

## Controller - RFC 450 ETH-IB - 2730200

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Remote Field Controller with 1x10/100 Ethernet, INTERBUS-Master, IP20 degree of protection, pluggable parameterization memory (MC FLASH)

### Product description

#### Remote Field Controllers for Ethernet networks

When it comes to distributed, modular automation, Remote Field Controllers (RFCs) with IEC 61131 control intelligence and network connection are the ideal solution. As compact industrial PCs, Remote Field Controllers provide networked, PC-based control performance locally on the DIN rail.

#### Integrated Ethernet connection

The integrated Ethernet network connection (via twisted pair) ensures Ethernet connectivity, an increasingly important factor.

The "DIN rail PCs" can be accessed remotely via Ethernet and TCP/IP. Programming, operation, and visualization via the network enable innovative and cost-effective automation solutions.

When using the INTERBUS OPC server, a standardized coupling to the various visualization packages is also available via Ethernet.

#### IEC 61131 control performance

Remote Field Controllers are based on the international PC/104 standard for embedded PC systems. All Remote Field Controllers are configured and programmed consistently according to IEC 61131 using the PC Worx automation software. PC Worx can be operated locally on the serial interface or via the network (Ethernet).

The powerful processor can be programmed in all five IEC 61131 programming languages and ensures quick control task processing.

#### Ethernet communication

The integrated communication functions of the RFC ... ETH-IB modules enable direct and effective data exchange via Ethernet. The Ethernet TCP/IP protocol provides universal options for communicating with the Remote Field Controllers. The standardized transport protocol TCP/IP is used worldwide and is available for all computer architectures and operating systems.

With the INTERBUS OPC server, data is available in the Ethernet network in a standardized format.

Using the TCP/IP send and receive communication blocks according to standard IEC 61131-5, information such as necessary coupling variables can be exchanged between two Remote Field Controllers via Ethernet. This enables distributed, modular automation solutions to be configured. Time synchronization is also possible via the Ethernet network.

### Product Features

- ✓ Engineering with PC Worx (IEC 61131-3)
- ✓ Integrated Ethernet interface
- ✓ Complete fieldbus master (8192 I/O points)
- ✓ Flash file system



### Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	1881.1 GRM

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Custom tariff number	85371091
Country of origin	Germany

### Technical data

#### Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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#### Dimensions

Width	124 mm
Height	185 mm
Depth	190 mm

#### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	0 °C ... 55 °C (from 45°C only with fan module)
Ambient temperature (storage/transport)	-25 °C ... 70 °C
Permissible humidity (operation)	5 % ... 90 % (non-condensing)
Permissible humidity (storage/transport)	5 % ... 90 % (non-condensing)
Air pressure (operation)	80 kPa ... 108 kPa (up to 2000 m above sea level)
Air pressure (storage/transport)	66 kPa ... 108 kPa (up to 3000 m above sea level)
Shock	25g, Criterion 1, according to IEC 60068-2-27
Vibration (operation)	1g, Criterion 1, according to IEC 60068-2-6

#### Mechanical design

Format	124 x 185 x 190 mm (W x H x D without fan and without key)
	124 x 210 x 190 mm (W x H x D with fan and without key)
Weight	1550 g
Note on weight specifications	Without fan module
Weight	1700 g
Note on weight specifications	With fan module

#### Data interfaces

Interface	INTERBUS 2-wire remote bus
Connection method	D-SUB-9 female connector
Transmission speed	500 kBaud / 2 MBaud umschaltbar
Interface	Parameterization/operation/diagnostics
Connection method	RS-232-C, D-SUB connector, Ethernet 10/100 (RJ45)
Interface	Ethernet
Connection method	RJ45 socket
Transmission speed	10/100 MBit/s
Interface	Ethernet 10Base-T/100Base-TX

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## Technical data

### Data interfaces

Connection method	RJ45 socket
Transmission speed	10/100 MBit/s

### IEC 61131 runtime system

Programming tool	PC WORX
Processing speed	0.05 ms (1 K mix instructions)
	10 $\mu$ s (1 K bit instructions)
Program memory	typ. 8 Mbyte (680 K instructions (IL))
Mass storage	16 Mbyte
Retentive mass storage	96 kByte (NVRAM)
Number of data blocks	depends on mass storage
Number of timers, counters	depends on mass storage
Number of control tasks	16
Realtime clock	Integrated (battery backup)

### Power supply

Power supply connection	Screw terminal blocks, plug-in
Typical current consumption	1.5 A
Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (including ripple)
Residual ripple	$\pm 5$ %

### Fieldbus function

Amount of process data	max. 8192 Bit (INTERBUS-Master)
Number of supported devices	max. 512 (of which 254 are remote bus devices/bus segments)
Number of devices with parameter channel	max. 126
Module classification	INTERBUS master

### Direct I/Os

Output name	Digital outputs
Number of outputs	3
Connection method	2, 3, 4-wire
Maximum output current per channel	500 mA
Input name	Digital inputs
Number of inputs	5
Connection method	Inline potential distributor

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## Classifications

### eCl@ss

eCl@ss 4.0	27240601
eCl@ss 4.1	27240601
eCl@ss 5.0	27242215
eCl@ss 5.1	27242207
eCl@ss 6.0	27242207
eCl@ss 7.0	27242207
eCl@ss 8.0	27242207

### ETIM

ETIM 2.0	EC000236
ETIM 3.0	EC000236
ETIM 4.0	EC000236
ETIM 5.0	EC000236

### UNSPSC

UNSPSC 6.01	43172015
UNSPSC 7.0901	43201404
UNSPSC 11	43172015
UNSPSC 12.01	43201404
UNSPSC 13.2	43201404

## Approvals

### Approvals

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#### Approvals

UL Recognized / cUL Recognized / GOST / cULus Recognized

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#### Ex Approvals

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Approvals submitted

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### Approval details

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### Approvals

