

Power supply unit - TRIO-PS-2G/3AC/24DC/20 - 2903155

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Primary-switched TRIO POWER power supply with push-in connection for DIN rail mounting, input: 3-phase, output: 24 V DC/20 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 960861
Sales Key	H1 - Power supply units
Note	Made to Order (non-returnable)

Technical data

Dimensions

Width	65 mm
Height	130 mm
Depth	160 mm

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 70 °C (> 60 °C derating, 2.5 %/K, startup at -40°C type-tested)
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 -20 % ... +15 %
	2x 400 V AC ... 500 V AC -10 % ... +15 %

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Input data

Input voltage range	3x 320 V AC ... 575 V AC
	2x 360 V AC ... 575 V AC
AC frequency range	50 Hz ... 60 Hz
Inrush surge current	≤ 22 A (typical)
Power failure bypass	> 10 ms (400 V AC)
	> 20 ms (500 V AC)
Input fuse	3.15 A (internal (device protection), slow-blow)
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 constant capacity)
Output current	20 A
	30 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	≤ 20 mV _{PP}
Maximum power dissipation NO-Load	< 1.2 W
Power loss nominal load max.	< 38 W

General

Net weight	1.5 kg
Efficiency	> 93 % (at 400 V AC and nominal values)
Insulation voltage input/output	4 kV AC (type test)
	1.5 kV AC (routine test)
Protection class	I (in closed control cabinet)
MTBF (IEC 61709, SN 29500)	> 1800000 h (25 °C)
	> 1100000 h (40 °C)
	> 510000 h (60 °C)
Mounting position	On horizontal and vertical DIN rail
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 50081-2
Low Voltage Directive	Conformance with LV directive 2006/95/EC
Standard – Electrical equipment of machines	EN 60204-1

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General

Standard - Electrical safety	IEC 60950-1/VDE 0805 (SELV)
Shipbuilding approval	GL applied for
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 (PELV)
Standard - Safe isolation	DIN VDE 0100-410
Standard – Protection against electric shock	DIN 57100-410
Standard – Limitation of mains harmonic currents	EN 61000-3-2
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 mm ²
Conductor cross section solid max.	4 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	12
Stripping length	10 mm

Connection data, output

Connection method	Push-in connection
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	10 mm ²
Conductor cross section stranded min.	0.2 mm ²
Conductor cross section stranded max.	6 mm ²
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	8
Stripping length	15 mm

Signaling

Output name	LED status indicator
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	1.5 mm ²
Conductor cross section stranded min.	0.2 mm ²
Conductor cross section stranded max.	1.5 mm ²
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	16

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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 4.0	EC002540
ETIM 5.0	EC002540

Drawings

Block diagram

