

# TRIO-PS/ 1AC/24DC/20


Order No.: 2866381



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DIN rail power supply unit, primary-switched mode, 1-phase, output: 24 V DC / 20 A



Commercial data	
EAN	 4 046356 046664
Pack	1
Customs tariff	85044081
Country of Origin	CN
Catalog page information	Page 591 (IF-2011)

### Product notes

WEEE/RoHS-compliant since:  
29/08/2006



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### 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.

### 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)
Short-term input voltage	300 V AC
AC frequency range	45 Hz ... 65 Hz
Current consumption	4.6 A (120 V AC) 2.4 A (230 V AC)
Inrush surge current	< 15 A
Power failure bypass	> 13 ms (120 V AC) > 13 ms (230 V AC)
Input fuse	10 A (slow-blow, internal)
Permissible backup fuse	B16
Power factor (cos phi)	0.99
Type 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 (> 24 V constant capacity)
Output current	20 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
Max. capacitive load	Unlimited
Current limitation	Approx. 25 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 $\pm$ 10%)
Residual ripple	< 10 mV <sub>PP</sub>
Peak switching voltages nominal load	< 80 mV <sub>PP</sub>
Maximum power dissipation idling	4 W
Power loss nominal load max.	46 W

**General data**

Width	115 mm
Height	130 mm
Depth	152.5 mm
Net weight	2.2 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)
Degree of protection	IP20
Protection class	I, with PE connection
MTBF (IEC 61709, SN 29500)	> 500000 h
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: Horizontally 0 mm, vertically 50 mm
Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Noise immunity	EN 61000-6-2:2005
Low Voltage Directive	Conformance with LV directive 2006/95/EC
Standard – Electrical equipment of machines	EN 60204
Standard - Safety of transformers	EN 61558-2-17
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
	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**

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 <sub>OUT</sub> > 21.5 V: LED lights up

**Certificates**



Certification

CUL, CUL Listed, UL, UL Listed

### Accessories

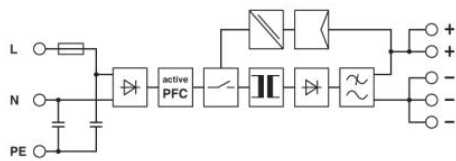
Item	Designation	Description
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#### General

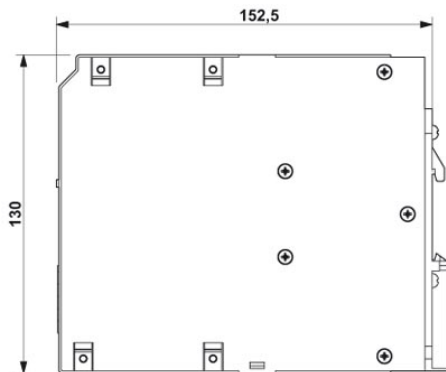
2853983	UTA 107	Universal DIN rail adapter, for screwing on switchgear
2938235	UWA 182/52	Universal wall adapter

### Drawings

Block diagram



Dimensioned drawing



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