

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

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DIN rail power supply unit, primary-switched mode, 1-phase, output: 24 V DC / 10 A

## Product Description

TRIO POWER is the DIN-rail-mountable power supply unit with basic functions. With an output voltage of 5 V DC, 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 allow 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 minus 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.

## Product Features

- 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

package_quantity	1
GTIN	4046356046657

## Technical data

### Dimensions

Width	60 mm
Height	130 mm
Depth	152.5 mm

### Ambient conditions

Degree of protection	IP20
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, non-condensing)
Noise immunity	EN 61000-6-2:2005

### Input data

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## Technical data

### Input data

<b>Input voltage range</b>	85 V AC ... 264 V AC (derating < 90 V AC: 2.5 % per Kelvin)
<b>Short-term input voltage</b>	300 V AC
<b>AC frequency range</b>	45 Hz ... 65 Hz
<b>Current consumption</b>	3 A (100 V AC)
<b>Current consumption</b>	1.5 A (240 V AC)
<b>Inrush surge current</b>	< 15 A
<b>Power failure bypass</b>	> 24 ms (120 V AC)
<b>Power failure bypass</b>	> 24 ms (230 V AC)
<b>Input fuse</b>	6.3 A (slow-blow, internal)
<b>Choice of suitable fuses</b>	10 A ... 16 A (Characteristics B, C, D, K)
<b>Power factor (cos phi)</b>	0.99
<b>Type of protection</b>	Transient surge protection
<b>Protective circuit/component</b>	Varistor

### Output data

<b>Nominal output voltage</b>	24 V DC $\pm$ 1%
<b>Setting range of the output voltage</b>	22.5 V DC ... 29.5 V DC (> 24 V constant capacity)
<b>Output current</b>	10 A (-25°C ... 55°C)
<b>Derating</b>	55 °C ... 70 °C (2.5%/K)
<b>Connection in parallel</b>	Yes, for redundancy and increased capacity
<b>Connection in series</b>	Yes
<b>Max. capacitive load</b>	Unlimited
<b>Current limitation</b>	Approx. 14 A (for short-circuit)
<b>Control deviation</b>	< 1 % (change in load, static 10 % ... 90 %)
<b>Control deviation</b>	< 2 % (change in load, dynamic 10 % ... 90 %)
<b>Control deviation</b>	< 0.1 % (change in input voltage $\pm$ 10 %)
<b>Residual ripple</b>	< 10 mV <sub>PP</sub>
<b>Peak switching voltages nominal load</b>	< 50 mV <sub>PP</sub>
<b>Maximum power dissipation NO-Load</b>	6.7 W
<b>Power loss nominal load max.</b>	30 W

### General

<b>Net weight</b>	1.4 kg
<b>Operating voltage display</b>	Green LED
<b>Efficiency</b>	> 89 % (for 230 V AC and nominal values)
<b>Insulation voltage input/output</b>	4 kV AC (type test)
<b>Insulation voltage input/output</b>	2 kV AC (routine test)
<b>Protection class</b>	I (with PE connection)
<b>MTBF (IEC 61709, SN 29500)</b>	> 981000 h (According to EN 29500)
<b>Mounting position</b>	horizontal DIN rail NS 35, EN 60715
<b>Assembly instructions</b>	Can be aligned: Horizontally 0 mm, vertically 50 mm
<b>Electromagnetic compatibility</b>	Conformance with EMC Directive 2004/108/EC

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## Technical data

### General

<b>Low Voltage Directive</b>	Conformance with LV directive 2006/95/EC
<b>Standard – Electrical equipment of machines</b>	EN 60204
<b>Standard - Electrical safety</b>	EN 60950-1/VDE 0805 (SELV)
<b>Standard – Electronic equipment for use in electrical power installations and their assembly into electrical power installations</b>	EN 50178/VDE 0160 (PELV)
<b>Standard – Safety extra-low voltage</b>	EN 60950-1 (SELV)
<b>Standard – Safety extra-low voltage</b>	EN 60204 (PELV)
<b>Standard - Safe isolation</b>	DIN VDE 0100-410
<b>Standard - Safe isolation</b>	DIN VDE 0106-1010
<b>Standard – Protection against electric shock</b>	DIN 57100-410
<b>Standard – Protection against shock currents, basic requirements for protective separation in electrical equipment</b>	DIN VDE 0106-101
<b>Standard – Limitation of mains harmonic currents</b>	EN 61000-3-2
<b>UL approvals</b>	UL/C-UL listed UL 508
<b>UL approvals</b>	UL/C-UL Recognized UL 60950
<b>Surge voltage category</b>	III

