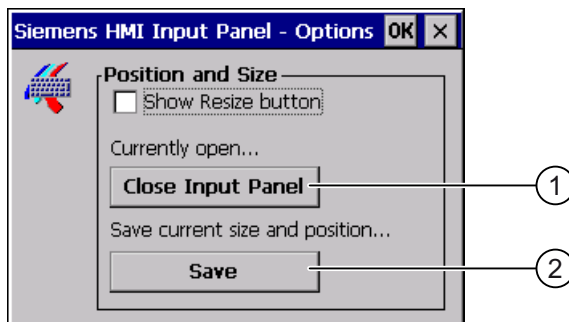
Proceed as follows:

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.

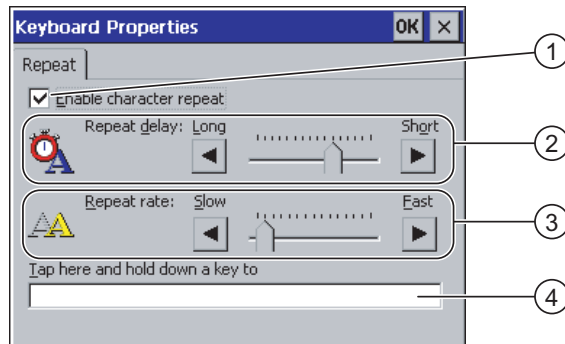
6.4.2 Setting the character repeat rate of the screen keyboard

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

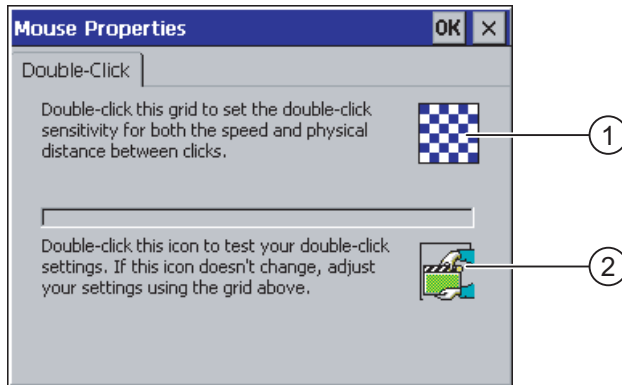
You can start applications in the Control Panel and in Windows CE by double-clicking. In the "Mouse Properties" dialog box you can change the following settings.

- 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

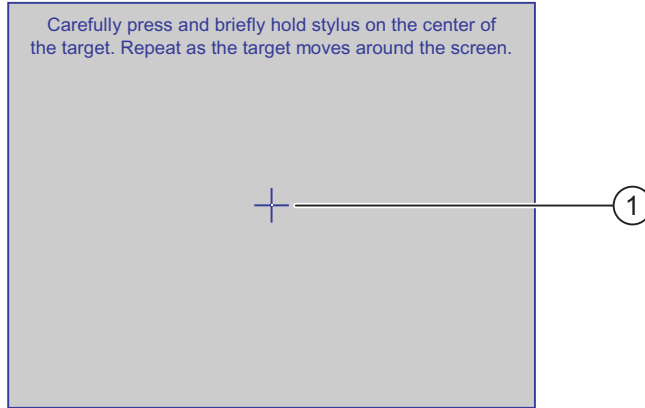
"OP"  icon.



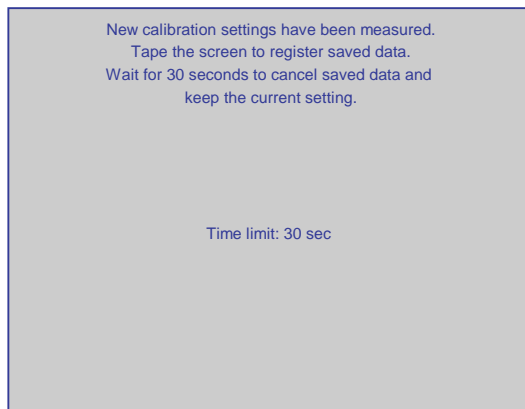
Procedure

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.

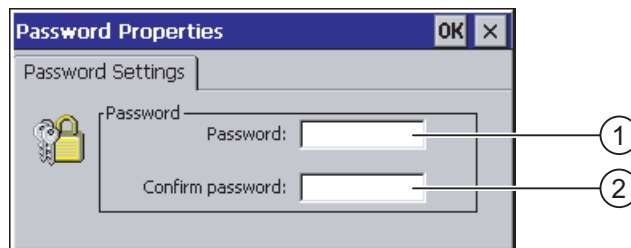
6.5 Changing password protection

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

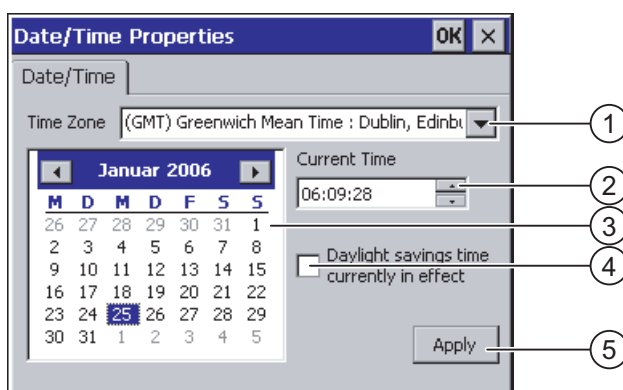
Introduction

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 date 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.

NOTICE
Time-dependent reactions
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 137)


6.6.2 Changing regional settings

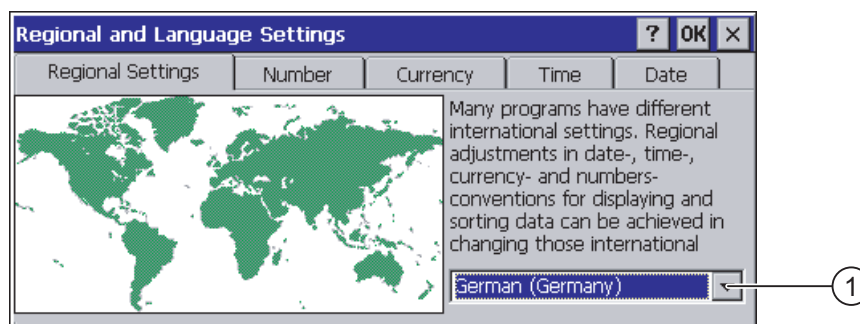
Introduction

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:

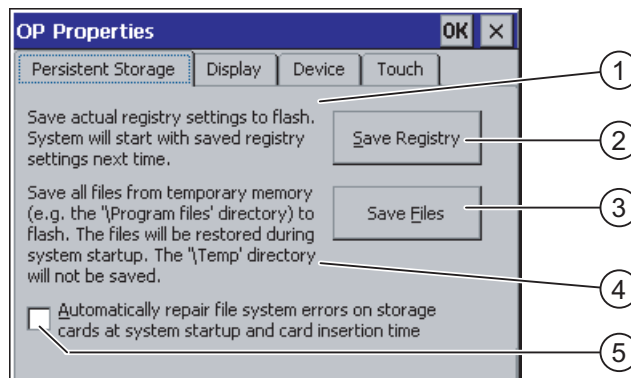
- Registry information
- Temporary files

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.

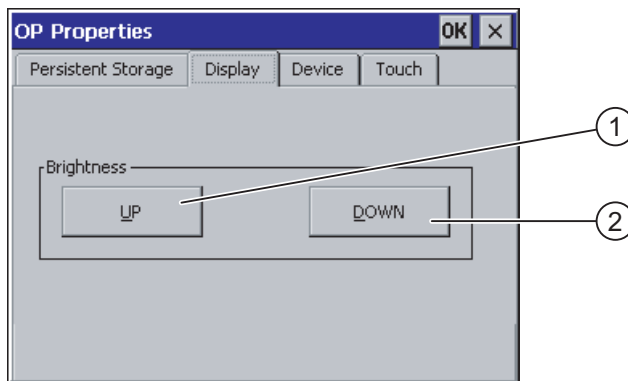
Result

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.

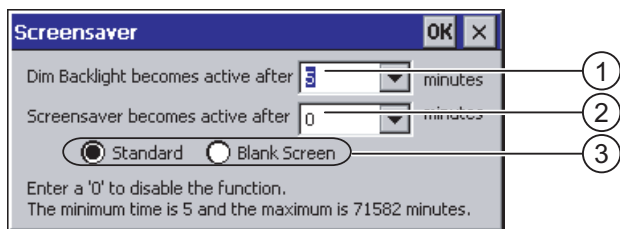
If a value of "0" is entered in the "Screensaver" dialog box for the reduction in backlighting, the value set in the project will apply.

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.

NOTICE
Reducing the brightness of the backlighting
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.
Burn-in effect
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 71,582 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 82)

Restarting the HMI device (Page 137)

6.6.6 Changing the printer properties

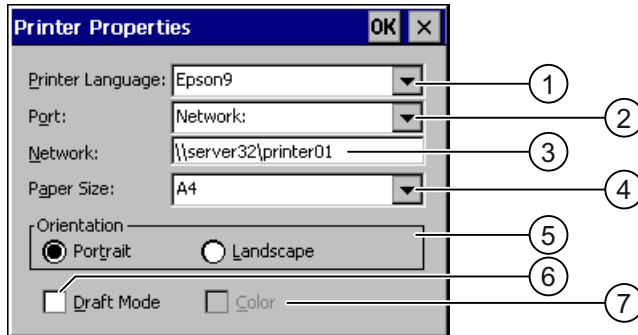
Introduction

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 data transfer rate to the Access Point.

NOTICE


Data loss when the HMI device is restarted

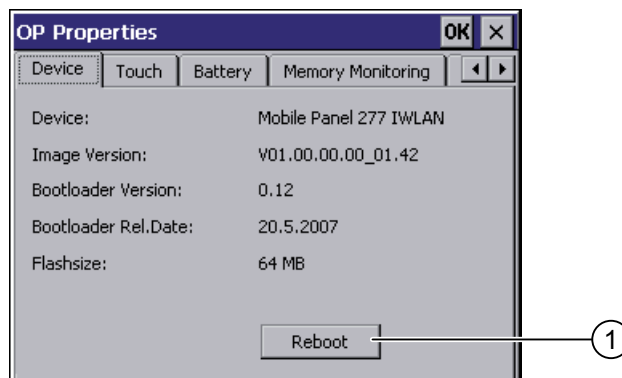
All volatile data is lost when the HMI device is restarted.

Check the following:

- The project on the HMI device is complete
- No data is being written to the flash memory

Requirements

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



- ① Button for restarting the HMI device

Procedure

1. Press "Reboot" to reboot the HMI device.
A warning is displayed.
The HMI device reboots immediately if you confirm this warning.

Result

The HMI device starts.

See also


- Setting the date and time (Page 128)
- Enabling PROFINET IO (Page 145)
- Overview (Page 109)

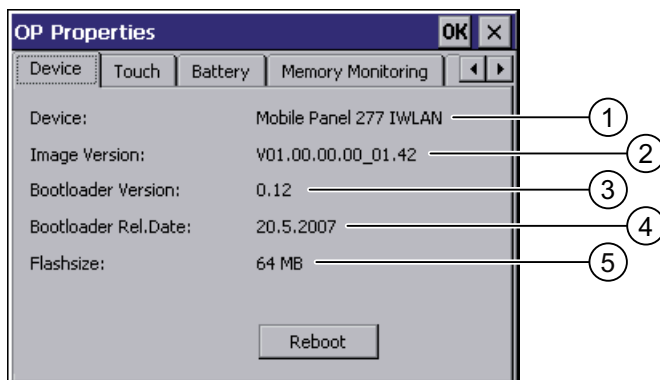
6.6.8 Displaying information about the HMI device

Introduction

You will need the device-specific information if you contact A&D 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 HMI 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.

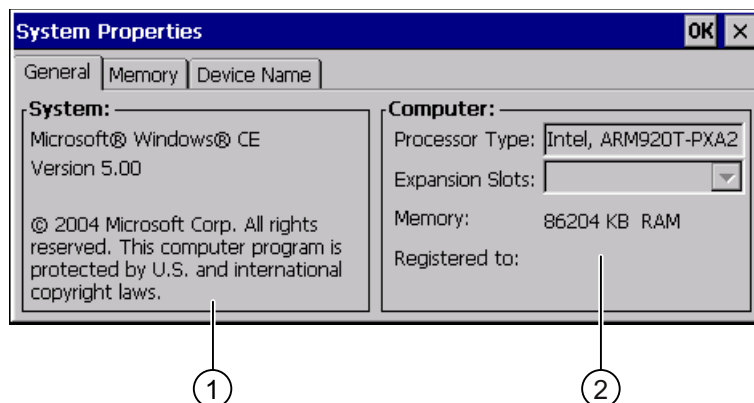
6.6.9 Displaying system properties

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.

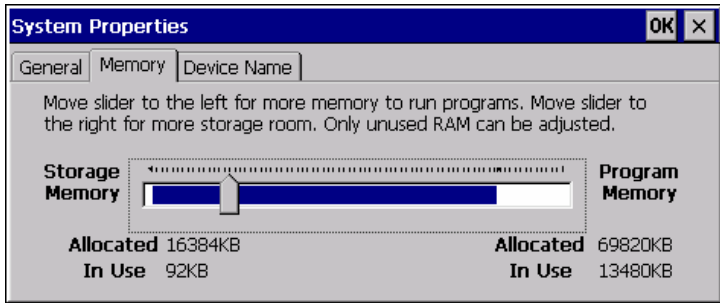
Close the dialog.

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.

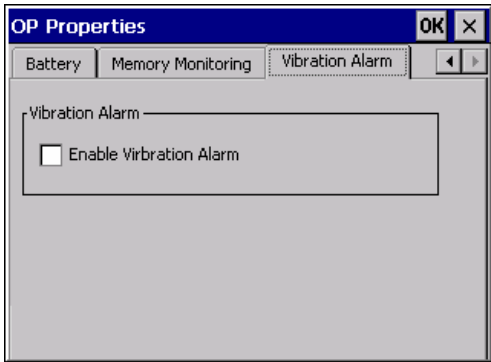
6.6.10 Activating vibration alarm

Introduction

You can activate a vibration alarm for the HMI device. The vibration alarm is triggered in the current project if 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.

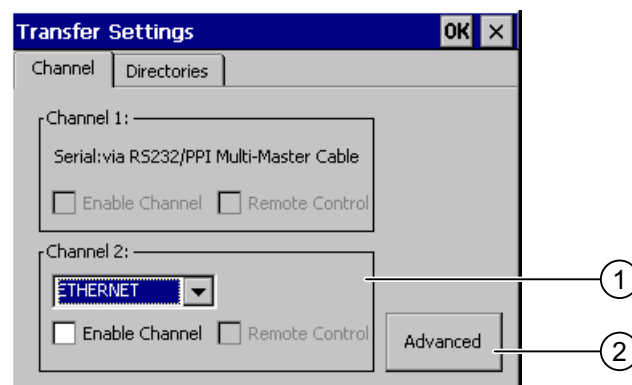
If you block all data channels, the HMI device is protected against unintentional overwriting of the project data and HMI device image.

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.

 WARNING
--

Unintentional transfer mode

Ensure that the configuring PC does not inadvertently switch the HMI device to transfer mode during the open project. This could cause unintentional actions to be triggered in the plant.
--

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 the "Transfer" operating 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 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
Transfer mode via channel 2 You can change the settings for the transfer. The following steps are required: <ul style="list-style-type: none">• Close the project.• Change the settings on the HMI device.• Then return to "Transfer" mode.

See also


Changing the network configuration (Page 150)

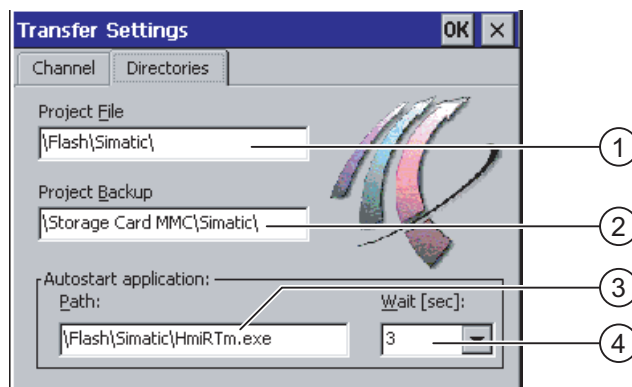
6.8 Setting the delay time

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.

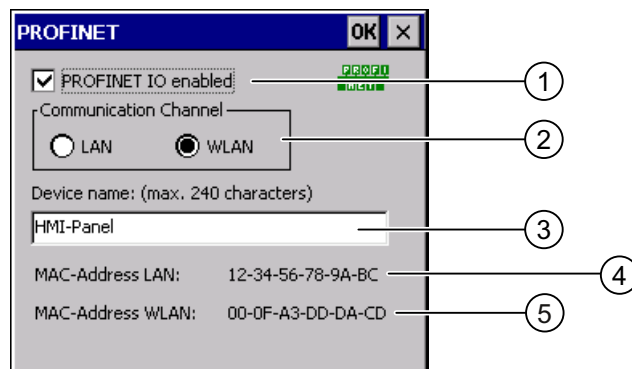
6.9 Enabling PROFINET IO

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 IP65 is not fulfilled.

