

Power supply unit - TRIO-PS/600DC/24DC/20 - 2866530

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DIN rail power supply unit, primary-switched, 1-phase, input: 600 V DC; output: 24 V DC/20 A

Product description

TRIO POWER is the power supply unit for the DIN rail with basic functionality at the highest level. TRIO POWER, 600 V DC, 24 V DC is ideally suited for connection to 600 V DC intermediate circuits of frequency inverters: In the event of a line supply failure, 24 V loads are supplied using the kinetic energy of the motor.



Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	1980.0 GRM
Custom tariff number	85044030
Country of origin	China

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, non-condensing)
Noise immunity	EN 61000-6-2:2005

Input data

Nominal input voltage range	600 V DC
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Input data

Input voltage range	450 V DC ... 840 V DC (Dielectric strength up to 900 V DC)
Frequency range DC	0 Hz
Current consumption	0.9 A (600 V DC)
Inrush surge current	< 26 A
Power failure bypass	> 15 ms (600 V DC)
Choice of suitable fuses	4 A ... 6 A (1000 V DC)
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 ($U_{IN} > 475$ V DC)
	22.5 V DC ... 28 V DC ($U_{IN} \leq 475$ V DC)
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	< 40 mV _{PP}
Peak switching voltages nominal load	< 10 mV _{PP}
Maximum power dissipation NO-Load	3.8 W
Power loss nominal load max.	45 W

General

Net weight	2 kg
Efficiency	> 91 % (With 600 V DC and nominal values)
Insulation voltage input/output	4 kV AC (type test)
	2 kV AC (routine test)
Protection class	I (with PE connection)
	> 701000 h (40°C)
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
Low Voltage Directive	Conformance with LV directive 2006/95/EC

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General

Standard – Electrical equipment of machines	EN 60204
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
	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 ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section stranded min.	0.2 mm ²
Conductor cross section stranded max.	2.5 mm ²
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 ²
Conductor cross section solid max.	6 mm ²
Conductor cross section stranded min.	0.5 mm ²
Conductor cross section stranded max.	4 mm ²
Conductor cross section AWG/kcmil min.	12
Conductor cross section AWG/kcmil max	10
Stripping length	14 mm

Signaling

Status display	"DC OK" LED green
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Signaling

Note on status display	U _{OUT} > 21.5 V: LED lights up
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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 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

Ex Approvals

Approvals submitted

Power supply unit - TRIO-PS/600DC/24DC/20 - 2866530

Approvals

Approval details

UL Recognized

UL Listed

cUL Recognized

cUL Listed

cULus Recognized

cULus Listed

Drawings

Block diagram

