

# RFC 480S PN 4TX - Safety controller



2404577  
<https://www.phoenixcontact.com/us/products/2404577>

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Remote Field Controller with 4 x 10/100/1000 Ethernet, PROFINET controller with integrated PROFIsafe safety controller, PROFINET device, IP20 degree of protection, pluggable parameterization memory

## Your advantages

- Convenient operation via the touch display
- Modern communication with SCADA systems, thanks to OPC UA
- Communication in up to three separate subnets
- Rapid processing of CPU-intensive applications
- Operation of devices with the latest PROFIsafe profile

## Commercial data

Item number	2404577
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR10
Product key	DRAABC
Catalog page	Page 53 (C-6-2019)
GTIN	4055626443966
Weight per piece (including packing)	3,274.4 g
Weight per piece (excluding packing)	3,249 g
Customs tariff number	85371091
Country of origin	DE

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## 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®Core™ i5-6300U, 2x 2.4 GHz (Dual-Core)
	Arm®Cortex®-A9 800 MHz (Safety)
	Arm®Cortex®-A8 600 MHz (Safety)
Retentive data storage	2 Mbyte

### IEC 61131 runtime system

Program memory	typ. 16 Mbyte
Data storage system	32 Mbyte
Number of control tasks	16

### PROFINET

Device function	PROFINET controller, PROFINET device
Update rate	min. 1 ms
Number of supported devices	max. 256

### Function

Diagnostics display	yes
Controller redundancy	No
Safety function	yes

### 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

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Power consumption	typ. 25 W (Without fan module)
	max. 35 W (With fan module)
Maximum power dissipation for nominal condition	typ. 24 W (Without fan module)
	typ. 24 W (Without fan module)

## 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

### COMBICON connector

Conductor cross section, rigid	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section, flexible	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section AWG	24 ... 12

## Interfaces

Web server	No
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### USB

Number of interfaces	1
Connection method	USB type A, male connector

### Ethernet

Bus system	RJ45
Number of interfaces	4
Connection method	RJ45 jack
Transmission speed	10/100/1000 Mbps (100 Mbps (LAN 3.1 and LAN 3.2), 1000 Mbps (LAN 1, LAN 2))

## Dimensions

### External dimensions

Width / Height / Depth	122 mm / 182 mm / 173 mm (without fan module)
	122 mm / 220 mm / 173 mm (With fan module)

## Material specifications

Color	anthracite grey (RAL 7016)
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## Characteristics

### Safety data: EN ISO 13849

Category	max. 4
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Performance level (PL)	max. e
Safety data: IEC 61508 - High demand	
Safety Integrity Level (SIL)	max. 3
Safety data: EN IEC 62061	
Safety Integrity Level Claim Limit (SIL CL)	max. 3

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20 (Manufacturers declaration, not evaluated by UL)
Ambient temperature (operation)	0 °C ... 60 °C up to 2000 m above mean sea level (from 40 °C only with fan module)
	0 °C ... 55 °C 2000 m ... 3000 m above mean sea level (With fan module only)
	0 °C ... 50 °C 3000 m ... 4000 m above mean sea level (With fan module only)
Ambient temperature (storage/transport)	-25 °C ... 70 °C
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	5 % ... 95 % (non-condensing)
Shock (operation)	20g (in accordance with EN 60068-2-27/IEC 60068-2-27)
Shock (storage/transport)	20g (in accordance with EN 60068-2-27/IEC 60068-2-27)
Vibration (operation)	1g (in accordance with EN 60068-2-6/IEC 60068-2-6)
Vibration (storage/transport)	1g (in accordance with EN 60068-2-6/IEC 60068-2-6)
Air pressure (operation)	60 kPa ... 108 kPa (up to 4000 m above mean sea level)
Air pressure (storage/transport)	58 kPa ... 108 kPa (up to 4500 m above mean 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/2404577>




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



**UL Listed**  
Approval ID: FILE E 238705



**cUL Listed**  
Approval ID: FILE E 238705



**Functional Safety**  
Approval ID: 01/205/5649.01/23

**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, 6(c), 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	270b9246-7fae-46dd-a74d-6402848075fd

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## Accessories

### 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.

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### RFC FAN MODULE - Fan

2404085

<https://www.phoenixcontact.com/us/products/2404085>



Fan module for the RFC 480S PN 4TX and RFC 4072S Remote Field Controllers.



