

TRIO-PM/1AC/48DC/2500W/PT - Power supply



1738960

<https://www.phoenixcontact.com/in/products/1738960>

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Primary-switched power supply unit, TRIO POWER, Push-in connection, CAN bus, Panel mounting, input: 1-phase, output: 48 V DC / 52.08 A, adjustable from 45 V DC ... 55 V DC

Your advantages

- High power density and high efficiency with a compact design
- Customized use through flexible panel mounting options
- Robust and reliable due to integrated protective functions
- Easy power increase with parallel connection with integrated O-ring diode
- Smart diagnostics with comprehensive monitoring via LED signaling, CAN bus interface, and EOL (End Of Life) reminder

Commercial data

Item number	1738960
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	CMHW14
GTIN	4067923302181
Weight per piece (including packing)	2,574 g
Weight per piece (excluding packing)	2,140 g
Country of origin	CN

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Technical data

Input data

AC operation

Supply system configuration	Star network (TN, TT, IT (PE))
Nominal input voltage range	100 V AC ... 240 V AC
Input voltage range	100 V AC ... 240 V AC -15 % ... +10 % 100 V AC ... 240 V AC ± 10 % (UL)
Derating	85 V AC ... 90 V AC (≤ 1350 W) 90 V AC ... 180 V AC (≤ 1500 W) 2.5 %/K, > 55 °C
Electric strength, max.	300 V AC 1 s
Typical national grid voltage	120 V AC 230 V AC
Voltage type of supply voltage	AC
Inrush current	< 10 A (115 V AC, 25 °C) < 20 A (230 V AC, 25 °C)
Inrush current integral (I^2t)	< 0.696 A ² s
Frequency range (f_N)	50 Hz ... 60 Hz ± 5 %
Mains buffering time	typ. 16 ms (120 V AC@80% load) typ. 16 ms (230 V AC@80% load)
Buffer time	typ. 18 ms (120 V AC) typ. 18 ms (230 V AC@80% load)
Current consumption	13.8 A (120 V AC) 18.1 A (85 V AC) 10.2 A (264 V AC) 11.7 A (230 V AC) max. 18 A (UL)
Protective circuit	Transient protection
Power factor (cos phi)	0.99 (230 V AC)
Device mains fuse	25 A internal (device protection)
Discharge current to PE	< 2 mA

DC operation

Input voltage range	140 V DC ... 340 V DC -15 %; +10 %
Current consumption	12.4 A (120 V DC) 6.9 A (380 V DC)

Output data

Efficiency	typ. 91.5 % (120 V AC) typ. 94 % (230 V AC)
Nominal output voltage	48 V DC
Setting range of the output voltage (U_{Set})	45 V DC ... 55 V DC (> 48 V DC, constant capacity restricted)

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Nominal output current (I_N)	52.08 A (@ 48 V DC)
Dynamic Boost ($I_{Dyn.Boost}$)	max. 72.92 A (5 s)
Short-circuit-proof	yes
No-load proof	yes
Derating	55 °C ... 70 °C (2.5 %/K)
Crest factor	typ. 1.452 (120 V AC)
	typ. 1.484 (230 V AC)
Output power	max. 1500 W (< 180 V AC)
Output power (P_N)	2500 W (@ 48 V DC)
Output power ($P_{Dyn. Boost}$)	max. 3500 W (5 s)
Connection in parallel	yes, for increased efficiency and redundancy
	max. 4
Connection in series	yes, for increased output voltage (observe SELV limit)
	max. 2
Feedback voltage resistance	≤ 63 V DC
Protection against overvoltage at the output (OVP)	≤ 63 V DC
Residual ripple	typ. 400 mV _{pp} (maximum)
Control deviation	< 0.5 % (change in load, static 10 % ... 90 %)
	< 5 % (change in load, dynamic 10 % ... 90 %)
	< 0.5 % (change in input voltage ±10 %)
Rise time	≤ 100 ms (U_{Out} = 10 % ... 90 %)
Minimum no-load power dissipation	< 30 W (120 V AC)
Maximum no-load power dissipation	< 10 W (230 V AC)
Minimum nominal load power dissipation	< 140 W (120 V AC)
Power loss nominal load max.	< 160 W (230 V AC)
Integrated fuse protection	no

Connection data

Input

Position	1.x
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Connection technology

Position marking	1.1 (L/+), 1.2 (N/-), 1.3 (⊕ )
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Conductor connection

Connection method	Push-in connection
rigid	0.2 mm² ... 10 mm²
	2.5 mm² (recommended)
flexible	0.2 mm² ... 6 mm²
	2.5 mm² (recommended)
flexible with ferrule without plastic sleeve	0.25 mm² ... 6 mm²
	2.5 mm² (recommended)
flexible with ferrule with plastic sleeve	0.25 mm² ... 6 mm²
	2.5 mm² (recommended)