

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 pc
GTIN	
GTIN	4055626598703
Weight per Piece (excluding packing)	4,100.000 g
Weight per piece (including packing)	4,100.000 g
Custom tariff number	85044030
Country of origin	China

Technical data

Dimensions

Width	151 mm
Height	304 mm
Depth	120 mm

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)

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

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Ambient conditions

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 %)
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)

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

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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

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

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

Technical data

EMC data

	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
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

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

Technical data

EMC data

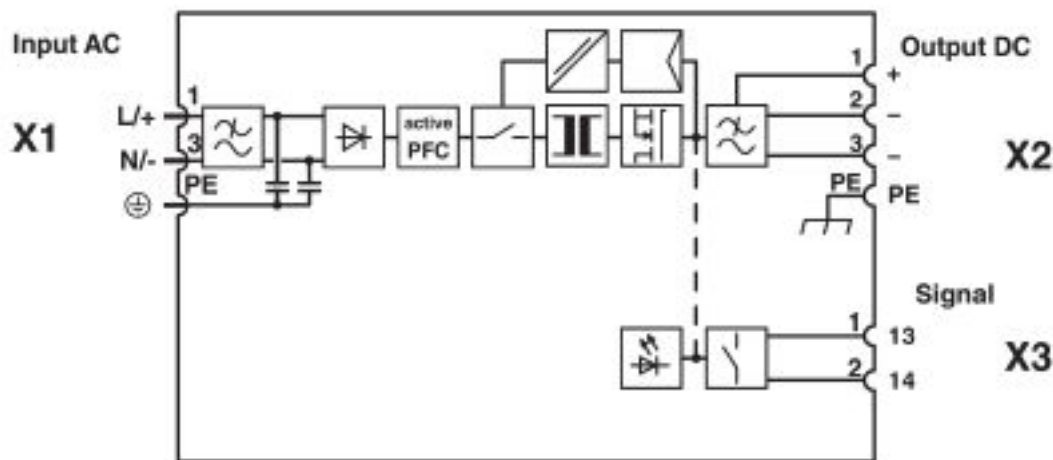
Voltage dip	0 %
Number of periods	1 period
Additional text	Test Level 2
Comments	Criterion B
Criterion A	Normal operating behavior within the specified limits.
Criterion B	Temporary impairment to operational behavior that is corrected by the device itself.
Criterion C	Temporary adverse effects on the 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



Classifications

eCl@ss

eCl@ss 8.0	27049002
eCl@ss 9.0	27040701

ETIM

ETIM 5.0	EC002540
ETIM 6.0	EC002540
ETIM 7.0	EC002540

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

Approvals

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CSA

Ex Approvals

Approval details

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

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Circular connector (cable-side)

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



Power connectors, 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

Cable connector - ST-3EP1N8A8005 - 1624534



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

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