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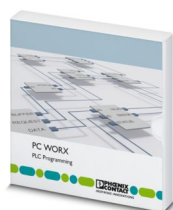
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## PC WORX DEMO - Programming software

2985725

<https://www.phoenixcontact.com/us/products/2985725>



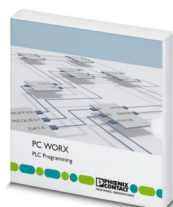
Software package for PC-based automation solutions. PC WORX DEMO contains all 5 IEC languages with MSFC compiler. Max. 16 bytes of input and output data can be used with the demo version. It is available free of charge and does not require a license key. It is part of the AUTOMATIONWORX Software Suite,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

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## 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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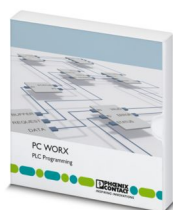
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## PC WORX PRO LIC - Programming software

2985385

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



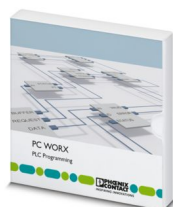
Software package for PC-based automation solutions, PC WORX PRO license, contains all 5 IEC languages, with MSFC compiler, max 128 kB input and output data, version-specific license key

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## 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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## UM QS DE SAFETYPROG - Quick start guide

2888628

<https://www.phoenixcontact.com/us/products/2888628>

Quick Start Guide, German, for SafetyProg



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## UM QS EN SAFETYPROG - Quick start guide

2888631

<https://www.phoenixcontact.com/us/products/2888631>

Quick Start Guide, English, for SafetyProg



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## SAFETYPROG BASIC - Programming software

2700443

<https://www.phoenixcontact.com/us/products/2700443>



Programming software for INTERBUS-Safety systems and PROFIsafe controllers from Phoenix Contact, with graphical user interface according to IEC 61131-3 in function block diagram (FBD), ladder diagram (LD), and structured text (ST).

One of the libraries from the corresponding PLCopen libraries (Basic\_SF, MatHandling\_SF, Muting\_SF, SafeMode\_SF, and TwoHand\_SF) can be used per project.

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## SAFETYPROG ADVANCED - Programming software

2700441

<https://www.phoenixcontact.com/us/products/2700441>



Programming software for INTERBUS-Safety systems and PROFIsafe controllers from Phoenix Contact, with graphical user interface according to IEC 61131-3 in function block diagram (FBD), ladder diagram (LD), and structured text (ST).

Three of the libraries from the corresponding PLCopen libraries (Basic\_SF, MatHandling\_SF, Muting\_SF, SafeMode\_SF, and TwoHand\_SF) can be used per project.

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## SAFETYPROG PROFESSIONAL - Programming software

2700442

<https://www.phoenixcontact.com/us/products/2700442>



Programming software for INTERBUS-Safety systems and PROFIsafe controllers from Phoenix Contact, with graphical user interface according to IEC 61131-3 in function block diagram (FBD), ladder diagram (LD), and structured text (ST).

All of the libraries from the corresponding PLCopen libraries (Basic\_SF, MatHandling\_SF, Muting\_SF, SafeMode\_SF, and TwoHand\_SF) can be used per project.

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## SD FLASH 512MB - Program / configuration memory

2988146

<https://www.phoenixcontact.com/us/products/2988146>



Program and configuration memory, plug-in, 512 Mbyte.

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## SD FLASH 512MB APPLIC A - Program / configuration memory

2701799

<https://www.phoenixcontact.com/us/products/2701799>



Program and configuration memory for extending the internal Flash memory, plug-in, 512 MB with license key for function block libraries. For licensed function blocks, please refer to the documentation.

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## SD FLASH 512MB PDPI BASIC - Memory

2701800

<https://www.phoenixcontact.com/us/products/2701800>



Program and configuration memory, plug-in, 512 MB with license key for licensing the PDPI - BASIC functional block for precise multi-channel controllers with self-optimization, e.g., for heating and cooling functions or hydraulic movements.

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## SD FLASH 512MB PDPI PRO - Memory

2701801

<https://www.phoenixcontact.com/us/products/2701801>



Program and configuration memory, plug-in, 512 MB with license key for licensing the PDPI - PRO functional block for precise multi-channel controllers with self-optimization, additional functions: e.g., for setpoint processing, for heating and cooling functions.

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## SD FLASH 2GB - Program / configuration memory

2988162

<https://www.phoenixcontact.com/us/products/2988162>



Program and configuration memory, for extending the internal flash memory, pluggable, 2 GB.

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## SD FLASH 2GB APPLIC A - Program / configuration memory

2701190

<https://www.phoenixcontact.com/us/products/2701190>



Program and configuration memory for extending the internal Flash memory, plug-in, 2 GB with license key for function block libraries. For licensed function blocks, please refer to the documentation.

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