

## Power supply unit - QUINT-PS/1AC/24DC/40 - 2866789

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Primary-switched QUINT POWER power supply for DIN rail mounting with SFB (Selective Fuse Breaking) Technology, input: 1-phase, output: 24 V DC/40 A

### Product Description

QUINT POWER power supplies with maximum functionality

QUINT POWER circuit breakers magnetically and therefore quickly trip at six times the nominal current, for selective and therefore cost-effective system protection. The high level of system availability is additionally ensured, thanks to preventive function monitoring, as it reports critical operating states before errors occur.

Reliable starting of heavy loads takes place via the static power reserve POWER BOOST. Thanks to the adjustable voltage, all ranges between 5 V DC ... 56 V DC are covered.

### Why buy this product

- ✓ For superior system availability
- ✓ Fast tripping of standard circuit breakers with dynamic power reserve SFB (selective fuse breaking) technology with up to 6 times the nominal current for 12 ms
- ✓ Reliable starting of difficult loads with the static POWER BOOST power reserve with up to 1.5 times the nominal current permanently
- ✓ Preventive function monitoring



### Key Commercial Data

|                                      |                                                                                                         |
|--------------------------------------|---------------------------------------------------------------------------------------------------------|
| Packing unit                         | 1 STK                                                                                                   |
| GTIN                                 | <br>4 046356 421720 |
| GTIN                                 | 4046356421720                                                                                           |
| Weight per Piece (excluding packing) | 3,830.000 g                                                                                             |
| Custom tariff number                 | 85044030                                                                                                |
| Country of origin                    | Thailand                                                                                                |

### Technical data

#### Dimensions

|        |        |
|--------|--------|
| Width  | 180 mm |
| Height | 130 mm |
| Depth  | 125 mm |

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## Technical data

### Dimensions

|                                  |        |
|----------------------------------|--------|
| Width with alternative assembly  | 122 mm |
| Height with alternative assembly | 130 mm |
| Depth with alternative assembly  | 183 mm |

### Ambient conditions

|                                                |                                              |
|------------------------------------------------|----------------------------------------------|
| Degree of protection                           | IP20                                         |
| Ambient temperature (operation)                | -25 °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)            |
| Noise immunity                                 | EN 61000-6-2:2005                            |
| Maximum altitude                               | 4000 m                                       |

### Input data

|                                     |                                                |
|-------------------------------------|------------------------------------------------|
| Nominal input voltage range         | 100 V AC ... 240 V AC                          |
|                                     | 120 V DC ... 300 V DC (UL 508: ≤ 250 V DC)     |
| Input voltage range                 | 85 V AC ... 264 V AC                           |
|                                     | 90 V DC ... 300 V DC (UL 508: ≤ 250 V DC)      |
| Dielectric strength maximum         | 300 V AC                                       |
| AC frequency range                  | 45 Hz ... 65 Hz                                |
| Frequency range DC                  | 0 Hz                                           |
| Discharge current to PE             | < 3.5 mA                                       |
| Current consumption                 | 8.8 A (120 V AC)                               |
|                                     | 4.6 A (230 V AC)                               |
|                                     | 9.5 A (110 V DC)                               |
|                                     | 4.7 A (220 V DC)                               |
| Inrush surge current                | < 15 A (typical)                               |
| Power failure bypass                | > 35 ms (120 V AC)                             |
|                                     | > 35 ms (230 V AC)                             |
| Input fuse                          | 20 A (slow-blow, internal)                     |
| Choice of suitable circuit breakers | 16 A ... 20 A (AC: Characteristics B, C, D, K) |
| Type of protection                  | Transient surge protection                     |
| Protective circuit/component        | Varistor, gas-filled surge arrester            |