3. Enter the device name of the HMI device.

The device name can have a maximum of 240 characters.

NOTICE
Addressing error of PROFINET IO device
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 137)
- Direct keys (Page 197)

6.10 Configuring network operation

6.10.1 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

NOTICE
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.

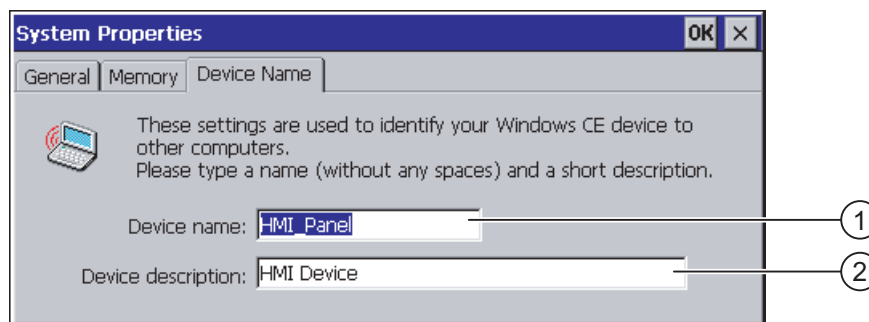
6.10.2 Setting the device name of the HMI device

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 147)

6.10.3 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.



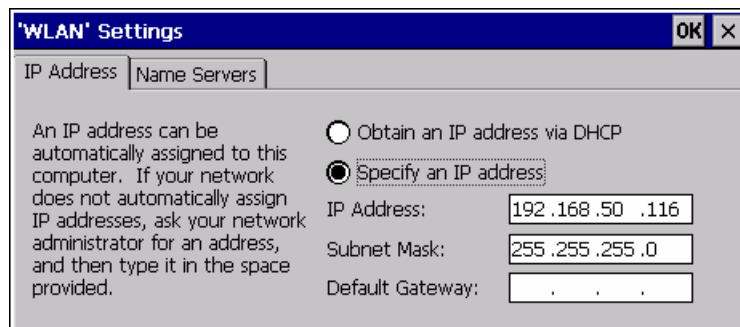
You can enter the connection parameters for the WLAN and LAN connection. The parameterization is identical.

Procedure for setting the connection parameters

The following procedure shows how to set the connection parameters using the WLAN connection.

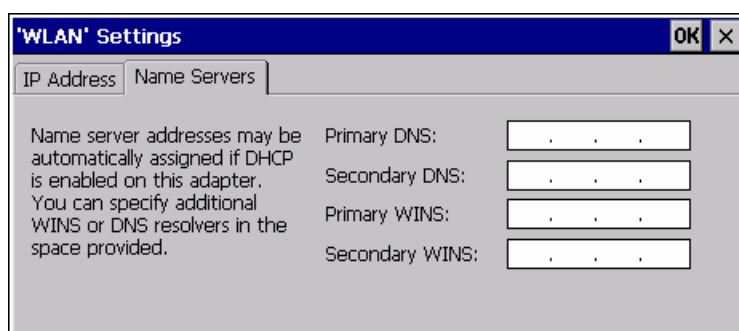
Proceed as follows:

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 147)

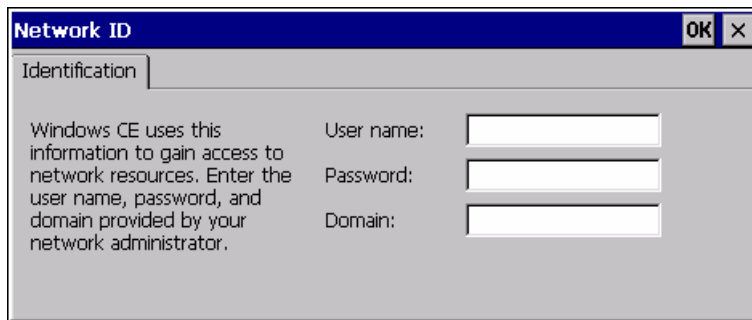
6.10.4 Changing the logon data

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.

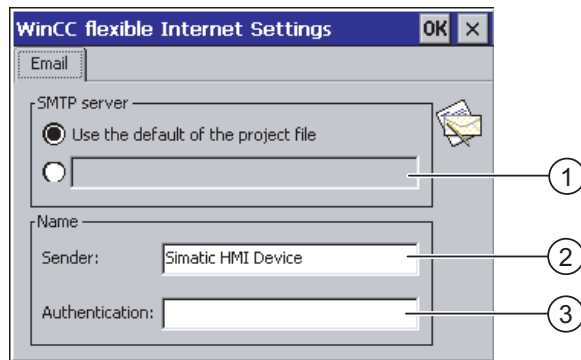
See also

Overview of network operation (Page 147)

6.10.5 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

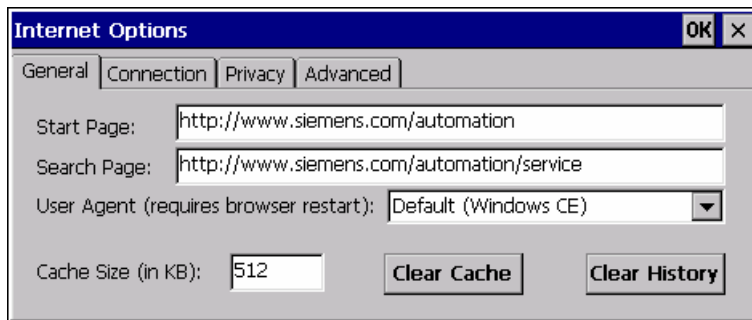
Overview of network operation (Page 147)

6.11 Changing internet settings

6.11.1 Changing general 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.

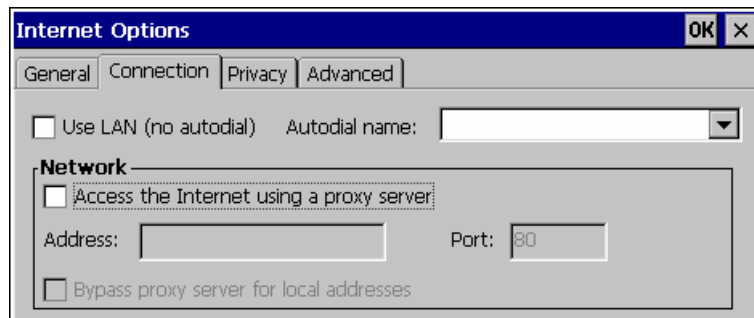
Result

The general parameters for the Internet browser have been set.

6.11.2 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.

6.11.3 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

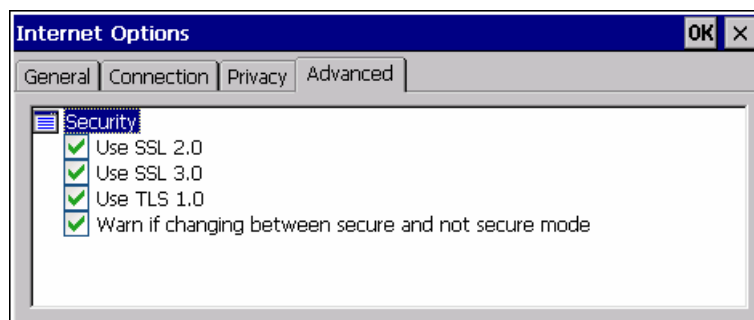
You have opened the "Internet Options" dialog box, "Privacy" tab, by touching the "Internet Options"  icon.



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.

6.11.4 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.

6.12 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 IP65 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

NOTICE
Deleting the flash memory 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.

NOTICE
Cancel restore 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 138)


6.13 Displaying battery status

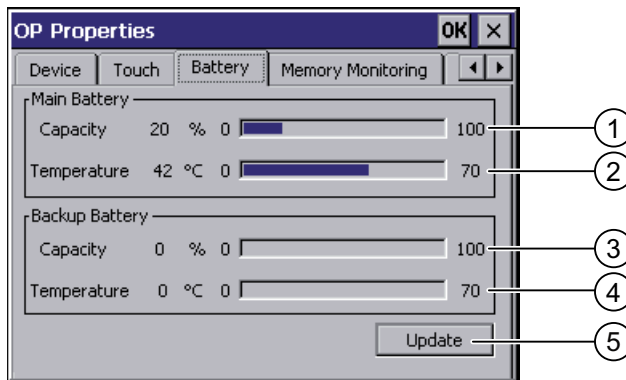
Introduction

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.

6.14 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.


NOTICE

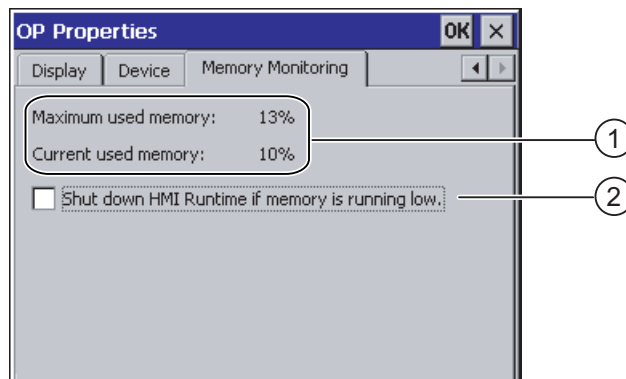
Memory management

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

Requirements for commissioning

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

After transferring the project to the HMI device you must take the following steps:

- Starting the project
- If necessary: Testing zones

See also

Mounting the charging station (Page 50)

Inserting batteries for the first time (Page 70)

Programming the data channel (Page 141)

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 mode, there is no communication between the HMI device and PLC. Although the HMI device can be operated, it cannot exchange data with the PLC.

"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.
 - The HMI device toggles to "Transfer" mode when automatic mode is set and a transfer is initiated on the configuring PC.

7.3 Using existing projects

Note

The Mobile Panel 277 IWLAN does not have an enabling button, stop button or emergency stop button. You must modify existing control programs to take this into account.

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.

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.

Further information on the subject can be found in the WinCC flexible Online Help or in the "WinCC flexible Migration" 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 RJ45 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 166)

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.

NOTICE
No checking of the project files
WinCC flexible does not check whether the compressed project file stored on the HMI device corresponds to the existing runtime project.

See also

Setting the delay time (Page 144)

Programming the data channel (Page 141)

Data transmission options (Page 168)

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

Programming the data channel (Page 141)

Data transmission options (Page 168)

Operating modes (Page 166)

7.5.2.3 Starting automatic transfer

Introduction

If automatic transfer is activated, the HMI device automatically changes into "Transfer" mode during operations as soon as you start a transfer on the configuring PC connected.

Note

With automatic transfer, the HMI device only changes into "Transfer" mode when the project is running on the HMI device.

Automatic transfer is particularly suited for the test phase of a new project since transfer is completed without interfering with the HMI device.

NOTICE

Undesired system responses

If the automatic transfer has been activated on the HMI device and a transfer is initiated on the configuring PC, the project currently running is automatically stopped. 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.
Set the connection parameters.
4. Set the transfer parameters in the right area of the dialog.
5. If you wish to transfer the compressed project file together with the executable project to the HMI device:
Select the "Enable backtransfer" check box.
6. Start transfer in WinCC flexible with "Transfer".
The configuring PC checks the connection to the HMI device. The HMI device terminates the current project. 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

Programming the data channel (Page 141)

Data transmission options (Page 168)

Operating modes (Page 166)

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.

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 is down while the test is being carried out.

- 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. Check the correct layout of the screens
2. Check the screen navigation
3. Check the input objects
4. Enter the tag values

The test increases the certainty that the project will run error-free on the HMI device.

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

Operating modes (Page 166)

7.5.4 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?

See also

Displaying zone names (Page 211)

Displaying zone quality (Page 211)

Mounting the transponder (Page 54)

7.5.5 Backup and restore

7.5.5.1 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

Resetting to factory defaults required

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.

Compatibility conflict

If a message is output on the HMI device warning of a compatibility conflict during the restore operation, the operating system must be updated.

7.5.5.2 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.
If automatic transfer mode is enabled on the HMI device, the HMI device automatically sets "Transfer" mode when a backup is initiated.
10. Start the backup operation in WinCC flexible with "OK" on the configuring PC.
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 "Project > Transfer" menu 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 "Restore" command in the menu "Project > Transfer".
The "Restore settings" dialog opens.
7. 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.
8. Set "Transfer" mode on the HMI device.
If automatic transfer mode is enabled on the HMI device, the device automatically sets "Transfer" mode when a restore operation is initiated.
9. 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 restore 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

Programming the data channel (Page 141)
Data transmission options (Page 168)
Operating modes (Page 166)

7.5.5.3 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 mode is enabled on the HMI device, the HMI device automatically sets "Transfer" mode when a backup is initiated.

8. Start the backup operation in ProSave on the PC with "Start Backup".

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 mode is enabled on the HMI device, the device automatically sets "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

Programming the data channel (Page 141)

Data transmission options (Page 168)

Operating modes (Page 166)

7.5.6 Updating the operating system

7.5.6.1 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

NOTICE
Resetting to factory defaults required
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.

NOTICE
Data loss
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 IP65 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.

7.5.6.2 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 mode is enabled on the HMI device, the device automatically sets "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

Programming the data channel (Page 141)

Data transmission options (Page 168)

Operating modes (Page 166)

Enabling PROFINET IO (Page 145)

Overview (Page 180)

7.5.6.3 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 mode is enabled on the HMI device, the device automatically sets "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

Programming the data channel (Page 141)
Data transmission options (Page 168)
Operating modes (Page 166)
Enabling PROFINET IO (Page 145)
Overview (Page 180)

7.5.6.4 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.

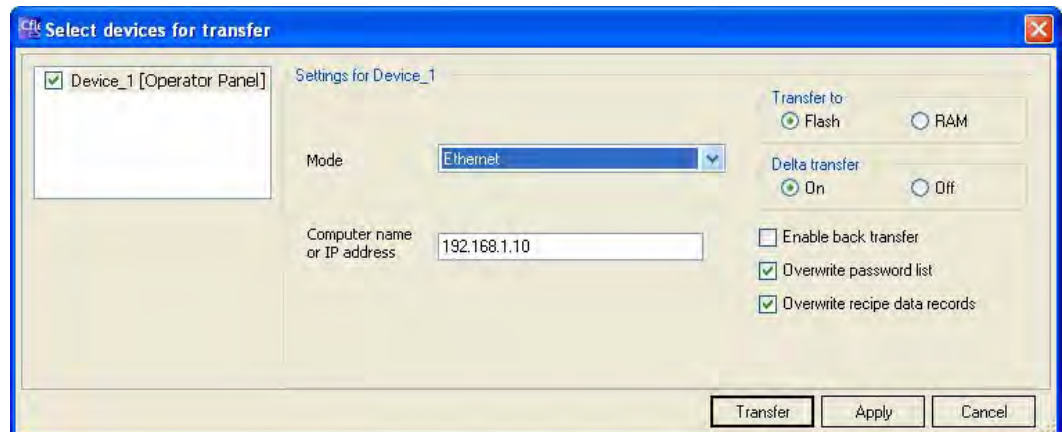
Note

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.

7.5.6.5 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.

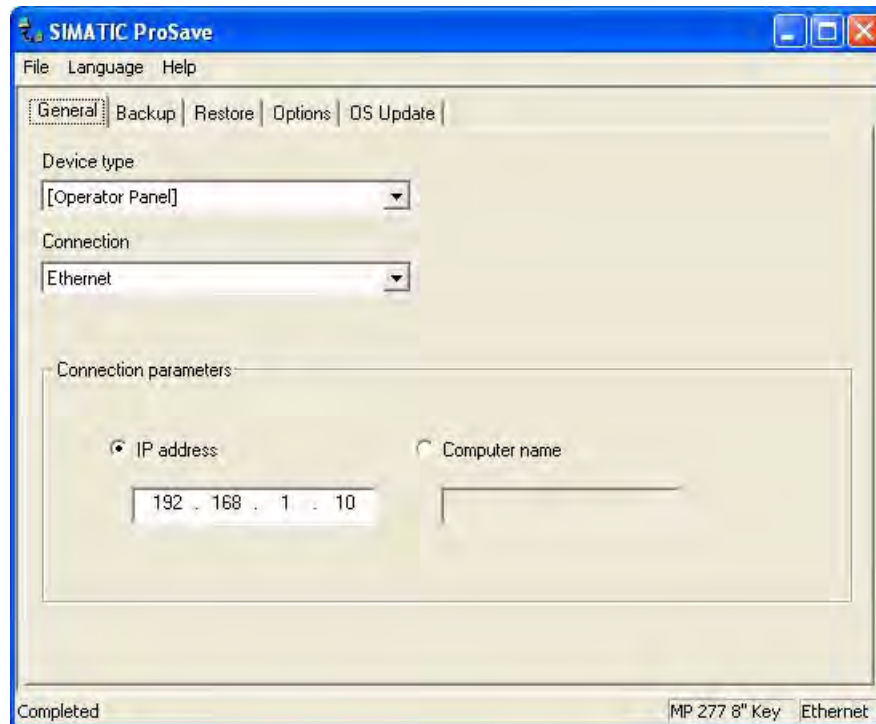
Note

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.

