

Features

- N+1 redundancy provides highest reliability
- Diagnostics and fault indication
- Modular and hot swappable
- Automatic load sharing
- Adjustable voltage
- Fanless
- ATEX and cULus approvals for Div 2/Zone 2

Function

The PS3500-PM-1.24.15 power supply module works with the PS2500/PS3500 series backplanes. The power supply is well suited for emergency shut down systems, fieldbus / HART networks, as well as any general-purpose process applications.

Each 24 V, 15 A module plugs directly into a 3- or 6-position backplane allowing a maximum capacity of 45 A or 90 A of uninterrupted power. The output voltage is adjustable from 22.5 V to 28 V DC via potentiometers on the backplane.

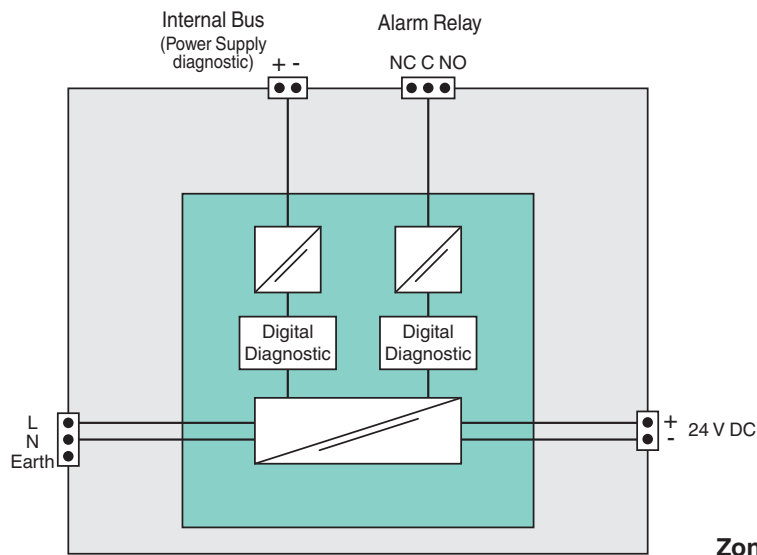
Universal input power is standard and allows a battery backup, eliminating the need for a UPS connection. The power supply modules are highly efficient (up to 91%) and use natural convection cooling.

Each module operates with automatic load sharing, so modules are hot swappable with no effect on the output supply.

Assembly



Connection



Release date 2013-03-05 17:10 Date of issue 2013-03-05 911109_eng.xml

| | |
|---|--|
| Interface | |
| Type | diagnostic bus: RS 485 |
| Input | |
| Input current | max 6.5 A |
| Inrush current | < 50 A peak for 50 µs |
| Voltage | 90 ... 250 V AC; ± 10 %, 90 ... 300 V DC |
| Power factor | > 0.97, 50 ... 100 % load |
| Output | |
| Current | 15 A |
| Voltage | 24 V DC ± 1 % (22.5 ... 28 V DC adjustable) |
| Ripple | 35 mV _{rms} (< 100 mV _{pp}) |
| Fault signal | relay 50 V DC, 1 A |
| Response time | min. hold-up time: ≥ 25 ms at nominal input voltage and output load |
| Input regulation | < 100 mV (90 ... 250 V AC ; 90 ... 300 V DC) |
| Load regulation | < 100 mV (0 ... 15 A output load) |
| Turn-on/turn-off voltage transient | 200 ms to final value (no over/under shoot) |
| Temperature coefficient | max. ± 0.01 % per °C |
| Short-circuit current | ≤ 20 A |
| Efficiency | up to 91 % |
| Electrical isolation | |
| Input/Output | 4.25 kV DC |
| Input/ground | 2.12 kV DC |
| Output/ground | 2.12 kV DC |
| Directive conformity | |
| Electromagnetic compatibility | |
| Directive 2004/108/EC | EN 61326-1:2006 EN 61000 sections 3-2, 3-3, 4-2, 4-4, 4-5, 4-6, and 4-11 |
| Conformity | |
| Electrical isolation | IEC 61131-2 |
| Electromagnetic compatibility | NE 21:2006 |
| Protection degree | EN 60529 |
| Shock resistance | EN 60068-2-27 |
| Vibration resistance | EN 60068-2-6 |
| Ambient conditions | |
| Ambient temperature | -25 ... 45 °C (-13 ... 113 °F) , derated: 0,4 A/°C, (from 45 ... 70 °C (113 ... 158 °F)) |
| Storage temperature | -40 ... 85 °C (-40 ... 185 °F) |
| Relative humidity | < 95 % , noncondensing |
| Shock resistance | 15 g , 11 ms |
| Vibration resistance | 1 g , 58 ... 150 Hz |
| Mechanical specifications | |
| Housing material | Powder Coated, 1010 Cold Rolled Steel |
| Protection degree | IP20 |
| Mass | approx. 1.8 kg (4.125 lbs) |
| Dimensions | 134 x 62 x 268 mm (5.3 x 2.5 x 10.6 in) |
| Data for application in connection with Ex-areas | |
| EC-Type Examination Certificate | ITS 09 ATEX 46140 X |
| Group, category, type of protection | ⊕ I/3 G Ex nC IIC T4 |
| Directive conformity | |
| Directive 94/9/EC | EN 60079-0, EN 60079-15 |
| International approvals | |
| UL approval | cULus Listed E230669 E350173 |
| Approved for | Class I/Div 2, ABCD |
| ETL Intertek | listed ANSI/UL 508 - 2005 ANSI/ISA 12.12.01 - 2.07 CSA C22.2 No. 213 C22.2 No.214CSA C22.2 No. 213 CAN/CSA C22.2 No.14-05 With update No.3, 2008 |
| Approved for | Class I, Zone 2, Group IIC T4 Class I, Division 2, Groups A, B, C, D, T4 |

