Power supply unit - TRIO-PS-2G/1AC/12DC/5/C2LPS - 2903157

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Primary-switched TRIO POWER power supply with push-in connection for DIN rail mounting, input: 1-phase, output: 12 V DC/5 A C2LPS

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.

Why buy this product

- Save time and costs, thanks to the Push-in connection and narrow design
- Increase system availability, thanks to dynamic boost with 150% of the nominal current for five seconds
- Maximum flexibility due to the wide temperature range from -25°C to +70°C and device startup at -40°C
- Rugged design

RoHS

Key Commercial Data

Packing unit	1 STK
GTIN	4 055626 248486
GTIN	4055626248486
Weight per Piece (excluding packing)	486.500 g
Custom tariff number	85044030
Country of origin	China

Technical data

Dimensions

Width	30 mm
Height	130 mm
Depth	115 mm

Ambient conditions

Degree of protection	IP20

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Ambient conditions

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)
Climatic class	3K3 (in acc. with EN 60721)
Degree of pollution	2
Installation height	≤ 5000 m (> 2000 m, Derating: 10 %/1000 m)

Input data

Nominal input voltage range	100 V AC ... 240 V AC
	110 V DC ... 250 V DC
Input voltage range	100 V AC ... 240 V AC -15 % ... +10 %
	99 V DC ... 275 V DC
Dielectric strength maximum	≤ 300 V AC 15 s
AC frequency range	50 Hz ... 60 Hz #10 %
Discharge current to PE	< 0.25 mA
Current consumption	1.1 A (100 V AC)
	1 A (120 V AC)
	0.6 A (230 V AC)
	0.6 A (240 V AC)
Nominal power consumption	9.9 W
Inrush surge current	≤ 25 A (typical)
Power failure bypass	> 20 ms (120 V AC)
	> 110 ms (230 V AC)
Input fuse	6.3 A Slow-blow
Choice of suitable circuit breakers	6 A ... 16 A (Characteristics B, C, D, K)
Type of protection	Transient surge protection
Protective circuit/component	Varistor

Output data

Nominal output voltage	12 V DC ±1 %
Setting range of the output voltage (U_{Set})	12 V DC ... 18 V DC (> 12 V DC, constant capacity restricted)
Nominal output current (I_N)	5 A
Derating	> 60 °C ... 70 °C (2.5%/K)
Connection in parallel	Yes, for redundancy and increased capacity
Connection in series	yes
Feedback resistance	< 25 V
Circuit breaker against surge voltage at output by invasive foreign matter	≤ 22 V DC
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} (with nominal values)
Output power	60 W

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Output data

Typical response time	< 1 s
Maximum power dissipation in no-load condition	< 1 W (230 V)
Power loss nominal load max.	< 10 W (230 V)

General

Net weight	0.32 kg
Efficiency	> 86 % (for 230 V AC and nominal values)
Insulation voltage input/output	3 kV AC (type test)
	1.5 kV AC (routine test)
Protection class	II (in closed control cabinet)
Degree of protection	IP20
MTBF (IEC 61709, SN 29500)	> (25 °C)
	> 2900000 h (40 °C)
	60 °C
Mounting position	horizontal DIN rail NS 35, EN 60715
Assembly instructions	Can be aligned: Horizontally 0 mm (≤ 40 °C) 10 mm (≤ 70 °C), vertically 50 mm

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

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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

Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Noise emission	EN 55011 (EN 55022)
Noise immunity	EN 61000-6-2:2005
Standards/regulations	EN 61000-4-2
Contact discharge	4 kV (Test Level 2)
Standards/regulations	EN 61000-4-3
Frequency range	80 MHz ... 1 GHz
Test field strength	10 V/m (Test Level 3)
Frequency range	1.4 GHz ... 2 GHz
Test field strength	3 V/m (Test Level 2)
Standards/regulations	EN 61000-4-4
Comments	Criterion B
Standards/regulations	EN 61000-4-5
Signal	0.5 kV (Test Level 1 - asymmetrical)
Standards/regulations	EN 61000-6-3
	EN 61000-4-6
Frequency range	0.15 MHz ... 80 MHz
Voltage	10 V (Test Level 3)
Standards/regulations	EN 61000-4-11
Low Voltage Directive	Conformance with LV directive 2006/95/EC
Standard - Safety of transformers	EN 61558-2-16 (air clearances and creepage distances only)
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
UL approvals	UL Listed UL 508
	UL/C-UL Recognized UL 60950-1
	NEC Class 2 as per UL 1310
Shock	18 ms, 30g, in each space direction (according to IEC 60068-2-27)
Vibration (operation)	< 15 Hz, amplitude ±2.5 mm (according to IEC 60068-2-6)
	15 Hz ... 150 Hz, 4g, 90 min.
Rail applications	EN 50121-4
Overvoltage category (EN 60950-1)	II

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Drawings

Block diagram