

# QUINT-ORING/24DC/2X10/1X20

Order No.: 2320173



<http://eshop.phoenixcontact.co.uk/phoenix/treeViewClick.do?UID=2320173>

Active redundancy module with ACB technology and monitoring  
functions



## Commercial data

|                          |                                                                                                       |
|--------------------------|-------------------------------------------------------------------------------------------------------|
| EAN                      | <br>4 046356 524902 |
| Pack                     | 1                                                                                                     |
| Customs tariff           | 85044082                                                                                              |
| Country of Origin        | CN                                                                                                    |
| Catalog page information | Page 626 (IF-2011)                                                                                    |

## Product notes

WEEE/RoHS-compliant since:  
26/08/2009



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## Technical data

### Input data

|                             |                                                          |
|-----------------------------|----------------------------------------------------------|
| Nominal input voltage       | 24 V DC                                                  |
| DC input voltage range      | 18 V DC ... 28 V DC (SELV)                               |
| Type of protection          | Protection against static surge voltages > 35 V          |
| Nominal input current $I_N$ | 2x 10 A (-25 °C ... 60 °C)<br>1x 20 A (-25 °C ... 60 °C) |

|                            |                          |
|----------------------------|--------------------------|
| Maximum current $I_{\max}$ | 2x 15 A (-25°C ... 40°C) |
|                            | 1x 30 A (-25°C ... 40°C) |

#### Output data

|                              |                                         |
|------------------------------|-----------------------------------------|
| Nominal output voltage       | 0.1 V (< DC input)                      |
| Output current               | 20 A (Increasing power)                 |
|                              | 10 A (Redundancy)                       |
| Derating                     | 60 °C ... 70 °C (2.5%/K)                |
| Power loss nominal load max. | 2 W ( $I_{\text{OUT}} = 10 \text{ A}$ ) |

#### General data

|                                                                                                                                  |                                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Width                                                                                                                            | 32 mm                                                                               |
| Height                                                                                                                           | 130 mm                                                                              |
| Depth                                                                                                                            | 125 mm                                                                              |
| Net weight                                                                                                                       | 0.4 kg                                                                              |
| Efficiency                                                                                                                       | > 98 %                                                                              |
| Degree of protection                                                                                                             | IP20                                                                                |
| Protection class                                                                                                                 | III                                                                                 |
| MTBF (IEC 61709, SN 29500)                                                                                                       | > 1000000 h                                                                         |
| Ambient temperature (operation)                                                                                                  | -25 °C ... 70 °C (> 60 °C derating)                                                 |
| Ambient temperature (storage/transport)                                                                                          | -40 °C ... 85 °C                                                                    |
| Max. permissible relative humidity (operation)                                                                                   | ≤ 95 % (at 25 °C, no condensation)                                                  |
| Mounting position                                                                                                                | horizontal DIN rail NS 35, EN 60715                                                 |
| Assembly instructions                                                                                                            | Can be aligned: 5 mm horizontally, 15 mm next to active components, 5 cm vertically |
| Electromagnetic compatibility                                                                                                    | Conformance with EMC Directive 2004/108/EC                                          |
| Low Voltage Directive                                                                                                            | Conformance with Low Voltage Directive 2006/95/EC                                   |
| Standard – Electrical equipment of machines                                                                                      | EN 60204                                                                            |
| Standard - Electrical safety                                                                                                     | EN 60950-1/VDE 0805 (SELV)                                                          |
| Standard – Electronic equipment for use in electrical power installations and their assembly into electrical power installations | EN 50178/VDE 0160 (PELV)                                                            |
| Standard – Safety extra-low voltage                                                                                              | IEC 60950-1 (SELV) and EN 60204 (PELV)                                              |
| UL approvals                                                                                                                     | UL/C-UL listed UL 508                                                               |
|                                                                                                                                  | UL/C-UL Recognized UL 60950                                                         |

