

Power supply unit - TRIO-PS/1AC/48DC/10 - 2866501

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Primary-switched TRIO POWER power supply for DIN rail mounting, input: 1-phase, output: 48 V DC/10 A

Product Description

TRIO POWER power supplies with standard functionality

TRIO POWER is particularly suited to standard machine production, thanks to 1- and 3-phase versions up to 960 W. The wide-range input and the international approval package enable worldwide use.


The robust metal housing, the high electric strength, and the wide temperature range ensure a high level of power supply reliability.

Why buy this product

- ✔ Use the third negative terminal block as a grounding terminal block and minimize installation costs
- ✔ Rugged design with metal housing and wide temperature range from -25 to +70°C
- ✔ Maximum operational reliability thanks to high MTBF (mean time between failures) of more than 500,000 hours and high dielectric strength of up to 300 V AC
- ✔ Compensation of voltage drops by means of output voltage that can be adjusted on the front



Key Commercial Data

| | |
|--------------------------------------|---|
| Packing unit | 1 STK |
| GTIN |  4 046356 287364 |
| GTIN | 4046356287364 |
| Weight per Piece (excluding packing) | 1,900.000 g |
| Weight per piece (including packing) | 2,126.000 g |
| Custom tariff number | 85044030 |
| Country of origin | China |

Technical data

Dimensions

| | |
|--------|----------|
| Width | 115 mm |
| Height | 130 mm |
| Depth | 152.5 mm |

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Technical data

Ambient conditions

| | |
|--|--|
| Degree of protection | IP20 |
| Ambient temperature (operation) | -25 °C ... 70 °C (> 55° C derating : 2.5%/K) |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Max. permissible relative humidity (operation) | 95 % (at 25 °C, non-condensing) |
| Climatic class | 3K3 (in acc. with EN 60721) |
| Degree of pollution | 2 |

Input data

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|-------------------------------------|---|
| Nominal input voltage range | 100 V AC ... 240 V AC |
| Input voltage range | 85 V AC ... 264 V AC (derating < 90 V AC: 2.5 % per Kelvin) |
| Dielectric strength maximum | 300 V AC |
| AC frequency range | 45 Hz ... 65 Hz |
| Discharge current to PE | < 3.5 mA |
| Current consumption | 4.6 A (120 V AC) 2.4 A (230 V AC) |
| Nominal power consumption | 533.5 W |
| Inrush surge current | < 15 A |
| Mains buffering | > 13 ms (120 V AC) > 18 ms (230 V AC) |
| Choice of suitable circuit breakers | 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 \pm 1 % |
| Setting range of the output voltage (U_{Set}) | 30 V DC ... 56 V DC (> 48 V DC, constant capacity restricted) |
| Nominal output current (I_N) | 10 A (-25 °C ... 55 °C) |
| Derating | 55 °C ... 70 °C (2.5%/K) |
| Connection in parallel | Yes, for redundancy and increased capacity |
| Connection in series | yes |
| Feedback resistance | 60 V DC |
| Protection against surge voltage on the output | yes, limited to approx. 60 V DC |
| Max. capacitive load | Unlimited |
| Active current limitation | Approx 11.4 A (in the event of a short-circuit) |
| 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 mV _{PP} |
| Output power | 480 W |
| Typical response time | < 1 s |
| Peak switching voltages nominal load | < 50 mV _{PP} |

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Output data

| | |
|--|------|
| Maximum power dissipation in no-load condition | 8 W |
| Power loss nominal load max. | 49 W |

General

| | |
|---------------------------------|--|
| Net weight | 1.9 kg |
| Operating voltage display | Green LED |
| Efficiency | > 91 % (for 230 V AC and nominal values) |
| Insulation voltage input/output | 4 kV AC (type test) |
| | 2 kV AC (routine test) |
| Insulation voltage input / PE | 2 kV AC (type test) |
| | 2 kV AC (routine test) |
| Insulation voltage output / PE | 500 V DC (type test) |
| Protection class | I (with PE connection) |
| Degree of protection | IP20 |
| | > 1168000 h (40 °C) |
| Mounting position | horizontal DIN rail NS 35, EN 60715 |
| Assembly instructions | alignable: horizontally 0 mm, vertically 50 mm |

Connection data, input

| | |
|---------------------------------------|---------------------|
| Connection method | Screw connection |
| Conductor cross section solid min. | 0.2 mm ² |
| Conductor cross section solid max. | 2.5 mm ² |
| Conductor cross section flexible min. | 0.2 mm ² |
| Conductor cross section flexible max. | 2.5 mm ² |
| Conductor cross section AWG min. | 24 |
| Conductor cross section AWG max. | 14 |
| Stripping length | 9 mm |
| Screw thread | M2,5 |

Connection data, output

| | |
|---------------------------------------|---------------------|
| Connection method | Screw connection |
| Conductor cross section solid min. | 0.5 mm ² |
| Conductor cross section solid max. | 6 mm ² |
| Conductor cross section flexible min. | 0.5 mm ² |
| Conductor cross section flexible max. | 4 mm ² |
| Conductor cross section AWG min. | 20 |
| Conductor cross section AWG max. | 10 |
| Stripping length | 14 mm |
| Screw thread | M3 |

