

Power supply unit - QUINT-PS/ 3AC/24DC/40 - 2866802

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Primary-switched QUINT power supply for DIN rail mounting, input: 3-phase, output: 24 V DC/40 A, with integrated SFB technology (selective fuse breaking).

Product Description

QUINT POWER power supply units – Superior 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.

Product Features

- High level of system availability even in the event of permanent phase failure
- Reliable starting of difficult loads
- Preventive function monitoring



Key commercial data

| | |
|------------------|---------------|
| package_quantity | 1 |
| GTIN | 4046356152877 |

Technical data

Dimensions

| | |
|----------------------------------|----------|
| Width | 96 mm |
| Height | 130 mm |
| Depth | 176 mm |
| Width with alternative assembly | 177.5 mm |
| Height with alternative assembly | 130 mm |
| Depth with alternative assembly | 99 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, non-condensing) |
| Noise immunity | EN 61000-6-2:2005 |

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Input data

| | |
|------------------------------|---|
| Input voltage range | 3x 320 V AC ... 575 V AC |
| Input voltage range | 2x 360 V AC ... 575 V AC (Not approved by UL) |
| Input voltage range | 450 V DC ... 800 V DC |
| AC frequency range | 45 Hz ... 65 Hz |
| Frequency range DC | 0 Hz |
| Current consumption | 3x 2.1 A (400 V AC) |
| Current consumption | 3x 1.7 A (500 V AC) |
| Inrush surge current | < 20 A (typical) |
| Power failure bypass | > 25 ms (400 V AC) |
| Power failure bypass | > 35 ms (500 V AC) |
| Choice of suitable fuses | 6 A ... 16 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 \pm 1% |
| Setting range of the output voltage | 18 V DC ... 29.5 V DC (> 24 V constant capacity) |
| Output current | 40 A (-25°C ... 60°C, U _{OUT} = 24 V DC) |
| Output current | 45 A (with POWER BOOST, -25°C ... 40°C permanently, U _{OUT} = 24 V DC) |
| Output current | 215 A (SFB technology, 12 ms) |
| Derating | 60 °C ... 70 °C (2.5%/K) |
| Connection in parallel | Yes, for redundancy and increased capacity |
| Connection in series | Yes |
| Residual ripple | < 40 mV _{PP} (with nominal values) |
| Peak switching voltages nominal load | < 5 mV _{PP} (at nominal values, 20 MHz) |
| Maximum power dissipation NO-Load | 18 W |
| Power loss nominal load max. | 63 W |

General

| | |
|---|---|
| Net weight | 2.5 kg |
| Operating voltage display | Green LED |
| Efficiency | > 94 % (at 400 V AC and nominal values) |
| Insulation voltage input/output | 4 kV AC (type test) |
| Insulation voltage input/output | 2 kV AC (routine test) |
| Protection class | I |
| MTBF (IEC 61709, SN 29500) | > 501000 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 |
| Low Voltage Directive | Conformance with LV directive 2006/95/EC |
| Standard – Electrical equipment of machines | EN 60204 |

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General

| | |
|---|--|
| Standard - Electrical safety | IEC 60950-1/VDE 0805 (SELV) |
| Shipbuilding approval | Germanischer Lloyd (EMC 2), ABS, LR, RINA, NK, DNV, BV |
| 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 |
| Standard - Safe isolation | DIN VDE 0106-101 |
| 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) |
| Information technology equipment - safety (CB scheme) | CB Scheme |
| UL approvals | UL Listed UL 508 |
| UL approvals | UL/C-UL Recognized UL 60950 (3-wire + PE, star net) |
| UL approvals | UL ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D (Hazardous Location) |
| Surge voltage category | III |

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. | 0.5 mm ² |
| Conductor cross section solid max. | 16 mm ² |
| Conductor cross section stranded min. | 0.5 mm ² |
| Conductor cross section stranded max. | 16 mm ² |
| Conductor cross section AWG/kcmil min. | 8 |
| Conductor cross section AWG/kcmil max | 6 |
| Stripping length | 10 mm |

Signaling

| | |
|---------------------------|--|
| Output name | DC OK active |
| Output description | $U_{OUT} > 0.9 \times U_N$: High signal |

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Technical data

Signaling

| | |
|--|--|
| Output voltage | + 24 V DC |
| Maximum inrush current | min. 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 |
| 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 |
| Maximum switching voltage | ≤ 30 V AC/DC |
| Maximum inrush current | ≤ 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 | + 24 V DC |
| Maximum inrush current | min. 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 | 27049002 |
| eCl@ss 5.1 | 27049002 |
| eCl@ss 6.0 | 27049002 |
| eCl@ss 7.0 | 27049002 |
| eCl@ss 8.0 | 27049002 |

ETIM

| | |
|----------|----------|
| ETIM 2.0 | EC001039 |
| ETIM 3.0 | EC001039 |

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classifications

ETIM

| | |
|-----------------|----------|
| ETIM 4.0 | EC000599 |
| 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

