Power supply unit - TRIO-PS-2G/1AC/24DC/5 - 2903148

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Primary-switched TRIO POWER power supply with push-in connection for DIN rail mounting, input: 1-phase, output: 24 V DC/5 A

Product Description

TRIO POWER power supplies with standard functionality
The TRIO POWER power supply range with push-in connection has been perfected for use in machine building. All functions and the space-saving design of the single and three-phase modules are optimally tailored to the stringent requirements. Under challenging ambient conditions, the power supply units, which feature an extremely robust electrical and mechanical design, ensure the reliable supply of all loads.

Key Commercial Data

Packing unit	1 pc
GTIN	4 046356 960847
Weight per Piece (excluding packing)	444.44 g
Custom tariff number	85044030
Country of origin	China

Technical data

Dimensions

Width	35 mm
Height	130 mm
Depth	115 mm

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 70 °C (> 60 °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
Maximum altitude	≤ 5000 m (> 2000 m, observe derating)

Input data

Power supply unit - TRIO-PS-2G/1AC/24DC/5 - 2903148

Technical data

Input data

Nominal input voltage range	100 V AC ... 240 V AC -15 % ... +10 %
	110 V DC ... 250 V DC
Input voltage range	85 V AC ... 264 V AC
	99 V DC ... 275 V DC
Dielectric strength maximum	≤ 300 V AC 15 s
AC frequency range	50 Hz ... 60 Hz
Discharge current to PE	≤ 0.25 mA
Inrush surge current	≤ 16 A (typical)
Power failure bypass	> 20 ms (120 V AC)
	> 100 ms (230 V AC)
Input fuse	6.3 A (internal (device protection))
Choice of suitable fuses	6 A ... 16 A (Characteristics B, C, D, K)
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	24 V DC ... 28 V DC (> 24 V DC, constant capacity restricted)
Nominal output current	5 A
Dynamic BOOST	7.5 A (5 s)
Derating	> 60 °C ... 70 °C (2.5%/K)
Connection in parallel	Yes, for redundancy and increased capacity
Connection in series	Yes
Control deviation	< 1 % (change in load, static 10 % ... 90 %)
	< 3 % (Dynamic load change 10 % ... 90 %, 10 Hz)
	< 0.1 % (change in input voltage ±10 %)
Residual ripple	≤ 50 mV_{PP}
Output power	120 W
Typical response time	< 1 s
Maximum power dissipation NO-Load	< 1 W
Power loss nominal load max.	< 16 W

General

Net weight	0.45 kg
Efficiency	> 90 % (for 230 V AC and nominal values)
Insulation voltage input/output	4 kV AC (type test)
	3 kV AC (routine test)
Protection class	II (in closed control cabinet)
MTBF (IEC 61709, SN 29500)	> 3380000 h (25 °C)
	> 1970000 h (40°C)
	> 900000 h (60°C)
Mounting position	horizontal DIN rail NS 35, EN 60715

Power supply unit - TRIO-PS-2G/1AC/24DC/5 - 2903148

Technical data

General

Assembly instructions	Can be aligned: Horizontally 0 mm (≤ 40 °C) 10 mm (≤ 70 °C), vertically 50 mm
Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Noise emission	EN 55011 (EN 55022)
Low Voltage Directive	Conformance with LV directive 2006/95/EC
Standard – Electrical equipment of machines	EN 60204-1
Standard - Electrical safety	IEC 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	IEC 60950-1 (SELV) and EN 60204-1 (PELV)
Standard - Safe isolation	DIN VDE 0100-410
Standard – Limitation of mains harmonic currents	EN 61000-3-2
Approval - requirement of the semiconductor industry with regard to mains voltage dips	Semi F47-0706
Rail applications	EN 50121-4
UL approvals	UL Listed UL 508
	UL/C-UL Recognized UL 60950-1

Connection data, input

Connection method	Push-in connection
Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	4 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.	12
Stripping length	10 mm

Connection data, output

Connection method	Push-in connection
Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	4 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.	12
Stripping length	8 mm

Connection data for signaling

Connection method	Push-in connection
Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	1.5 mm²
Conductor cross section flexible min.	0.2 mm²

Power supply unit - TRIO-PS-2G/1AC/24DC/5 - 2903148

Technical data

Connection data for signaling

Conductor cross section flexible max.	1.5 mm²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	16
Stripping length	8 mm

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 4.0	EC002540
ETIM 5.0	EC002540

Approvals

Approvals

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

Ex Approvals

Approvals submitted

Approval details

UL Recognized

Power supply unit - TRIO-PS-2G/1AC/24DC/5 - 2903148

Approvals

UL Listed

cUL Recognized

cUL Listed

EAC

cULus Recognized

cULus Listed

Drawings

Block diagram