

## Diode - QUINT-DIODE/48DC/2X20/1X40 - 2320160

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DIN rail diode module 48 V DC/2x20 A or 1x40 A. Uniform redundancy up to the consumer.

### Product Description

A safe redundant system is the result of the parallel connection of two power supply units which are decoupled from one another. To further increase system availability, QUINT DIODE provides the solution: decoupling with diode.

### Your advantages

- ✓ Flexible
- ✓ Rugged design
- ✓ Consistent redundancy up to the load



### Key Commercial Data

|              |                                                                                                         |
|--------------|---------------------------------------------------------------------------------------------------------|
| Packing unit | 1 pc                                                                                                    |
| GTIN         | <br>4 046356 524759 |
| GTIN         | 4046356524759                                                                                           |

### Technical data

#### Dimensions

|                                  |               |
|----------------------------------|---------------|
| Width                            | 50 mm         |
| Height                           | 130 mm        |
| Depth                            | 125 mm        |
| Installation distance right/left | 5 mm / 5 mm   |
| Installation distance top/bottom | 50 mm / 50 mm |

#### Ambient conditions

|                                                |                                              |
|------------------------------------------------|----------------------------------------------|
| Degree of protection                           | IP20                                         |
| Ambient temperature (operation)                | -40 °C ... 70 °C (> 60 °C Derating: 2.5 %/K) |
| Ambient temperature (storage/transport)        | -40 °C ... 85 °C                             |
| Max. permissible relative humidity (operation) | ≤ 95 % (at 25 °C, non-condensing)            |

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## Technical data

### Ambient conditions

|                     |                             |
|---------------------|-----------------------------|
| Climatic class      | 3K3 (in acc. with EN 60721) |
| Degree of pollution | 2                           |
| Installation height | 2000 m                      |

### Input data

|                             |                            |
|-----------------------------|----------------------------|
| Nominal input voltage range | 48 V DC                    |
|                             | 48 V DC                    |
| Input voltage range         | 30 V DC ... 56 V DC        |
|                             | 30 V DC ... 56 V DC        |
| Nominal input current       | 2x 20 A (-25 °C ... 60 °C) |
|                             | 1x 40 A (-25 °C ... 60 °C) |
| Maximum input current       | 2x 30 A (-25°C ... 40°C)   |
|                             | 1x 60 A (-25°C ... 40°C)   |
| Nominal input current       | 2x 20 A (-25 °C ... 60 °C) |
|                             | 1x 40 A (-25 °C ... 60 °C) |
| Maximum input current       | 2x 30 A (-25°C ... 40°C)   |
|                             | 1x 60 A (-25°C ... 40°C)   |

### Output data

|                                          |                                |
|------------------------------------------|--------------------------------|
| Nominal output voltage                   | 48 V DC                        |
| Nominal output current (I <sub>N</sub> ) | 40 A (Increasing power)        |
|                                          | 20 A (Redundancy)              |
| Derating                                 | 60 °C ... 70 °C (2.5%/K)       |
| Connection in series                     | No                             |
| Power loss nominal load max.             | 14 W (I <sub>OUT</sub> = 20 A) |

### General

|                            |                                                                                                                                                                                                            |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Net weight                 | 0.75 kg                                                                                                                                                                                                    |
| Efficiency                 | > 97 %                                                                                                                                                                                                     |
| MTBF (IEC 61709, SN 29500) | 40000000 h                                                                                                                                                                                                 |
| Degree of protection       | IP20                                                                                                                                                                                                       |
| Protection class           | III                                                                                                                                                                                                        |
| Housing material           | Steel sheet, zinc-plated                                                                                                                                                                                   |
| Mounting position          | horizontal DIN rail NS 35, EN 60715                                                                                                                                                                        |
| Assembly instructions      | alignable: P <sub>N</sub> ≥ 50%, 5 mm horizontally, 15 mm next to active components, 50 mm vertically<br>alignable: P <sub>N</sub> < 50%, 0 mm horizontally, 40 mm vertically top, 20 mm vertically bottom |

### Connection data, input

|                                       |                     |
|---------------------------------------|---------------------|
| 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 flexible min. | 0.2 mm <sup>2</sup> |

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### Technical data

#### Connection data, input

|                                       |                   |
|---------------------------------------|-------------------|
| Conductor cross section flexible max. | 4 mm <sup>2</sup> |
| Conductor cross section AWG min.      | 12                |
| Conductor cross section AWG max.      | 10                |
| Stripping length                      | 7 mm              |
| Screw thread                          | M3                |

