Power supply unit - TRIO-PS/3AC/24DC/20 - 2866394

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Primary-switched TRIO POWER power supply for DIN rail mounting, input: 3-phase, output: 24 V DC/20 A

Product Description

TRIO POWER power supplies with standard functionality
TRIO POWER is particularly suited to standard machine production, thanks to 1- and 3-phase versions up to 960 W. The wide-range input and the international approval package enable worldwide use.
The robust metal housing, the high electric strength, and the wide temperature range ensure a high level of power supply reliability.

Product Features

- Use the third negative terminal block as a grounding terminal block and minimize installation costs
- 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
- Rugged design with metal housing and wide temperature range from -25 to +70°C
- Compensation of voltage drops by means of output voltage that can be adjusted on the front



Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	2180.0 g
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

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Ambient conditions

Ambient temperature (operation)	-25 °C ... 70 °C (> 55° C derating : 2.5%/K)
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	3x 400 V AC ... 500 V AC
Input voltage range	3x 320 V AC ... 575 V AC (Derating < 360 V AC: 1,5 %/V)
	2x 360 V AC ... 575 V AC (for 2-phase operation)
AC frequency range	45 Hz ... 65 Hz
Discharge current to PE	< 3.5 mA
Current consumption	3x 1.1 A (400 V AC)
	3x 0.8 A (480 V AC)
Inrush surge current	< 15 A
Power failure bypass	> 17 ms (3x 400 V AC)
Choice of suitable circuit breakers	6 A ... 16 A (Characteristics B, C, D, K)
Power factor (cos phi)	0.67
Type of protection	Transient surge protection
Protective circuit/component	Varistor

Output data

Nominal output voltage	24 V DC ±1 %
Setting range of the output voltage (U_{Set})	22.5 V DC ... 29.5 V DC (> 24 V DC, constant capacity restricted)
Nominal output current (I_N)	20 A (U_{OUT} = 24 V DC)
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
Active current limitation	Approx. 25 A
Control deviation	< 1 % (change in load, static 10 % ... 90 %)
	< 2 % (change in load, dynamic 10 % ... 90 %)
	< 0.1 % (change in input voltage ±10 %)
Residual ripple	< 10 mV_{PP}
Output power	480 W
Typical response time	< 1 s
Peak switching voltages nominal load	< 30 mV_{PP}
Maximum power dissipation in no-load condition	< 6 W
Power loss nominal load max.	< 48 W

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Technical data

General

Net weight	2 kg
Operating voltage display	Green LED
Efficiency	91 % (at 400 V AC and nominal values)
Insulation voltage input/output	4 kV AC (type test)
	2 kV AC (routine test)
Protection class	I (with PE connection)
MTBF (IEC 61709, SN 29500)	> 1190000 h
Mounting position	horizontal DIN rail NS 35, EN 60715
Assembly instructions	Can be aligned: Horizontally 0 mm, vertically 50 mm

Connection data, input

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	2.5 mm²
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	2.5 mm²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	14
Stripping length	9 mm
Screw thread	M2,5

Connection data, output

Connection method	Screw connection
Conductor cross section solid min.	0.5 mm²
Conductor cross section solid max.	6 mm²
Conductor cross section flexible min.	0.5 mm²
Conductor cross section flexible max.	4 mm²
Conductor cross section AWG min.	12
Conductor cross section AWG max.	10
Stripping length	14 mm
Screw thread	M3

Signaling

Status display	"DC OK" LED green
Note on status display	U_{OUT} > 21.5 V: LED lights up

Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Shock	30g in each direction, according to IEC 60068-2-27

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Standards and Regulations

Noise immunity	EN 61000-6-2:2005
Connection in acc. with standard	CUL
Standards/regulations	EN 61000-4-3
	EN 61000-4-4
	EN 61000-4-6
Standard – Electrical equipment of machines	EN 60204-1
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
Standard – Protection against shock currents, basic requirements for protective separation in electrical equipment	EN 50178
Standard – Limitation of mains harmonic currents	EN 61000-3-2
UL approvals	UL/C-UL listed UL 508
	UL/C-UL Recognized UL 60950
Vibration (operation)	< 15 Hz, amplitude ±2.5 mm (according to IEC 60068-2-6)
Low Voltage Directive	Conformance with LV directive 2006/95/EC

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
eCl@ss 9.0	27040701

ETIM

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

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Classifications

UNSPSC

UNSPSC 6.01	30211502
UNSPSC 7.0901	39121004
UNSPSC 11	39121004
UNSPSC 12.01	39121004
UNSPSC 13.2	39121004

Approvals

Approvals

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

Ex Approvals

Approvals submitted

Approval details

UL Recognized

UL Listed

cUL Recognized

cUL Listed

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Approvals

EAC

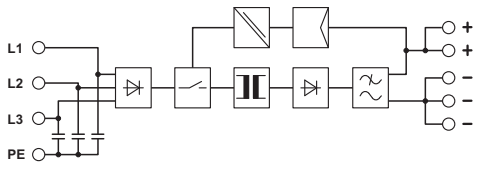
EAC

cULus Recognized

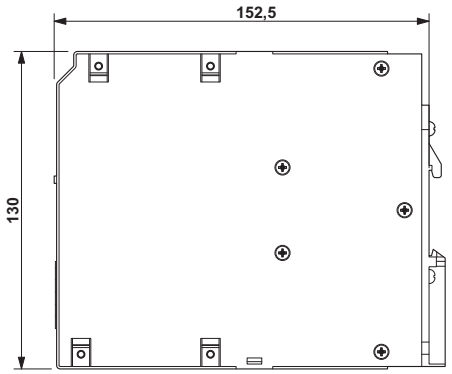
cULus Listed

Drawings

Block diagram



Dimensional drawing



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