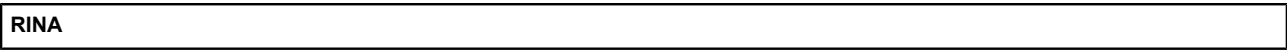
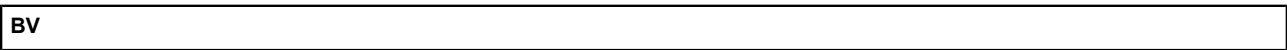
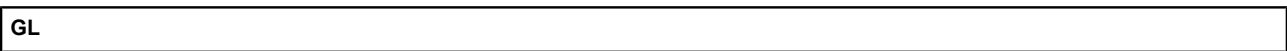
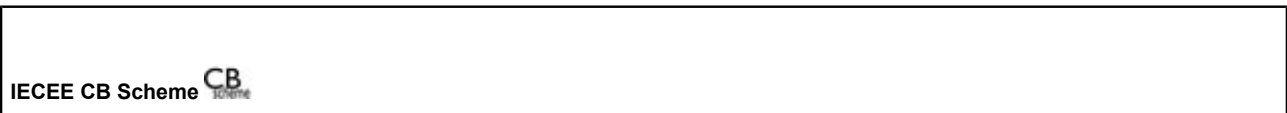
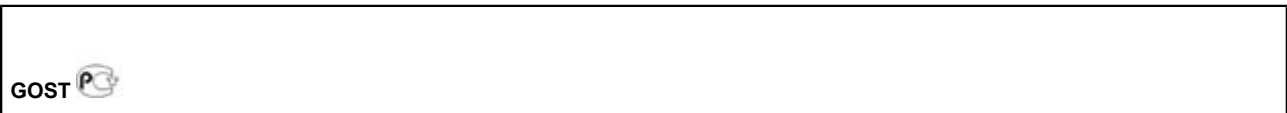
UL Listed / cUL Listed / UL Listed / cUL Listed / cULus Listed / CSA / UL Recognized / UL Listed / cUL Recognized / GOST / IECCE
CB Scheme / GL / BV / ABS / RINA / CSA / UL Recognized / UL Listed / cUL Recognized / GOST / GL / BV / ABS / RINA / IECCE CB
Scheme / NK / NK / DNV / DNV / LR / SEMI F47 / Geprüfte Sicherheit / Bauartgeprüft / cULus Recognized / BV /

Approval details

| |
|--------------|
| UL Listed |
| cUL Listed |
| UL Listed |
| cUL Listed |
| cULus Listed |
| CSA |

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approvals



Power supply unit - QUINT-PS/ 3AC/24DC/40 - 2866802

approvals

cUL Recognized

GL

BV

RINA

IECEE CB Scheme

NK

NK

DNV

DNV

LR

SEMI F47

Geprüfte Sicherheit

Bauartgeprüft

cULus Recognized

Power supply unit - QUINT-PS/ 3AC/24DC/40 - 2866802

accessories

Mounting rail adapter

UTA 107 - 2853983



Assembly adapter

UWA 182/52 - 2938235



Redundancy module

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



QUINT-ORING/24DC/2X20/1X40 - 2320186



Thermomagnetic device circuit breakers

CB TM1 1A SFB P - 2800836



Power supply unit - QUINT-PS/ 3AC/24DC/40 - 2866802

accessories

CB TM1 2A SFB P - 2800837



CB TM1 3A SFB P - 2800838



CB TM1 4A SFB P - 2800839



CB TM1 5A SFB P - 2800840



CB TM1 6A SFB P - 2800841



Power supply unit - QUINT-PS/ 3AC/24DC/40 - 2866802

accessories

CB TM1 8A SFB P - 2800842



CB TM1 10A SFB P - 2800843



CB TM1 12A SFB P - 2800844



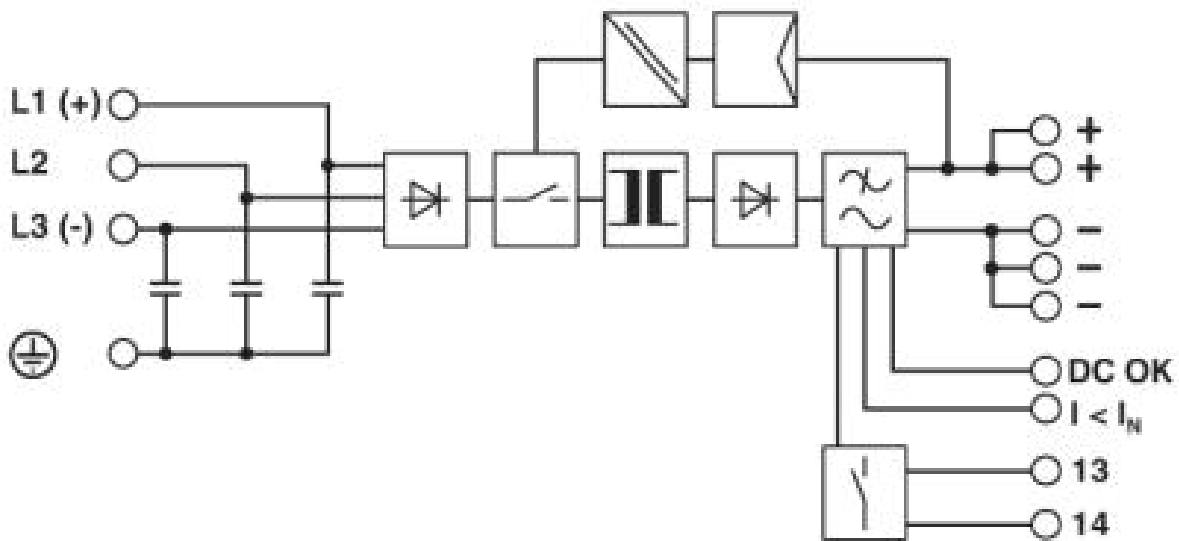
CB TM1 16A SFB P - 2800845



Drawings

Power supply unit - QUINT-PS/ 3AC/24DC/40 - 2866802

Block diagram



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