7.5.7 Installing and removing options

7.5.7.1 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.

7.5.7.2 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 mode is enabled on the HMI device, the device automatically sets "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 mode is enabled on the HMI device, the device automatically sets "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

Programming the data channel (Page 141)

Data transmission options (Page 168)

Operating modes (Page 166)

Overview (Page 188)

7.5.7.3 Installing and removing options using ProSave

Requirements

- The HMI device is connected to a PC on which ProSave is installed
- The data channel is configured 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 mode is enabled on the HMI device, the device automatically sets "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 mode is enabled on the HMI device, the device automatically sets "Transfer" mode when the removal of an option is initiated.

9. Start the removal of the option in ProSave with the "<<" button.

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

Programming the data channel (Page 141)

Data transmission options (Page 168)

Operating modes (Page 166)

Overview (Page 188)

7.5.8 Transferring and transferring back license keys

7.5.8.1 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.

7.5.8.2 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

- Overview (Page 191)
- Operating modes (Page 166)
- Programming the data channel (Page 141)
- Data transmission options (Page 168)

Operating a project

8.1 Handling the HMI device during operation

The following must be noted when working with the Mobile Panel 277 IWLAN:

- Pay attention to the "BAT" LED.
 - 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.
- Pay attention to the "COM" LED.

If you leave the area with sufficient WLAN coverage, the "COM" LED will flash. The HMI device is in "Offline" mode. You can no longer operate the system with the HMI device.

See also

Displaying WLAN quality (Page 210)

8.2 Starting the project

Requirements

In order to switch on the Mobile Panel 277 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 is loaded on the HMI device
- The WLAN quality is sufficient
- Transponders, if 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. The HMI device either starts the project immediately or after a configured delay time.

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 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.
5. The HMI device will show the project start screen or the zone-specific screen.

Result

The project is started.

If the HMI device was unable to establish a WLAN connection, it will continue to attempt to establish the connection.

8.3 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.

NOTICE
<p>PLC stop</p> <p>Please note that leaving the WLAN area will cause the PROFINET IO device to fail and will therefore result in a PLC stop.</p> <p>Determine suitable programming measures in the PLC, in order to prevent a PLC stop.</p> <p>Please refer to your system documentation to check whether additional information on this subject is available there.</p>

NOTICE
<p>Effectiveness of direct keys in offline mode</p> <p>Direct keys are active when both of the following conditions are satisfied:</p> <ul style="list-style-type: none"> • The HMI device is in an area with sufficient WLAN coverage. • The HMI device is in "Offline" mode.

NOTICE
<p>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.</p>

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".

See also

Enabling PROFINET IO (Page 145)

Evaluating operator controls as direct keys (Page 87)

8.4 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.

 **CAUTION**

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

 **CAUTION**

Do not carry out several operations simultaneously. You may otherwise trigger unintentional actions.

- With touch control:
Always touch only one operating element on the screen
- With key operation via an external keyboard:
Do not press more than two keys simultaneously

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.

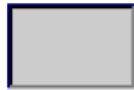
Optical feedback from operating elements

The type of optical feedback depends on the operating element:

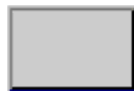
- Buttons

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.

8.5 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.

 CAUTION
Unintentional actions
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.

8.6 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.

8.7 Input

8.7.1 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 .

8.7.2 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.



Figure 8-1 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 alphanumeric 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.

8.7.3 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.



Figure 8-2 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 alphanumerical value or entered a new one.

8.7.4 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 205)

Setting the project language (Page 201)

8.7.5 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.

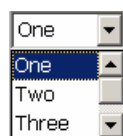




Figure 8-3 Symbolic I/O field after touch, example

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.

8.8 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.

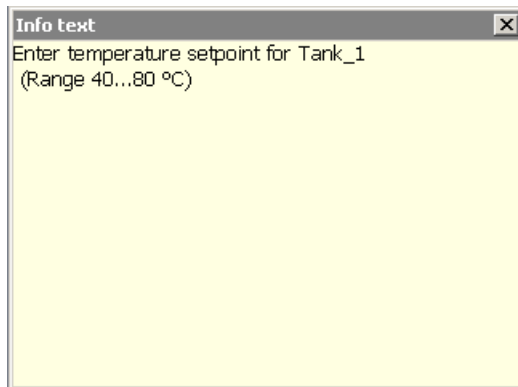


Figure 8-4 Infotext for an I/O field, example

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.




8.9 Device-specific displays

8.9.1 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.

See also

Inserting, charging and changing the battery (Page 68)







Charging batteries in the charging compartment (Page 100)

8.9.2 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.

See also

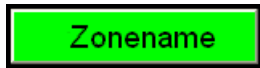

Handling the HMI device during operation (Page 195)

8.9.3 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.

See also




Division of the system into zones (Page 45)

8.9.4 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.

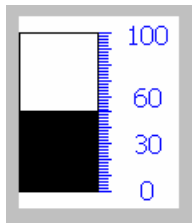
8.10 Bar and gauge

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.



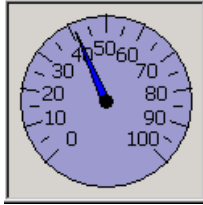
Layout

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.

8.11 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.

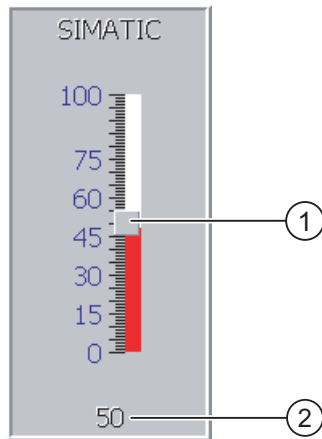


Figure 8-5 Slider control – example

- ① Slider control for entering values
- ② Value display with current value

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.

8.12 Operating the switch

Introduction

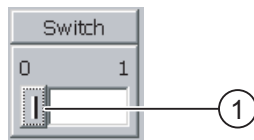
The switch is an operating element and display object with two predefined switching states, for example "On" and "Off". Switches can signalize the state of a plant section, for example if a motor is running or not. At the same time, you can use the switch to change the state of the corresponding plant 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

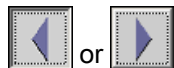
- Switch with text or graphic

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.

8.13 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.

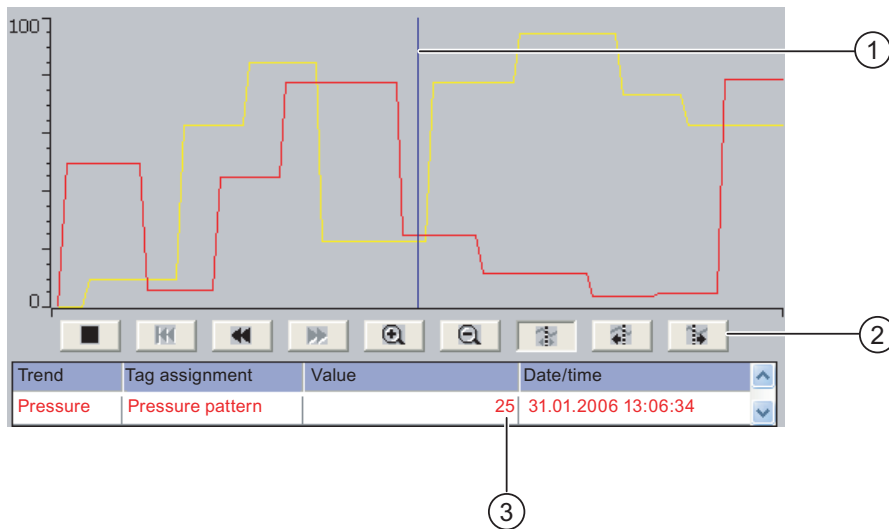


Figure 8-6 Trend view, example

- ① Ruler
- ② Buttons for trend operation
- ③ Trend value in the value table

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 display of time intervals
- 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
	Zooms the displayed time section
	Zooms out of 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)
	Inserts or removes 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.

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.

8.14 Operating the Status Force

8.14.1 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

Figure 8-7 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.

8.14.2 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.

8.15 Operating the Sm@rtClient view

8.15.1 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.

8.15.2 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.

8.16 Project security

8.16.1 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	
The currently valid user data is overwritten in the following cases:	
<ul style="list-style-type: none">• Depending on the transfer settings, when the project is transferred again• Upon restore of a backed-up project• 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.	
The retransferred or restored user data and passwords are valid with immediate effect.	

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

8.16.2 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

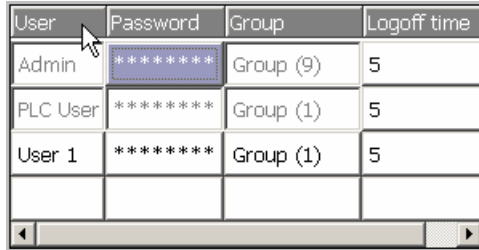
If you are not logged on to the HMI device, the only entry contained in the simple user view is "<ENTER>".

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:

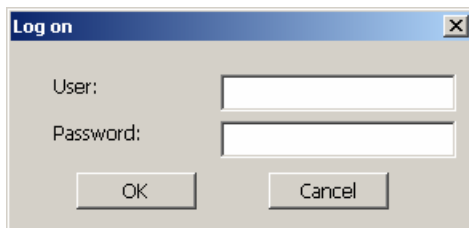
- Users
- Password
- Group
- Logoff time

The passwords are encrypted by appearing as asterisks.

8.16.3 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 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.

8.16.4 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.

8.16.5 Creating users

Requirements

You have opened a screen containing the user view.

You have user management authorization or you are the administrator.

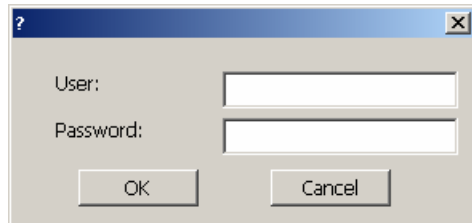
NOTICE
The following characters cannot be used in passwords: <ul style="list-style-type: none">• Blank• Special characters * ? . % / \ ' "

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:

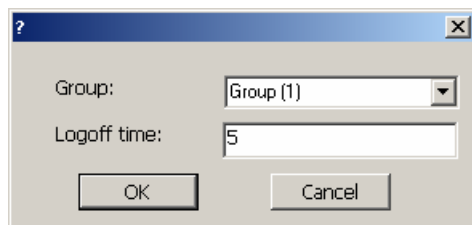


2. Enter the desired user name and password.


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.

8.16.6 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.

8.16.7 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.

8.17 Closing the project

Procedure

Proceed as follows:

1. Use the corresponding operating element object to close the project.
Wait for the Loader to open after you closed the project.
2. Press the ON/OFF button for at least 4 seconds.

Result

The project is terminated.

The HMI device is switched off.

Operating alarms

9.1 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 permanently. 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.

9.2 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.



Figure 9-1 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.

9.3 Displaying alarms

Displaying alarms

Alarms are displayed in the alarm view or in the alarm window on the HMI device.

Alarm view

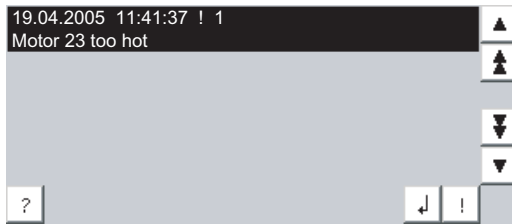
Depending on the configuration, the alarm view is displayed as follows:

- 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.

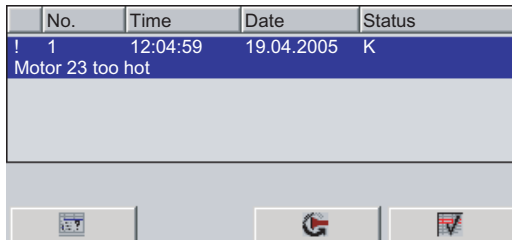
Simple alarm view



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.




9.4 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 235)



9.5 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.

9.6 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

10.1 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

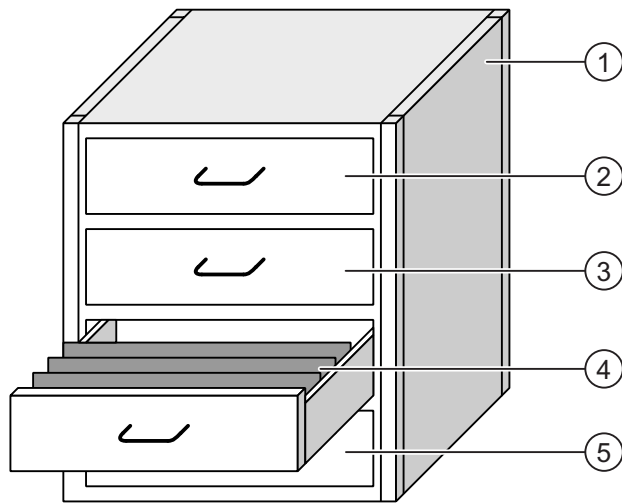
10.2 Structure of a recipe

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.



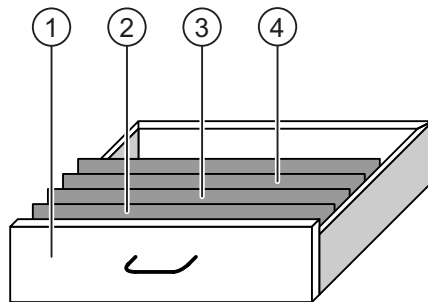
① File cabinet	Recipe collection	Recipes for a fruit juice plant
② Drawer	Recipe	Orange flavored drinks
③ Drawer	Recipe	Grape flavored drinks
④ Drawer	Recipe	Apple flavored drinks
⑤ Drawer	Recipe	Cherry flavored drinks

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.

10.3 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.

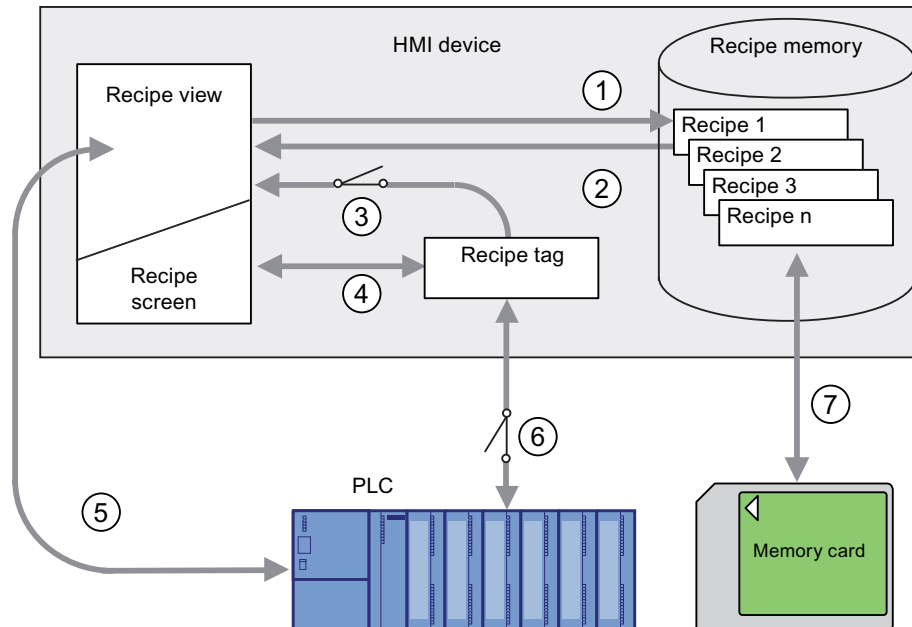
The recipe tags can be synchronized with the recipe data records so that the same values are saved in both.

- Memory card

The memory card is an external storage medium for recipe data records. The recipe data records are exported from the HMI device recipe memory and are saved on the memory card in a *.csv file. The records can be reimported from the memory card 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 memory card

10.4 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.