#### Connection data, output

|                                       |                     |
|---------------------------------------|---------------------|
| Connection method                     | Screw connection    |
| Conductor cross section solid min.    | 0.5 mm <sup>2</sup> |
| Conductor cross section solid max.    | 16 mm <sup>2</sup>  |
| Conductor cross section flexible min. | 0.5 mm <sup>2</sup> |
| Conductor cross section flexible max. | 16 mm <sup>2</sup>  |
| Conductor cross section AWG min.      | 10                  |
| Conductor cross section AWG max.      | 6                   |
| Stripping length                      | 10 mm               |
| Screw thread                          | M4                  |

#### Standards

|                                                                                                                                  |                                          |
|----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| 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 60204-1 (PELV) |
| Standard - Safe isolation                                                                                                        | DIN VDE 0100-410                         |
| Standard – Protection against shock currents, basic requirements for protective separation in electrical equipment               | EN 50178                                 |

#### Conformance/approvals

|              |                                                                                  |
|--------------|----------------------------------------------------------------------------------|
| UL approvals | UL/C-UL listed UL 508                                                            |
|              | UL/C-UL Recognized UL 60950-1                                                    |
|              | UL ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D (Hazardous Location) |

#### EMC data

|                               |                                                   |
|-------------------------------|---------------------------------------------------|
| Electromagnetic compatibility | Conformance with EMC Directive 2014/30/EU         |
| Low Voltage Directive         | Conformance with Low Voltage Directive 2014/35/EC |
| Electrostatic discharge       | EN 61000-4-2                                      |
| Electromagnetic HF field      | EN 61000-4-3                                      |
| Fast transients (burst)       | EN 61000-4-4                                      |
| Surge voltage load (surge)    | EN 61000-4-5                                      |
| Conducted interference        | EN 61000-4-6                                      |

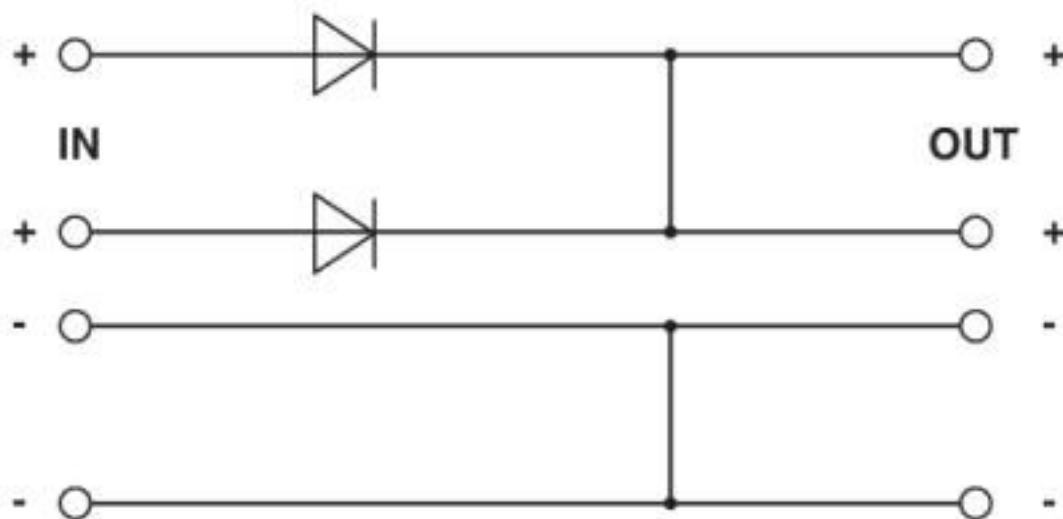
#### Environmental Product Compliance

|            |                |
|------------|----------------|
| REACH SVHC | Lead 7439-92-1 |
|------------|----------------|

