

Power supply unit - QUINT-PS/ 1AC/48DC/10 - 2866682

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Primary-switched QUINT power supply for DIN rail mounting, input: 1-phase, output: 48 V DC/10 A, with integrated SFB (selective fuse breaking) technology, including mounted universal DIN rail adapter UTA 107

Product description


QUINT POWER power supply units – Maximum system availability with SFB technology
 Compact power supply units of the new QUINT POWER generation maximize the availability of your system. With the SFB technology (Selective Fuse Breaking Technology), six times the nominal current for 12 ms, even the standard power circuit-breakers can now also be triggered reliably and quickly. Faulty current paths are switched off selectively, the fault is located and important system parts continue to operate. Comprehensive diagnostics are provided through constant monitoring of output voltage and current. This preventive function monitoring visualizes critical operating modes and reports them to the control unit before an error can occur.

Why buy this product

- Quick tripping of standard circuit breakers
- Reliable starting of difficult loads
- Preventive function monitoring



Key commercial data

| | |
|--------------------------------------|---|
| Packing unit | 1 PCE |
| GTIN |  4 046356 307680 |
| Weight per Piece (excluding packing) | 2240.0 GRM |
| Weight per piece (including packing) | 2240.0 GRM |
| Custom tariff number | 85044082 |
| Country of origin | Thailand |
| Sales Key | H1 - Power supply units |

Technical data

Dimensions

| | |
|---------------------------------|--------|
| Width | 90 mm |
| Height | 130 mm |
| Depth | 125 mm |
| Width with alternative assembly | 122 mm |

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Dimensions

| | |
|----------------------------------|--------|
| Height with alternative assembly | 130 mm |
| Depth with alternative assembly | 93 mm |

Ambient conditions

| | |
|--|--|
| Degree of protection | IP20 |
| Ambient temperature (operation) | -25 °C ... 70 °C (> 60°C derating, startup at -40°C type-tested) |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Max. permissible relative humidity (operation) | ≤ 95 % (at 25 °C, no condensation) |
| Noise immunity | EN 61000-6-2:2005 |

Input data

| | |
|------------------------------|--|
| Nominal input voltage range | 100 V AC ... 240 V AC |
| Input voltage range AC | 85 V AC ... 264 V AC |
| Input voltage range DC | 90 V DC ... 350 V DC (UL 508: ≤ 250 V DC) |
| Short-term input voltage | 300 V AC |
| AC frequency range | 45 Hz ... 65 Hz |
| Frequency range DC | 0 Hz |
| Current consumption | 5.1 A (120 V AC) |
| | 2.3 A (230 V AC) |
| Inrush surge current | < 20 A (typical) |
| Power failure bypass | > 20 ms (120 V AC) |
| | > 20 ms (230 V AC) |
| Input fuse | 12 A (slow-blow, internal) |
| Choice of suitable fuses | 10 A ... 16 A (Characteristics B, C, D, K) |
| Type of protection | Transient surge protection |
| Protective circuit/component | Varistor |

Output data

| | |
|-------------------------------------|---|
| Nominal output voltage | 48 V DC ±1% |
| Setting range of the output voltage | 30 V DC ... 56 V DC (> 48 V constant capacity) |
| Output current | 10 A (-25°C ... 60°C, U _{OUT} = 48 V DC) |
| | 13 A (with POWER BOOST, -25 °C ... 40 °C permanently, U _{OUT} = 48 V DC) |
| | 60 A (SFB technology, 12 ms) |
| | 13 A (SFB technology, 12 ms) |
| Magnetic fuse tripping | B2 |
| | B4 |
| | B6 |
| | C2 |
| | C4 |
| 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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Output data

| | |
|-----------------------------------|---|
| Current limitation | $I_{BOOST} = 13 \text{ A}$ (for short-circuit), approximately |
| Control deviation | < 1 % (change in load, static 10% ... 90%) |
| | < 2 % (change in load, dynamic 10% ... 90%) |
| | < 0.1 % (change in input voltage $\pm 10\%$) |
| Residual ripple | < 80 mV _{PP} (with nominal values) |
| Maximum power dissipation NO-Load | 16 W |
| Power loss nominal load max. | 41 W |

General

| | |
|--|--|
| Net weight | 1.7 kg |
| Efficiency | > 93 % (for 230 V AC and nominal values) |
| Insulation voltage input/output | 4 kV AC (type test) |
| | 2 kV AC (routine test) |
| Protection class | I |
| MTBF (IEC 61709, SN 29500) | > 630000 h |
| Mounting position | horizontal DIN rail NS 35, EN 60715 |
| Assembly instructions | Alignable: 5 mm horizontally, 15 mm next to active components, 50 mm vertically |
| Electromagnetic compatibility | Conformance with EMC Directive 2004/108/EC |
| Noise emission | EN 50081-2 |
| Low Voltage Directive | Conformance with LV directive 2006/95/EC |
| Standard – Electrical equipment of machines | EN 60204 |
| 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 (PELV) |
| Standard - Safe isolation | DIN VDE 0100-410 |
| | DIN VDE 0106-1010 |
| Standard – Protection against electric shock | DIN 57100-410 |
| Standard – Protection against shock currents, basic requirements for protective separation in electrical equipment | DIN VDE 0106-101 |
| Standard – Limitation of mains harmonic currents | EN 61000-3-2 |
| Standard - Equipment safety | GS (tested safety) |
| Standard - Approval for medical use | IEC 60601 |
| Approval - requirement of the semiconductor industry with regard to mains voltage dips | Semi F47-0706 |
| Information technology equipment - safety (CB scheme) | CB Scheme |
| UL approvals | UL Listed UL 508 |
| | UL/C-UL Recognized UL 60950 |
| | UL ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D (Hazardous Location) |
| Surge voltage category | III |

