

TRIO-PS-2G/1AC/24DC/10 - Power supply unit



2903149

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Primary-switched TRIO POWER power supply with push-in connection for DIN rail mounting, input: single phase, output: 24 V DC/10 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.

Your advantages

- Save time and costs, thanks to the Push-in connection and narrow design
- Increase system availability, thanks to dynamic boost with 150% of the nominal current for five seconds
- Maximum flexibility due to the wide temperature range from -25°C to +70°C and device startup at -40°C
- Rugged design

Commercial Data

Item number	2903149
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	CMP
Product Key	CMPO13
Catalog Page	Page 256 (C-4-2019)
GTIN	4046356960854
Weight per Piece (including packing)	1,122.7 g
Weight per Piece (excluding packing)	919 g
Customs tariff number	85044083
Country of origin	CN

Technical Data

Input data

AC operation

Network type	Star network
Nominal input voltage range	100 V AC ... 240 V AC
Input voltage range	100 V AC ... 240 V AC -15 % ... +10 %
Switch-on voltage	> 75 V AC
Shut-down voltage	< 70 V AC
Electric strength, max.	300 V AC 15 s
Typical national grid voltage	120 V AC
	230 V AC
Voltage type of supply voltage	AC/DC
Inrush current	≤ 25 A (typical)
Inrush current integral (I^2t)	< 0.5 A ² s
Inrush current limitation	typ. 25 A (after 1 ms)
AC frequency range	50 Hz ... 60 Hz ±10 %
Mains buffering time	typ. 15 ms (120 V AC)
	typ. 20 ms (230 V AC)
Current consumption	3.1 A (100 V AC)
	2.4 A (120 V AC)
	1.3 A (230 V AC)
	1.4 A (240 V AC)
Nominal power consumption	285 VA
Protective circuit	Transient surge protection; Varistor
Power factor (cos phi)	0.93
Typical response time	< 1 s
Input fuse	6.3 A (internal (device protection))
Recommended breaker for input protection	6 A ... 16 A (Characteristics B, C, D, K)
Discharge current to PE	< 3.5 mA
POWER factor	> 0.9 (120 V AC)
	> 0.9 (230 V AC)

DC operation

Nominal input voltage range	110 V DC ... 250 V DC
Input voltage range	110 V DC ... 250 V DC -10 % ... +10 %
Switch-on voltage	≥ 95 V DC
Shut-down voltage	< 70 V DC
Voltage type of supply voltage	AC/DC
Mains buffering time	> 15 ms (230 V AC)
Current consumption	2.5 A (110 V DC)
	1.1 A (250 V DC)

Output data

Efficiency	> 91 % (for 230 V AC and nominal values)
Output characteristic	U/I with dynamic load reserve
Nominal output voltage	24 V DC \pm 1 %
Setting range of the output voltage (U_{Set})	24 V DC ... 28 V DC (constant capacity)
Nominal output current (I_N)	10 A
Dynamic Boost ($I_{Dyn.Boost}$)	15 A (5 s)
Derating	> 60 °C ... 70 °C (2.5%/K)
Feedback voltage resistance	\leq 35 V DC
Protection against overvoltage at the output (OVP)	\leq 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 \pm 10 %)
Residual ripple	< 10 mV _{PP} (with nominal values)
Short-circuit-proof	yes
No-load proof	yes
Output power	240 W
	360 W
Maximum no-load power dissipation	< 5.1 W (230 V)
Power loss nominal load max.	< 25 W
Rise time	\leq 12 ms (U_{OUT} (10 % ... 90 %))
Connection in parallel	yes, for redundancy and increased capacity
Connection in series	yes

Signal: DC OK

Maximum switching voltage	30 V AC/DC
Continuous load current	100 mA

Connection data

Input

Connection method	Push-in connection
Conductor cross section, rigid min.	0.2 mm ²
Conductor cross section, rigid max.	4 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.	12
Stripping length	10 mm

Output

Connection method	Push-in connection
Conductor cross section, rigid min.	0.2 mm ²
Conductor cross section, rigid max.	4 mm ²
Conductor cross section flexible min.	0.2 mm ²