

Power supply unit - TRIO-PS-IP67/1AC/24DC/20 - 1039830

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TRIO POWER primary-switched power supply in IP67 die-cast housing, input: 1-phase, output: 24 V DC / 20 A

Your advantages

- ✓ Direct installation at the load in the field reduces cable lengths and saves space in the control cabinet
- ✓ The robust design (die-cast aluminum housing) ensures high system availability, thanks to resistance to extreme environmental conditions (temperature, dust, and water)
- ✓ Reliable startup of high loads, thanks to the dynamic boost
- ✓ High efficiency of > 93%, thanks to low power losses



Key Commercial Data

Packing unit	1
GTIN	 4 055626 598703
GTIN	4055626598703
Custom tariff number	85044030

Technical data

Dimensions

Width	151 mm
Height	304 mm
Depth	120 mm
Installation distance right/left	20 mm / 20 mm
Installation distance top/bottom	50 mm / 100 mm

Ambient conditions

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Ambient conditions

Degree of protection	IP67
Inflammability class in acc. with UL 94 (housing / terminal blocks)	V0
Ambient temperature (operation)	-25 °C ... 85 °C (Derating >60°C: 2.5 %/K)
Ambient temperature (start-up type tested)	-40 °C
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	4
Installation height	≤ 4000 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 #10 %
	110 V DC ... 250 V DC #10 %
Dielectric strength maximum	≤ 300 V AC 15 s
AC frequency range	50 Hz ... 60 Hz
Discharge current to PE	< 3.5 mA
Current consumption	5.6 A (100 V AC)
	2.4 A (240 V AC)
Nominal power consumption	36.8 W
Inrush current	typ. 20 A (at 25 °C)
Mains buffering time	typ. 10 ms (120 V AC)
	typ. 15 ms (230 V AC)
Input fuse	10 A (internal (device protection))
Recommended breaker for input protection	10 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 %
Nominal output current (I _N)	20 A
Dynamic Boost (I _{Dyn.Boost})	30 A (5 s)
Derating	> 60 °C ... 70 °C (2.5%/K)
Protection against overvoltage at the output (OVP)	≤ 30 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 %)

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Output data

Residual ripple	≤ 30 mV _{PP}
Output power	480 W
Typical response time	< 1 s
Maximum power dissipation in no-load condition	< 3 W (120 V AC)
	< 2.5 W (230 V AC)
Power loss nominal load max.	< 48 W (120 V AC)
	< 36 W (230 V AC)

General

Net weight	3.7 kg
Efficiency	91 % (100 V AC)
	93 % (230 V AC)
MTBF (IEC 61709, SN 29500)	> 1400000 h (25 °C)
	> 800000 h (40 °C)
	> 400000 h (60 °C)
Insulation voltage input/output	4 kV AC (type test)
	1.5 kV AC (routine test)
Degree of protection	IP67
Protection class	I
Inflammability class in acc. with UL 94 (housing / terminal blocks)	V0
Assembly instructions	Alignable: 20 mm horizontally, 50 mm vertically above, 100 mm vertically below

Connection data, input

Connection method	Circular connector
Type of locking	M12 screw locking
Coding	S-coded
Number of positions	3

Connection data, output

Connection method	Circular connector
Type of locking	M17 standard and SPEEDCON locking
Coding	N-coded
Number of positions	4

Connection data for signaling

Connection method	Circular connector
Type of locking	SPEEDCON M12
Coding	A-coded
Number of positions	5

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Standards

Standard - Electrical safety	IEC 61010-2-201 (SELV)
Standard - Safety extra-low voltage	EN 60204-1 (PELV)
Standard - Safe isolation	DIN VDE 0100-410
Standard - Limitation of mains harmonic currents	EN 61000-3-2

EMC data

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Low Voltage Directive	Conformance with Low Voltage Directive 2014/35/EC
Conducted noise emission	EN 55016
	EN 61000-6-3 (Class B)
Noise emission	EN 55016
	EN 61000-6-3 (Class B)
Flicker	EN 61000-3-3
Electrostatic discharge	EN 61000-4-2
Contact discharge	6 kV (Test Level 4)
Discharge in air	8 kV (Test Level 4)
Electromagnetic HF field	EN 61000-4-3
Frequency range	80 MHz ... 1 GHz
Test field strength	10 V/m (Test Level 3)
Frequency range	1 GHz ... 2 GHz
Test field strength	10 V/m (Test Level 3)
Frequency range	2 GHz ... 3 GHz
Test field strength	10 V/m (Test Level 3)
Comments	Criterion A
Fast transients (burst)	EN 61000-4-4
Input	4 kV (Test Level 4 - asymmetrical)
Output	2 kV (Test Level 3 - asymmetrical)
Signal	2 kV (Test Level 2 - asymmetrical)
Comments	Criterion A
Surge voltage load (surge)	EN 61000-4-5
Input	3 kV (Test Level 3 - symmetrical)
	4 kV (Test Level 4 - asymmetrical)
Output	1 kV (Test Level 2 - symmetrical)
	2 kV (Test Level 1 - asymmetrical)
Signal	1 kV (Test Level 2 - asymmetrical)
Comments	Criterion B
Conducted interference	EN 61000-4-6
Frequency range	0.15 MHz ... 80 MHz

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Technical data

EMC data

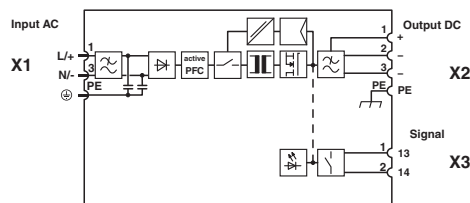
Voltage	10 V (Test Level 3)
Comments	Criterion A
Voltage dips	EN 61000-4-11
Voltage	230 V AC
Frequency	50 Hz
Voltage dip	70 %
Number of periods	25 periods
Additional text	Test Level 2
Comments	Criterion A
Voltage dip	40 %
Number of periods	10 periods
Additional text	Test Level 2
Comments	Criterion B
Voltage dip	0 %
Number of periods	1 period
Additional text	Test Level 2
Comments	Criterion B
Criterion A	Normal operating behavior within the specified limits.
Criterion B	Temporary impairment to operational behavior that is corrected by the device itself.
Criterion C	Temporary adverse effects on the operating behavior, which the device corrects automatically or which can be restored by actuating the operating elements.

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
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Drawings

Block diagram



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Classifications

eCl@ss

eCl@ss 10.0.1	27040701
eCl@ss 11.0	27040701
eCl@ss 9.0	27040701

ETIM

ETIM 6.0	EC002540
ETIM 7.0	EC002540

Approvals

Approvals

Approvals

CSA

Ex Approvals

Approval details

CSA		http://www.csagroup.org/services-industries/product-listing/	70175690
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Accessories

Accessories

Circular connector (cable-side)

Power connector - SACC-M12FSS-2PECON-PG 9-M - 1419640



Power connector, 3-position, unshielded, Socket straight M12, Coding: S, Screw connection, knurl material: Zinc die-cast, nickel-plated, cable gland Pg9, external cable diameter 6 mm ... 8 mm, for alternating current up to 16 A/630 V

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Cable connector - ST-3EP1N8A8005 - 1624534



Cable connector, straight, Screw locking, M17, number of positions: 3+PE, type of contact: Pin, shielded: yes, degree of protection: IP67, cable diameter range: 10 mm ... 12.5 mm, number of positions: 4, connection method: Crimp connection

Connector - SACC-FS-5SC M SCO - 1432583



Connector, 5-position, Socket straight M12 SPEEDCON, Coding: A, Spring-cage connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm