

## TRIO-PS/1AC/24DC/2.5

Order No.: 2866268

<http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=2866268>

Primary switched-mode power supply unit, 1-phase, output: 24 V DC / 2.5 A

### Commercial data

|                          |                    |
|--------------------------|--------------------|
| EAN                      | 4046356046626      |
| Pack                     | 1 Pcs.             |
| Customs tariff           | 85044081           |
| Weight/Piece             | 0.6671 KG          |
| Catalog page information | Page 498 (IF-2007) |

### Product notes

WEEE/RoHS-compliant since:  
10/12/2006



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### Product description

TRIO POWER is the rail mountable 24 V power supply unit with basic functions. With an output voltage of 24 V DC and 1-phase 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 for minus simplifies the grounding on the secondary side. All power supply units are idle proof and short circuit proof and provide a regulated and settable output voltage of 22.5 V DC to 29.5 V DC with output currents of 2.5 A, 5 A, 10 A, 20 A or 40 A.

## Technical data

### Input data

|                              |  |
|------------------------------|--|
| Nominal input voltage        | 100 V AC ... 240 V AC                                      |
| AC input voltage range       | 85 V AC ... 264 V AC (derating < 90 V AC: 2.5% per Kelvin) |
| AC frequency range           | 45 Hz ... 65 Hz  |
| Current consumption          | 0.95 A (120 V AC)<br>0.5 A (230 V AC)                      |
| Nominal power consumption    | 60 W   |
| Inrush surge current         | < 15 A   |
| Power failure bypass         | > 20 ms (120 V AC)<br>> 100 ms (230 V AC)                  |
| Input fuse                   | 2 A (slow-blow, internal)                                  |
| Recommended backup fuse      | 6 A<br>10 A<br>16 A (characteristic B)                     |
| Power factor (cos phi)       | 0.72   |
| 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  | 22.5 V DC ... 29.5 V DC  |
| Output current                       | 2.5 A (-25°C ... 70°C)   |
| Connection in parallel               | Yes, for redundancy and increased capacity   |
| Connection in series                 | No   |
| Max. capacitive load                 | Unlimited  |
| Current limitation                   | Approx. 5 A (for short circuit)  |
| Control deviation                    | < 1 % (change in load, static 10% ... 90%)<br>< 2 % (change in load, dynamic 10% ... 90%)<br>< 0.1 % (change in input voltage $\pm$ 10%) |
| Residual ripple                      | < 30 mVPP  |
| Peak switching voltages nominal load | < 20 mVPP  |
| Maximum power dissipation idling     | 0.9 W  |

|  |  |
|--|--|
| Power loss nominal load max.   | 11 W   |
| <b>General data</b>  |  |
| Width  | 32 mm  |
| Height   | 130 mm   |
| Depth  | 115 mm   |
| Weight   | 0.5 kg   |
| Operating voltage display  | LED green                                      |
| Efficiency   | > 85 %   |
| Insulation voltage input/output  | 4 kV AC (type test)<br>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 89/336/EEC      |
| Immunity to interference   | EN 61000-6-2                                   |
| Standard – Electrical equipment of machines  | EN 60204                                       |
| Standard – Safety transformers for switched-mode power supply units  | EN 61558-2-17                                  |
| Standard - Electrical safety   | EN 60950/VDE 0805 (SELV)<br>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)<br>EN 60204 (PELV)             |
| Standard - Safe isolation  | DIN VDE 0100-410<br>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 <sup>2</sup> |
| Conductor cross section solid max.     | 2.5 mm <sup>2</sup> |
| Conductor cross section stranded min.  | 0.2 mm <sup>2</sup> |
| Conductor cross section stranded max.  | 2.5 mm <sup>2</sup> |
| Conductor cross section AWG/kcmil min. | 24                  |
| Conductor cross section AWG/kcmil max  | 14                  |
| Stripping length                       | 9 mm                |
| Screw thread                           | M 2,5               |

**Connection data, output**

|  |                     |
|--|---------------------|
| Type of connection                     | Screw connection    |
| Conductor cross section solid min.     | 0.2 mm <sup>2</sup> |
| Conductor cross section solid max.     | 2.5 mm <sup>2</sup> |
| Conductor cross section stranded min.  | 0.2 mm <sup>2</sup> |
| Conductor cross section stranded max.  | 2.5 mm <sup>2</sup> |
| Conductor cross section AWG/kcmil min. | 24                  |
| Conductor cross section AWG/kcmil max  | 14                  |
| Stripping length                       | 9 mm                |

**Signaling**

|                        |  |
|------------------------|--|
| Output name            | DC OK active                             |
| Status display         | "DC OK" LED green                        |
| Note on status display | U <sub>OUT</sub> > 21.5 V: LED lights up |

**Certificates / Approvals**

Approval logo

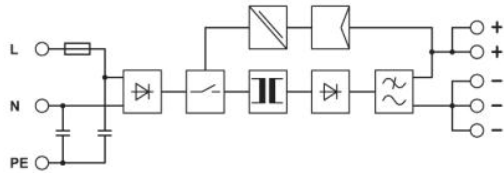


**requested approbations**

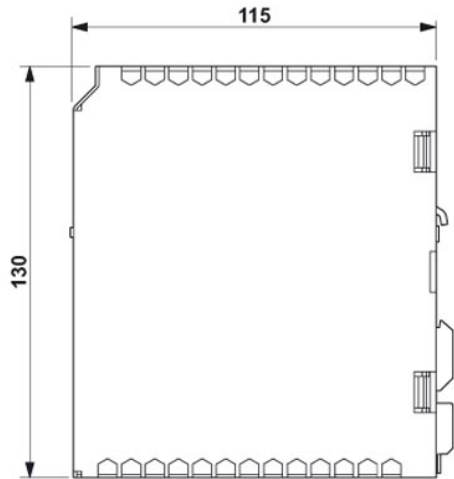
|                             |                                    |
|-----------------------------|------------------------------------|
| Certification               | CUL, CUL Listed, GL, UL, UL Listed |
| Certifications applied for: | UL / CUL                           |

**Drawings**

Block diagram



Dimensioned drawing



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