Standards and Regulations

| | |
|-------------------------------|---|
| Electromagnetic compatibility | Conformance with EMC Directive 2014/30/EU |
| Noise immunity | EN 61000-6-2:2005 |

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Standards and Regulations

| | |
|--|---|
| Connection in acc. with standard | CUL |
| Standards/regulations | EN 61000-4-2 |
| Contact discharge | 4 kV (Test Level 2) |
| Standards/regulations | EN 61000-4-3 |
| Frequency range | 80 MHz ... 1 GHz |
| Test field strength | 10 V/m |
| Frequency range | 1.4 GHz ... 2 GHz |
| Test field strength | 3 V/m |
| Standards/regulations | EN 61000-4-4 |
| Comments | Criterion B |
| Standards/regulations | EN 61000-4-5 |
| | EN 61000-6-3 |
| | EN 61000-4-6 |
| Frequency range | 0.15 MHz ... 80 MHz |
| Voltage | 10 V (Test Level 3) |
| Standards/regulations | EN 61000-4-11 |
| Low Voltage Directive | Conformance with LV directive 2006/95/EC |
| 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 – Safety extra-low voltage | EN 60950-1 (SELV) |
| | EN 60204 (PELV) |
| Standard - Safe isolation | DIN VDE 0100-410 |
| Standard – Protection against shock currents, basic requirements for protective separation in electrical equipment | EN 50178 |
| Standard – Limitation of mains harmonic currents | EN 61000-3-2 |
| UL approvals | UL Listed UL 508 |
| | UL/C-UL Recognized UL 60950-1 |
| Shock | 15g in all directions in acc. with IEC 60068-2-27 |
| Vibration (operation) | < 15 Hz, amplitude ±2.5 mm (according to IEC 60068-2-6) |
| | 15 Hz ... 150 Hz, 2.3g, 90 min. |
| Rail applications | EN 50121-4 |

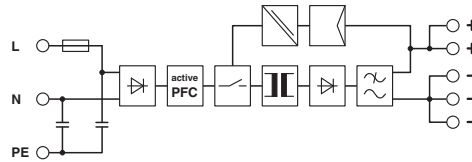
Environmental Product Compliance

| | |
|------------|---|
| China RoHS | Environmentally Friendly Use Period = 25; |
| | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

Drawings

Power supply unit - TRIO-PS/1AC/48DC/10 - 2866501

Block diagram



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 |
| eCl@ss 9.0 | 27040701 |

ETIM

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|----------|----------|
| ETIM 2.0 | EC001039 |
| ETIM 3.0 | EC001039 |
| ETIM 4.0 | EC000599 |
| ETIM 5.0 | EC002540 |
| ETIM 6.0 | EC002540 |

UNSPSC

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

Approvals

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UL Recognized / UL Listed / cUL Recognized / cUL Listed / EAC / EAC / cULus Recognized / cULus Listed

Ex Approvals

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Approvals

Approval details

| | | | |
|---------------|--|---|---------------|
| UL Recognized | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 211944 |
|---------------|--|---|---------------|

| | | | |
|-----------|--|---|---------------|
| UL Listed | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 123528 |
|-----------|--|---|---------------|

| | | | |
|----------------|--|---|---------------|
| cUL Recognized | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 211944 |
|----------------|--|---|---------------|

| | | | |
|------------|--|---|---------------|
| cUL Listed | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 123528 |
|------------|--|---|---------------|

| | | | |
|-----|--|--|---------------|
| EAC | | | EAC-Zulassung |
|-----|--|--|---------------|

| | | | |
|-----|--|--|--------------------------|
| EAC | | | RU C- DE.A*30.B.01082 |
|-----|--|--|--------------------------|

| | | | |
|------------------|--|---|--|
| cULus Recognized | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | |
|------------------|--|---|--|

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| cULus Listed | | | |
|--------------|--|--|--|

Accessories

Accessories

Assembly adapter

Assembly adapters - UWA 182/52 - 2938235



Universal wall adapter for securely mounting the power supply in the event of strong vibrations. The power supply is screwed directly onto the mounting surface. The universal wall adapter is attached at the top/bottom.

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Accessories

Device protection

Type 3 surge protection device - PLT-SEC-T3-230-FM-UT - 2907919



Type 2/3 surge protection, consisting of protective plug and base element, with integrated status indicator and remote signaling for single-phase power supply networks. Nominal voltage 230 V AC/DC.

Type 3 surge protection device - PLT-SEC-T3-60-FM-UT - 2907917



Type 3 surge protection, consisting of protective plug and base element, with integrated status indicator and remote signaling for single-phase power supply networks. Nominal voltage 60 V AC/DC.

Mounting rail adapter

Electronic housing - UTA 107 - 2853983

Universal DIN rail adapter



Potential distributor

Potential distributors - VIP-2/SC/PDM-2/24 - 2315269

VARIOFACE module, with two equipotential busbars (P1, P2) for potential distribution, for mounting on NS 35 rails. Module width: 70.4 mm

Potential distributors - VIP-3/PT/PDM-2/24 - 2903798



VARIOFACE module with push-in connection and two equipotential busbars (P1, P2) for potential distribution, for mounting on NS 35 rails. Module width: 57.1 mm
