

TRIO3-PS/3AC/24DC/20/8C/IOL - Power supply unit



1362791

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Primary-switched power supply unit, TRIO POWER, Push-in connection, 8-channel electronic circuit breaker, IO-Link, DIN rail mounting, input: 3-phase, output: 24 V DC / 20 A, adjustable from 24 V DC ... 28 V DC

Product description

All TRIO POWER power supplies feature smart diagnostics with multicolor LEDs and a collective alarm contact. This is used to signal all relevant states such as DC OK, overload, and short circuit. Devices with integrated multi-channel device protection and an IO-Link interface for diagnostics and parameterization are optionally available. The compact devices reduce the installation work, space requirements in the control cabinet, and material costs. TRIO POWER power supplies therefore provide power reliability in one device.

Your advantages

- Power reliability in one device due to the integrated multi-channel device protection
- Low installation costs due to 70% less wiring and installation effort
- Easy commissioning through intuitive manual operation or parameterization via IO-Link
- High availability due to prioritized load management with intelligent self-monitoring functionality
- Space-saving due to its low overall width and capability of being mounted side by side

Commercial data

Item number	1362791
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	CMPD36
GTIN	4063151706449
Weight per piece (including packing)	1,518 g
Weight per piece (excluding packing)	1,146 g
Customs tariff number	85044095
Country of origin	CN

Technical data

Input data

AC operation

Supply system configuration	Star network (TN, TT, IT (PE))
Nominal input voltage range	3x 400 V AC ... 500 V AC
Input voltage range	3x 400 V AC ... 500 V AC -20 % ... +10 % 2x 400 V AC ... 500 V AC ± 10 %
Typical national grid voltage	3x 400 V AC 3x 480 V AC
Voltage type of supply voltage	AC
Inrush current	< 13 A (25 °C)
Inrush current integral (I^2t)	< 0.33 A ² s
Frequency range (f_N)	50 Hz ... 60 Hz ± 10 %
Mains buffering time	typ. 28 ms (3x 400 V AC) typ. 28 ms (3x 480 V AC)
Current consumption	3x 0.77 A (3x 400 V AC) 3x 0.63 A (3x 500 V AC) 2x 1.37 A (2x 400 V AC) 2x 1.13 A (2x 500 V AC)
Protective circuit	Transient protection; Varistor
Power factor (cos phi)	0.93 (3x 480 V AC)
Device mains fuse	3.15 A internal (device protection)
Recommended breaker for input protection	3x 6 A ... 16 A (Characteristic B, C, D, K or comparable)
Discharge current to PE	< 3.5 mA

Output data

Efficiency	typ. 94.4 % (3x 400 V AC) typ. 94.5 % (3x 480 V AC)
Nominal output voltage	24 V DC
Setting range of the output voltage (U_{Set})	24 V DC ... 28 V DC (> 24 V DC, constant capacity restricted)
Nominal output current (I_N)	20 A
Dynamic Boost ($I_{Dyn.Boost}$)	max. 30 A (5 s)
No. of channels	8
Nominal current per channel	1 A 2 A 3.8 A 4 A 6 A 8 A 10 A
Waiting time after switch off of a channel	5 s
Switch-on delay of the channels	100 ms

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Short-circuit-proof	yes
No-load proof	yes
Derating	60 °C ... 70 °C
Crest factor	typ. 1.51 (3x 400 V AC) typ. 1.69 (3x 480 V AC)
Output power (P_N)	480 W
Output power ($P_{\text{Dyn. Boost}}$)	max. 720 W (5 s)
Connection in parallel	no
Connection in series	no
Max. capacitive load	30 mF
Feedback voltage resistance	$\leq 35 \text{ V DC}$
Protection against overvoltage at the output (OVP)	$\leq 35 \text{ V DC}$
Residual ripple	typ. 15 mV _{pp} (with nominal values)
Control deviation	< 1 % (change in load, static 10 % ... 90 %) < 3 % (change in load, dynamic 10 % ... 90 %) < 0.1 % (change in input voltage $\pm 10 \%$)
Rise time	$\leq 1 \text{ s}$ ($U_{\text{Out}} = 10 \% \dots 90 \%$)
Minimum no-load power dissipation	< 3 W (3x 400 V AC)
Maximum no-load power dissipation	< 3.1 W (3x 480 V AC)
Minimum nominal load power dissipation	< 26.08 W (3x 400 V AC)
Power loss nominal load max.	< 27.35 W (3x 480 V AC)
Integrated fuse protection	yes

Signal relay 13/14

Position	3.x
Position marking	3.1 (13), 3.2 (14)
Switch contact (floating)	OptoMOS
Switching voltage	max. 30 V DC (SELV)
Current carrying capacity	max. 100 mA
State condition	$U_{\text{Out}} > 21 \text{ V DC}$ and $I_{\text{Out}} < 0.9 \times I_N$ (Contact closed) $U_{\text{Out}} < 21 \text{ V DC}$ or $I_{\text{Out}} > 0.9 \times I_N$ (averaging over 60 s) (Contact open) Channel triggered or defective or OVP active

Connection data

Input

Position	1.x
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Connection technology

Position marking	1.1 (L1), 1.2 (L2), 1.3 (L3), 1.4 (⚡ IEC 60364)
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Conductor connection

Connection method	Push-in connection
rigid	0.2 mm ² ... 4 mm ² 1.5 mm ² (recommended)