

Power supply unit - TRIO-PS67/1AC/24DC/10/IPD - 1111664

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TRIO POWER primary-switched power supply in IP67 die-cast housing, input: 1-phase, output: 24 V DC / 10 A



Key Commercial Data

Packing unit	1 pc
Custom tariff number	85044030
Country of origin	China

Technical data

Dimensions

Width	136 mm
Height	292 mm
Depth	53 mm
Installation distance right/left	20 mm / 20 mm
Installation distance top/bottom	50 mm / 100 mm

Ambient conditions

Degree of protection	IP67
Inflammability class in acc. with UL 94 (housing / terminal blocks)	V0
Ambient temperature (operation)	-25 °C ... 70 °C (Derating >60°C: 2.5 %/K)
Ambient temperature (start-up type tested)	-25 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Max. permissible relative humidity (operation)	≤ 100 % (at 25 °C, non-condensing)
Permissible humidity (operation)	≤ 100 % (at 25 °C, non-condensing)
Climatic class	3K3 (in acc. with EN 60721)
Degree of pollution	3

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Ambient conditions

Installation height	≤ 4000 m (> 2000 m, Derating: 10 %/1000 m)
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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 ±10 %
Frequency range (f _N)	50 Hz ... 60 Hz ±10 %
Discharge current to PE	< 3.5 mA
Current consumption	2.8 A (100 V AC)
	1.2 A (240 V AC)
Nominal power consumption	285 VA
Inrush current	≤ 25 A (typical)
Mains buffering time	> 15 ms (120 V AC)
	> 15 ms (230 V AC)
Input fuse	6.3 A (internal (device protection))
Recommended breaker for input protection	6 A ... 16 A (US/CAN: branch circuit protection < 20 A) (Characteristic B, C, D, K or comparable)
Power factor (cos phi)	> 0.93
Type of protection	Transient surge protection
Protective circuit/component	Varistor

Output data

Nominal output voltage	24 V DC ±1 %
Nominal output current (I _N)	10 A
Dynamic Boost (I _{Dyn.Boost})	15 A (5 s)
Derating	> 60 °C ... 70 °C (2.5%/K)
Connection in parallel	no
Connection in series	No
Feedback voltage resistance	≤ 35 V DC
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	≤ 10 mV _{PP}
Output power	240 W

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Output data

Maximum power dissipation in no-load condition	< 10 W (120 V AC)
	< 6 W (230 V AC)
Power loss nominal load max.	< 22 W (120 V AC)
	< 17 W (230 V AC)

General

Net weight	1.5 kg
Efficiency	typ. 91 % (120 V AC)
	typ. 93 % (230 V AC)
MTBF (IEC 61709, SN 29500)	> 1800000 h (25 °C)
	> 1000000 h (40 °C)
	> 480000 h (60 °C)
Insulation voltage input/output	3 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	IPD panel feed-through with Push-in spring connection
Type of locking	Clip locking
Range of positions	3 Push-in connection

Connection data, output

Connection method	IPD panel feed-through with Push-in spring connection
Type of locking	Clip locking
Range of positions	3 Push-in connection

Standards

Standard designation	Electrical safety
Standards/regulations	IEC 61010-1 (SELV)
Standard designation	Protective extra-low voltage
Standards/regulations	IEC 61010-1 (SELV)
	IEC 61010-2-201 (PELV)
Standard designation	Safe isolation
Standards/regulations	IEC 61558-2-16
Standard designation	Low-voltage power supplies, DC output
Standards/regulations	EN 61204-3

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Standards

Standard designation	Safety requirements for electrical equipment for measurement, control, and laboratory use
Standards/regulations	IEC 61010-1
Standard designation	Limit values for harmonic currents
Standards/regulations	EN 61000-3-2
Standard designation	Degrees of protection provided by enclosures (IP code)
Standards/regulations	EN/IEC 60529
Overvoltage category EN 61010-1	III (≤ 2000 m)
	II (≤ 4000 m)

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)
Harmonic currents	EN 61000-3-2
	EN 61000-3-2 (Class A)
Electrostatic discharge	EN 61000-4-2
Contact discharge	6 kV (Test Level 3)
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 ... 6 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 3 - asymmetrical)
Output	2 kV (Test Level 3 - asymmetrical)
Signal	2 kV (Test Level 3 - asymmetrical)
Comments	Criterion A
Surge voltage load (surge)	EN 61000-4-5
Input	2 kV (Test Level 4 - symmetrical)
	4 kV (Test Level 4 - asymmetrical)
Output	1 kV (Test Level 3 - symmetrical)

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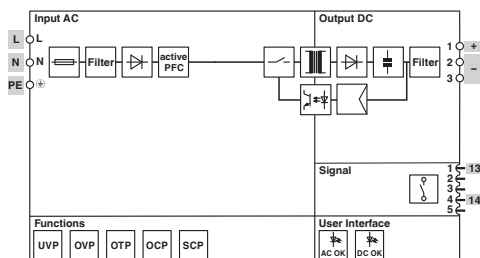
Technical data

