

# RFC 4072S - Safety controller



1051328

<https://www.phoenixcontact.com/us/products/1051328>

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

## Product Description

The RFC 4072S is the first high-performance Remote Field Controller based on PLCnext Technology. It is also possible to use applications with the highest safety requirements in accordance with SIL 3 or PLe. Standard and safety programming in only one engineering tool, thanks to PLCnext Engineer.

## Your advantages

- Integrated PROFINET controller and PROFINET device
- Support for PROFIsafe Profile V2.6.1
- System networking M2M with OPC UA
- Safety: highest level of safety of machinery, thanks to diversified processors and the support of up to 300 PROFIsafe devices
- PLCnext Technology for preferred programming languages and programming environments, open-source software, apps, PROFICLOUD, and soon, also PLCnext Store with real-time execution
- Performance: Use of one Intel® Core™ i5 dual-core processor and two powerful processors based on Arm architecture enables one of the best performance capabilities on the market

## Commercial Data

Item number	1051328
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	DR09
Product Key	DRADBA
Catalog Page	Page 11 (C-6-2019)
GTIN	4055626673400
Weight per Piece (including packing)	3,465 g
Weight per Piece (excluding packing)	2,000 g
Customs tariff number	85371091
Country of origin	DE

## 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)
Pollution degree	2 (when installed in a control cabinet or housing with IP54 degree of protection or higher)

### Display

Diagnostics display	yes
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### System properties

Processor	Intel® Core™ i5-6300U 2x 2.4 GHz (Standard)
	Arm® Cortex® -A9, 800 MHz (CPU1)
	Arm® Cortex® -A8, 600 MHz (CPU2)
Retentive data storage	2 Mbyte

### IEC 61131 runtime system

Program memory	16 Mbyte
Data storage system	32 Mbyte

### PROFINET

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

### Function

Diagnostics display	yes
Controller redundancy	No
Safety function	yes

### Functionality

Programming languages supported	Symbolic flowchart (SFC)
	Ladder diagram (LD)
	Function block diagram (FBD)
	Structured text (ST)
	C++
	C#
	Java
	Python
Simulink	

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## System requirements

Engineering tool	PLCnext Engineer
	Eclipse
	Visual Studio
	MATLAB® Simulink®
Application interface	OPC UA

## Electrical properties

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 (3.6 V <sub>pp</sub> ))
Power supply connection	Screw terminal blocks, plug-in
Typical current consumption	1 A

## Real-time clock

Realtime clock	integrated (capacitive buffering)
Description realtime clock	1.73 s/day = 20 ppm at 25 °C

## 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	yes
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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
Note on the connection method	Auto negotiation and auto crossing, auto polarity exchange
Transmission speed	10/100/1000 Mbps (LAN 1/LAN 2, half duplex or full duplex)
	10/100 Mbps (LAN3.1/LAN3.2 (internally switched), half duplex or full duplex)

## Dimensions

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## 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: EN 62061

Safety Integrity Level Claim Limit (SIL CL)	max. 3
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### Safety data: IEC 61508 - High demand

Safety Integrity Level (SIL)	max. 3
Probability of a hazardous failure per hour (PFH <sub>D</sub> )	1 * 10 <sup>-9</sup>
Duration of use	300 Months (therefore no restrictions, no maintenance intervals)

## 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 to 3000 m above mean sea level (With fan module only)
	0 °C ... 50 °C 3000 m to 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)
Resistance to gases that may endanger the functions, in acc. with DIN 40046-36, DIN 40046-37	Use of the device in these ambient conditions is prohibited.

## EMC data

Conformance with EMC directives	Immunity test in accordance with EN 61000-6-2/IEC 61000-6-2 Electrostatic discharge (ESD)EN 61000-4-2/IEC 61000-4-2 Criterion B, 6 kV contact discharge, 8 kV air discharge
	Immunity test in accordance with EN 61000-6-2/IEC 61000-6-2 Electromagnetic fieldsEN 61000-4-3/IEC 61000-4-3 Criterion A, Field intensity: 10 V/m

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	Immunity test in accordance with EN 61000-6-2/IEC 61000-6-2 Fast transients (burst)EN 61000-4-4/IEC 61000-4-4 Criterion B; Supply lines: 2 kV; Signal/data lines: 2 kV
	Immunity test in accordance with EN 61000-6-2/IEC 61000-6-2 Transient overvoltage (surge)EN 61000-4-5/IEC 61000-4-5 Criterion B, supply lines: 0.5 kV, signal/data cables: 1 kV
	Immunity test in accordance with EN 61000-6-2/IEC 61000-6-2 Conducted interferenceEN 61000-4-6/IEC 61000-4-6 Criterion A, Test voltage 10 V
	Noise emission test in accordance with EN 61000-6-4/IEC 61000-6-4
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU

## Mounting

Mounting type	DIN rail mounting
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## Approvals



**UL Listed**

Approval ID: FILE E 238705



**cUL Listed**

Approval ID: FILE E 238705



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**UL Listed**

Approval ID: FILE E 238705



**Functional Safety**

Approval ID: 01/205/5649.00/18



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Approval ID: 01/205/5649.00/18



**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 = 10;
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"



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## Accessories

### SD FLASH 8GB PLCNEXT MEMORY - Program / configuration memory

1061701

<https://www.phoenixcontact.com/us/products/1061701>



Program and configuration memory for storing the application programs and other files in the file system of the PLC, plug-in, 8 GB.

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### SD FLASH 2GB PLCNEXT MEMORY - Program / configuration memory

1043501

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Program and configuration memory for storing the application programs and other files in the file system of the PLC, plug-in, 2 GB.

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## PLCNEXT ENGINEER - Programming software

1046008

<https://www.phoenixcontact.com/us/products/1046008>



Engineering software platform for Phoenix Contact automation controllers. PLCnext Engineer is IEC 61131-3-compliant and is available free of charge under Downloads. Its functionality can be extended using paid add-ins. To do this, open the license configurator via the "Configure" button.

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## RFC FAN MODULE - Fan

2404085

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

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