

RFC 430 ETH-IB - Controller



2730190

<https://www.phoenixcontact.com/gb/products/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

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

Commercial data

Item number	2730190
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DRAABA
Product key	DRAABA

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Catalog page	Page 30 (AX-2009)
GTIN	4017918189235
Weight per piece (including packing)	1,847.7 g
Weight per piece (excluding packing)	1,559.2 g
Customs tariff number	85371091
Country of origin	DE

Technical data

Notes

Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area
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Product properties

Type	Stand-Alone
Product type	Controller
Product family	Remote Field Controller

Insulation characteristics

Protection class	III (IEC 61140, EN 61140, VDE 0140-1)
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Display

Diagnostics display	yes
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System properties

Retentive data storage	96 kByte (NVRAM)
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IEC 61131 runtime system

Program memory	typ. 2 Mbyte (170 K instructions (IL))
Data storage system	4 Mbyte
Number of control tasks	16

INTERBUS-Master

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

Function

Diagnostics display	yes
Controller redundancy	No
Safety function	No

Local diagnostics

Designation	LINK, TRAFFIC
Monitored function	Higher-level network
Optical representation	Status display via LED

Functionality

Programming languages supported	Instruction list (IL)
	Symbolic flowchart (SFC)
	Ladder diagram (LD)
	Function block diagram (FBD)

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System requirements

Engineering tool	PC Worx
Diagnostics tool	DIAG+ from version 1.14
Application interface	Device driver interface via TCP/IP sockets

Electrical properties

Local diagnostics	LINK, TRAFFIC Higher-level network Status display via LED
	FCRUN, FCDBG IEC 61131 runtime system Diagnostics display
	INTERBUS master Diagnostics display
Transmission medium	Copper
Maximum power dissipation for nominal condition	max. 20 W

Supply

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

Real-time clock

Realtime clock	Integrated (battery backup)
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Input data

Digital

Input name	Digital inputs
Number of inputs	5
Connection method	Inline potential distributor
Connection technology	2-, 3-, 4-conductor

Output data

Digital

Output name	Digital outputs
Connection method	Spring-cage connection
Connection technology	2-, 3-, 4-conductor
Number of outputs	3
Output voltage	24 V DC
Maximum output current per channel	500 mA

Connection data

Connection method	FLK14 pin strip
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Interfaces

Web server	No
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INTERBUS (Master)

Bus system	RS-422
Number of interfaces	1
Connection method	D-SUB-9 female connector
Transmission speed	500 kBaud / 2 MBaud (can be switched)

Parameterization/operation/diagnostics

Bus system	RS-232
Number of interfaces	1
Connection method	D-SUB 9 plug
Transmission physics	Copper
No. of channels	2

Ethernet

Bus system	RJ45
Number of interfaces	1
Connection method	RJ45 jack
Transmission speed	10/100 Mbps
No. of channels	1

Serial (RS-232)

Bus system	RS-232
Number of interfaces	1
Connection method	D-SUB 9 plug
Transmission speed	10/100 Mbps
Transmission physics	Copper

Dimensions

External dimensions

Width / Height / Depth	124 mm / 185 mm / 190 mm (without fan module)
	124 mm / 210 mm / 190 mm (With fan module)

Environmental and real-life conditions

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)
Shock	25g, Criterion 1, according to IEC 60068-2-27
Vibration (operation)	1g, Criterion 1, according to IEC 60068-2-6
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)

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Mounting

Mounting type	DIN rail mounting
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Approvals

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cUL Recognized

Approval ID: FILE E 140324



UL Recognized

Approval ID: FILE E 140324



EAC

Approval ID: RU*DE*08.B.00529/19

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Classifications

ECLASS

ECLASS-11.0	27242207
ECLASS-12.0	27242207
ECLASS-13.0	27242207

ETIM

ETIM 8.0	EC000236
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UNSPSC

UNSPSC 21.0	32151700
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Environmental product compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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Mandatory accessories

IBS MC FLASH 4MB - Memory

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<https://www.phoenixcontact.com/gb/products/2729392>

Program and configuration memory, 4 Mbyte



IBS MC FLASH 2MB - Memory

2729389

<https://www.phoenixcontact.com/gb/products/2729389>

Program and configuration memory, 2 Mbyte



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IBS PRG CAB - Connecting cable

2806862

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



RFC DUAL-FAN - Fan

2730239

<https://www.phoenixcontact.com/gb/products/2730239>

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



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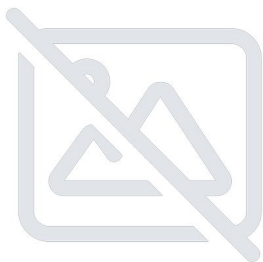
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SPARE KEYSET - Spare key

2737135

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Spare key for the RFC 4xx ETH-IB.

AX OPC SERVER - Driver and interface software

2985945

<https://www.phoenixcontact.com/gb/products/2985945>



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

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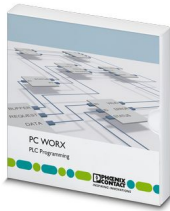
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PC WORX DEMO - Programming software

2985725

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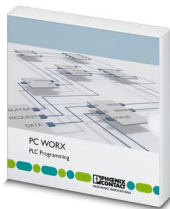


Software package for PC-based automation solutions. PC WORX DEMO contains all 5 IEC languages with MSFC compiler. Max. 16 bytes of input and output data can be used with the demo version. It is available free of charge and does not require a license key. It is part of the AUTOMATIONWORX Software Suite, which you can download under "Downloads".

PC WORX BASIC LIC - Programming software

2985275

<https://www.phoenixcontact.com/gb/products/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

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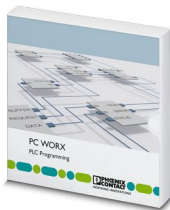
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PC WORX PRO LIC - Programming software

2985385

<https://www.phoenixcontact.com/gb/products/2985385>

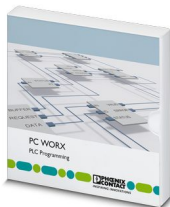


Software package for PC-based automation solutions, PC WORX PRO license, contains all 5 IEC languages, with MSFC compiler, max 128 kB input and output data, version-specific license key

PC WORX PRO-MSFC LIC - Programming software

2985495

<https://www.phoenixcontact.com/gb/products/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

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AX+ BASIC - Software

2985068

<https://www.phoenixcontact.com/gb/products/2985068>

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



AX DTM LIB - Programming software

2988065

<https://www.phoenixcontact.com/gb/products/2988065>

DTM library



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