

QUINT-PS/1AC/24DC/10

Order No.: 2866763



DIN rail power supply unit 24 V DC/10 A, primary-switched mode, 1-phase. The SFB technology (Selective Fusebreaking Technology) can be also used to trigger standard power circuit-breakers quickly and reliably.



| Commercial data | |
|--------------------------|---------------------|
| EAN | 4046356113793 |
| Pack | 1 Pcs. |
| Customs tariff | 85044081 |
| Weight/Piece | 1.45 KG |
| Catalog page information | Page 239 (NTK-2008) |

Product notes

WEEE/RoHS-compliant since:
03/19/2007



Product description

QUINT POWER power supply units – highest system availability due to SFB technology

Compact power supply units of the new QUINT POWER generation maximize the availability of your system. Even the standard power circuit-breakers can be tripped reliably and quickly with the SFB technology (Selective Fusebreaking Technology) and six times the nominal current for 12 ms. Defective current paths are disconnected selectively, the defect is limited and the important system parts remain in operation. A comprehensive diagnostics is carried out by continuously monitoring the output voltage and current. This preventive function monitoring visualizes the critical operating modes and reports them to the control unit before an error occurs.

Technical data

Input data

| | |
|------------------------------|--|
| Nominal input voltage | 100 V AC ... 240 V AC |
| AC input voltage range | 85 V AC ... 264 V AC |
| DC input voltage range | 90 V DC ... 350 V DC |
| Short-term input voltage | 300 V AC |
| AC frequency range | 45 Hz ... 65 Hz |
| DC frequency range | 0 Hz |
| Current consumption | Approx. 2.8 A (120 V AC) Approx. 1.2 A (230 V AC) |
| Inrush surge current | < 15 A (typical) |
| Power failure bypass | > 40 ms (120 V AC) > 40 ms (230 V AC) |
| Input fuse | 6.3 A (slow-blow, internal) |
| Recommended backup fuse | 10 A (characteristic B) 16 A (characteristic B) |
| Name of protection | Transient surge protection |
| Protective circuit/component | Varistor |

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 | 10 A (-25°C ... 70°C) 15 A (with POWER BOOST, -25°C ... 40°C permanent) 60 A (with SFB technology, 12 ms) |
| Connection in parallel | Yes, for redundancy and increased capacity |
| Connection in series | Yes |
| 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 | < 50 mVPP (with nominal values) |
| Maximum power dissipation idling | 8 W |
| Power loss nominal load max. | 24 W |

General data

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|-------|-------|
| Width | 60 mm |
|-------|-------|

| | |
|--|---|
| Height | 130 mm |
| Depth | 125 mm |
| Weight | 1.1 kg |
| Efficiency | > 92.5 % (for 230 V AC and nominal values) |
| Insulation voltage input/output | 4 kV AC (type test) 2 kV AC (routine test) |
| Degree of protection | IP20 |
| Class of protection | I, with PE connection |
| MTBF | > 500 000 h in acc. with IEC 61709 (SN 29500) |
| Ambient temperature (operation) | -25 °C ... 70 °C (> 60°C derating) |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Max. permissible relative humidity (operation) | 95 % (at 25°C, no condensation) |
| Mounting position | Horizontal DIN rail NS 35, EN 60715 |
| Assembly instructions | Can be aligned: horizontally 5 mm, in addition to active components of 15 mm, vertically 5 cm |
| Electromagnetic compatibility | Conformance with EMC directive 2004/108/EC |
| Emitted interference | EN 50081-2 |
| Immunity to interference | EN 61000-6-2 |
| Standard – Electrical equipment of machines | EN 60204 |
| Standard – Safety transformers for switched-mode power supply units | IEC 61558-2-17 |
| Standard - Electrical safety | IEC 60950/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 (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 network variation (undervoltage) | Semi F47-200 |
| Certificate | CB Scheme |
| UL approvals | UL Listed UL 508 UL/C-UL Recognized UL 60950 |

Connection data, input

| | |
|--|----------------------------|
| Type of connection | Pluggable screw connection |
| Conductor cross section solid min. | 0.2 mm ² |
| Conductor cross section solid max. | 2.5 mm ² |
| Conductor cross section stranded min. | 0.2 mm ² |
| Conductor cross section stranded max. | 2.5 mm ² |
| Conductor cross section AWG/kcmil min. | 16 |
| Conductor cross section AWG/kcmil max | 12 |
| Stripping length | 7 mm |
| Screw thread | M3 |

Connection data, output

| | |
|--|----------------------------|
| Type of connection | Pluggable screw connection |
| Conductor cross section solid min. | 0.2 mm ² |
| Conductor cross section solid max. | 2.5 mm ² |
| Conductor cross section stranded min. | 0.2 mm ² |
| Conductor cross section stranded max. | 2.5 mm ² |
| Conductor cross section AWG/kcmil min. | 16 |
| Conductor cross section AWG/kcmil max | 12 |
| 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 |
| Maximum inrush current | ≤ 20 mA (short circuit resistant) |
| Continuous load current | ≤ 20 mA |
| Status display | "DC OK" LED green |
| Note on status display | $U_{OUT} < 0.9 \times U_N$: LED flashing |
| | $I_{OUT} < I_N$: LED ON |
| Conductor cross section solid min. | 0.2 mm ² |
| Conductor cross section solid max. | 2.5 mm ² |
| Conductor cross section stranded min. | 0.2 mm ² |
| Conductor cross section stranded max. | 2.5 mm ² |
| Conductor cross section AWG/kcmil min. | 16 |
| Conductor cross section AWG/kcmil max | 12 |

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

Certificates / Approvals



Certification ABS, CB, CSA, CUL, GL, UL, UL Listed

Certifications applied for: UL-EX LIS / CUL-EX LIS / LR / NV / BV

Accessories

| Item | Designation | Description |
|----------------|----------------------|---|
| General | | |
| 2938206 | QUINT-PS-ADAPTERS7/2 | Assembly adapter for QUINT POWER 10A on S7-300 rail |
| 2938235 | UWA 182/52 | Universal wall adapter |

Drawings

Block diagram

