

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

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DIN rail power supply unit, primary-switched mode, 1-phase, output: 48 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.



## Key commercial data

package_quantity	1
GTIN	4046356287364

## Technical data

### Dimensions

Width	115 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, no condensation)
Noise immunity	EN 61000-6-2:2005

### Input data

Nominal input voltage range	100 V AC ... 240 V AC
Input voltage range AC	85 V AC ... 264 V AC (derating < 90 V AC: 2.5% per Kelvin)
Short-term input voltage	300 V AC
AC frequency range	45 Hz ... 65 Hz
Current consumption	4.6 A (120 V AC)

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## Technical data

### Input data

<b>Current consumption</b>	2.4 A (230 V AC)
<b>Nominal power consumption</b>	(> 48 V constant capacity)
<b>Inrush surge current</b>	< 15 A
<b>Power failure bypass</b>	> 13 ms (120 V AC)
<b>Power failure bypass</b>	> 18 ms (230 V AC)
<b>Type of protection</b>	Transient surge protection
<b>Protective circuit/component</b>	Varistor

### Output data

<b>Nominal output voltage</b>	48 V DC $\pm$ 1%
<b>Setting range of the output voltage</b>	30 V DC ... 56 V DC (> 48 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 11.4 A (in the event of a 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>	< 50 mV <sub>PP</sub>
<b>Peak switching voltages nominal load</b>	< 50 mV <sub>PP</sub>
<b>Maximum power dissipation NO-Load</b>	8 W
<b>Power loss nominal load max.</b>	49 W

### General

<b>Net weight</b>	1.9 kg
<b>Operating voltage display</b>	Green LED
<b>Efficiency</b>	> 91 % (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>	> 1168000 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
<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 - Electrical safety</b>	EN 61558-2-17
<b>Standard – Electronic equipment for use in electrical power installations and their assembly into electrical power installations</b>	EN 50178/VDE 0160 (PELV)

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## Technical data

### General

Standard – Safety extra-low voltage	EN 60950-1 (SELV)
Standard – Safety extra-low voltage	EN 60204 (PELV)
Standard - Safe isolation	DIN VDE 0100-410
Standard - Safe isolation	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 Listed UL 508
UL approvals	UL/C-UL Recognized UL 60950
Surge voltage category	III

### Connection data, input

Connection method	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	M2,5

### Connection data, output

Connection method	Screw connection
Conductor cross section solid min.	0.5 mm <sup>2</sup>
Conductor cross section solid max.	6 mm <sup>2</sup>
Conductor cross section stranded min.	0.5 mm <sup>2</sup>
Conductor cross section stranded max.	4 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	20
Conductor cross section AWG/kcmil max	10
Stripping length	14 mm

### Signaling

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

## classifications

### eCl@ss

eCl@ss 4.0	27040702
eCl@ss 4.1	27040702
eCl@ss 5.0	27049002

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## classifications

### eCl@ss

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

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

### Approval details

UL Recognized

UL Listed

cUL Recognized

cUL Listed

cULus Recognized

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

approvals



accessories

## Assembly adapter

UWA 182/52 - 2938235

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## Mounting rail adapter

UTA 107 - 2853983



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## Drawings

Block diagram

