

Power supply unit - TRIO-PS/1AC/24DC/ 5 - 2866310

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



Primary-switched TRIO POWER power supply for DIN rail mounting, input: 1-phase, output: 24 V DC/5 A

Product Description

TRIO POWER power supplies with standard functionality

TRIO POWER is particularly suited to standard machine production, thanks to 1- and 3-phase versions up to 960 W. The wide-range input and the international approval package enable worldwide use.

The robust metal housing, the high electric strength, and the wide temperature range ensure a high level of power supply reliability.

Your advantages

- ☒ Use the third negative terminal block as a grounding terminal block and minimize installation costs
- ☒ Rugged design with metal housing and wide temperature range from -25 to +70°C
- ☒ Maximum operational reliability thanks to high MTBF (mean time between failures) of more than 500,000 hours and high dielectric strength of up to 300 V AC
- ☒ Compensation of voltage drops by means of output voltage that can be adjusted on the front



Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 046640
GTIN	4046356046640
Weight per Piece (excluding packing)	760.000 g
Custom tariff number	85044030
Country of origin	China

Technical data

Dimensions

Width	40 mm
-------	-------

Power supply unit - TRIO-PS/1AC/24DC/ 5 - 2866310

Technical data

Dimensions

Height	130 mm
Depth	115 mm
Installation distance right/left	0 mm / 0 mm
Installation distance top/bottom	50 mm / 50 mm

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 70 °C (> 55° 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

Input data

Nominal input voltage range	100 V AC ... 240 V AC
Input voltage range	85 V AC ... 264 V AC (Derating < 90 V AC: 2,5 %/V)
Dielectric strength maximum	300 V AC
AC frequency range	45 Hz ... 65 Hz
Discharge current to PE	< 3.5 mA
Current consumption	1.65 A (120 V AC)
	0.9 A (230 V AC)
Nominal power consumption	189 VA
Inrush current	< 15 A
Mains buffering time	> 20 ms (120 V AC)
	> 110 ms (230 V AC)
Input fuse	3.15 A (slow-blow, internal)
Recommended breaker for input protection	6 A ... 16 A (Characteristics B, C, D, K)
Power factor (cos phi)	0.72
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 (U_{Set})	22.5 V DC ... 29.5 V DC (> 24 V DC, constant capacity restricted)
Nominal output current (I_N)	5 A (U_{OUT} = 24 V DC)
Derating	55 °C ... 70 °C (2.5%/K)
Connection in parallel	yes, for redundancy and increased capacity
Connection in series	yes
Feedback voltage resistance	35 V DC

Power supply unit - TRIO-PS/1AC/24DC/ 5 - 2866310

Technical data

Output data

Protection against overvoltage at the output (OVP)	< 35 V DC
Max. capacitive load	unlimited
Active current limitation	Approx. 10 A (for short-circuit)
Control deviation	< 1 % (change in load, static 10 % ... 90 %)
	< 2 % (change in load, dynamic 10 % ... 90 %)
	< 0.1 % (change in input voltage ± 10 %)
Residual ripple	< 20 mV _{PP}
Output power	120 W
Typical response time	< 1 s
Peak switching voltages nominal load	< 30 mV _{PP}
Maximum no-load power dissipation	1.1 W
Power loss nominal load max.	18 W

General

Net weight	0.6 kg
Operating voltage display	Green LED
Efficiency	89 % (for 230 V AC and nominal values)
MTBF (IEC 61709, SN 29500)	> 2031000 h
Insulation voltage input/output	4 kV AC (type test)
	2 kV AC (routine test)
Insulation voltage input / PE	2 kV AC (type test)
	2 kV AC (routine test)
Insulation voltage output / PE	500 V DC (type test)
Degree of protection	IP20
Protection class	I (with PE connection)
Mounting position	horizontal DIN rail NS 35, EN 60715
Assembly instructions	alignable: horizontally 0 mm, vertically 50 mm

Connection data, input

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	14
Stripping length	9 mm
Screw thread	M2,5

Power supply unit - TRIO-PS/1AC/24DC/ 5 - 2866310

Technical data

Connection data, output

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	14
Stripping length	9 mm
Screw thread	M2,5

Signaling

Status display	"DC OK" LED green
Note on status display	U _{OUT} > 21.5 V: LED lights up

Standards and Regulations

Low Voltage Directive	Conformance with Low Voltage Directive 2014/35/EC
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
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
Frequency range	1.4 GHz ... 2 GHz
Test field strength	3 V/m
Standards/regulations	EN 61000-4-4
Comments	Criterion B
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
Standard - Electrical safety	EN 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	EN 60950-1 (SELV)
	EN 60204 (PELV)
Standard - Safe isolation	DIN VDE 0100-410

Power supply unit - TRIO-PS/1AC/24DC/ 5 - 2866310

Technical data

Standards and Regulations

Standard – Protection against shock currents, basic requirements for protective separation in electrical equipment	EN 50178
Standard – Limitation of mains harmonic currents	EN 61000-3-2
Shipbuilding approval	DNV GL (EMC A)
UL approvals	UL/C-UL listed UL 508
	UL/C-UL Recognized UL 60950-1
Shock	15g in all directions in acc. with IEC 60068-2-27
Vibration (operation)	< 15 Hz, amplitude ± 2.5 mm (according to IEC 60068-2-6)
	15 Hz ... 150 Hz, 2.3g, 90 min.

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 25;
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"