

SIEMENS

SIMATIC

ET 200S distributed I/O
Digital electronic module
2DO AC24..230V (6ES7132-4FB01-0AB0)

Manual

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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.

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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

Preface

Purpose of the manual

This manual supplements the *ET 200S Distributed I/O System* Operating Instructions. General functions for the ET 200S are described in the *ET 200S Distributed I/O System* Operating Instructions.

The information in this document along with the operating instructions enables you to commission the ET 200S.

Basic knowledge requirements

To understand these operating instructions you should have general knowledge of automation engineering.

Scope of the manual

This manual applies to this ET 200S module. It describes the components that are valid at the time of publication.

Recycling and disposal

Thanks to the fact that it is low in contaminants, this ET 200S module is recyclable. For environmentally compliant recycling and disposal of your electronic waste, please contact a company certified for the disposal of electronic waste.

Additional support

If you have any questions relating to the products described in these operating instructions, and do not find the answers in this document, please contact your local Siemens representative.

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The portal to our technical documentation for the various SIMATIC products and systems is available at:

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We offer courses to help you get started with the ET 200S and the SIMATIC S7 automation system. Please contact your regional training center or the central training center in D - 90327, Nuremberg, Germany.

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- The bulletin board, a worldwide knowledge exchange for users and experts.
- Your local contact for Automation & Drives in our contact database.
- Information about on-site services, repairs, spare parts. Lots more can be found on our "Services" pages.

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Properties

1.1 Digital electronic module 2DO AC24..230V (6ES7132-4FB01-0AB0)

Properties

- Digital electronic module with two outputs
- Output current 2 A per output
- Rated load voltage 24 VAC to 48/120/230 VAC
- Replacement value
- Suitable for solenoid valves, AC contactors, and indicator lights

General terminal assignment

Note

Terminals 4, 8, A4, A8, A3 and A7 are only available at specified terminal modules.

Terminal assignment for 2DO AC24..230V (6ES7132-4FB01-0AB0)				
Terminal	Assignment	Terminal	Assignment	Notes
1	DO ₀	5	DO ₁	<ul style="list-style-type: none"> • DO_n: Output signal, Channel n • N: Neutral conductor • n.c.: Not connected (max. 30 V DC can be connected) • AUX1: Protective-conductor terminal or potential bus (freely usable up to 230 VAC)
2	n.c.	6	n.c.	
3	N	7	N	
4	n.c.	8	n.c.	
A4	AUX1	A8	AUX1	
A3	AUX1	A7	AUX1	

Usable terminal modules

Usable terminal modules for 2DO AC24..230V (6ES7132-4FB01-0AB0)				
TM-E15C26-A1 (6ES7193-4CA50-0AA0)	TM-E15C24-A1 (6ES7193-4CA30-0AA0)	TM-E15C24-01 (6ES7193-4CB30-0AA0)	TM-E15C23-01 (6ES7193-4CB10-0AA0)	← Spring terminal
TM-E15S26-A1 (6ES7193-4CA40-0AA0)	TM-E15S24-A1 (6ES7193-4CA20-0AA0)	TM-E15S24-01 (6ES7193-4CB20-0AA0)	TM-E15S23-01 (6ES7193-4CB00-0AA0)	← Screw-type terminal
TM-E15N26-A1 (6ES7193-4CA80-0AA0)	TM-E15N24-A1 (6ES7193-4CA70-0AA0)	TM-E15N24-01 (6ES7193-4CB70-0AA0)	TM-E15N23-01 (6ES7193-4CB60-0AA0)	← Fast Connect
				<p>Wiring examples</p>

Block diagram

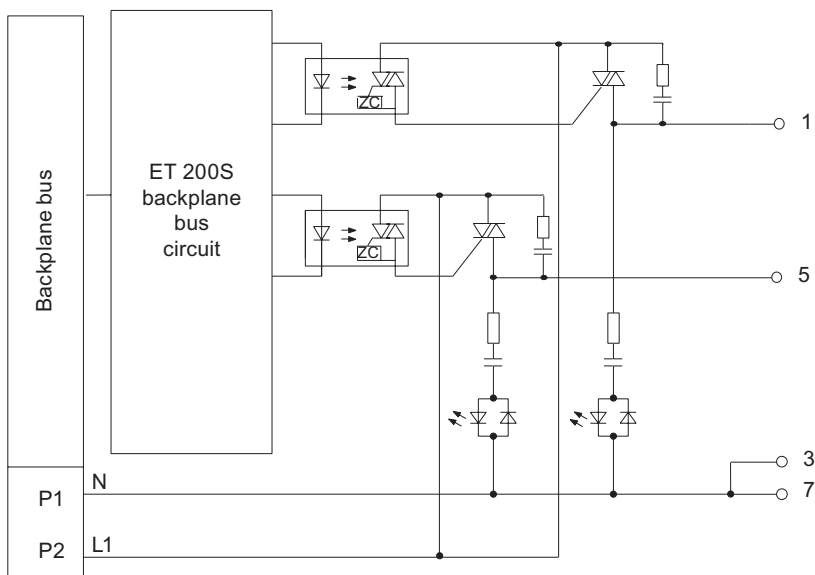


Figure 1-1 Block diagram of the 2DO AC24..230V

Technical data 2DO AC24..230V (6ES7132-4FB01-0AB0)

