RFC 4072S - Safety controller

1051328

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CRA-READY



Safety controller (SPS), PLCnext Control; Programming: High-level language and IEC 61131-3; Operating system: Yocto/Linux® (real-time); Programming tool: PLCnext Engineer, Eclipse®, Visual Studio®, MATLAB®/ Simulink®; Processor: Intel® Core™ i5-6300U, 2x 2.4 GHz (Standard); The product is being prepared for compliance with the Cyber Resilience Act (CRA).

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

- Real-time-capable Linux operating system for deterministic and reliable execution of time-critical processes
- Supports numerous protocols such as: HTTP, HTTPS, FTP, OPC UA, SNTP, SNMP, SMTP, SQL, MySQL, DCP, etc. – for smooth communication with IT systems
- Direct connection to the Proficloud, the PLCnext Store and any cloud platforms – for seamless IoT integration of your applications
- Support for numerous fieldbus protocols (PROFINET, Modbus TCP/RTU, Ethernet/IP, etc.) for easy integration into existing automation technology systems and installations
- Maximum design freedom thanks to the combination of classic PLC programming with modern high-level languages such as C++, C#, or Python
- Meets the highest security requirements of industrial automation – for the protection of your applications and data

ELEKTROGERÄTE RÜCKNAHME

Commercial data

Item number	1051328
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR09
Product key	DRADBA
GTIN	4055626673400
Weight per piece (including packing)	3,250 g
Weight per piece (excluding packing)	2,850 g
Customs tariff number	85371091
Country of origin	DE

Technical data

Notes

Note on application

Note on application	Only for industrial use
Note on application	As things stand now, we are preparing the product so that, as of December 11, 2027, it will comply with the requirements of the EU Cyber Resilience Act (CRA) based on the information currently available regarding the CRA.

Product properties

Product type	Controller
Product family	PLCnext Control
Type	Stand-alone
Special properties	The product is being prepared for compliance with the Cyber Resilience Act (CRA)

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

System properties

Operating system	Yocto/Linux® (real-time)
Processor	Arm® Cortex®-A9 800 MHz (CPU1)
	Arm® Cortex®-A8 600 MHz (CPU2)
	Intel®Core™ i5-6300U, 2x 2.4 GHz (Standard)
Trusted Platform Module	TPM 1.2

IEC 61131 runtime system

Program memory	16 Mbyte
Retentive data storage	2 Mbyte
Data storage system	32 Mbyte
Cycle Time	500 µs (for cyclical task)
Number of control tasks	32 (16 per processor core)

System limits

Amount of process data (Input/output data)	max. 128 kByte (Input and output data)

PROFINET

Device function	PROFINET controller, PROFINET device
Conformance Class	B
Supported functions	Topology detection
	Automatic device replacement

	Parameterizable alarm and startup behavior
Update rate	min. 1 ms
Number of supported devices (PROFINET-Controller)	max. 256
Device ID	$014A_{hex}$ / 176_{dez}
Vendor ID	$00B0_{hex}$ / 176_{dez}

PROFIsafe

Device function	PROFIsafe F-Host
Number of supported devices	300
Profile version	2.6MU1 (also includes support for V2.4)

Function

Diagnostics display	yes
Redundancy function	no
Safety function	yes

Functionality

Programming tool	PLCnext Engineer
	Eclipse®
	Visual Studio®
	MATLAB®/ Simulink®
Programming languages supported	Symbolic flowchart (SFC)
	Ladder diagram (LD)
	Function block diagram (FBD)
	Structured text (ST)
	C++
	C#
	Java
	Python®
	Simulink®

System requirements

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. 35 W (With fan module)
	typ. 25 W (Without fan module)

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

Real-time clock	integrated (capacitive buffering)
Description real-time clock	1.73 s/day = 20 ppm at 25 °C
Power reserve	min. 240 h (at 25 °C)
	typ. 360 h (at 25 °C)

Connection data

Tightening torque	0.5 ... 0.6 Nm

COMBICON connector

Conductor cross-section, rigid	0.2 mm² ... 2.5 mm²
Conductor cross-section, flexible	0.2 mm² ... 2.5 mm²
Conductor cross-section AWG	24 ... 12

Interfaces

Web server	yes

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

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	gray (RAL 7042)

Characteristics

Safety data: EN ISO 13849

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)	5g (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

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
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
	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

Mounting

Mounting type	DIN rail mounting

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1051328

PROFINET
Approval ID: Z13529

PROFINET
Approval ID: Z13530

PROFIsafe
Approval ID: Z20352

PROFIsafe
Approval ID: Z20353

Cybersecurity Certificate
Approval ID: 968 CSP 1037.00 25

cULus Listed
Approval ID: E238705

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

FS Thermoprocess
Approval ID: 968 INS 799.01 25

Classifications

ECLASS

ECLASS-13.0	27242207
ECLASS-15.0	27242207
ECLASS-15.0 ASSET	27250101

ETIM

ETIM 10.0	EC000236

UNSPSC

UNSPSC 21.0	32151700

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	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.)	4,4'-isopropylidenediphenol(CAS: 80-05-7)
	Lead(CAS: 7439-92-1)
SCIP	1a5f8f12-b6b0-49c6-a37e-9530122266de

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