

TRIO-PS/ 3AC/24DC/10

Order No.: 2866459



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DIN rail power supply unit, primary-switched mode, 3-phase, output: 24 V DC / 10 A

| Commercial data | |
|--------------------------|--------------------|
| GTIN (EAN) | 4046356046701 |
| sales group | H001 |
| Pack | 1 pcs. |
| Customs tariff | 85044081 |
| Weight/Piece | 1.4361 KG |
| Catalog page information | Page 573 (IF-2009) |

Product notes

WEEE/RoHS-compliant since: 09/25/2006



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Product description

TRIO POWER is the DIN-rail-mountable power supply unit with basic functions. With an output voltage of 12 V DC, 24 V DC and 48 V DC and 1- and 3-phase versions with 60 W or 960 W, it is particularly suited for use in series production in mechanical engineering. The wide-range input and international certification package allows worldwide implementation.

The high MTBF of 500,000 h stands for high supply reliability. The devices can be connected in parallel to increase the capacity and redundancy.

The clear LED signaling and the device connection with double terminal block for plus and minus for fast potential distribution are further advantages of this device series. A third terminal block simplifies the grounding on the secondary side. All power supply units are idle proof and short-circuit proof and provide a regulated and adjustable output voltage.

Technical data

Input data

| | |
|---|--|
| Nominal input voltage | 2x / 3x 400 V AC ... 500 V AC |
| AC input voltage range | 3x 320 V AC ... 575 V AC (for 3-phase operation) 2x 360 V AC ... 575 V AC (for 2-phase operation) |
| AC frequency range | 45 Hz ... 65 Hz |
| Current consumption | Approx. 3x 0.6 A (400 V AC) 3x 0.5 A (480 V AC) |
| Inrush surge current | < 15 A |
| Power failure bypass | > 20 ms (400 V AC) > 25 ms (480 V AC) |
| Permissible backup fuse | B6 B10 B16 |
| Required backup fuse (device and line protection) | (externally via 3 circuit breakers 6 A, 10 A or 16 A, characteristic B) |
| Power factor (cos phi) | 0.59 |
| Type 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 | 22.5 V DC ... 29.5 V DC (> 24 V constant capacity) |
| Output current | 10 A (-25°C ... 55°C) |
| Derating | +55°C to +70°C: 2.5% per Kelvin 55 °C ... 70 °C (2.5%/K) |
| Connection in parallel | Yes, for redundancy and increased capacity |
| Connection in series | Yes |
| Max. capacitive load | Unlimited |
| Current limitation | Approx. 15 A |
| 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 | < 10 mV _{pp} |
| Peak switching voltages nominal load | < 30 mV _{pp} |
| Maximum power dissipation idling | 6 W |
| Power loss nominal load max. | 28 W |

General data

| | |
|--|--|
| Width | 60 mm |
| Height | 130 mm |
| Depth | 152.5 mm |
| Net weight | 1.3 kg |
| Operating voltage display | LED green |
| Efficiency | > 89 % (at 400 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 (> 55° 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: Horizontal 0 cm, vertical 5 cm |
| Electromagnetic compatibility | Conformance with EMC directive 2004/108/EC |
| Noise immunity | EN 61000-6-2:2005 |
| Low Voltage Directive | Conformance with LV directive 2006/95/EC |
| Standard – Electrical equipment of machines | EN 60204 |
| Standard - Safety of transformers | EN 61558-2-17 |
| Standard - Electrical safety | EN 60950/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 – Safety extra-low voltage | EN 60950 (SELV) 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 |
| UL approvals | UL/C-UL listed UL 508 UL/C-UL Recognized UL 60950 |
| Surge voltage category | III |

Connection data, input

| | |
|--|---------------------|
| Type of connection | 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. | 24 |
| Conductor cross section AWG/kcmil max | 14 |
| Stripping length | 9 mm |
| Screw thread | M2,5 |

Connection data, output

| | |
|--|---------------------|
| Type of connection | 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 | 9 mm |

Signaling

| | |
|------------------------|--|
| Status display | "DC OK" LED green |
| Note on status display | U _{OUT} > 21.5 V: LED lights up |

Certificates / Approvals



Certification

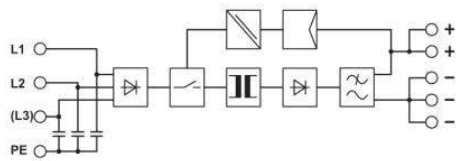
CUL, CUL Listed, UL, UL Listed

Accessories

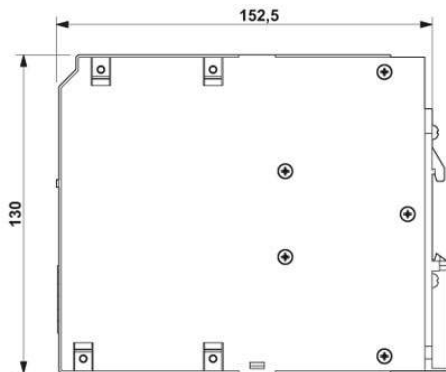
| Item | Designation | Description |
|----------------|----------------------|---|
| General | | |
| 2938206 | QUINT-PS-ADAPTERS7/2 | Assembly adapter for QUINT POWER 10A on S7-300 rail |
| 2938235 | UWA 182/52 | Universal wall adapter |

Diagrams/Drawings

Block diagram



Dimensioned drawing



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