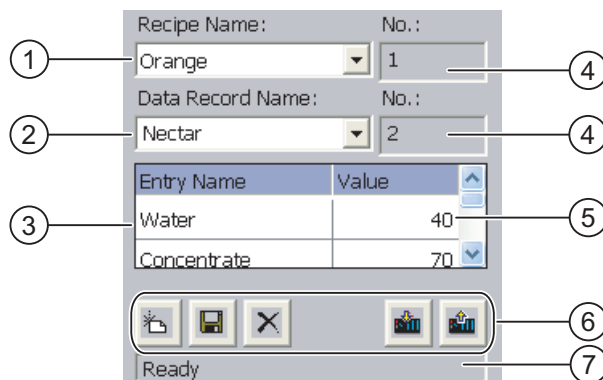
Depending on the configuration, the recipe view is displayed as follows:

- 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

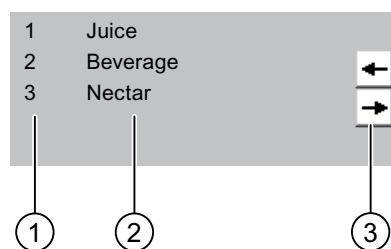
Simple recipe view

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:

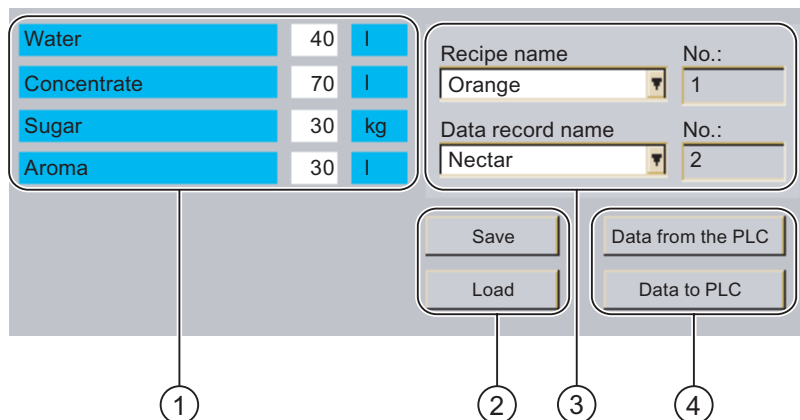
If values of the corresponding recipe data record are changed by a PLC job, the recipe view is not updated automatically.

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.

10.5 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

10.6 Operating the recipe view

10.6.1 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.

10.6.2 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 244)


10.6.3 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  button.

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 244)

10.6.4 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 244)

10.6.5 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.

NOTICE
Changed tag name
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 244)

10.6.6 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 244)

10.6.7 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 244)

10.7 Operating the simple recipe view

10.7.1 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.

10.7.2 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 244)

10.7.3 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 244)

10.7.4 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 244)

10.7.5 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 244)

10.7.6 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 244)

10.8 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:

NOTICE

Export of recipe data to USB memory stick not possible

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.

10.9 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

10.10 Examples

10.10.1 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.

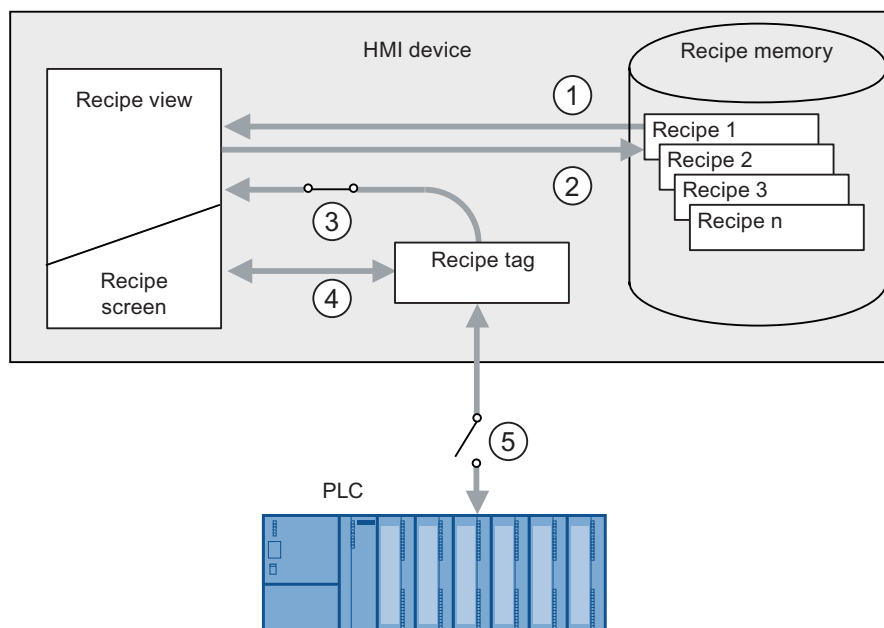
Procedure

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

10.10.2 Manual production sequence

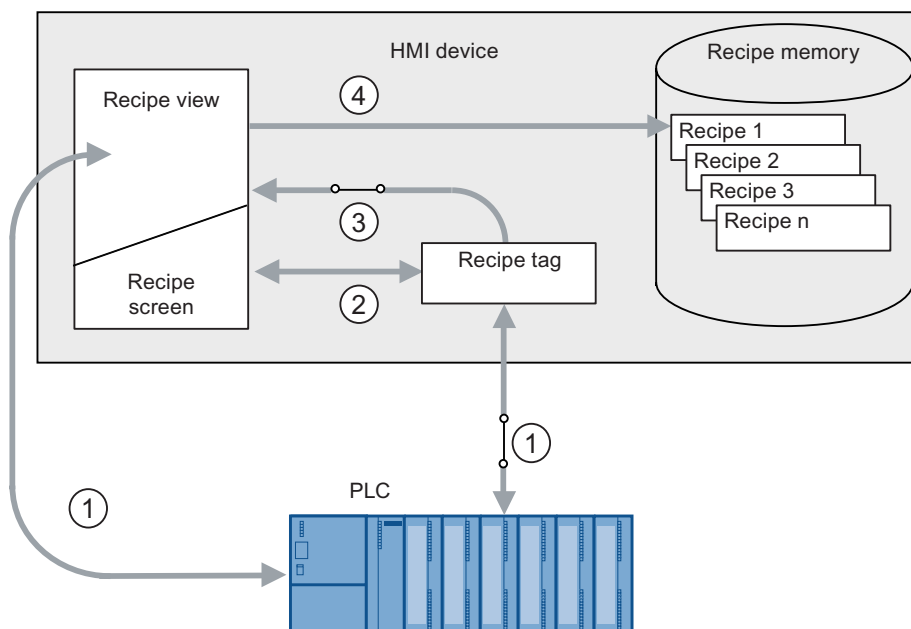
Introduction

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

11.1 Maintenance and care

Scope of maintenance

- 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 once 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

 CAUTION
Inadvertent operation Always switch off the HMI device before cleaning it. This will ensure that you do not trigger unintended functions when you touch the keys.
CAUTION 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.

11.2 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:

A&D Return 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

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

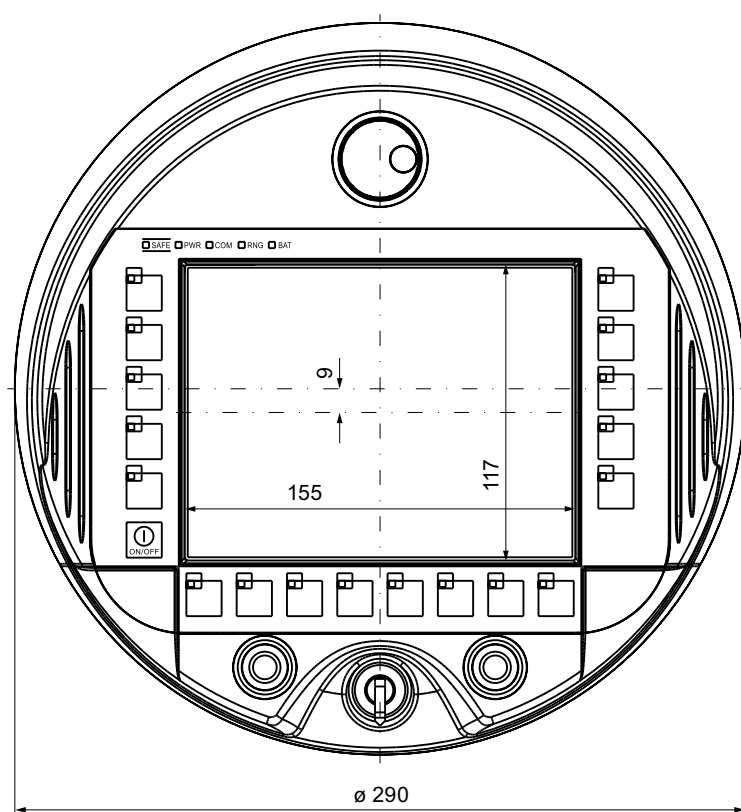
Information about on-site services, repairs, spare parts, and much more is available on our "Services" pages.

Technical specifications

12.1 Dimension drawings

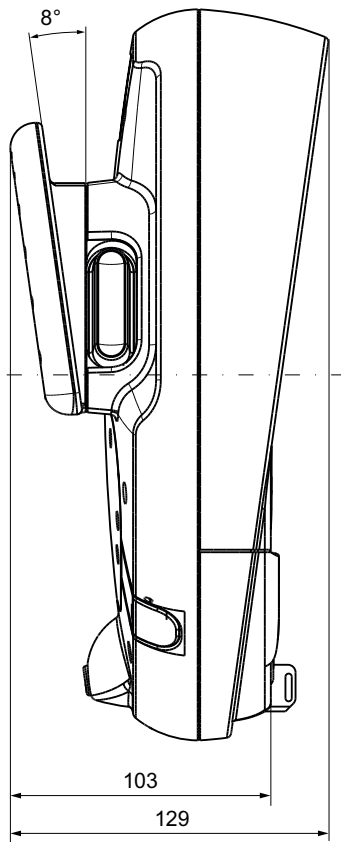
12.1.1 Mobile Panel 277 IWLAN

Front view



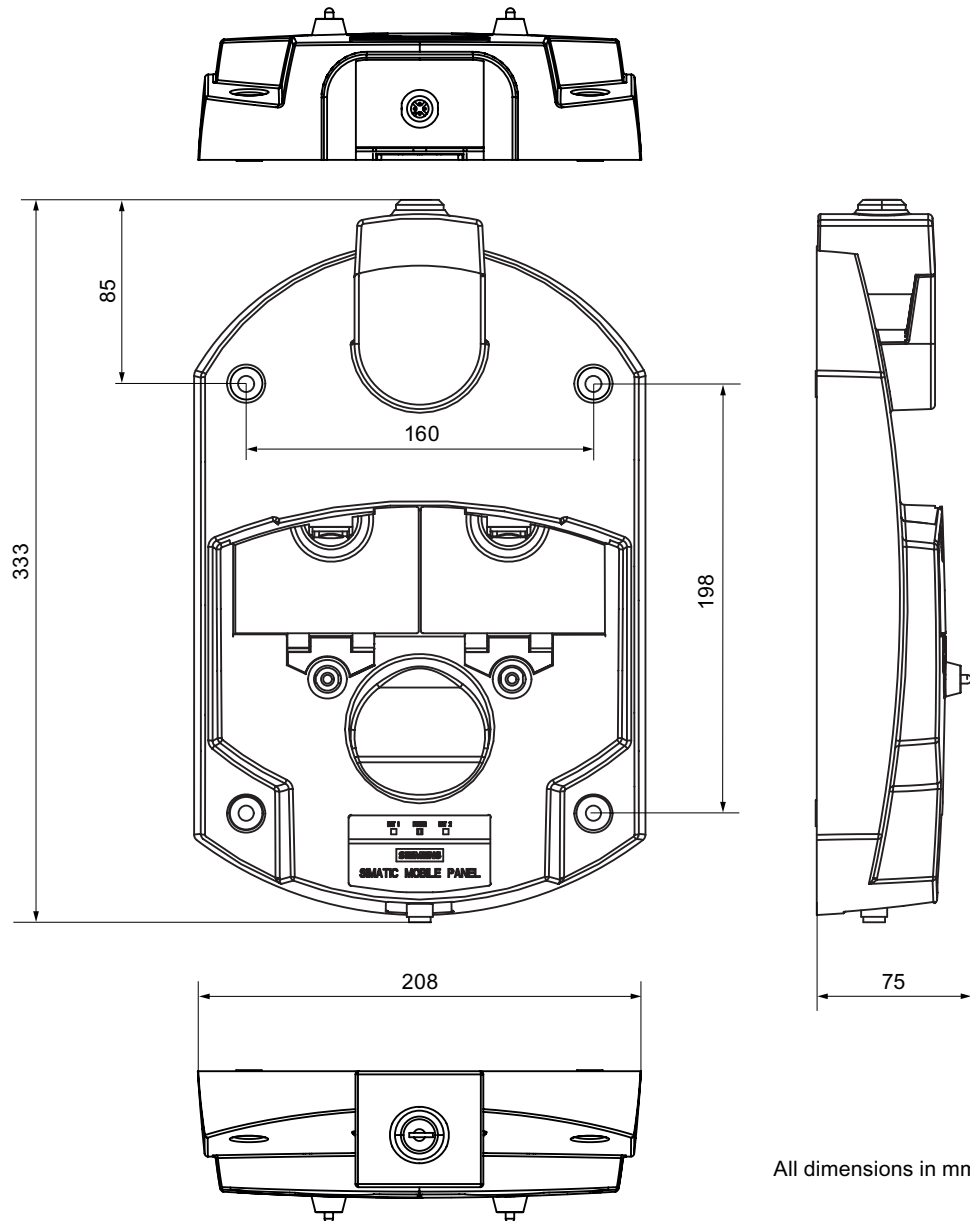
All dimensions in mm

Side view



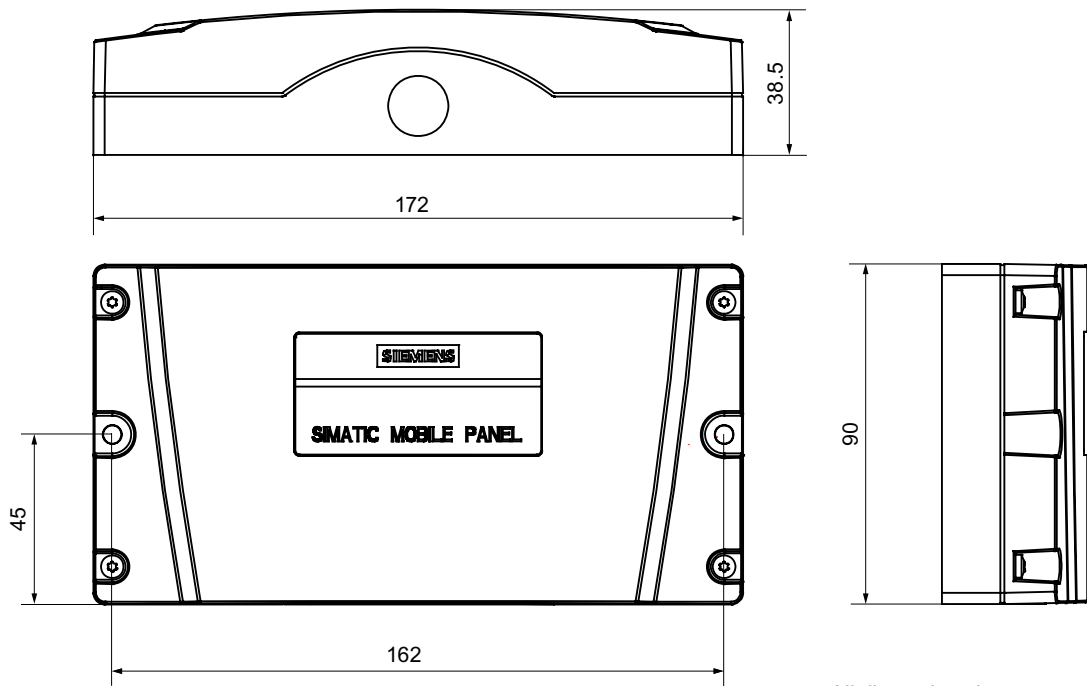
All dimensions in mm

12.1.2 Charging station



All dimensions in mm

12.1.3 Transponder



All dimensions in mm

12.2 Specifications

12.2.1 Mobile Panel 277 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 unit

Type	Touch screen, analog, resistive Membrane keyboard
Function keys	18, with LEDs
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
--------------------	------

Ports

1 x USB	<ul style="list-style-type: none"> • USB host; conforms to USB standard 1.1 (supporting low-speed and full-speed USB devices) • Maximum load 100 mA
1 x WLAN	For PROFINET WLAN
1 x RJ45	For PROFINET LAN

Supply voltage

Supply voltage	
About	<ul style="list-style-type: none"> • Battery • Charging station • Tabletop power supply unit

Additional specifications

Drop height with 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"> • Frequency band • Transmission angle 	<ul style="list-style-type: none"> • 2,400 - 2,483 MHz • Approx. 83°

12.2.2 Batteries

Main battery	
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 ¹⁾

Bridging battery	
Type	Lithium ion accumulator
Bridging time	5 min
Charging cycles	500

¹⁾ The effective charging time depends on the ambient temperature. The higher the ambient temperature, the longer the charging time.

12.2.3 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"> • Typical • Constant current, maximum • Power on current surge I²t 	<ul style="list-style-type: none"> • Approx. 1.5 A • Approx. 1.8 A • Approx. 1.7 A²s
Current consumption with Mobile Panel and batteries in charging compartment <ul style="list-style-type: none"> • Typical • Constant current, maximum • Power on current surge I²t 	<ul style="list-style-type: none"> • Approx. 2.8 A • Approx. 3.4 A • Approx. 1.7 A²s
Fuse, internal	Electronic

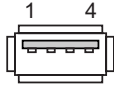
12.2.4 Transponder

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"> • Frequency band • Transmission angle 	<ul style="list-style-type: none"> • 2,400 - 2,483 MHz • Approx. 93°
Type	Passive

12.2.5 Description of interfaces on the HMI device

USB

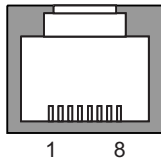
The figure below shows the pin assignment of the USB interface.



