# 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

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|---|---|
| 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

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|---|---|
| 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

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|---|---|
| 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

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|---|---|
| ETIM 10.0 | EC000236 |

### UNSPSC

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

## Environmental product compliance

EU RoHS

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|---|---|
| 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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