EMC data

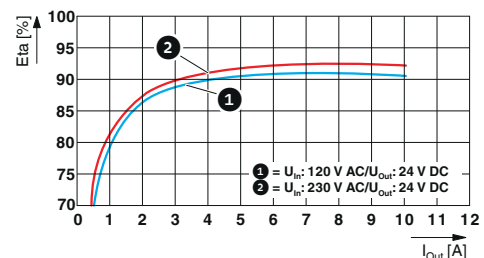
	2 kV (Test Level 3 - asymmetrical)
Signal	1 kV (Test Level 2 - asymmetrical)
Comments	Criterion A
Conducted interference	EN 61000-4-6
Frequency range	0.15 MHz ... 80 MHz
Voltage	10 V (Test Level 3)
Comments	Criterion A
Voltage dips	EN 61000-4-11
Voltage	230 V AC
Frequency	50 Hz
Voltage dip	70 %
Number of periods	25 periods
Comments	Criterion A
Voltage dip	40 %
Number of periods	10 periods
Comments	Criterion A
Voltage dip	0 %
Number of periods	1 period
Comments	Criterion A
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.

Drawings

Block diagram

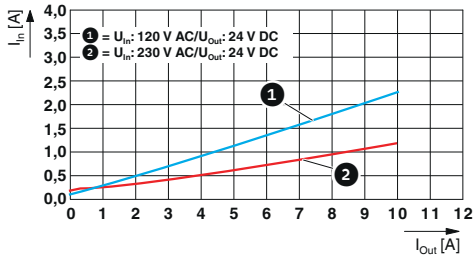


Diagram

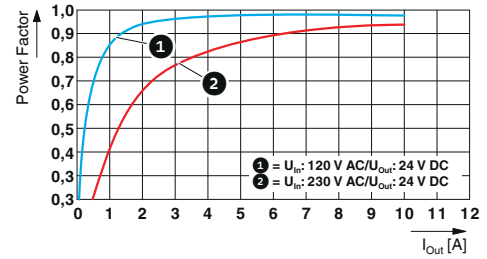


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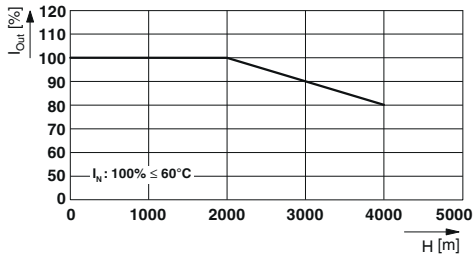
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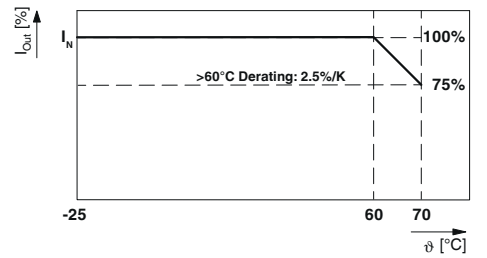
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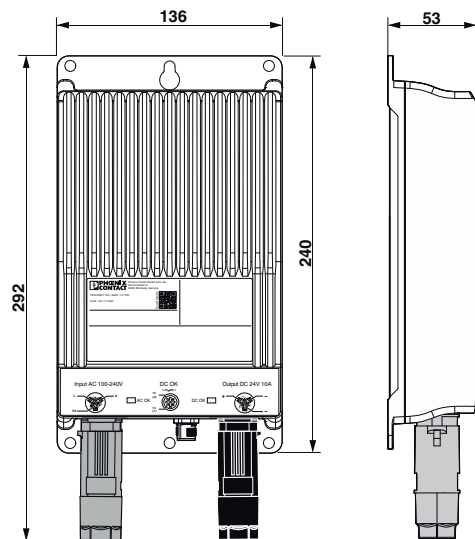
Diagram



Diagram



Dimensional drawing



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Classifications

eCl@ss

eCl@ss 9.0	27040701
eCl@ss 11.0	27040701

Approvals

Approvals

Approvals

cULus Listed / EAC / IECEE CB Scheme

Ex Approvals

Approval details

cULus Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 123528
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EAC	
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IECEE CB Scheme		http://www.iecee.org/	DK-113104-UL
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Accessories

Accessories

Circular connector (cable-side)

Connector - SACC-M12FS-5PL M - 1424652



Connector, Universal, 5-position, unshielded, Socket straight M12, Coding: A, Push-lock spring connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

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Sensor/actuator cable

Sensor/actuator cable - SAC-5P- 1,5-PUR/M12FS - 1669822



Sensor/actuator cable, 5-position, PUR halogen-free, black-gray RAL 7021, free cable end, on Socket straight M12, coding: A, cable length: 1.5 m