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 according to IEEE 802.11 a,b,g,h

If the system includes zones and therefore transponders, WLAN according to IEEE 802.11a must be used. As a general rule the use of WLAN according to IEEE 802.11a is recommended.

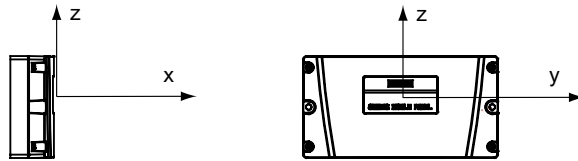
12.3 Radiation characteristic

12.3.1 Radiation characteristic of the transponder

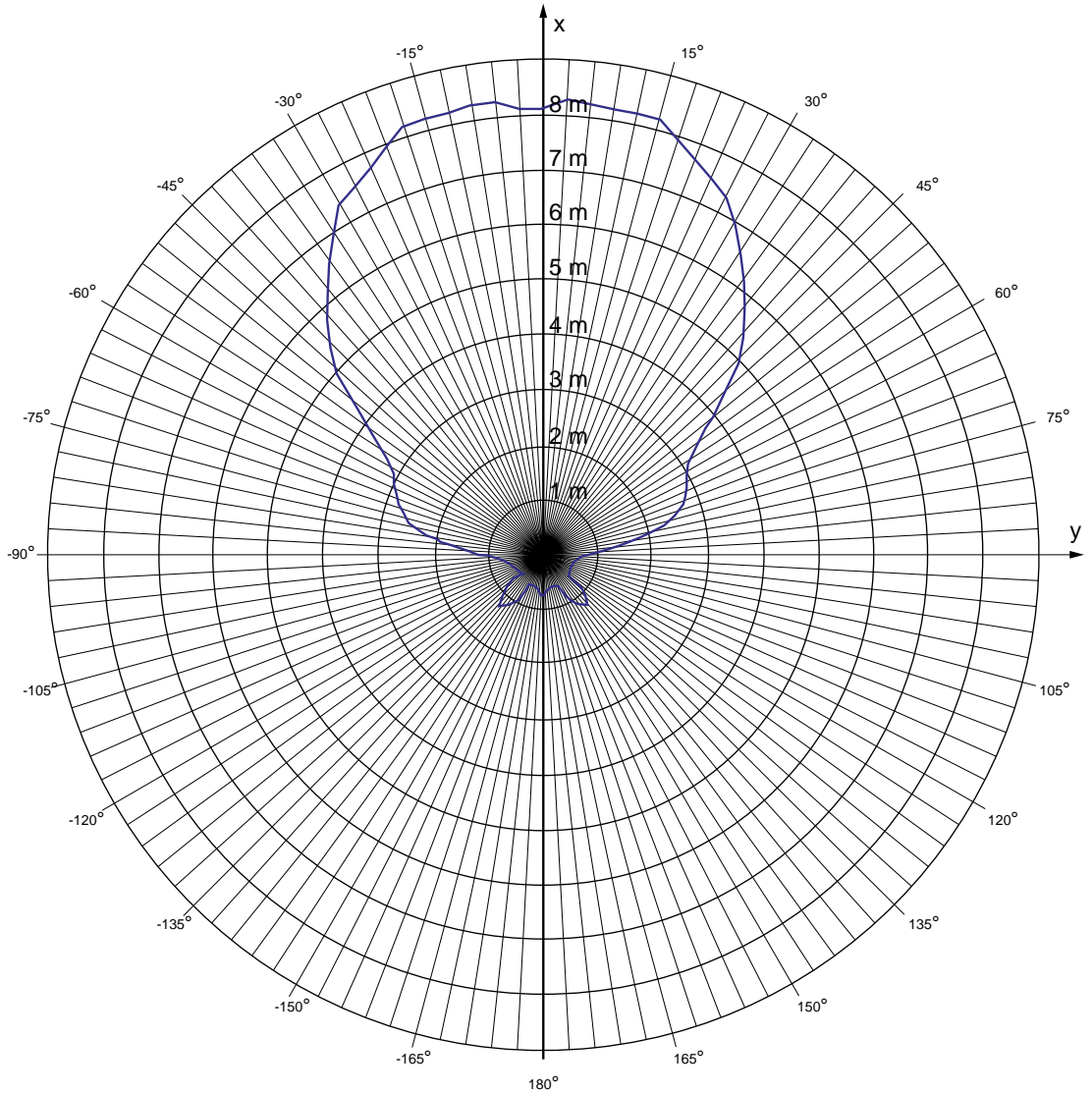
Antenna type	Dual port patch antenna
Polarization	Vertical and horizontal
Frequency band	2,400 - 2,483 MHz
Antenna gain	Max. in main count direction <ul style="list-style-type: none"> • Port 1: 2.6 dBic • Port 2: 2.7 dBic
Impedance	50 Ω
Full widths at half maximum, horizontal at 2.45 GHz	93°
Full widths at half maximum, vertical at 2.45 GHz	90°

Ranges depending on angular displacement to main count direction

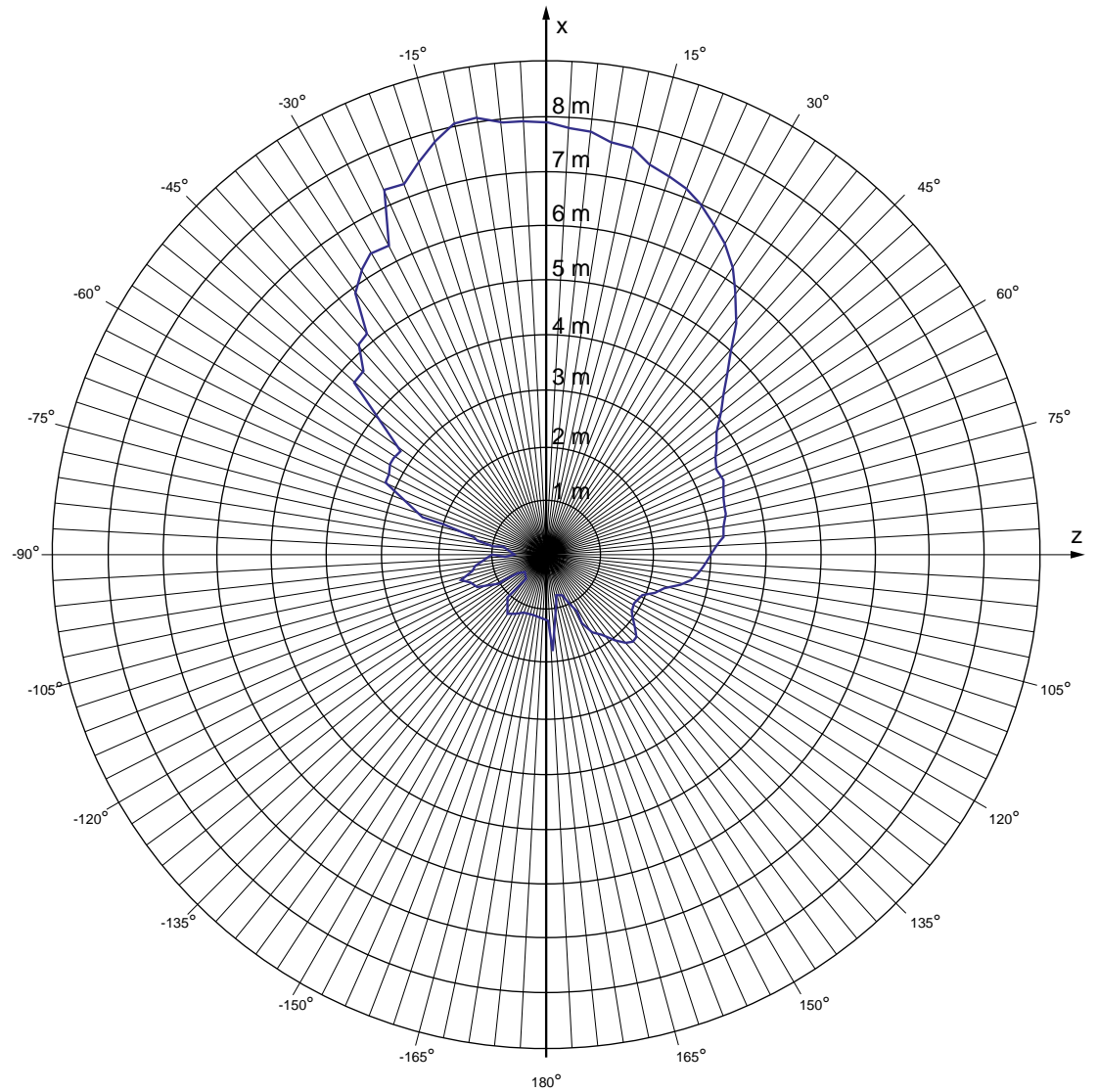
The following figure shows the coordinate system applied to the transponder.



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:

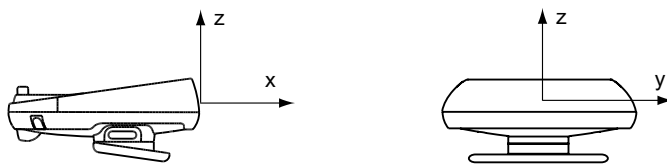


12.3.2 Radiation characteristic of HMI device

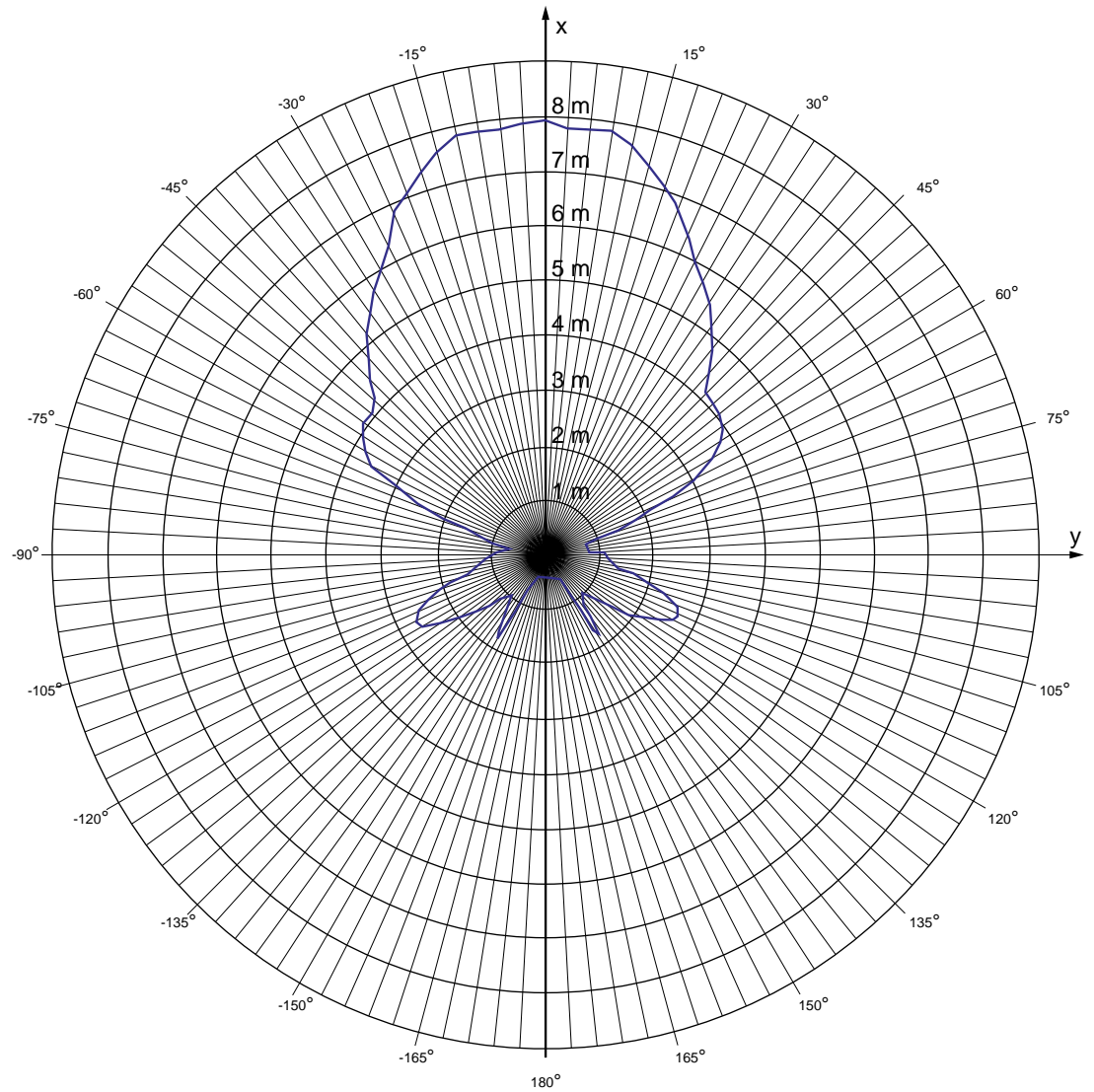
Antenna type	Dual port patch antenna
Polarization	Vertical and horizontal
Frequency band	2,400 - 2,483 MHz
Antenna gain	Max. in main count direction <ul style="list-style-type: none">• Port 1: 2.6 dBic• Port 2: 2.7 dBic
Impedance	50 Ω
Full widths at half maximum, horizontal at 2.45 GHz	83°
Full widths at half maximum, vertical at 2.45 GHz	80°

Ranges depending on angular displacement to main count direction

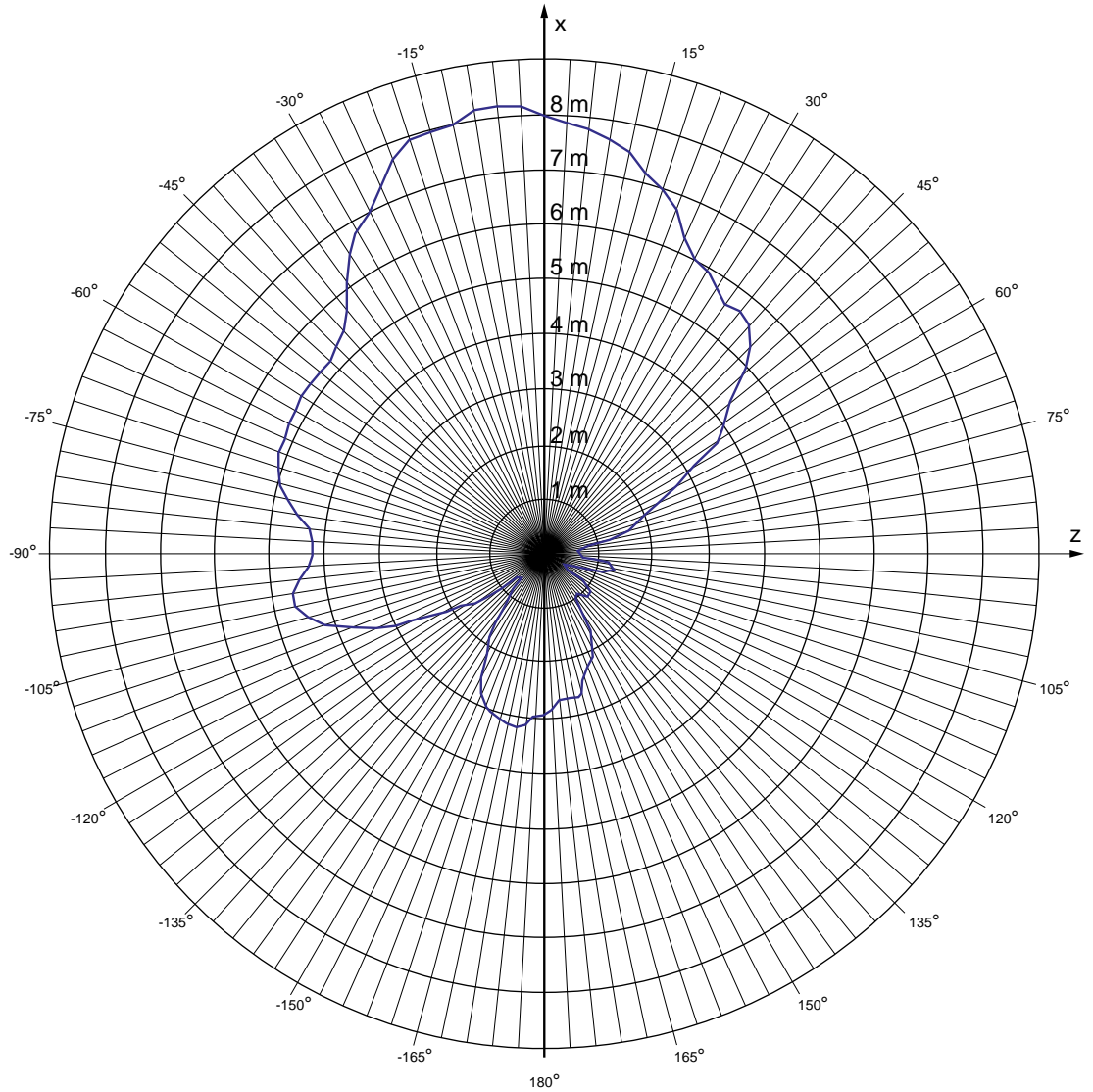
The figure below shows the coordinate system applied to the HMI device.



