

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.

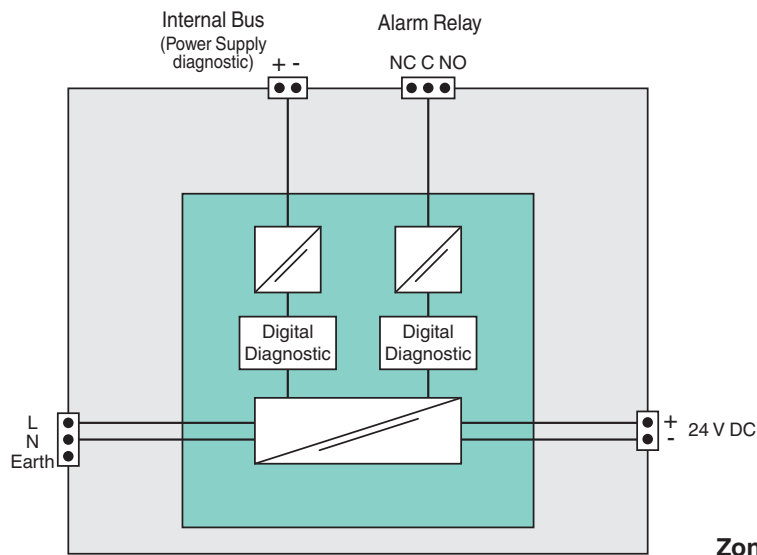
Universal input power is standard and allows a battery backup, eliminating the need for a UPS connection. The power supply modules are highly efficient (up to 91%) and use natural convection cooling.

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

Assembly



Connection



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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	⊕ IIB 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

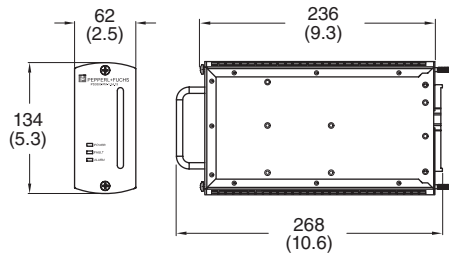
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General information

Supplementary information

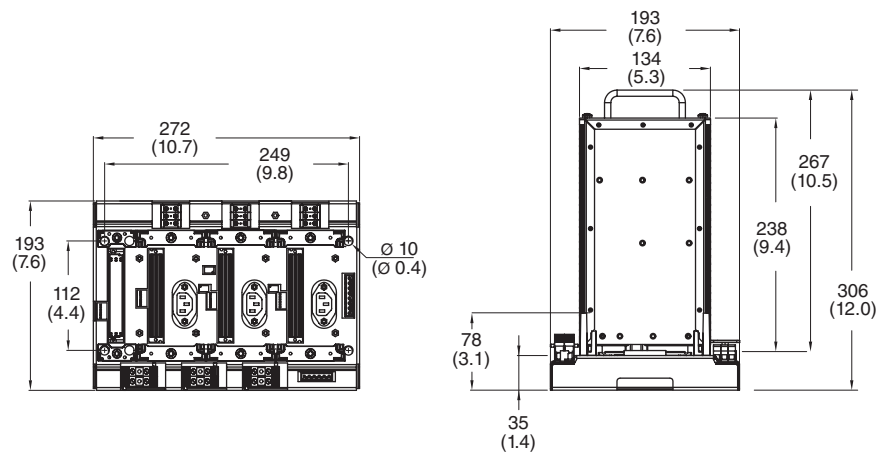
Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com.

Dimensions mm (in)

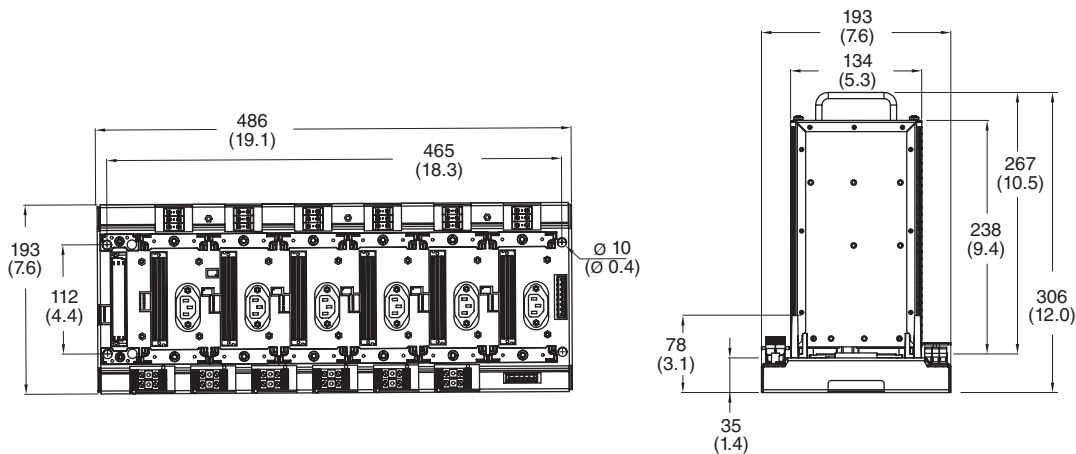


System dimensions mm (in)

PS3500-TB-3

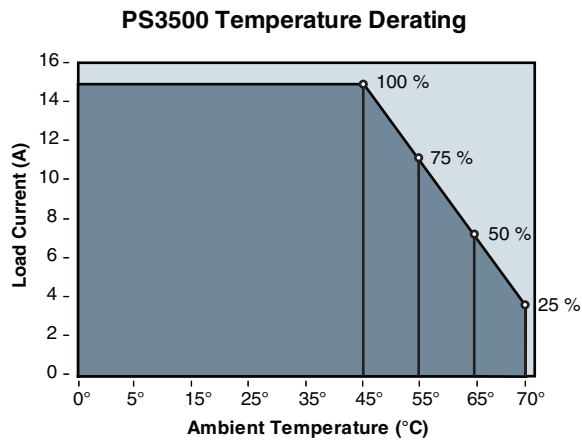


PS3500-TB-6



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Curves



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