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Technical data

Connection data, input

| | |
|--|---------------------|
| Connection method | Screw connection |
| Conductor cross section solid min. | 0.2 mm ² |
| Conductor cross section solid max. | 6 mm ² |
| Conductor cross section stranded min. | 0.2 mm ² |
| Conductor cross section stranded max. | 4 mm ² |
| Conductor cross section AWG/kcmil min. | 18 |
| Conductor cross section AWG/kcmil max | 10 |
| Stripping length | 7 mm |
| Screw thread | M3 |

Connection data, output

| | |
|--|---------------------|
| Connection method | Screw connection |
| Conductor cross section solid min. | 0.2 mm ² |
| Conductor cross section solid max. | 6 mm ² |
| Conductor cross section stranded min. | 0.2 mm ² |
| Conductor cross section stranded max. | 4 mm ² |
| Conductor cross section AWG/kcmil min. | 12 |
| Conductor cross section AWG/kcmil max | 10 |
| Stripping length | 7 mm |

Signaling

| | |
|--|--|
| Output name | DC OK active |
| Output description | $U_{OUT} > 0.9 \times U_N$: High signal |
| Maximum switching voltage | + 24 V DC |
| Output voltage | + 48 V DC |
| Maximum inrush current | 20 mA (short-circuit resistant) |
| Continuous load current | ≤ 20 mA |
| Status display | $U_{OUT} > 0.9 \times U_N$: "DC OK" LED green |
| Note on status display | $U_{OUT} < 0.9 \times U_N$: Flashing "DC OK" LED |
| | $I_{OUT} < I_N$: LED ON |
| Conductor cross section solid min. | 0.2 mm ² |
| Conductor cross section solid max. | 6 mm ² |
| Conductor cross section stranded min. | 0.2 mm ² |
| Conductor cross section stranded max. | 4 mm ² |
| Conductor cross section AWG/kcmil min. | 18 |
| Conductor cross section AWG/kcmil max | 10 |
| Tightening torque, min | 0.5 Nm |
| Tightening torque max | 0.6 Nm |
| Screw thread | M3 |
| Output name | DC OK floating |
| Output description | Relay contact, $U_{OUT} > 0.9 \times U_N$: Contact closed |

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Technical data

Signaling

| | |
|---------------------------|---|
| Maximum switching voltage | ≤ 30 V AC |
| | 24 V DC |
| Maximum inrush current | 0.5 A |
| | 1 A |
| Continuous load current | 1 A |
| Status display | $U_{OUT} > 0.9 \times U_N$: "DC OK" LED green |
| Note on status display | $U_{OUT} < 0.9 \times U_N$: Flashing "DC OK" LED |
| Output name | POWER BOOST, active |
| Output description | $I_{OUT} < I_N$: High signal |
| Output voltage | + 48 V DC |
| Maximum inrush current | 20 mA (short-circuit resistant) |
| Continuous load current | ≤ 20 mA |
| Status display | $I_{OUT} > I_N$: LED "BOOST" yellow |

Classifications

eCl@ss

| | |
|------------|----------|
| eCl@ss 4.0 | 27040702 |
| eCl@ss 4.1 | 27040702 |
| eCl@ss 5.0 | 27242213 |
| eCl@ss 5.1 | 27242213 |
| eCl@ss 6.0 | 27049002 |
| eCl@ss 7.0 | 27049002 |
| eCl@ss 8.0 | 27049002 |

ETIM

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

UNSPSC

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

Approvals

Approvals

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Approvals

Approvals

CSA / UL Recognized / UL Listed / cUL Recognized / GOST / IECEE CB Scheme / SEMI F47 / cULus Recognized

Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approvals submitted

Approval details

CSA

UL Recognized

UL Listed

cUL Recognized

GOST

IECEE CB Scheme

SEMI F47

cULus Recognized

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Accessories

Accessories

Assembly adapter

Assembly adapters - UWA 182/52 - 2938235



Universal wall adapter

Mounting rail adapter

Assembly adapters - UTA 107 - 2853983



Universal DIN rail adapter

Redundancy module

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



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

Redundancy module - TRIO-DIODE/48DC/2X10/1X20 - 2866527



Redundancy module with function monitoring, 48 V DC, 2x 10 A, 1x 20 A

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.

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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.

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.

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.

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.

Drawings

Block diagram