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:

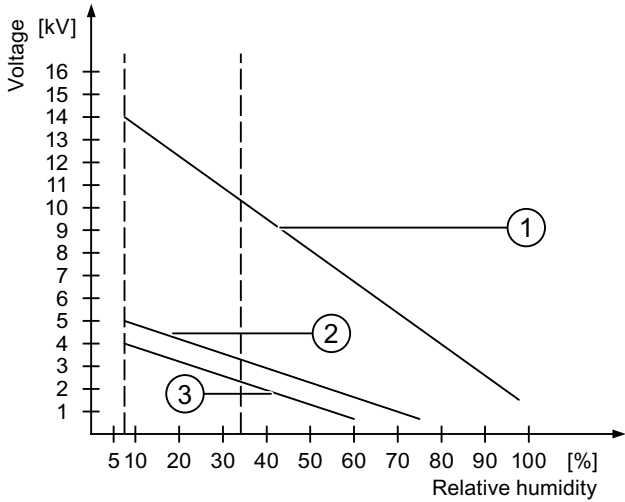


Electrostatic charging

CAUTION
Electrostatic charging
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

CAUTION
Observe grounding measures
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:

Table A-1 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.

Table A-2 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.

Table A-3 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.

Table A-4 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.

Table A-5 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.	--

Table A-6 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.

Table A-7 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"> An invalid time was transferred in the job mailbox. The Windows user has no right to modify the system time. 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"> An invalid time was transferred. The Windows user has no right to modify the system time. 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.

Table A-8 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"> • If the "StartSequenceLog" system function was properly configured • if the tag parameters are properly provided with data on the HMI device
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"> • if the "CopyLog" system function was properly configured • if the tag parameters are properly provided with data on the HMI device
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.
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.	--

Number	Effect/causes	Remedy
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.
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"> • The connection to the server • If the server is running • If there is enough free space on the server
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.

Number	Effect/causes	Remedy
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.

Table A-9 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".
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.

Table A-10 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"> • The project ID entered on the PLC. • The project ID entered in WinCC flexible.

Table A-11 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.

Table A-12 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"> • The correct data medium is being accessed • The data medium is inserted
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"> • The correct file is being accessed • The file exists • Another action is preventing simultaneous access to the file
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.

Table A-13 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.

Table A-14 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"> • The cable is defective • The PLC does not respond, is defective, etc. • The wrong port is used for the connection • System overload 	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.	--

Table A-15 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"> • The cable is defective • The PLC does not respond, is defective, etc. • The wrong port is used for the connection • System overload 	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"> • The server name is correct • The computer name is correct • The server is registered
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"> • The server name is correct • The computer name is correct • The server is registered 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.

Table A-16 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.	--
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.	--

Table A-17 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"> • Generate the alarms at a slower rate (polling) • Initiate scripts and functions at greater intervals 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.

Table A-18 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"> • A value entered • A system function • A script 	Observe the configured or current threshold values of the tag.
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"> • Increase the time interval between multiple write actions. • Do not use an array tag longer than 6 words when you configure an acknowledgment on the HMI device using "Acknowledgment HMI".

Number	Effect/causes	Remedy
190011	<p>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.</p> <p>Possible cause 2: The connection to the PLC was interrupted.</p>	<p>Make sure that the value entered lies within the range of values of the control tags.</p> <p>Check the connection to the PLC.</p>
190012	<p>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.</p>	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.

Table A-19 190100 - Area pointer alarms

Number	Effect/causes	Remedy
190100	<p>The area pointer is not updated because the address configured for this pointer does not exist.</p> <p>Type</p> <ol style="list-style-type: none"> 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 <p>No.:</p> <p>Consecutive number displayed in WinCC flexible ES.</p>	Check the configuration.
190101	<p>The area pointer is not updated because it is not possible to map the PLC type to the area pointer type.</p> <p>Parameter type and no.: See alarm 190100.</p>	--
190102	<p>The area pointer is updated after the cause of the last error state has been eliminated (return to normal operation).</p> <p>Parameter type and no.: See alarm 190100.</p>	--

Table A-20 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"> • The cable is defective • The PLC does not respond, is defective, etc. • System overload 	Ensure that the cable is plugged in and the PLC is operational. Restart the system if the system alarm persists.

Table A-21 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"> • The cable is defective • The PLC does not respond, is defective, etc. • System overload 	Ensure that the cable is plugged in and the PLC is operational. Restart the system if the system alarm persists.

Table A-22 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.

Table A-23 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"> • The cable is plugged in • The PLC is OK • The correct port is used • Your configuration is OK (port parameters, protocol settings, PLC address) 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.

Table A-24 230000 - View alarms

Number	Effect/causes	Remedy
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"> • The value range has been exceeded • Illegal characters have been entered • The maximum permitted number of users has been exceeded 	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.	--
230202	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.	Depending on the cause: When an attempt to connect fails or a timeout error occurs: <ul style="list-style-type: none"> • Check the network connection and the network • Check the server address • Check whether the WebServer is actually running on the destination station. Faulty authorization: <ul style="list-style-type: none"> • The configured user name and/or password do not match those on the server. Establish consistency When the server certificate is rejected: Certificate signed by an unknown CA (): <ul style="list-style-type: none"> • Either ignore this item in your project, or • Install a certificate that has been signed with a root certificate known to the client computer The date of the certificate is invalid: <ul style="list-style-type: none"> • Either ignore this item in your project, or • Install a certificate with a valid date on the server Invalid CN (Common Name or Computer Name): <ul style="list-style-type: none"> • Either ignore this item in your project, or • Install a certificate with a name that corresponds to that of the server address

Number	Effect/causes	Remedy
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"> WinCC flexible Runtime is not running on the server, or The HTTP channel is not supported (503 Service unavailable) <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>	Use a compatible remote server.
230305	<p>The authentication has failed because the password is incorrect. The attempt to connect failed.</p>	Configure the correct password.
230306	<p>Error in the connection to the remote server. This may occur as a result of network problems. The attempt to connect failed.</p>	<p>Check whether</p> <ul style="list-style-type: none"> The bus cable is plugged in There are network problems
230307	<p>The connection to the remote server was shut down because</p> <ul style="list-style-type: none"> The remote server was shut down, or The user instructed the server to close all connections <p>The connection is closed.</p>	--
230308	<p>This alarm provides information on the connection status. An attempt is made to connect.</p>	--

Table A-25 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"> • A corrupt file • A defective installation • No free space for the Automation License Manager etc. 	Reboot the HMI device or PC. If this does not solve the problem, remove the Automation License Manager and install it again.

Table A-26 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.

Table A-27 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.

Number	Effect/causes	Remedy
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 PTProRun.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.
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.

Number	Effect/causes	Remedy
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 Server. The logon is not authorized.	Check the licensing on the SIMATIC Logon Server.
260037	There is no license on the SIMATIC Logon Server. 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.

Table A-28 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.
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.

Table A-29 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"> • The cable is defective • The PLC does not respond, is defective, etc. • The wrong port is used for the connection • System overload 	Check whether <ul style="list-style-type: none"> • The cable is plugged in • The PLC is OK • The correct port is used 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"> • The cable is plugged in • The PLC is OK • The correct port is used Restart the system if the system alarm persists. Remedy depends on the error code: <ol style="list-style-type: none"> 1: The function block must set the COM bit in the response container. 2: The function block must not set the ERROR bit in the response container. 3: The function block must respond within the specified time (timeout). 4: Go online to the PLC.
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.

Table A-30 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.

Number	Effect/causes	Remedy
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.
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"> • Check the source for the number (constant or tag value) • First, delete the record • Change the "Overwrite" function parameter
290014	The file specified to be imported could not be found.	Check: <ul style="list-style-type: none"> • The file name • Ensure that the file is in the specified directory
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"> • The tag addresses are configured in the PLC • The recipe number exists • The record number exist • The "Overwrite" function parameter is set
290023	Alarm reporting that the download of records from the PLC to the HMI device has started.	--

Appendix

A.2 System alarms

Number	Effect/causes	Remedy
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"> • The tag addresses are configured in the PLC • The recipe number exists • The record number exist • The "Overwrite" function parameter is set
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.
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.

Number	Effect/causes	Remedy
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.	--
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.	--

Number	Effect/causes	Remedy
290111	<p>The Recipes subsystem cannot be used. Recipe views have no content and recipe-specific functions will not be performed.</p> <p>Possible causes:</p> <ul style="list-style-type: none"> • An error occurred while transferring the recipes. • 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. 	Transfer the project to the device again, together with the recipes (the corresponding check box in the Transfer dialog must be checked).

Table A-31 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.

Table A-32 310000 - Report system alarms

Number	Effect/causes	Remedy
310000	<p>An attempt is being made to print too many reports in parallel.</p> <p>Only one log file can be output to the printer at a given time; the print job is therefore rejected.</p>	<p>Wait until the previous active log was printed.</p> <p>Repeat the print job if necessary.</p>
310001	An error occurred on triggering the printer. The report is either not printed or printed with errors.	<p>Evaluate the additional system alarms related to this alarm.</p> <p>Repeat the print job if necessary.</p>

Table A-33 320000 - Alarms

Number	Effect/causes	Remedy
320000	<p>The movements have already been indicated by another device.</p> <p>The movements can no longer be controlled.</p>	Deselect the movements on the other display units and select the motion control screen on the required display unit.
320001	<p>The network is too complex.</p> <p>The faulty addresses cannot be indicated.</p>	View the network in STL.
320002	<p>No diagnosable alarm message (error) selected.</p> <p>The unit associated with the alarm message could not be selected.</p>	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.

Number	Effect/causes	Remedy
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.
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.

Table A-34 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.

Table A-35 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.

Number	Effect/causes	Remedy
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.
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
EAP	Extensible Authentication Protocol
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
IO	Input and Output
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
OP	Operator Panel
PC	Personal Computer
PELV	Protective Extra Low Voltage
PG	Programming device
PLC	Programmable Logic Controller
PPI	Point-to-Point Interface (SIMATIC S7)
RAM	Random Access Memory
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
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
WEP	Wired Equivalent Privacy
WINS	Windows Internet Naming Service
WLAN	Wireless Local Area Network
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 network

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 device

PLC of the SIMATIC S5 series such as the S5-115U

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.

Display duration

Defines whether a system alarm is displayed on the HMI device and the duration of the display.

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.

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 operator controls 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

Network structure 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, e.g. 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.

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 with 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.

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.

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, e.g. 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 – normally wireless – communication, display or control device, which records incoming signals and automatically replies to them. The term transponder is derived from transmitter and responder. Transponders can be passive or active.

WLAN

WLAN is a radio-based LAN.

Index

A

- Accessories
 - Accessory kit, 18, 21, 23
- Accessory kit, 18
 - Charging station, 21
 - Transponder, 23
- Acknowledge
 - Alarm, 238
 - Error alarm, 238
- Activate
 - Password protection, 127
- Ad hoc mode, 45
- Address assignment
 - TCP/IP network, 150
- Addressing, 147
- Admin, 230, 231
- Agency, 6
- Alarm, 233
 - Acknowledge, 238
 - Alarm indicator, 235
 - Display, 235
 - Editing, 239
 - Functional scope, 24
- Alarm buffer, 234
 - Functional scope, 24
- Alarm class, 234, 237
- Alarm event, 233
- Alarm group, 234
- Alarm indicator, 235
- Alarm line, 235
- Alarm log, 234
- Alarm report, 234
- Alarm view, 235
 - Extended, 236
 - Simple, 236
- Alarm window, 237
- ALARM_S, 24
- Alphanumeric
 - Screen keyboard, 205
- Alphanumeric value
 - Changing, 206
 - Entering, 206
- Ambient conditions

- Climatic, charging station, 41
- Climatic, HMI device, 40
- Climatic, transponder, 41
- Mechanical, 39
- Tested for, 40

Applications

- Mobile Panel 277 IWLAN, 15

Audit, 27

Authorization, 223

Automatic

- Transfer, 171

Automation License Manager, 191

B

Backlighting

- Reducing, 133
- Setting, 117

Backtransfer, 169, 173

Backup, 116, 158, 168, 175, 176, 178, 224

- Registry information, 117, 131
- Temporary files, 131
- to external memory medium, 116
- To external storage device, 158
- To memory card, 158
- With ProSave, 178
- With WinCC flexible, 176

Backup time

- Internal clock, 276

Bar, 212

Basic knowledge

- Required, 4

BAT

- LED, 82

BAT 1

- LED, 101

BAT 2

- LED, 101

Batteries

- Charging in the charging compartment, 100

Battery, 209

- Application, 209
- Charging options, 20
- Layout, 209
- LED display, 72

- Maintenance cycle, 267
- Operation, 209
- Purpose, 19
- State, 162
- Battery charging status
 - Vibration alarm, 140
- Battery status
 - Display, 72, 117
- Booting, 137
- Bridging battery, 19
 - Changing, 74
 - Insert, 70
 - Safety instruction, 73, 74, 75
- Bridging time, 93
- Brightness
 - Changing, 133
- Browser
 - Homepage, 116
 - Setting, 116
- Bus connection, 27
- Byte assignment
 - Direct keys, 87

C

- Calibrating
 - Touch screen, 125
- Care, 267
- CE approval, 30
- Certificate
 - Delete, 116, 157
 - Display, 116
 - Importing, 116, 157
- Certificates, 116
- Certifications, 30
- Changing
 - Brightness, 133
 - Screen setting, 133
 - User data, 230
- Character repeat, 116
 - Screen keyboard, 123
 - Setting, 123
- Charging
 - Electrostatic, 286
- Charging options
 - Battery, 20
- Charging station, 19
 - Charging compartment, 100
 - Clearance, 43
 - Configuration, 20
 - EMC-compliant installation, 35
 - LED display, 101

- Lock, 102
- Main dimensions, 273
- Mounting location, 42
- Mounting position, 50
- Charging status of battery
 - Vibration alarm, 140
- Climatic
 - Transport conditions, 37
- Closing
 - Project, 231
- Column sequence
 - Alarm view, 237
- COM
 - LED, 82
- Commissioning engineers, 3
- Compatibility conflict, 176
- Configuration phase, 21
- Configure
 - Network, 148
 - Operating system, 105
 - Screen keyboard, 116, 121
- Configuring PC, 21
 - Connecting, 62
 - Connection graphic, 62
- Connecting
 - Configuring PC, 62
 - PLC, 64
 - Printer, 65
 - USB device, 66
- Connection, 27
 - Electrical, 54
- Connection graphic
 - Configuring PC, 62
 - PLC on Mobile Panel, 64
 - Printer, 65
- Connection to PLCs
 - Number, 27
- Control Panel
 - Open, 116
 - Operating, 118
 - Password protection, 107
 - Screen keyboard, 118
- Cookies, 116, 155
- Country code, 110
- Creating
 - Recipe data record, 252, 259
 - Users, 228
- C-Tick mark (Australia), 31
- Currency, 117

D

Data channel
 Enabling, 141
 Locking, 141
 Parameter assignment, 117, 141
Data flow, 245
Data record list, 247, 258
Data transfer rate
 to Access Point, 111
Date, 116
 Entering, 207
 Setting, 128
 Synchronizing, 129
Date format, 117, 130
Date/time properties, 116, 128
Deactivating
 Password protection, 128
Decimal, 203
Default Gateway, 150
Degree of protection
 Safety instruction, 60, 158, 181
Delay time
 Setting, 117, 144
Delete
 Certificate, 157
 Recipe data record, 254, 261
 Users, 231
Design variations, 16
Device name
 For network operation, 149
 Setting, 117
DHCP, 150
Direct key, 86, 197
 Bit coding, 88
 Byte assignment, 87
 Functional scope, 26
 Reaction time, 90
Display
 Alarm, 235
 Battery status, 72
 HMI device information, 117
 Infotext, 208, 238
 Memory information, 140
 Specifications, 275
 System information, 139
Display format, 203
Disposal, 7
DNS, 151
 Server, 147
Documentation
 Conventions, 6
 Enclosed, 49

 Getting started, 4
 Operating instructions, 5
 User manual, 4
Double-click, 116
 Setting, 124
Drop down list box, 207

E

EC Declaration of Conformity, 31
Editing
 Alarm, 239
 Recipe data record, 253, 260
Electrical
 Installation, 54
Electrostatic charging, 286
Electrostatic discharge
 Precautions, 287
Element list, 247, 258
E-mail
 Setting, 117, 153
EMC, 35
 Guideline, 30
Emission, 34, 36
Encryption, 155
Entering
 Alphanumerical value, 206
 By means of function key, 200
 Date, 207
 Numerical value, 204
 Recipe data record, 265
 Symbolic value, 207
 Text box, 202
 Time, 207
Error alarm
 Acknowledge, 238
ESD
 Abbreviations, 285
 Labeling, 285
 Safety instruction, 53
Ethernet settings
 IP address, 150
Evaluation
 Operator control, 80
Exporting
 Recipe data record, 263
Extended alarm view, 236
Extended recipe view, 246
Extended user view, 226
External memory medium
 Backup to, 158
 Restoring from, 158