### Output data

|                                                         |                                                                 |
|---------------------------------------------------------|-----------------------------------------------------------------|
| Nominal output voltage                                  | 24 V DC ±1 %                                                    |
| Setting range of the output voltage (U <sub>Set</sub> ) | 18 V DC ... 29.5 V DC (> 24 V DC, constant capacity restricted) |
| Nominal output current (I <sub>N</sub> )                | 40 A (-25°C ... 60°C, U <sub>OUT</sub> = 24 V DC)               |
| POWER BOOST (I <sub>Boost</sub> )                       | 45 A (-25°C ... 40°C permanent, U <sub>OUT</sub> = 24 V DC)     |
| Selective Fuse Breaking (I <sub>SFB</sub> )             | 215 A (12 ms)                                                   |
| Derating                                                | 60 °C ... 70 °C (2.5%/K)                                        |
| Connection in parallel                                  | Yes, for redundancy and increased capacity                      |
| Connection in series                                    | yes                                                             |

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### Technical data

#### Output data

|                                                |                                             |
|------------------------------------------------|---------------------------------------------|
| Residual ripple                                | < 30 mV <sub>PP</sub> (with nominal values) |
| Output power                                   | 960 W                                       |
| Typical response time                          | < 0.7 s                                     |
| Maximum power dissipation in no-load condition | 14 W                                        |
| Power loss nominal load max.                   | 80 W                                        |

#### General

|                                 |                                                                                 |
|---------------------------------|---------------------------------------------------------------------------------|
| Net weight                      | 3.3 kg                                                                          |
| Efficiency                      | > 92 % (for 230 V AC and nominal values)                                        |
| Insulation voltage input/output | 4 kV AC (type test)<br>2 kV AC (routine test)                                   |
| Protection class                | I                                                                               |
| MTBF (IEC 61709, SN 29500)      | > 900000 h (25 °C)<br>> 530000 h (40 °C)                                        |
| Mounting position               | horizontal DIN rail NS 35, EN 60715                                             |
| Assembly instructions           | Alignable: 5 mm horizontally, 15 mm next to active components, 50 mm vertically |

#### 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> |
| Conductor cross section flexible max. | 4 mm <sup>2</sup>   |
| Conductor cross section AWG min.      | 14                  |
| 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.      | 8                   |
| Conductor cross section AWG max.      | 6                   |
| Stripping length                      | 10 mm               |
| Screw thread                          | M4                  |

#### Connection data for signaling

|                                    |                     |
|------------------------------------|---------------------|
| Conductor cross section solid min. | 0.2 mm <sup>2</sup> |
| Conductor cross section solid max. | 6 mm <sup>2</sup>   |

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## Technical data

### Connection data for signaling

|                                       |                     |
|---------------------------------------|---------------------|
| Conductor cross section flexible min. | 0.2 mm <sup>2</sup> |
| Conductor cross section flexible max. | 4 mm <sup>2</sup>   |
| Conductor cross section AWG min.      | 24                  |
| Conductor cross section AWG max.      | 10                  |
| Screw thread                          | M3                  |

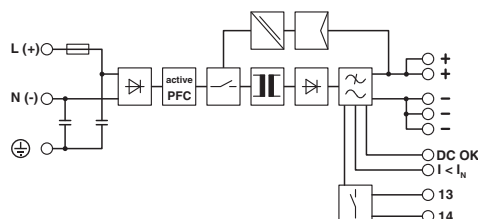
### Standards and Regulations

|                                                                                                                                  |                                                                                  |
|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| Electromagnetic compatibility                                                                                                    | Conformance with EMC Directive 2014/30/EU                                        |
| Shock                                                                                                                            | 18 ms, 30g, in each space direction (according to IEC 60068-2-27)                |
| Noise emission                                                                                                                   | EN 55011 (EN 55022)                                                              |
| Noise immunity                                                                                                                   | EN 61000-6-2:2005                                                                |
| Connection in acc. with standard                                                                                                 | CSA                                                                              |
| Standards/regulations                                                                                                            | EN 61000-4-2                                                                     |
|                                                                                                                                  | EN 61000-4-3                                                                     |
|                                                                                                                                  | EN 61000-4-4                                                                     |
|                                                                                                                                  | EN 61000-4-5                                                                     |
|                                                                                                                                  | EN 61000-4-6                                                                     |
| Standard - Electrical safety                                                                                                     | IEC 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                                                                 |
|                                                                                                                                  | DIN VDE 0106-101                                                                 |
| Standard – Protection against shock currents, basic requirements for protective separation in electrical equipment               | EN 50178                                                                         |
| Standard – Limitation of mains harmonic currents                                                                                 | EN 61000-3-2                                                                     |
| Standard - Equipment safety                                                                                                      | BG (design tested)                                                               |
| Standard - Approval for medical use                                                                                              | IEC 60601-1, 2 x MOOP                                                            |
| Shipbuilding approval                                                                                                            | Germanischer Lloyd (EMC 2), ABS, LR, RINA, NK, DNV, BV                           |
| UL approvals                                                                                                                     | 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) |
| Vibration (operation)                                                                                                            | < 15 Hz, amplitude ±2.5 mm (according to IEC 60068-2-6)                          |
|                                                                                                                                  | 15 Hz ... 150 Hz, 2.3g, 90 min.                                                  |
| Low Voltage Directive                                                                                                            | Conformance with LV directive 2006/95/EC                                         |
| Information technology equipment - safety (CB scheme)                                                                            | CB Scheme                                                                        |
| Rail applications                                                                                                                | EN 50121-4                                                                       |
| Overvoltage category (EN 62477-1)                                                                                                | III                                                                              |

