

# RFC 480S PN 4TX - Safety controller



2404577

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

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



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)	3,465 g
Weight per piece (excluding packing)	3,249 g
Customs tariff number	85371091
Country of origin	DE

# RFC 480S PN 4TX - Safety controller



2404577

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

## Technical data

### 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)
------------------	---------------------------------------

### Display

Diagnostics display	yes
---------------------	-----

### 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

# RFC 480S PN 4TX - Safety controller



2404577

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

Power consumption	typ. 25 W (Without fan module)
	max. 35 W (With fan module)
Maximum power dissipation for nominal condition	max. 24 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
Typical current consumption	1 A

## Real-time clock

Realtime clock	Integrated (battery backup)
----------------	-----------------------------

## 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
------------	----

### 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)

## Characteristics

### Safety data: EN ISO 13849

Category	max. 4
Performance level (PL)	max. e

### Safety data: IEC 61508 - High demand

Safety Integrity Level (SIL)	max. 3
------------------------------	--------

# RFC 480S PN 4TX - Safety controller



2404577

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

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
---------------	-------------------

# RFC 480S PN 4TX - Safety controller




2404577


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

## 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: 01/205/5649.00/18

**cULus Listed**

# RFC 480S PN 4TX - Safety controller



2404577

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

## Classifications

### ECLASS

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

### ETIM

ETIM 8.0	EC000236
----------	----------

### UNSPSC

UNSPSC 21.0	32151700
-------------	----------

# RFC 480S PN 4TX - Safety controller



2404577

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

## 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"

# RFC 480S PN 4TX - Safety controller



2404577

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

## 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.

---

### 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.



# RFC 480S PN 4TX - Safety controller



2404577

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

## PC WORX DEMO - Programming software

2985725

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



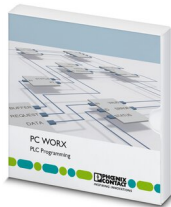
Software package for PC-based automation solutions. PC WORX DEMO contains all 5 IEC languages with MSFC compiler. Max. 16 bytes of input and output data can be used with the demo version. It is available free of charge and does not require a license key. It is part of the AUTOMATIONWORX Software Suite,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

---

## 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

# RFC 480S PN 4TX - Safety controller



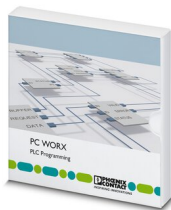
2404577

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

## PC WORX PRO LIC - Programming software

2985385

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



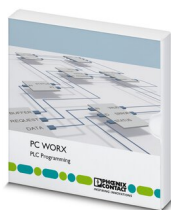
Software package for PC-based automation solutions, PC WORX PRO license, contains all 5 IEC languages, with MSFC compiler, max 128 kB input and output data, version-specific license key

---

## 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

# RFC 480S PN 4TX - Safety controller



2404577

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

## UM QS DE SAFETYPROG - Quick start guide

2888628

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

Quick Start Guide, German, for SafetyProg



---

## UM QS EN SAFETYPROG - Quick start guide

2888631

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

Quick Start Guide, English, for SafetyProg



# RFC 480S PN 4TX - Safety controller



2404577

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

## 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.

---

## 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.

# RFC 480S PN 4TX - Safety controller

2404577

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



## 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.

---

## SD FLASH 512MB - Program / configuration memory

2988146

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



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

# RFC 480S PN 4TX - Safety controller



2404577

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

## 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.

---

## 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.

# RFC 480S PN 4TX - Safety controller



2404577

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

## 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.

---

## 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.

# RFC 480S PN 4TX - Safety controller



2404577

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

## 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.

---

Phoenix Contact 2023 © - all rights reserved

<https://www.phoenixcontact.com>

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