

Power supply unit - TRIO-PS/1AC/24DC/10 - 2866323

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Primary-switched TRIO POWER power supply for DIN rail mounting, input: 1-phase, output: 24 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.

Your advantages

- 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 pc |
| GTIN |  4 046356 046657 |
| GTIN | 4046356046657 |
| Weight per Piece (excluding packing) | 1,580.000 g |
| Custom tariff number | 85044030 |
| Country of origin | China |

Technical data

Dimensions

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

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Technical data

Dimensions

| | |
|----------------------------------|---------------|
| Height | 130 mm |
| Depth | 152.5 mm |
| Installation distance right/left | 0 mm / 0 mm |
| Installation distance top/bottom | 50 mm / 50 mm |

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 %/V) |
| Dielectric strength maximum | 300 V AC |
| AC frequency range | 45 Hz ... 65 Hz |
| Discharge current to PE | < 3.5 mA |
| Current consumption | 3 A (100 V AC) 1.5 A (240 V AC) |
| Nominal power consumption | 272 VA |
| Inrush current | < 15 A |
| Mains buffering time | > 24 ms (120 V AC) > 24 ms (230 V AC) |
| Input fuse | 6.3 A (slow-blow, internal) |
| Recommended breaker for input protection | 10 A ... 16 A (Characteristics B, C, D, K) |
| Power factor (cos phi) | 0.99 |
| 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 (U_{Set}) | 22.5 V DC ... 29.5 V DC (> 24 V DC, constant capacity restricted) |
| Nominal output current (I_N) | 10 A ($U_{OUT} = 24$ V DC) |
| Derating | 55 °C ... 70 °C (2.5%/K) |
| Connection in parallel | Yes, for redundancy and increased capacity |
| Connection in series | yes |
| Feedback voltage resistance | 35 V DC |

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Output data

| | |
|--|---|
| Protection against overvoltage at the output (OVP) | < 35 V DC |
| Max. capacitive load | unlimited |
| Active current limitation | Approx. 14 A (for short-circuit) |
| 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 | < 10 mV _{PP} |
| Output power | 240 W |
| Typical response time | < 1 s |
| Peak switching voltages nominal load | < 50 mV _{PP} |
| Maximum power dissipation in no-load condition | 6.7 W |
| Power loss nominal load max. | 30 W |

General

| | |
|---------------------------------|--|
| Net weight | 1.4 kg |
| Operating voltage display | Green LED |
| Efficiency | 89 % (for 230 V AC and nominal values) |
| MTBF (IEC 61709, SN 29500) | > 981000 h (40 °C) |
| 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) |
| Degree of protection | IP20 |
| Protection class | I (with PE connection) |
| 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 |

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Connection data, output

| | |
|---------------------------------------|---------------------|
| 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 |
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Signaling

| | |
|------------------------|---|
| Status display | "DC OK" LED green |
| Note on status display | $U_{OUT} < 0.9 \times U_N$: LED flashing |

Standards and Regulations

| | |
|--|---|
| Electromagnetic compatibility | Conformance with EMC Directive 2014/30/EU |
| Noise immunity | EN 61000-6-2:2005 |
| 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 61000-6-3 |
| | 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 Low Voltage Directive 2014/35/EC |
| Standard - Electrical safety | EN 60950-1/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 | EN 60950-1 (SELV) |
| | EN 60204 (PELV) |
| Standard - Safe isolation | DIN VDE 0100-410 |

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Standards and Regulations

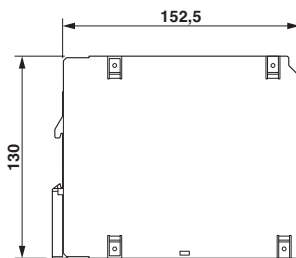
| | |
|--|---|
| Standard – Protection against shock currents, basic requirements for protective separation in electrical equipment | EN 50178 |
| Standard – Limitation of mains harmonic currents | EN 61000-3-2 |
| UL approvals | UL/C-UL listed UL 508 |
| | UL/C-UL Recognized UL 60950-1 |
| Shock | 18 ms, 30g, in each space direction (according to 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. |

Environmental Product Compliance

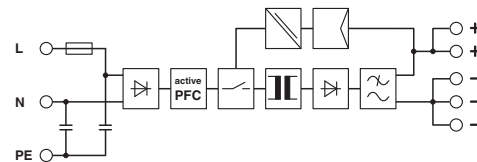
| | |
|------------|---|
| REACH SVHC | Lead 7439-92-1 |
| China RoHS | Environmentally Friendly Use Period = 25; |
| | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

Drawings

Dimensional drawing



Block diagram



Classifications

eCl@ss

| | |
|---------------|----------|
| eCl@ss 10.0.1 | 27040701 |
| eCl@ss 11.0 | 27040701 |
| eCl@ss 4.0 | 27040700 |
| eCl@ss 4.1 | 27040700 |
| eCl@ss 5.0 | 27049000 |
| eCl@ss 5.1 | 27049000 |
| eCl@ss 6.0 | 27049000 |
| eCl@ss 7.0 | 27049002 |
| eCl@ss 8.0 | 27049002 |
| eCl@ss 9.0 | 27040701 |

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Classifications

ETIM

| | |
|----------|----------|
| ETIM 2.0 | EC001039 |
| ETIM 3.0 | EC001039 |
| ETIM 4.0 | EC000599 |
| ETIM 5.0 | EC002540 |
| ETIM 6.0 | EC002540 |
| ETIM 7.0 | 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 |
| UNSPSC 18.0 | 39121004 |
| UNSPSC 19.0 | 39121004 |
| UNSPSC 20.0 | 39121004 |
| UNSPSC 21.0 | 39121004 |

Approvals

Approvals

Approvals

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

Ex Approvals

Approval details

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

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

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Approvals

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

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

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

| | | | |
|-----|--|--|---------------------|
| EAC | | | RU*DE*08.B.01873/19 |
|-----|--|--|---------------------|

| | | | |
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| cULus Recognized | | | |
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| cULus Listed | | | |
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Accessories

Accessories

Assembly adapter

Assembly adapters - UWA 182/52 - 2938235



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

Device protection

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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 screw connection. For single-phase power supply network with integrated status indicator and remote signaling. Nominal voltage 230 V AC/DC.

Type 3 surge protection device - PLT-SEC-T3-24-FM-UT - 2907916



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 24 V AC/DC.

Mounting rail adapter

DIN rail adapter - UTA 107 - 2853983

Universal DIN rail adapter, for screwing on switchgear