## Drawings

## Power supply unit - QUINT-PS/1AC/24DC/40 - 2866789

Block diagram



### Classifications

#### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27040702 |
| eCl@ss 4.1 | 27040702 |
| eCl@ss 5.0 | 27049002 |
| eCl@ss 5.1 | 27049002 |
| eCl@ss 6.0 | 27049002 |
| eCl@ss 7.0 | 27049002 |
| eCl@ss 8.0 | 27049002 |
| eCl@ss 9.0 | 27040701 |

#### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC001039 |
| ETIM 3.0 | EC001039 |
| ETIM 4.0 | EC000599 |
| ETIM 5.0 | EC002540 |
| ETIM 6.0 | EC002540 |

#### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211502 |
| UNSPSC 7.0901 | 39121004 |
| UNSPSC 11     | 39121004 |
| UNSPSC 12.01  | 39121004 |
| UNSPSC 13.2   | 39121004 |

### Approvals

#### Approvals

##### Approvals

CSA / UL Recognized / UL Listed / cUL Recognized / IEC CB Scheme / BV / ABS / RINA / LR / SEMI F47 / EAC / EAC / DNV GL / NK / cUL Listed / cULus Recognized

##### Ex Approvals

UL Listed / cUL Listed / cULus Listed

## Power supply unit - QUINT-PS/1AC/24DC/40 - 2866789

### Approvals

#### Approval details

|                 |                                                                                     |                                                                                                                                                                                                                               |                    |
|-----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| CSA             |    | <a href="http://www.csagroup.org/services/testing-and-certification/certified-product-listing/">http://www.csagroup.org/services/testing-and-certification/certified-product-listing/</a>                                     | 2261820            |
| 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      |
| 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      |
| 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      |
| IECEE CB Scheme |  | <a href="http://www.iecee.org/">http://www.iecee.org/</a>                                                                                                                                                                     | SI-2572            |
| BV              |  | <a href="http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials">http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials</a> | 21004-B0 BV        |
| ABS             |  | <a href="http://www.eagle.org/eagleExternalPortalWEB/">http://www.eagle.org/eagleExternalPortalWEB/</a>                                                                                                                       | 15-HG1375463-1-PDA |
| RINA            |  | <a href="http://www.rina.org/en">http://www.rina.org/en</a>                                                                                                                                                                   | ELE016612XG        |
| LR              |  | <a href="http://www.lr.org/en">http://www.lr.org/en</a>                                                                                                                                                                       | 08/20069 E3        |
| SEMI F47        |  |                                                                                                                                                                                                                               | SEMI F47           |

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### Approvals

|     |                                                                                   |                          |
|-----|-----------------------------------------------------------------------------------|--------------------------|
| EAC |  | RU C-<br>DE.A*30.B.01082 |
|-----|-----------------------------------------------------------------------------------|--------------------------|