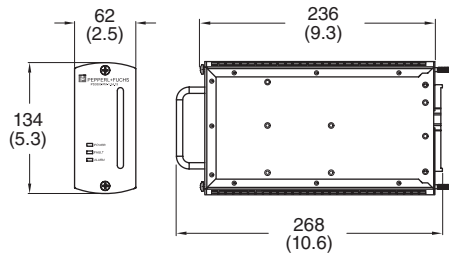
Release date 2013-03-05 17:10 Date of issue 2013-03-05 911109_eng.xml

General information

Supplementary information

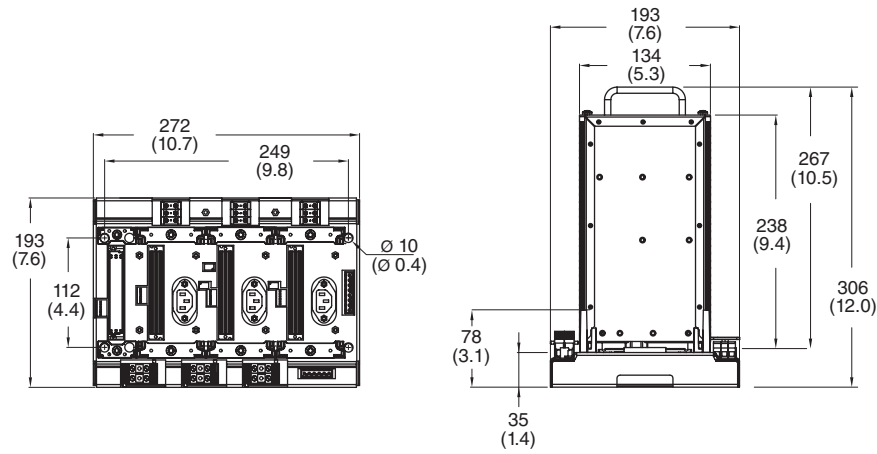
Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com.

Dimensions mm (in)

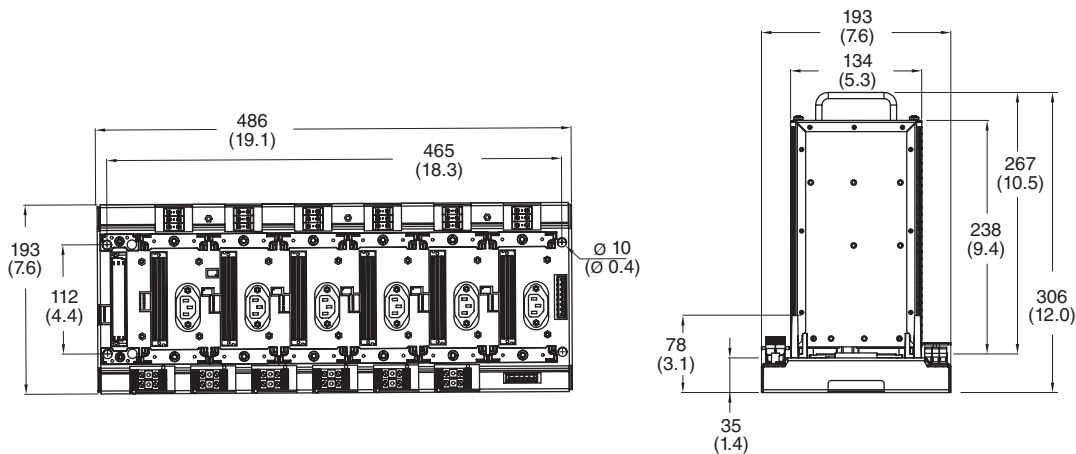


System dimensions mm (in)

PS3500-TB-3

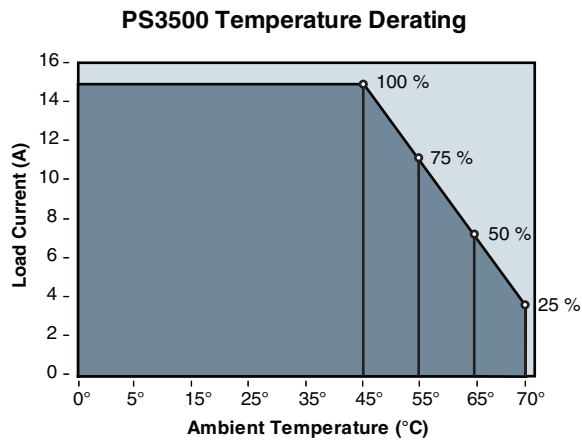


PS3500-TB-6



Release date 2013-03-05 17:10 Date of issue 2013-03-05 911109_eng.xml

Curves



Release date 2013-03-05 17:10 Date of issue 2013-03-05 911109_eng.xml