Dimensions and weight	
Width (mm)	15
Weight	Approx. 37 g
Module-specific data	
Supports isochronous operation	No
Number of outputs	2
Cable length	
• Unshielded	Max. 600 m
• Shielded	Max. 1000 m
Parameter length	3 bytes
Address space	1 byte
Address space (packed)	2 bits
Voltages, currents, potentials	
Rated load voltage L1 (from the power module)	24 VAC to 230 VAC
• Frequency	47 Hz to 63 Hz
Total current of the outputs (per module)	
• Up to 40 °C	Max. 2 A ¹
• Up to 60°C	Max. 1 A ¹
Electrical isolation	
• Between the channels	No
• Between the channels and backplane bus	Yes
Insulation tested	2500 VDC
Current consumption	
• From backplane bus	Max. 18 mA
• From rated load voltage L1 (no load)	Max. 15 mA per channel
Power dissipation of the module	Max. 4 W
Status, interrupts, diagnostics	
Status display	Green LED per channel
Diagnostics function	No
Data for selecting an actuator	
Output voltage	
• At signal "1"	Min. L (-1.5 V)
Output current (per channel)	
• At signal "1"	
– Rated value	2 A
– Permitted range	0.1 mA to 2.2 A
• With signal "0" (leakage current)	Max. 3 mA
Output delay (for resistive load)	
• At "0" to "1"	Max. 15 ms
• At "1" to "0"	Max. 15 ms

Properties

1.1 Digital electronic module 2DO AC24..230V (6ES7132-4FB01-0AB0)

Zero cross inhibit voltage	Max. 25 A
Motor starter size	
• Up to 40 °C	Max. size in accordance with NEMA: 5
• Up to 60°C	Max. size in accordance with NEMA: 4
Lamp load	Max. 100 W
Connecting two outputs in parallel	
• For redundant triggering of a load	Yes (per module)
• To increase performance	No
Control of a digital input	Supported
Switch rate	
• For resistive load	Max. 10 Hz
• On inductive load	Max. 0.5 Hz
• For lamp load	Max. 1 Hz
Short-circuit protection of the output	Yes, by means of fuse in the power module
¹ Total current of the outputs (per module): see the diagram below	

Total current of the outputs

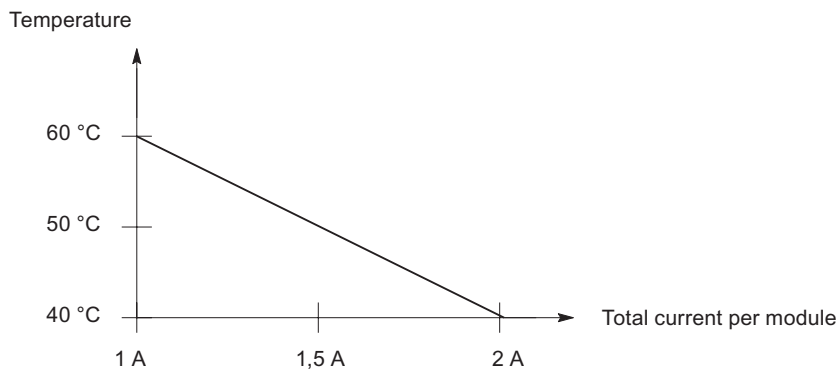


Figure 1-2 Total current of the outputs for 2DO AC24..230V

Parameters

2.1 Parameters

This table shows the parameters for digital output modules:

Table 2-1 Parameters for digital output modules

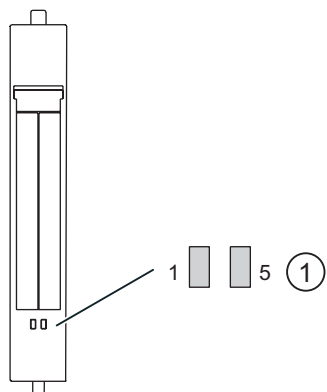
2DO AC24..230V/1A	Range of values	Default setting	Applicability
Response to CPU-/master-STOP	<ul style="list-style-type: none"> • Substitute a value • Keep last value 	Substitute a value	Module
Substitute value *	<ul style="list-style-type: none"> • "0" • "1" 	"0"	Channel

* If the interface module or COMPACT module becomes deenergized, the digital output modules will not produce substitute values. Output value = 0.

Diagnostics

3.1 Diagnostics using LED display

LED display



① Status display for output status (green)

Status and error displays

Event (LEDs)		Cause	Remedy
1	5		
On		Output on channel 0 activated.	—
	On	Output on channel 1 activated.	—

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