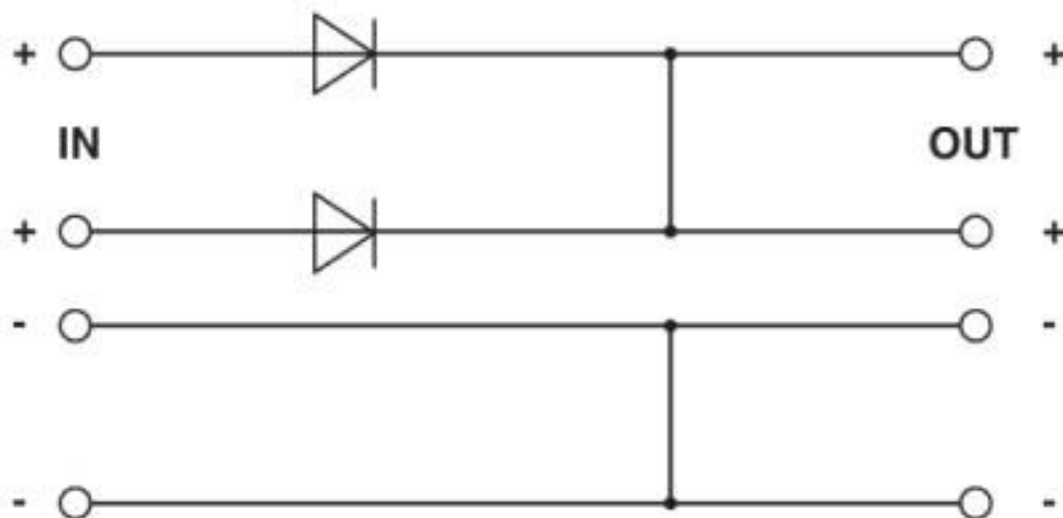
## Diode - QUINT-DIODE/48DC/2X20/1X40 - 2320160

### Drawings

Block diagram



Block diagram



### Classifications

eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27371010 |
| eCl@ss 4.0    | 27250300 |
| eCl@ss 4.1    | 27250300 |
| eCl@ss 5.0    | 27371000 |
| eCl@ss 5.1    | 27371000 |
| eCl@ss 6.0    | 27371000 |

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### Classifications

#### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 7.0 | 27371010 |
| eCl@ss 8.0 | 27371010 |
| eCl@ss 9.0 | 27371010 |

#### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC001039 |
| ETIM 3.0 | EC001039 |
| ETIM 4.0 | EC002540 |
| ETIM 5.0 | EC000683 |
| ETIM 6.0 | EC000683 |
| ETIM 7.0 | EC000683 |

#### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211502 |
| UNSPSC 7.0901 | 39121004 |
| UNSPSC 11     | 39121004 |
| UNSPSC 12.01  | 39121004 |
| UNSPSC 13.2   | 32151504 |
| UNSPSC 18.0   | 32151504 |
| UNSPSC 19.0   | 32151504 |
| UNSPSC 20.0   | 32151504 |
| UNSPSC 21.0   | 32151504 |

### Approvals

#### Approvals

##### Approvals

DNV GL / UL Listed / UL Recognized / cUL Recognized / cUL Listed / EAC / EAC / cULus Recognized / cULus Listed

##### Ex Approvals

IECEX / ATEX / UL Listed / cUL Listed / EAC Ex / cULus Listed

#### Approval details

|        |                                                                                     |                                                                                   |            |
|--------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------|
| DNV GL |  | <a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a> | TAA000011F |
|--------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------|

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### Approvals

|           |                                                                                   |                                                                                                                                                       |               |
|-----------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| UL Listed |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 123528 |
|-----------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|

|               |                                                                                   |                                                                                                                                                       |               |
|---------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| UL Recognized |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 211944 |
|---------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|

|                |                                                                                   |                                                                                                                                                       |               |
|----------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| cUL Recognized |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 211944 |
|----------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|

|            |                                                                                   |                                                                                                                                                       |               |
|------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| cUL Listed |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 123528 |
|------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|

|     |                                                                                     |               |
|-----|-------------------------------------------------------------------------------------|---------------|
| EAC |  | EAC-Zulassung |
|-----|-------------------------------------------------------------------------------------|---------------|

|     |                                                                                     |                     |
|-----|-------------------------------------------------------------------------------------|---------------------|
| EAC |  | RU*DE*08.B.01873/19 |
|-----|-------------------------------------------------------------------------------------|---------------------|

|                  |                                                                                     |
|------------------|-------------------------------------------------------------------------------------|
| cULus Recognized |  |
|------------------|-------------------------------------------------------------------------------------|

|              |                                                                                     |
|--------------|-------------------------------------------------------------------------------------|
| cULus Listed |  |
|--------------|-------------------------------------------------------------------------------------|

### Accessories

#### Accessories

#### Assembly adapter

Assembly adapters - UWA 182/52 - 2938235



Universal wall adapter for securely mounting the device in the event of strong vibrations. The device is screwed directly onto the mounting surface. The universal wall adapter is attached on the top/bottom.

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### Accessories

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#### Assembly adapters - QUINT-PS-ADAPTERS7/1 - 2938196



Assembly adapter for QUINT-PS... power supply on S7-300 rail

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#### Assembly adapters - UTA 107/30 - 2320089



Universal DIN rail adapter

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