

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 _{pp}))
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 ² ... 2.5 mm ²
Conductor cross section, flexible	0.2 mm ² ... 2.5 mm ²
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 _D)	1 * 10 ⁻⁹
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

 **Functional Safety**
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.

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

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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.

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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