F

- Factory settings
 - Resetting to, 181
- Feedback
 - Optical, 199
- Front view, 16, 271
- Function keys
 - Global function assignment, 200
 - Input via, 200
 - Labeling, 95
 - Local function assignment, 200
- Function test, 77
- Functional scope
 - Alarm buffer, 24
 - ALARM_S, 24
 - Alarms, 24
 - Device-specific, 26
 - Graphics list, 24
 - Infotext, 26
 - Limit value monitoring, 24
 - Log, 25
 - Recipe, 25
 - Safety, 26
 - Scaling, 24
 - Screen, 25
 - Tag, 24
 - Text list, 24
- Functions
 - Additional, 26

G

- Gauge, 213
- Graphics list
 - Functional scope, 24

H

- Handwheel
 - Application, 91
 - Evaluate incremental values, 91
 - Operating, 84
 - Reaction time, 90
- High frequency radiation, 30
- HMI device
 - Holding, 98, 99
 - Information, 117, 138
 - LED display, 81
 - Ports, 61
 - Restart, 137
 - Restarting, 117

- Specifications, 275
- Switch off, 77
- Switching on, 76
- Testing, 76
- HMI Input Panel
 - Options, 121
- Homepage
 - Internet, 154
- Host cable
 - Safety instruction, 63

I

- Identification, 152
- Illuminated pushbutton
 - Application, 92
 - Bit assignment, 92
 - Operating, 86
- Importing
 - Certificate, 157
 - Recipe data record, 264
- Infotext
 - Display, 208, 238
 - Functional scope, 26
- Initial startup, 169
- Input Panel, 116
- Input unit, 80
 - Specifications, 275
- Installation
 - Electrical, 54
 - EMC-compliant, 35
- Installing
 - Option, 168, 188, 190
- Interference
 - Pulse-shaped, 35
 - Sinusoidal, 36
- Internal clock, 129, 276
- Internet
 - Homepage, 154
 - Options, 116
 - Search engine, 154
 - Security settings, 116
 - Service, 7, 269
 - Settings, 117, 153
 - Support, 7, 269
- Internet Explorer, 108
- Internet options
 - Privacy, 156
- IP address
 - Ethernet, 150
 - Setting, 116, 117

K

- Keyboard
 - Safety instruction, 80
- Keyboard properties, 116, 123
- Key-operated switch
 - Application, 91
 - Bit assignment, 91
 - Operating, 85

L

- Labeling
 - Function keys, 95
- Labeling strips, 18
 - Attaching, 97
 - Dimensions, 96
 - Exchange, 97
 - Printing, 95
- LAN connection, 116, 117
- Language change
 - Functional scope, 26
- Layout
 - Battery, 209
 - Slider control, 214
 - Sm@rtClient view, 220
 - Trend view, 216
- LED
 - BAT, 82
 - BAT 1, 101
 - BAT 2, 101
 - COM, 82
 - POWER, 101
 - PWR, 82
 - RNG, 82
 - SAFE, 82
- LED display
 - Battery, 72
 - Charging station, 101
 - HMI device, 81
- LED function key
 - Application, 90
 - Bit assignment, 90
- License key, 191
 - Transferring, 168, 192
 - Transferring back, 168, 193
- Limit value
 - For password, 224
 - For user, 224
 - For user view, 224
- Limit value monitoring
 - Functional scope, 24
- Limit value test, 203

- Loader
 - Buttons, 105
 - Open, 107
- Log
 - Functional scope, 25
- Logbook
 - WLAN connection, 115
- Logoff
 - Users, 228
- Logoff time, 224
- Logon
 - Users, 226
- Logon data, 152

M

- Main battery, 18, 19
 - Changing in good time, 73
 - Insert, 71
- Main battery change
 - Block of USB interface, 66
- Main dimensions
 - Charging station, 273
 - Mobile Panel 277 IWLAN, 271
- Maintenance, 267, 268
- Maintenance technicians, 3
- Manual
 - Production sequence, 266
 - Transfer, 170
- Mechanical
 - Transport conditions, 37
- Memory
 - Specifications, 275
- Memory card, 18
 - Inserting, 94
 - Restoring file system, 131
 - Unplug, 95
- Memory information, 117
 - Display, 140
- Memory management, 117, 163
- Mobile Panel
 - Applications, 15
 - Design variations, 16
 - Front view, 16
 - Information, 138
 - Main dimensions, 271
 - Ports, 61
 - Rear view, 17
 - Side view, 17
- Mobile Panel 277 IWLAN
 - Ports, 276
- Monitor setting

- Changing, 117
- Monitoring mode
 - Sm@rtClient view, 220
- Mounting location
 - Charging station, 42
 - Transponder, 47
- Mounting position
 - Charging station, 50
- Mouse properties, 116, 124
- Multi-key operation, 198, 200
- Multimedia card, 18, 93

N

- Name server, 151
 - Setting, 116, 117
- Network
 - Configure, 148
 - Logon data, 117
 - Set up, 147
 - Setting, 150
- Network & dial-up connections, 117
- Network and dial-up connections, 116
- Network ID, 117
- Network operation
 - Device name, 149
 - Options, 117, 153
- Nominal voltage, 44
- NOTE
 - License key, 188
- Number format, 117, 130
- Numerical
 - Screen keyboard, 203
- Numerical value
 - Changing, 204
 - Decimal places, 203
 - Display format, 203
 - Entering, 204
 - Limit value test, 203

O

- Offices, 6
- Offline
 - Operating mode, 166
 - Recipe tag, 250
 - Test, 174
- ON/OFF button, 83
- Online
 - Operating mode, 166
 - Recipe tag, 250
 - Test, 174

- OP properties, 117
 - Device, 138
 - Memory monitoring, 163
 - Persistent storage, 131
 - Touch, 125
- Open
 - Loader, 107
- Operating
 - Control Panel, 118
 - Feedback, 199
 - Handwheel, 84
 - Illuminated pushbutton, 86
 - Key-operated switch, 85
 - Recipe menu, 258
 - Recipe screen, 251, 258
 - Slider control, 214
 - Switches, 215
 - Trend view, 217
 - With external keyboard, 198
 - With external mouse, 198
- Operating instructions
 - Purpose of, 3
 - Scope, 4
- Operating mode, 166
 - Changing, 166
 - Offline, 166
 - Online, 166
 - Transfer, 76, 167
- Operating safety
 - Standards, 32
- Operating system
 - Configure, 105
 - Update via ProSave, 183
 - Updating, 180, 181
 - Updating using WinCC flexible, 182
- Operation
 - Battery, 209
- Operation feedback, 199
- Operator control
 - Evaluation, 80
 - Functions, 80
 - Recipe view, 251
 - Selection, 80
 - Simple recipe view, 257
- Operators, 3
- Optical feedback, 199
- Option
 - Installing, 168, 188
 - Installing with ProSave, 190
 - Installing with WinCC flexible, 188
 - Removing, 168, 188
 - Removing with ProSave, 190
 - Removing with WinCC flexible, 189

- Options, 27
 - Network operation, 117, 153

P

- Parameter assignment
 - Data channel, 117, 141
- Password, 224
 - Backup, 224
 - Restoring, 224
 - Specifying, 127
- Password list, 224
- Password properties, 117, 127
- Password protection, 107, 117
 - Activate, 127
 - Deactivating, 128
- PELV, 33
- Peripherals
 - Rated load, 66
- Permission in remote control, 222
- Pin assignment
 - RJ45 socket, 278
 - USB socket, 278
- PLC
 - Connecting, 64
 - Connection graphic, 64
 - Number, 27
 - Protocol, 27
 - Reading recipe data record, 255, 261
 - Transferring recipe data record, 256, 262
- PLC_User, 230, 231
- Ports, 61
 - Mobile Panel 277, 276
- POWER
 - LED, 101
- Power failure, 176, 180
- Power management, 82
- Power Save 1, 83, 133
- Power Save 2, 83, 133
- Power supply, 33
 - Charging station, 33
 - Tabletop power supply unit, 34
- Precautions
 - Electrostatic discharge, 287
- Printer
 - Connecting, 65
 - Connection graphic, 65
 - Setting, 117
- Printer connection
 - Setting, 135
- Printer properties, 117, 136
- Printing
 - Labeling strips, 95
 - Via network printer, 148

- Production sequence
 - Manual, 266
- PROFINET, 147
 - Addressing, 147
- PROFINET IO
 - Disabling direct keys, 145
 - Enabling direct keys, 145
 - Setting, 117
- Project
 - Closing, 231
 - Offline testing, 174
 - Reuse, 167
 - Testing online, 174
 - Transferring, 168
- Project file, compressed
 - Memory location, 144
- Proper use, 30
- Protection against ingress of solid foreign bodies, 44
- Protection against water, 44
- Protective foil, 18
- Protocol
 - PLC, 27
- Proxy
 - Server, 116, 153, 155
 - Setting, 116
- PWR
 - LED, 82

R

- Radiation
 - High frequency, 30
- Radio interference, 34
 - Emission, 36
- Rate Control, 111
- Rated load
 - USB interface, 66
- Reading
 - Recipe data record, 255
- Reading out
 - Recipe data record, 261
- Real-time clock
 - Internal, 129
- Rear view, 17
- Recipe, 242
 - Control, 243
 - Data flow, 245
 - Data record, 243
 - Field of application, 241
 - Functional scope, 25

- Recipe screen, 246
- Recipe view, 246
- Synchronizing tags, 254
- Recipe data record
 - Creating, 252, 259
 - Delete, 254, 261
 - Editing, 253, 260
 - Entering, 265
 - Exporting, 263
 - Importing, 264
 - Reading from PLC, 255, 261
 - Synchronize with PLC, 253
 - Transferring to PLC, 256, 262
- Recipe list, 247, 258
- Recipe menu
 - Operating, 258
- Recipe screen, 248
 - Operating, 251, 258
 - Overview, 248
- Recipe tag
 - Offline, 250
 - Online, 250
 - Synchronizing, 249, 254
- Recipe view, 246
 - Extended, 246
 - Menu items, 258
 - Operator control, 251, 257
 - Simple, 247
- Recommissioning, 169
- Recycling, 7
- Regional and language settings, 117, 130
- Regional settings, 130
- Registered trademarks, 6
- Registry information
 - Backup, 117, 131
- Regulations for the prevention of accidents, 29
- Remote control
 - Forcing permission, 222
 - Start, 221
- Removing
 - Option, 168, 188, 189, 190
- Repairs, 268
- Replacement key set, 269
- Reset button, 61
- Resetting to factory settings with ProSave, 186
- Resetting to factory settings with WinCC flexible, 184
- Restore, 116, 158
- Restoring, 168, 175, 177, 179, 224
 - from external memory medium, 116
 - From external storage device, 158
 - From memory card, 131
 - With ProSave, 179
 - With WinCC flexible, 177

- Restoring factory settings, 63, 168, 181
- Return Center, 268
- RJ45 socket
 - Safety instruction, 61
- RNG
 - LED, 82
- Rotary coding switch
 - Transponder, 51
- Ruler
 - Trend view, 217
- S**
- SAFE
 - LED, 82
- Safe electrical separation, 33
- Safety
 - Functional scope, 26
 - Standards, 32
- Safety instruction
 - Backlighting, 134
 - Bridging battery, 73, 74, 75
 - Changed tag name, 254
 - Compatibility conflict, 176
 - Compressed project file, 169
 - Data channel, 181
 - Data loss, 180
 - Degree of protection, 60, 158
 - Degree of protection, 181
 - Direct key, 197
 - Electrostatic charging, 286
 - ESD, 53
 - General, 34
 - High frequency radiation, 30
 - Keyboard, 80
 - Leaving the WLAN coverage area, 197
 - License keys, 181
 - Malfunctions, 56, 69, 93
 - Memory card, first use, 94
 - Memory distribution, 140
 - Multi-key operation, 198
 - Observe grounding measures, 287
 - Path, 144
 - Power failure, 176, 180
 - Power supply, 33
 - Preventing inadvertent operation, 267
 - Project file, 144
 - Recipe data record in the background, 247
 - Restart, 137
 - RJ45 socket, 61
 - Sample cycle time, 90
 - Storage, 37

- Switching infotext, 208
- Time-dependent reactions, 129
- Touch screen, 80
- Transfer mode, 143
- Transfer mode channel 2, 143
- Transport, 37
- Unintentional action, 200
- Unintentional transfer mode, 142
- USB connection sequence, 63
- USB Host-to-Host cable, 63
- USB interface, 66
- Safety regulations, 29
- SAR, 36
- Scaling
 - Functional scope, 24
- Scope of delivery, 49
- Screen
 - Functional scope, 25
- Screen keyboard, 116, 201
 - Adjust size, 120
 - Alphanumeric, 205
 - Change layout, 119
 - Character repeat, 123
 - Configure, 121
 - For Control Panel, 118
 - Keyboard level, 205
 - Language change, 205
 - Move, 120
 - Numerical, 203
 - Representation types, 119
- Screen saver, 117, 134
 - Setting, 133
- Screen setting
 - Changing, 133
- Search engine
 - Internet, 154
- Security settings, 116
- Security system, 223
- Selection
 - Operator control, 80
- Service
 - On the Internet, 7, 269
- Service pack, 268
- Service technicians, 3
- Set up
 - Network, 147
- Setting
 - Backlighting, 117
 - Browser, 116
 - Character repeat, 123
 - Date, 128
 - Date format, 130
 - Date/Time, 116
 - Delay time, 117, 144
 - Device name, 117
 - Double-click, 124
 - E-mail, 117
 - E-mail connection, 153
 - IP address, 116, 117
 - Language, 201
 - Name server, 116, 117
 - Network, 150
 - Number format, 130
 - Printer connection, 135
 - PROFINET IO, 117
 - Proxy, 116
 - Regional data, 130
 - Screen saver, 133
 - Time, 128
 - Time format, 130
 - Transponder ID, 53
- Setting language, 201
- Settings
 - Internet, 117
 - Language, 117
 - Regional, 117
- Side view, 17, 272
- Siemens HMI input panel options, 116
- SIMATIC Logon, 223
- Simple alarm view, 236
- Simple recipe view, 247
 - Menu items, 258
 - Operator control, 257
- Simple user view, 225
- Slider control, 214
- Sm@rtAccess, 27
- Sm@rtClient view, 220, 221
 - Monitoring mode, 220
 - Usage, 220
- Sm@rtService, 27
- SMTP server, 153
- Software options, 27
- Sort order
 - Alarm view, 237
- Specifications
 - Display, 275
 - HMI device, 275
 - Input unit, 275
 - Memory, 275
 - Mobile Panel 277 IWLAN, 276
 - Supply voltage, 276, 277
 - Weight, 277
- Standard input unit, 80
- Start
 - HMI device, 137
- Status Force, 218

- Touch operation, 219
- Subnet Mask, 150
- Supply voltage, 277
 - Specifications, 276
- Support
 - On the Internet, 7, 269
- Switch off
 - HMI device, 77
- Switches, 215
- Switching on
 - HMI device, 76
- Symbolic value
 - Changing, 207
 - Entering, 207
- Synchronizing
 - Date and time, 129
 - Recipe tag, 249, 254
- System, 139
- System alarm
 - Meaning, 287
 - Parameters, 287
- System functions, 86
- System information, 117
 - Display, 139
- System properties, 117
 - Device name, 149
 - General, 139
 - Memory, 140

T

- Tabletop power supply unit, 19, 61
 - Connecting, 67
- Tag
 - Functional scope, 24
- Task planner
 - Functional scope, 26
- TCP/IP address, 150
- Technical support, 7
- Temporary files
 - Backup, 131
- Test
 - For ambient conditions, 40
- Test voltages, 44
- Testing
 - HMI device, 76
- Text box, 202
- Text list
 - Functional scope, 24
- Time, 116
 - Entering, 207
 - Setting, 128

- Synchronizing, 129
- Time format, 117, 130
- Time zone
 - Setting, 128
- Time-dependent reactions, 129
- Touch screen
 - Calibrating, 117, 125
 - Safety instruction, 80
- Training center, 7
- Transfer, 167, 168, 169
 - Automatic, 171
 - Cancel, 77
 - Manual, 170
- Transfer mode
 - Unintentional, 142
- Transfer settings, 117, 141
 - Channel, 141
- Transfer Settings
 - Directories, 144
- Transferring
 - License key, 168, 192
 - Project, 168
 - Recipe data record, 256, 262
- Transferring back
 - License key, 168, 193
- Transponder, 19, 46
 - Detect, 47, 48
 - Inserting the battery, 53
 - Installation, 54
 - Mounting location, 47
 - Rotary coding switch, 51
- Transponder ID
 - Setting, 53
- Transport conditions, 37
- Transport damage, 49
- Trend view, 216
- Trends
 - Functional scope, 26
 - Limit violation, 216

U

- UL approval, 31
- Unintentional action, 198, 200
- Unintentional transfer mode, 142
- Updating
 - About ProSave, 183
 - Operating system, 180
 - Using WinCC flexible, 182
- Updating the operating system, 168
- Usage
 - Conditions, 39

- In industry, 34
- In residential areas, 34
- With additional measures, 39
- USB
 - Connection sequence, 63
- USB connection sequence
 - Safety instruction, 63
- USB device
 - Connecting, 66
- USB FlashDrive, 18
- USB interface
 - Block during main battery change, 66
 - Rated load, 66
- USB socket, 61
 - Pin assignment, 278
- USB stick, 18
- User data
 - Backup, 224
 - Changing, 230
 - Restoring, 224
- User group, 223
- User manual, 4
- User name, 152
- User view, 225
 - Extended, 226
 - Simple, 225
- Users, 224
 - Admin, 230, 231
 - Creating, touch operation, 228
 - Delete, 231
 - Logoff, 228
 - Logon, 226
 - PLC_User, 230, 231

V

- Value table
 - Trend view, 216
- VBScript
 - Functional scope, 26
- Vibration alarm, 117
 - Activate, 140

W

- Weight, 277
- WinCC flexible internet settings, 117
 - E-mail, 153
- Windows CE taskbar, 105
 - Password protection, 107
- WINS, 151
 - Server, 147
- Wireless approval, 31
- WLAN
 - Authentication, 113
 - Encryption, 113
 - Interface, 278
 - Network key, 113
 - Password, 113
- WLAN connection
 - Logbook, 115
- WLAN network
 - Connect, 113
- WLAN networks
 - Connection sequence, 114
 - Creating new, 113
 - Display available, 112
 - Parameter assignment, 113
- WLAN quality, 210
 - Application, 210
 - Operation, 210
- WLAN range, 47

Z

- Zone, 45
 - Calculating quality, 212
 - Detect, 48
- Zone name, 211
 - Layout, 211
 - Operation, 211
- Zone quality, 211
 - Application, 211
 - Layout, 211
 - Operation, 212
- Zones
 - Testing, 175

Mobile Panel 277 IWLAN

Produktinformation

Gültigkeit

Die vorliegende Produktinformation gilt für das Bediengerät Mobile Panel 277 IWLAN mit folgenden Bestellnummern:

- 6AV6 645-0DD01-0AX0
- 6AV6 645-0FD01-0AX0
- 6AV6 645-0DE01-0AX0
- 6AV6 645-0FE01-0AX0

Diese Produktinformation enthält wichtige Hinweise. Die 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.

