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Primary-switched power supply unit, TRIO POWER, Push-in connection, 4-channel electronic circuit breaker, IO-Link, DIN rail mounting, input: 1-phase, output: 24 V DC / 10 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                          | 1252696       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | CM29          |
| Product key                          | CMPD16        |
| GTIN                                 | 4063151360863 |
| Weight per piece (including packing) | 942 g         |
| Weight per piece (excluding packing) | 861 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              | 100 V AC ... 240 V AC                                                          |
| Input voltage range                      | 100 V AC ... 240 V AC -15 % ... +10 %<br>115 V AC ... 240 V AC $\pm 10$ % (UL) |
| Derating                                 | < 100 V AC (1 %/V)<br>2.5 %/K, > 60 °C                                         |
| Typical national grid voltage            | 120 V AC<br>230 V AC                                                           |
| Voltage type of supply voltage           | AC                                                                             |
| Inrush current                           | < 17 A (25 °C)                                                                 |
| Inrush current integral ( $I^2t$ )       | < 0.5 A <sup>2</sup> s                                                         |
| Frequency range ( $f_N$ )                | 50 Hz ... 60 Hz $\pm 10$ %                                                     |
| Mains buffering time                     | typ. 27 ms (120 V AC)<br>typ. 28 ms (230 V AC)                                 |
| Current consumption                      | 2.6 A (100 V AC)<br>2.2 A (120 V AC)<br>1.2 A (230 V AC)<br>1.1 A (240 V AC)   |
| Protective circuit                       | Transient protection; Varistor                                                 |
| Power factor (cos phi)                   | 0.95 (230 V AC)                                                                |
| Device mains fuse                        | 6.3 A internal (device protection)                                             |
| Recommended breaker for input protection | 6 A ... 16 A (Characteristic B, C, D, K or comparable)                         |
| Discharge current to PE                  | < 3.5 mA                                                                       |

## DC operation

|                                |                                                                           |
|--------------------------------|---------------------------------------------------------------------------|
| Input voltage range            | 100 V DC ... 240 V DC $\pm 10$ %<br>160 V DC ... 240 V DC $\pm 10$ % (UL) |
| Derating                       | < 140 V DC (1 %/V)                                                        |
| Voltage type of supply voltage | DC                                                                        |
| Current consumption            | 2.7 A (100 V DC)<br>1.1 A (240 V DC)                                      |

## Output data

|                                                   |                                                               |
|---------------------------------------------------|---------------------------------------------------------------|
| Efficiency                                        | typ. 94.5 % (120 V AC)<br>typ. 95.5 % (230 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 ( $I_N$ )                  | 10 A                                                          |
| Dynamic Boost ( $I_{Dyn.Boost}$ )                 | max. 15 A (5 s)                                               |

# TRIO3-PS/1AC/24DC/10/4C/IOL - Power supply unit



1252696

<https://www.phoenixcontact.com/us/products/1252696>

|                                                    |                                                             |
|----------------------------------------------------|-------------------------------------------------------------|
| No. of channels                                    | 4                                                           |
| 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                                                      |
| Short-circuit-proof                                | yes                                                         |
| No-load proof                                      | yes                                                         |
| Derating                                           | 60 °C ... 70 °C                                             |
| Crest factor                                       | typ. 1.75 (120 V AC)                                        |
|                                                    | typ. 1,7 (230 V AC)                                         |
| Output power ( $P_N$ )                             | 240 W                                                       |
| Output power ( $P_{\text{Dyn. Boost}}$ )           | max. 360 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. 50 mV <sub>PP</sub> (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                  | < 1.2 W (120 V AC)                                          |
| Maximum no-load power dissipation                  | < 1.3 W (230 V AC)                                          |
| Minimum nominal load power dissipation             | < 14.5 W (120 V AC)                                         |
| Power loss nominal load max.                       | < 12 W (230 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