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

|        |                                                             |            |
|--------|-------------------------------------------------------------|------------|
| DNV GL | <a href="https://www.dnvgl.com/">https://www.dnvgl.com/</a> | TAE000014W |
|--------|-------------------------------------------------------------|------------|

|    |                                                                                   |                                                                               |        |
|----|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------|--------|
| NK |  | <a href="http://www.classnk.or.jp/hp/en/">http://www.classnk.or.jp/hp/en/</a> | 08A039 |
|----|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------|--------|

|            |                                                                                    |                                                                                                                                                       |               |
|------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 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 |
|------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|

|                  |                                                                                     |                                                                                                                                                       |
|------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| cULus 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> |
|------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|

### Accessories

#### Accessories

#### Assembly adapter

#### Assembly adapters - UWA 130 - 2901664



2-piece universal wall adapter for securely mounting the power supply in the event of strong vibrations. The profiles that are screwed onto the side of the power supply are screwed directly onto the mounting surface. The universal wall adapter is attached on the left/right.

#### Assembly adapters - UWA 182/52 - 2938235



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

#### Fan

## Power supply unit - QUINT-PS/1AC/24DC/40 - 2866789

### Accessories

Fan - QUINT-PS/FAN/4 - 2320076



The fan for QUINT-PS/1AC and .../3AC can be mounted without the need for tools or other accessories. By using the fan, optimum cooling is ensured at high ambient temperatures or if the mounting position is rotated.

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### Mounting rail adapter

Electronic housing - UTA 107 - 2853983

Universal DIN rail adapter



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### Redundancy module

Diode - QUINT-DIODE/12-24DC/2X20/1X40 - 2320157



DIN rail diode module 12-24 V DC/2x20 A or 1x40 A. Uniform redundancy up to the consumer.

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Redundancy module, with protective coating - QUINT-ORING/24DC/2X20/1X40 - 2320186



Active QUINT redundancy module for DIN rail mounting with ACB (auto current balancing) technology and monitoring functions, input: 24 V DC, output: 24 V DC/2 x 20 A or 1 x 40 A, including mounted UTA 107/30 universal DIN rail adapter

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### Thermomagnetic device circuit breakers

Thermomagnetic device circuit breaker - CB TM1 1A SFB P - 2800836



Thermomagnetic device circuit breaker, 1-pos., tripping characteristic SFB, 1 PDT contact, plug for base element.



## Power supply unit - QUINT-PS/1AC/24DC/40 - 2866789

### Accessories

Thermomagnetic device circuit breaker - CB TM1 2A SFB P - 2800837



Thermomagnetic device circuit breaker, 1-pos., tripping characteristic SFB, 1 PDT contact, plug for base element.

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Thermomagnetic device circuit breaker - CB TM1 3A SFB P - 2800838



Thermomagnetic device circuit breaker, 1-pos., tripping characteristic SFB, 1 PDT contact, plug for base element.

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Thermomagnetic device circuit breaker - CB TM1 4A SFB P - 2800839



Thermomagnetic device circuit breaker, 1-pos., tripping characteristic SFB, 1 PDT contact, plug for base element.

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Thermomagnetic device circuit breaker - CB TM1 5A SFB P - 2800840



Thermomagnetic device circuit breaker, 1-pos., tripping characteristic SFB, 1 PDT contact, plug for base element.

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Thermomagnetic device circuit breaker - CB TM1 6A SFB P - 2800841



Thermomagnetic device circuit breaker, 1-pos., tripping characteristic SFB, 1 PDT contact, plug for base element.

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## Power supply unit - QUINT-PS/1AC/24DC/40 - 2866789

### Accessories

Thermomagnetic device circuit breaker - CB TM1 8A SFB P - 2800842



Thermomagnetic device circuit breaker, 1-pos., tripping characteristic SFB, 1 PDT contact, plug for base element.

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Thermomagnetic device circuit breaker - CB TM1 10A SFB P - 2800843



Thermomagnetic device circuit breaker, 1-pos., tripping characteristic SFB, 1 PDT contact, plug for base element.

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Thermomagnetic device circuit breaker - CB TM1 12A SFB P - 2800844



Thermomagnetic device circuit breaker, 1-pos., tripping characteristic SFB, 1 PDT contact, plug for base element.

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Thermomagnetic device circuit breaker - CB TM1 16A SFB P - 2800845



Thermomagnetic device circuit breaker, 1-pos., tripping characteristic SFB, 1 PDT contact, plug for base element.

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