

RFC 460R PN 3TX - Controller



2700784

<https://www.phoenixcontact.com/us/products/2700784>

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High-availability Remote Field Controller with redundancy function, 3 x 10/100 Ethernet, PROFINET controller, IP20 protection, plug-in parameterization memory

Product description

High-availability Remote Field Controller for PROFINET networks
When it comes to high-availability, distributed, and modular automation, Remote Field Controllers (RFCs) with IEC 61131 control intelligence, redundancy technology, and network connection are the ideal solution. Thanks to the integrated fiber optic-based redundancy function, you can reduce system downtimes, work cost-effectively, and also avoid potential hazards, e.g., in tunnels or at airports.

Your advantages

- The RFC 460R PN 3TX features:
- Fast startup and automatic configuration of all redundancy functions, thanks to AutoSync technology
- Uninterrupted process in the event of failure or when a controller is replaced
- Optimum device integration, thanks to PROFINET standards; redundancy for your future-proof Ethernet network
- High-resolution display for displaying status and error messages in plain text
- Uninterrupted visualization - thanks to redundancy-capable OPC server
- A distance of up to 80 km between the controllers via fiber optics; cost-optimized thanks to plug-in SFP modules

Commercial data

Item number	2700784
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR10
Product key	DRAABA
Catalog page	Page 53 (C-6-2019)
GTIN	4046356640589
Weight per piece (including packing)	2,100 g
Weight per piece (excluding packing)	1,870 g
Customs tariff number	85371091
Country of origin	DE

Technical data

Product properties

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

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

Processor	Intel® Celeron® 927 UE 1.5 GHz
Retentive data storage	120 kByte (NVRAM)

IEC 61131 runtime system

Program memory	typ. 8 Mbyte
Data storage system	16 Mbyte
Number of control tasks	1

PROFINET

Device function	PROFINET-Controller
Specification	Version 1.1
Update rate	min. 1 ms

Function

Diagnostics display	yes
Controller redundancy	yes
Safety function	No

Functionality

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

System requirements

Engineering tool	PC Worx
Diagnostics tool	DIAG+, version 2.00 or higher
Application interface	Device driver interface via TCP/IP sockets

Electrical properties

Maximum power dissipation for nominal condition	typ. 24 W (Without fan module)
Transmission medium	Copper

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Maximum power dissipation for nominal condition	typ. 24 W (Without fan module)
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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
Typical current consumption	1 A

Real-time clock

Realtime clock	Integrated (battery backup)
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Connection data

Connection method	without
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Interfaces

Web server	No
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Ethernet

Bus system	RJ45
Number of interfaces	3
Connection method	RJ45 jack
Transmission speed	10/100 Mbps
Transmission physics	Copper
Transmission length	100 m (per segment)

Synchronization interface

Number of interfaces	1
Connection method	SFP
Transmission speed	1 Gbps
Transmission physics	Depending on the SFP module
Transmission length	up to 80 km (Depending on the fiber/SFP module used)

USB 2.0

Number of interfaces	2
Connection method	USB type A, socket

Dimensions

External dimensions

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

Material specifications

Color	anthracite grey (RAL 7016)
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Environmental and real-life conditions

Ambient conditions

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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 ... 106 kPa (up to 2000 m above sea level)
Air pressure (storage/transport)	66 kPa ... 108 kPa (up to 3000 m above sea level)

Mounting

Mounting type	DIN rail mounting
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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2700784>



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



UL Listed
Approval ID: FILE E 140324



cUL Listed
Approval ID: FILE E 140324

cULus Listed

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Classifications

ECLASS

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

ETIM

ETIM 9.0	EC000236
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UNSPSC

UNSPSC 21.0	32151700
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Environmental product compliance

EU RoHS	
Fulfills EU RoHS substance requirements	Yes
Exemption	6(a), 6(a)-I, 7(a), 7(c)-I
China RoHS	
Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.
EU REACH SVHC	
REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	e26c3b55-47e1-45ef-8674-88e83dffae13

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Mandatory accessories

CF FLASH 2GB - Memory

2701185

<https://www.phoenixcontact.com/us/products/2701185>

Program and configuration memory, plug-in, 2 Gbytes.



CF FLASH 2GB APPLIC A - Memory

2701189

<https://www.phoenixcontact.com/us/products/2701189>

Program and configuration memory, plug-in, 2 Gbytes with license key for function block libraries, e.g., for: SNMP, SQL, wireless, motion functions, etc.



