

Power supply unit - QUINT-PS/2AC/1DC/24DC/20 - 2320830

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Primary-switched DIN rail power supply unit. AC input: suitable for operation between two phases (400 V AC). DC input: suitable for operation in an FI intermediate circuit. Output: 24 V DC/20 A.

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.



Key commercial data

| | |
|----------------------|----------|
| Packing unit | 1 pc |
| Custom tariff number | 85044030 |
| Country of origin | China |

Technical data

Note

| | |
|-------------------------|---|
| Utilization restriction | EMC: class A product, see manufacturer's declaration in the download area |
|-------------------------|---|

Dimensions

| | |
|--------|--------|
| Width | 120 mm |
| Height | 130 mm |
| Depth | 125 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 |

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Ambient conditions

| | |
|--|-----------------------------------|
| Max. permissible relative humidity (operation) | ≤ 95 % (at 25 °C, non-condensing) |
| Maximum altitude | ≤ 2000 m |

Input data

| | |
|------------------------------|-------------------------------------|
| Nominal input voltage range | 2x 400 V AC ... 500 V AC |
| | 600 V DC |
| Input voltage range | 2x 360 V AC ... 575 V AC |
| | 450 V DC ... 840 V DC |
| AC frequency range | 45 Hz ... 65 Hz |
| Inrush surge current | < 85 A (typical) |
| Power failure bypass | > 20 ms (400 V AC) |
| Input fuse | 3.15 A (slow-blow, internal) |
| Choice of suitable fuses | 10 A ... 16 A (Characteristic B, C) |
| Type of protection | Transient surge protection |
| Protective circuit/component | Varistor |

Output data

| | |
|--------------------------------------|--|
| Nominal output voltage | 24 V DC ±1 % |
| Setting range of the output voltage | 18 V DC ... 29.5 V DC ($U_{IN} \geq 360$ V AC / 480 V DC) |
| | 18 V DC ... 26 V DC (< 480 V DC) |
| Nominal output current | 20 A (-25 °C ... 60 °C) |
| POWER BOOST | 26 A (-25 °C ... 40 °C permanent, $U_{OUT} = 24$ V DC) |
| SFB technology current reserve | 120 A (20 ms) |
| Derating | 60 °C ... 70 °C (2.5%/K) |
| Connection in parallel | Yes, for redundancy and increased capacity |
| Connection in series | Yes |
| Max. capacitive load | Unlimited |
| Active current limitation | Approx. 27 A |
| Control deviation | < 1 % (change in load, static 10 % ... 90 %) |
| | < 2 % (change in load, dynamic 10 % ... 90 %) |
| | < 0.1 % (change in input voltage ±10 %) |
| Residual ripple | < 50 mV _{PP} (with nominal values) |
| Output current | 20 A (-25 °C ... 60 °C) |
| Output power | 480 W |
| Peak switching voltages nominal load | < 50 mV _{PP} (20 MHz) |
| Maximum power dissipation NO-Load | 11 W |
| Power loss nominal load max. | 51 W |

General

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General

| | |
|--|---|
| Net weight | 2 kg |
| Efficiency | > 92 % (600 V DC) |
| | > 90.5 % (400 V AC) |
| Insulation voltage input/output | 1.5 kV AC (type test) |
| | 2 kV AC (routine test) |
| Protection class | I |
| | > 860000 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 |
| Electromagnetic compatibility | Conformance with EMC Directive 2004/108/EC |
| Standard - Safety of transformers | EN 61558-2-17 |
| Standard - Electrical safety | EN 60950-1/VDE 0805 (SELV) |
| | EN 61558-2-17 |
| Standard – Electronic equipment for use in electrical power installations and their assembly into electrical power installations | EN 50178/VDE 0160 (PELV) |
| Standard - Safe isolation | DIN VDE 0100-410 |
| Rail applications | EN 50121-4 |
| UL approvals | UL/C-UL listed UL 508 |
| | UL/C-UL Recognized UL 60950-1 |

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 flexible min. | 0.2 mm ² |
| Conductor cross section flexible max. | 4 mm ² |
| Conductor cross section AWG min. | 24 |
| Conductor cross section AWG max. | 10 |
| Stripping length | 8 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 flexible min. | 0.2 mm ² |
| Conductor cross section flexible max. | 4 mm ² |
| Conductor cross section AWG min. | 12 |

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Connection data, output

| | |
|----------------------------------|------|
| Conductor cross section AWG max. | 10 |
| Stripping length | 8 mm |
| Screw thread | M3 |

Signaling

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|---------------------------------------|---|
| Output name | DC OK floating |
| Output description | $U_{OUT} > 0.9 \times U_N$: Relays closed |
| Maximum inrush current | ≤ 100 mA (short-circuit resistant) |
| Status display | "DC OK" LED green |
| Conductor cross section solid min. | 0.2 mm ² |
| Conductor cross section solid max. | 6 mm ² |
| Conductor cross section flexible min. | 0.2 mm ² |
| Conductor cross section flexible max. | 4 mm ² |
| Conductor cross section AWG min. | 24 |
| Conductor cross section AWG max. | 10 |
| Tightening torque, min | 0.5 Nm |
| Tightening torque max | 0.6 Nm |
| Screw thread | M3 |
| Output name | POWER BOOST, active |
| Output description | $I_{OUT} < I_N$: High signal |
| Maximum inrush current | < 20 mA (short-circuit resistant) |
| Status display | "BOOST" LED yellow/ $I_{OUT} > I_N$: LED on |
| Output name | DC _{IN} OK, active |
| Output description | $U_{IN} > 450$ V DC: high signal |
| Maximum inrush current | < 20 mA (short-circuit resistant) |
| Status display | LED "DC _{IN} OK" green / $U_{IN} > 450$ V DC: LED on |

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 |

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Classifications

ETIM

| | |
|----------|----------|
| 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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UL Recognized / UL Listed / cUL Recognized / cUL Listed / EAC / cULus Recognized / cULus Listed

Ex Approvals

Approvals submitted

Approval details

UL Recognized

UL Listed

cUL Recognized

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