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 Spannungsversorgung betreiben, dann wird nach zwei Minuten ohne Bedienung automatisch der Energiesparmodus "Power Save 1" aktiviert. Das Display wird abgedunkelt.

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

HSP Mobile Panel 277 Wireless V1.1 erforderlich

Verwenden Sie zur Projektierung des Bediengeräts ausschließlich die Software "HSP Mobile Panel 277 Wireless V1.1".

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

Siemens AG
Industry Sector
Postfach 48 48
90026 NÜRNBERG

Mobile Panel 277 IWLAN
A5E02098200-04, 04/2009

Mobile Panel 277 IWLAN

Product Information

Validity

This product information is valid for the HMI device Mobile Panel 277 IWLAN with the following order numbers:

- 6AV6 645-0DD01-0AX0
- 6AV6 645-0FD01-0AX0
- 6AV6 645-0DE01-0AX0
- 6AV6 645-0FE01-0AX0

This product information contains important information. The 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.

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 in case of 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 voltage supply, the device will switch to power-save mode "Power Save 1" after two minutes without input. The display will be dimmed.

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

HSP Mobile Panel 277 Wireless V1.1 required

Configure the HMI device only with the software "HSP Mobile Panel 277 Wireless V1.1".

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.

Siemens AG
Industry Sector
Postfach 48 48
90026 NÜRNBERG

Mobile Panel 277 IWLAN
A5E02098200-04, 04/2009

Mobile Panel 277 IWLAN

Information produit

Validité

La présente information produit est valable pour le pupitre opérateur Mobile Panel 277 IWLAN avec les numéros de référence suivants :

- 6AV6 645-0DD01-0AX0
- 6AV6 645-0FD01-0AX0
- 6AV6 645-0DE01-0AX0
- 6AV6 645-0FE01-0AX0

Cette information produit contient des indications importantes. Les remarques complètent les instructions de service du pupitre opérateur et, en cas de conflit avec les indications des instructions de service, des Release Notes et de l'aide en ligne, c'est à elle que vous devez vous reporter.

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. Si des alarmes sont générées pendant que le mode d'économie d'énergie est actif, l'écran est 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.

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

HSP Mobile Panel 277 Wireless V1.1 requis

Utilisez pour la configuration du pupitre opérateur uniquement le logiciel "HSP Mobile Panel 277 Wireless V1.1".

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.

Siemens AG
Industry Sector
Postfach 48 48
90026 NÜRNBERG

Mobile Panel 277 IWLAN
A5E02098200-04, 04/2009

Mobile Panel 277 IWLAN

Informazioni sul prodotto

Validità

Le seguenti informazioni sul prodotto si riferiscono al pannello operatore Mobile Panel 277 IWLAN con i seguenti numeri di ordinazione:

- 6AV6 645-0DD01-0AX0
- 6AV6 645-0FD01-0AX0
- 6AV6 645-0DE01-0AX0
- 6AV6 645-0FE01-0AX0

Le presenti informazioni sul prodotto contengono avvertenze importanti. Le avvertenze sono da considerarsi parte integrante delle Istruzioni operative del pannello operatore e hanno valore di veridicità superiore a quello delle Informazioni contenute nelle Istruzioni operative, nelle Note di rilascio e nella Guida in linea.

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. Se appaiono delle segnalazioni quando la modalità a risparmio energetico è attiva, la visualizzazione rimane oscurata o disattivata. In questo caso è difficile o impossibile riconoscere le segnalazioni.

Nota

Se si utilizza il pannello operatore con alimentazione di tensione esterna, dopo due minuti di inattività viene attivata automaticamente la modalità a risparmio energetico "Power Save 1". Il display viene oscurato.

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

Richiesta di HSP Mobile Panel 277 Wireless V1.1

Per la progettazione del pannello operatore utilizzare esclusivamente il software "HSP Mobile Panel 277 Wireless V1.1".

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 trasponder 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. Il funzionamento sicuro del pannello operatore non può essere garantito in ogni circostanza. 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 per un funzionamento stabile dell'impianto anche in caso di elevato carico di 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.

Siemens AG
Industry Sector
Postfach 48 48
90026 NÜRNBERG

Mobile Panel 277 IWLAN
A5E02098200-04, 04/2009

Mobile Panel 277 IWLAN

Información del producto

Validez

La presente información de producto es válida para el panel de operador Mobile Panel 277 con las referencias siguientes:

- 6AV6 645-0DD01-0AX0
- 6AV6 645-0FD01-0AX0
- 6AV6 645-0DE01-0AX0
- 6AV6 645-0FE01-0AX0

La presente Información de producto contiene indicaciones importantes. Las 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 Online.

Power Management

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 más oscura o apagada. En este caso, los mensajes apenas pueden reconocerse.

Nota

Si utiliza el panel de operador con fuente de alimentación externa, tras dos minutos sin operación se activará automáticamente el modo de ahorro de energía "Power Save 1". La pantalla se oscurece.

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

HSP Mobile Panel 277 Wireless V1.1 necesario

Para configurar el panel de usuario utilice únicamente el software "HSP Mobile Panel 277 Wireless V1.1".

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 en cualquier 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.

Siemens AG
Industry Sector
Postfach 48 48
90026 NÜRNBERG

Mobile Panel 277 IWLAN
A5E02098200-04, 04/2009

Mobile Panel 277 IWLAN

製品情報

有効性

この製品情報は、以下の注文番号の HMI デバイス Mobile Panel 277 IWLAN を対象としています。

- 6AV6 645-0DD01-0AX0
- 6AV6 645-0FD01-0AX0
- 6AV6 645-0DE01-0AX0
- 6AV6 645-0FE01-0AX0

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。

電源管理

通知

省電力モードでは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")。省電力モードの間は、アラームの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 デバイスを使用している場合、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。

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

HSP Mobile Panel 277 Wireless V1.1 必要

HMI デバイスは、"HSP Mobile Panel 277 Wireless V1.1"ソフトウェアを使用している場合にのみ設定可能です。

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に設計されています。

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。

Siemens AG
Industry Sector
Postfach 48 48
90026 NÜRNBERG

Mobile Panel 277 IWLAN
A5E02098200-04, 04/2009

Mobile Panel 277 IWLAN, Mobile Panel 277F IWLAN


Produktinformation

Gültigkeit

Diese Produktinformation enthält wichtige Hinweise. Die Produktinformation ist gültig für folgende Bediengeräte:

- Mobile Panel 277 IWLAN, Bestellnummern 6AV6 645-0DD01-0AX0 und 6AV6 645-0DE01-0AX0.
- Mobile Panel 277F IWLAN, Bestellnummern 6AV6 645-0DB01-0AX0 und 6AV6 645-0DC01-0AX0

Funkzulassungen

 VORSICHT
Die folgende Übersicht informiert Sie über die möglichen Zulassungen. Für das Bediengerät selbst gelten nur die jeweils auf der Geräterückseite angegebenen Zulassungen.

CE-Zulassung



Die Produkte

- Mobile Panel 277 IWLAN, Bestellnummern 6AV6 645-0DD01-0AX0 und 6AV6 645-0DE01-0AX0.
- Mobile Panel 277F IWLAN, Bestellnummern 6AV6 645-0DB01-0AX0 und 6AV6 645-0DC01-0AX0

stimmen in der von Siemens A&D 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
EN 301893	Breitband-Funkzugangnetze (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 . 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
A&D AS RD ST
Postfach 1963
D-92209 Amberg

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 <http://support.automation.siemens.com>.

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.

FCC-Zulassung

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 received, including interference that may cause undesired operation.

Changes or modifications made to this equipment not expressly approved by SIEMENS may void the FCC authorization to operate this equipment.

Note

This equipment has been tested and found to comply with the limits for a **Class A digital device**, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This device has been shown to be capable of compliance for localized specific absorption rate (SAR) for uncontrolled environment / general public exposure limits specific in ANSI/IEEE C95.1-1992 and had been tested in accordance with the measurement procedures specified in IEEE Std. 1528-2003 December 2003.

IC-Zulassung Kanada

Exposure to Radio Frequency (RF) Signals:

The wireless device is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limit for exposure to radio frequency (RF) energy set by the Ministry of Health (Canada), Safety Code 6. These limits are part of comprehensive guidelines and established permitted levels of RF energy for the general population. These guidelines are based on the safety standards previously set by international standard bodies. These standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health.

This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter. This device has been shown to be capable of compliance for localized specific absorption rate (SAR) for uncontrolled environment / general public exposure limits specific in ANSI/IEEE C95.1-1992 and had been tested in accordance with the measurement procedures specified in IEEE Std. 1528-2003.

Länderzulassungen



VORSICHT















Die folgende Übersicht informiert Sie über die Funkzulassungen in verschiedenen Ländern.

Für das Bediengerät selbst gelten nur die jeweils auf der Geräterückseite angegebenen Funkzulassungen.

Die Funkzulassungen gelten für folgende Produkte:

- Mobile Panel 277 IWLAN, Bestellnummern 6AV6 645-0DD01-0AX0 und 6AV6 645-0DE01-0AX0
- Mobile Panel 277F IWLAN, Bestellnummern 6AV6 645-0DB01-0AX0 und 6AV6 645-0DC01-0AX0

Land	Kennzeichnung	Zulassung erteilt
Australien		
Belgien	CE 0681 	✓
Deutschland	CE 0681 	✓
Dänemark	CE 0681 	✓
Finnland	CE 0681 	✓
Frankreich	CE 0681 	✓
Griechenland	CE 0681 	✓
Großbritannien	CE 0681 	✓
Irland	CE 0681 	✓
Island	CE 0681 	✓
Italien	CE 0681 	✓
Japan		
Kanada	IC	
Liechtenstein	CE 0681 	✓

Land	Kennzeichnung	Zulassung erteilt
Luxemburg	CE 0681 	✓
Niederlande	CE 0681 	✓
Norwegen	CE 0681 	✓
Österreich	CE 0681 	✓
Portugal	CE 0681 	✓
Schweden	CE 0681 	✓
Schweiz	CE 0681 	✓
Spanien	CE 0681 	✓
Südafrika		
Taiwan		
Tschechien	CE 0681 	✓
Türkei	CE 0681 	✓
Ungarn	CE 0681 	✓
Vereinigte Staaten von Amerika		

Siemens AG
 Industry Sector
 Postfach 48 48
 90026 NÜRNBERG

Mobile Panel 277 IWLAN, Mobile Panel 277F IWLAN
 A5E01004934-02, 10/2008

Mobile Panel 277 IWLAN, Mobile Panel 277F IWLAN

Product Information

Validity

This product information contains important information. This product information applies to the following HMI devices:

- Mobile Panel 277 IWLAN, order numbers 6AV6 645-0DD01-0AX0 and 6AV6 645-0DE01-0AX0.
- Mobile Panel 277F IWLAN, order numbers 6AV6 645-0DB01-0AX0 and 6AV6 645-0DC01-0AX0

Wireless approvals

CAUTION

The following overview shows the approvals that may be available.

The approvals shown on the rear panel of each device apply to the HMI device itself.

CE approval



The products

- Mobile Panel 277 IWLAN, order numbers 6AV6 645-0DD01-0AX0 and 6AV6 645-0DE01-0AX0.
- Mobile Panel 277F IWLAN, order numbers 6AV6 645-0DB01-0AX0 and 6AV6 645-0DC01-0AX0

in the version put into circulation by Siemens A&D conform 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 Issues
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 Aktiengesellschaft
Automation & Drives
A&D AS RD ST
PO Box 1963
D-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 <http://support.automation.siemens.com>.

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.

FCC approval

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 received, including interference that may cause undesired operation.

Changes or modifications made to this equipment not expressly approved by SIEMENS may void the FCC authorization to operate this equipment.

Note

This equipment has been tested and found to comply with the limits for a **Class A digital device**, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This device has been shown to be capable of compliance for localized specific absorption rate (SAR) for uncontrolled environment / general public exposure limits specific in ANSI/IEEE C95.1-1992 and had been tested in accordance with the measurement procedures specified in IEEE Std. 1528-2003 December 2003.

IC approval Canada

Exposure to Radio Frequency (RF) Signals:

The wireless device is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limit for exposure to radio frequency (RF) energy set by the Ministry of Health (Canada), Safety Code 6. These limits are part of comprehensive guidelines and established permitted levels of RF energy for the general population. These guidelines are based on the safety standards previously set by international standard bodies. These standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health.

This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter. This device has been shown to be capable of compliance for localized specific absorption rate (SAR) for uncontrolled environment / general public exposure limits specific in ANSI/IEEE C95.1-1992 and had been tested in accordance with the measurement procedures specified in IEEE Std. 1528-2003.

National approvals

CAUTION



The following overview shows wireless approvals in a number of different countries.

The HMI device itself is certified in accordance with the wireless approvals shown on the rear panel labels.

The wireless approvals apply to the following products:

- Mobile Panel 277 IWLAN, order numbers 6AV6 645-0DD01-0AX0 and 6AV6 645-0DE01-0AX0
- Mobile Panel 277F IWLAN, order numbers 6AV6 645-0DB01-0AX0 and 6AV6 645-0DC01-0AX0

Country	Identification	Approval granted
Australia		
Belgium	CE 0681 Ⓢ	✓
Germany	CE 0681 Ⓢ	✓
Denmark	CE 0681 Ⓢ	✓
Finland	CE 0681 Ⓢ	✓
France	CE 0681 Ⓢ	✓
Greece	CE 0681 Ⓢ	✓
Great Britain	CE 0681 Ⓢ	✓
Ireland	CE 0681 Ⓢ	✓
Iceland	CE 0681 Ⓢ	✓
Italy	CE 0681 Ⓢ	✓
Japan		
Canada	IC	
Liechtenstein	CE 0681 Ⓢ	✓

Country	Identification	Approval granted
Luxembourg	CE 0681 Ⓢ	✓
The Netherlands	CE 0681 Ⓢ	✓
Norway	CE 0681 Ⓢ	✓
Austria	CE 0681 Ⓢ	✓
Portugal	CE 0681 Ⓢ	✓
Sweden	CE 0681 Ⓢ	✓
Switzerland	CE 0681 Ⓢ	✓
Spain	CE 0681 Ⓢ	✓
South Africa		
Taiwan		
Czech Republic	CE 0681 Ⓢ	✓
Turkey	CE 0681 Ⓢ	✓
Hungary	CE 0681 Ⓢ	✓
United States of America	FC	

Siemens AG
Industry Sector
Postfach 48 48
90026 NÜRNBERG

Mobile Panel 277 IWLAN, Mobile Panel 277F IWLAN
A5E01004934-02, 10/2008