Accessories

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CF FLASH 2GB - Memory

2701185

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Program and configuration memory, plug-in, 2 Gbytes.



CF FLASH 2GB APPLIC A - Memory

2701189

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Program and configuration memory, plug-in, 2 Gbytes with license key for function block libraries, e.g., for: SNMP, SQL, wireless, motion functions, etc.



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AX OPC SERVER - Driver and interface software

2985945

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



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

RFC DUAL-FAN - Fan

2730239

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



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

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FL SFP SX - Media module

2891754

<https://www.phoenixcontact.com/us/products/2891754>



Gigabit SFP module for transmission up to 1 km with a wavelength of 850 nm.

FL SFP LX - Media module

2891767

<https://www.phoenixcontact.com/us/products/2891767>



Gigabit SFP module for transmission up to 30 km with a wavelength of 1310 nm.

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FL SFP LH - Media module

2989912

<https://www.phoenixcontact.com/us/products/2989912>

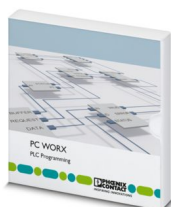


Gigabit SFP module for transmission up to 80 km with a wavelength of 1,550 nm.

PC WORX BASIC LIC - Programming software

2985275

<https://www.phoenixcontact.com/us/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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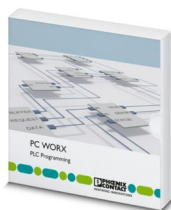
<https://www.phoenixcontact.com/us/products/2700784>



PC WORX PRO LIC - Programming software

2985385

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

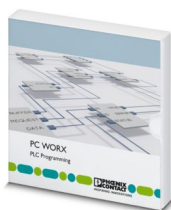


Software package for PC-based automation solutions, PC WORX PRO license, contains all 5 IEC languages, with MSFC compiler, max 128 kB input and output data, version-specific license key

PC WORX PRO-MSFC LIC - Programming software

2985495

<https://www.phoenixcontact.com/us/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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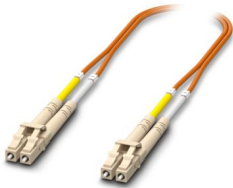


FOC-LC:PA-LC:PA-OM2:D01/1 - FO patch cable

1115633

<https://www.phoenixcontact.com/us/products/1115633>

Multi-mode OM2 duplex jumper, LC-LC, UPC polishing, length 1 m

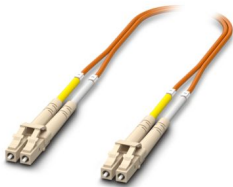


FOC-LC:PA-LC:PA-OM2:D01/2 - FO patch cable

1115634

<https://www.phoenixcontact.com/us/products/1115634>

Multi-mode OM2 duplex jumper, LC-LC, UPC polishing, length 2 m



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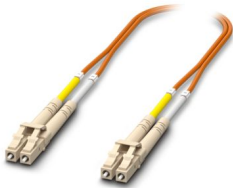


FOC-LC:PA-LC:PA-OM2:D01/5 - FO patch cable

1115637

<https://www.phoenixcontact.com/us/products/1115637>

Multi-mode OM2 duplex jumper, LC-LC, UPC polishing, length 5 m



FOC-LC:PA-LC:PA-OS2:D01/1 - FO patch cable

1115636

<https://www.phoenixcontact.com/us/products/1115636>

Single-mode OS2 duplex jumper, LC-LC, UPC polishing, length 1 m



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FOC-LC:PA-LC:PA-OS2:D01/2 - FO patch cable

1115629

<https://www.phoenixcontact.com/us/products/1115629>

Single-mode OS2 duplex jumper, LC-LC, UPC polishing, length 2 m



FOC-LC:PA-LC:PA-OS2:D01/5 - FO patch cable

1115626

<https://www.phoenixcontact.com/us/products/1115626>

Single-mode OS2 duplex jumper, LC-LC, UPC polishing, length 5 m



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PC WORX UA SERVER-PLC 80 - Driver and interface software

2402686

<https://www.phoenixcontact.com/us/products/2402686>

OPC UA server for communication with a maximum of 200 controllers



USB FLASH DRIVE - USB memory stick

2402809

<https://www.phoenixcontact.com/us/products/2402809>

USB memory stick, 8 GB



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Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com