#### Connection data, input

|                   |                  |
|-------------------|------------------|
| Connection method | Screw connection |
|-------------------|------------------|

|                                        |                     |
|----------------------------------------|---------------------|
| Conductor cross section solid min.     | 0.2 mm <sup>2</sup> |
| Conductor cross section solid max.     | 4 mm <sup>2</sup>   |
| Conductor cross section stranded min.  | 0.2 mm <sup>2</sup> |
| Conductor cross section stranded max.  | 2.5 mm <sup>2</sup> |
| Conductor cross section AWG/kcmil min. | 14                  |
| Conductor cross section AWG/kcmil max  | 12                  |
| Stripping length                       | 8 mm                |
| Screw thread                           | M3                  |

#### Connection data, output

|                                        |                     |
|----------------------------------------|---------------------|
| Connection method                      | Screw connection    |
| Conductor cross section solid min.     | 0.2 mm <sup>2</sup> |
| Conductor cross section solid max.     | 6 mm <sup>2</sup>   |
| Conductor cross section stranded min.  | 0.2 mm <sup>2</sup> |
| Conductor cross section stranded max.  | 4 mm <sup>2</sup>   |
| Conductor cross section AWG/kcmil min. | 10                  |
| Conductor cross section AWG/kcmil max  | 10                  |
| Stripping length                       | 7 mm                |

#### Signaling

|                                        |                                        |
|----------------------------------------|----------------------------------------|
| Output name                            | Redundancy OK, 13/14                   |
| Output description                     | Group contact                          |
| Maximum switching voltage              | max 30 V AC/DC                         |
| Maximum inrush current                 | ≤ 100 mA (short-circuit resistant)     |
| Status display                         | LED redundancy OK                      |
| Note on status display                 | Green                                  |
| Conductor cross section solid min.     | 0.2 mm <sup>2</sup>                    |
| Conductor cross section solid max.     | 4 mm <sup>2</sup>                      |
| Conductor cross section stranded min.  | 0.2 mm <sup>2</sup>                    |
| Conductor cross section stranded max.  | 2.5 mm <sup>2</sup>                    |
| Conductor cross section AWG/kcmil min. | 24                                     |
| Conductor cross section AWG/kcmil max  | 12                                     |
| Tightening torque, min                 | 0.5 Nm                                 |
| Tightening torque max                  | 0.6 Nm                                 |
| Screw thread                           | M3                                     |
| Output name                            | ACB (Auto Current Balancing) OK, 23/24 |

|                           |                                                     |
|---------------------------|-----------------------------------------------------|
| Output description        | Contact closed: $\Delta U_{IN} \leq 300 \text{ mV}$ |
| Maximum switching voltage | max 30 V AC/DC                                      |
| Maximum inrush current    | $\leq 100 \text{ mA}$ (short-circuit resistant)     |
| Status display            | ACB OK LED                                          |
| Note on status display    | LED bar graph green                                 |

**Certificates**

|                             |                                |
|-----------------------------|--------------------------------|
| Certification               | CUL, CUL Listed, UL, UL Listed |
| Certification Ex:           | CUL-EX LIS, UL-EX LIS          |
| Certifications applied for: | IECEEx                         |

**Accessories**

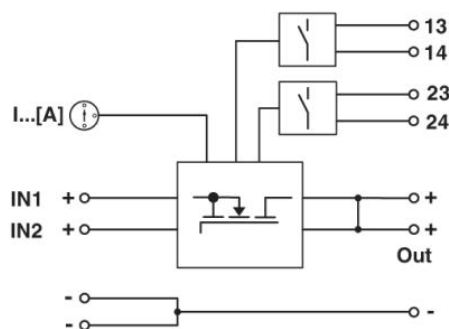
| Item | Designation | Description |
|------|-------------|-------------|
|------|-------------|-------------|

**General**

|         |                      |                                                              |
|---------|----------------------|--------------------------------------------------------------|
| 2938196 | QUINT-PS-ADAPTERS7/1 | Assembly adapter for QUINT-PS... power supply on S7-300 rail |
| 2320089 | UTA 107/30           | Universal DIN rail adapter                                   |
| 2938235 | UWA 182/52           | Universal wall adapter                                       |

**Drawings**

Block diagram



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