Controller - RFC 430 ETH-IB - 2730190

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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 (RFC) with IEC 61131 control system intelligence and network connection are the ideal solution. Remote Field Controllers are compact, industrial PCs that provide networked, PC-based control performance on site with DIN rail mounting.
Integrated Ethernet connection
The integrated Ethernet network connection (via twisted pair) ensures Ethernet connectivity, an increasingly important factor.
The "DIN rail PCs" can be reached via Ethernet and TCP/IP by means of remote operation. Programming, operation, and visualization via the network enable innovative and cost-effective automation solutions.
When using the INTERBUS OPC server, standardized coupling with various visualization packages is also available via Ethernet.
IEC 61131 controller performance
Remote Field Controllers are based on the international PC/104 standard for embedded PC systems. All Remote Field Controllers are seamlessly configured and programmed according to IEC 61131 using the PC WORX automation software. PC WORX can be used 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 time-effective data exchange via Ethernet. The Ethernet TCP/IP protocol is used for universal possibilities to communicate with Remote Field Controllers. The standardized transport protocol TCP/IP is known worldwide and is available for all computer architectures and operating systems.
In the Ethernet network data is available in a standardized format using the INTERBUS OPC server.
Using the TCP/IP Send and Receive communication blocks according to the IEC-61131-5 standard, information between two Remote Field Controllers, e.g. necessary coupling variables, can be exchanged via Ethernet. This enables distributed, modular automation solutions to be configured. Even time synchronization is possible via the Ethernet network.

Your advantages

☑ 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
GTIN	‖‖‖‖‖‖‖‖‖‖‖‖‖‖ 4 017918 189235
GTIN	4017918189235

Controller - RFC 430 ETH-IB - 2730190

Weight per Piece (excluding packing)	1,559.200 g
Custom tariff number	85371091
Country of origin	Germany
Note	Made to Order (non-returnable)

Technical data

Note

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

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

Control system

Engineering tool	PC WORX
Programming languages supported	Programming in acc. with IEC 61131-3
Diagnostics tool	DIAG+ from version 1.14

IEC 61131 runtime system

Engineering tool	PC WORX
Program memory	typ. 2 Mbyte (170 K instructions (IL))
Mass storage	4 Mbyte
Retentive mass storage	96 kByte (NVRAM)
Number of control tasks	16
Realtime clock	Integrated (battery backup)

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. 62
Program memory	typ. 2 Mbyte (170 K instructions (IL))

Data interfaces

Interface	INTERBUS (Master)

Controller - RFC 430 ETH-IB - 2730190

Technical data

Data interfaces

Number	1
Connection method	D-SUB-9 female connector
Transmission speed	500 kBaud / 2 MBaud (can be switched)
Interface	Parameterization/operation/diagnostics
Number	1
Connection method	D-SUB 9 plug
Interface	Ethernet
Number	1
Connection method	RJ45 socket
Transmission speed	10/100 Mbps
Interface	Serial (RS-232)
Number	1
Connection method	D-SUB 9 plug
Transmission speed	10/100 Mbps

Direct I/Os

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

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	±5 %
Power dissipation	max. 20 W

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
Diagnostics display	yes

Controller - RFC 430 ETH-IB - 2730190

Technical data

Mechanical design

Controller redundancy	No
Safety function	No

Standards and Regulations

Vibration (storage/transport)	1g, Criterion 1, according to IEC 60068-2-6
Connection in acc. with standard	CUL
Shock	25g, Criterion 1, according to IEC 60068-2-27
Vibration (operation)	1g, Criterion 1, according to IEC 60068-2-6

Environmental Product Compliance

	1,2-dimethoxyethane,ethylene glycol dimethyl ether (EGDME) 110-71-4
	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Classifications

eCl@ss

eCl@ss 4.0	27240600
eCl@ss 4.1	27240600
eCl@ss 5.0	27242700
eCl@ss 5.1	27242700
eCl@ss 6.0	27242200
eCl@ss 7.0	27242207
eCl@ss 8.0	27242207
eCl@ss 9.0	27242207

ETIM

ETIM 2.0	EC000236
ETIM 3.0	EC000236
ETIM 4.0	EC000236
ETIM 5.0	EC000236
ETIM 6.0	EC000236
ETIM 7.0	EC000236

UNSPSC

UNSPSC 6.01	43172015
UNSPSC 7.0901	43201404
UNSPSC 11	43172015
UNSPSC 12.01	43201404
UNSPSC 13.2	39122114
UNSPSC 18.0	39122114

Controller - RFC 430 ETH-IB - 2730190

Classifications

UNSPSC

UNSPSC 19.0	39122114
UNSPSC 20.0	39122114
UNSPSC 21.0	39122114

Accessories

Accessories

Device parameterization

Software - AX+ BASIC - 2985068

Software CD for FDT container for integrating device DTMs (free download)

Drivers and interfaces

Software - AX OPC SERVER - 2985945

AX OPC SERVER, communication interface for OPC-capable visualization with PC WORX-based controls.

Fan

Fan - RFC DUAL-FAN - 2730239

Fan module for Remote Field Controllers RFC 430 ETH-IB / RFC 450 ETH-IB

Parameterization memory

Memory - IBS MC FLASH 2MB - 2729389

Program and configuration memory, 2 Mbyte

Controller - RFC 430 ETH-IB - 2730190

Accessories

Memory - IBS MC FLASH 4MB - 2729392

Program and configuration memory, 4 Mbyte

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Program and configuration memory, 4 Mbyte

Memory - IBS MC FLASH 2MB - 2729389

Program and configuration memory, 2 Mbyte

Programming

Software - PC WORX DEMO - 2985725

Software package for PC-based automation solutions, PC WORX DEMO, contains all 5 IEC languages, with MSFC compiler, max. 16 bytes input and output data

Software - PC WORX BASIC LIC - 2985275

Software package for PC-based automation solutions, PC WORX BASIC license, contains all 5 IEC languages, without MSFC compiler, max. 2048 byte input and output data, version-specific license key

Controller - RFC 430 ETH-IB - 2730190

Accessories

Software - PC WORX PRO LIC - 2985385

Software package for PC-based automation solutions, PC WORX PRO license, contains all 5 IEC languages, with MSFC compiler, max 128 kB input and output data, version-specific license key

Software - AX DTM LIB - 2988065

DTM library

Programming cable

Connecting cable - IBS PRG CAB - 2806862

Connection cable, to connect the controller boards to the PC (RS-232-C), length 3 m

Spare key - SPARE KEYSET - 2737135

Spare key for the RFC 4xx ETH-IB.

Software - PC WORX PRO-MSFC LIC - 2985495

Software package for PC-based automation solutions, PC WORX PRO-MSFC license, contains all 5 IEC languages and MSFC compiler, max. 64 Kbytes IN, 64 Kbytes OUT, version-specific license key

Spare key - SPARE KEYSET - 2737135

Spare key for the RFC 4xx ETH-IB.

Necessary add-on products

Controller - RFC 430 ETH-IB - 2730190

Accessories

Memory - IBS MC FLASH 4MB - 2729392

Program and configuration memory, 4 Mbyte

Memory - IBS MC FLASH 2MB - 2729389

Program and configuration memory, 2 Mbyte

Spare parts

Memory - IBS MC FLASH 4MB - 2729392

Program and configuration memory, 4 Mbyte

Memory - IBS MC FLASH 2MB - 2729389

Program and configuration memory, 2 Mbyte