### Connection data, input

<b>Connection method</b>	Screw connection
<b>Conductor cross section solid min.</b>	0.2 mm <sup>2</sup>
<b>Conductor cross section solid max.</b>	2.5 mm <sup>2</sup>
<b>Conductor cross section stranded min.</b>	0.2 mm <sup>2</sup>
<b>Conductor cross section stranded max.</b>	2.5 mm <sup>2</sup>
<b>Conductor cross section AWG/kcmil min.</b>	24
<b>Conductor cross section AWG/kcmil max</b>	14
<b>Stripping length</b>	9 mm
<b>Screw thread</b>	M2,5

### Connection data, output

<b>Connection method</b>	Screw connection
<b>Conductor cross section solid min.</b>	0.2 mm <sup>2</sup>
<b>Conductor cross section solid max.</b>	2.5 mm <sup>2</sup>
<b>Conductor cross section stranded min.</b>	0.2 mm <sup>2</sup>
<b>Conductor cross section stranded max.</b>	2.5 mm <sup>2</sup>
<b>Conductor cross section AWG/kcmil min.</b>	24
<b>Conductor cross section AWG/kcmil max</b>	14
<b>Stripping length</b>	9 mm

### Signaling

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

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## 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

### ETIM

ETIM 2.0	EC001039
ETIM 3.0	EC001039
ETIM 4.0	EC000599
ETIM 5.0	EC002540

### UNSPSC

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 / cULus Recognized / cULus Listed /

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### Approval details

UL Recognized
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UL Listed
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cUL Recognized
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cUL Listed
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## Power supply unit - TRIO-PS/ 1AC/24DC/10 - 2866323

approvals

cULus Recognized 

cULus Listed 

accessories

**Assembly adapter**

UWA 182/52 - 2938235



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**Mounting rail adapter**

UTA 107 - 2853983

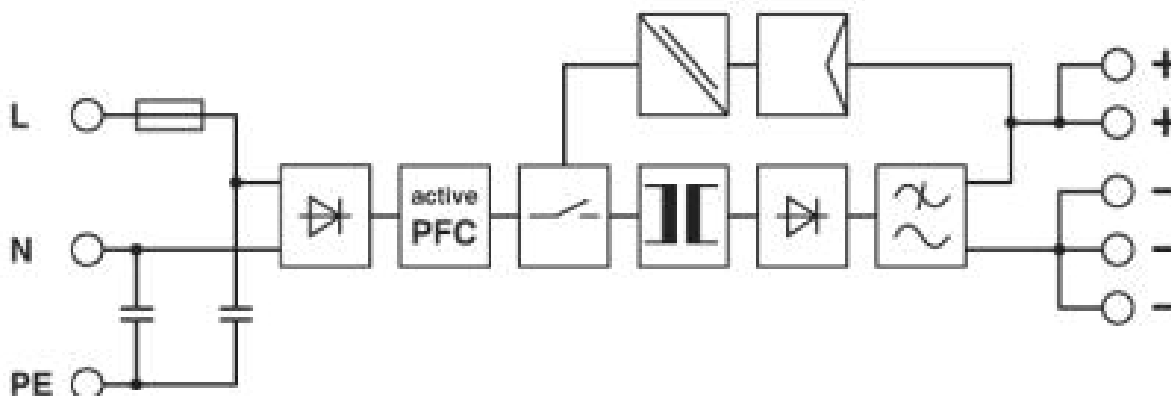


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Drawings

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

Block diagram



Dimensioned drawing

