

P R B X

POWERBOX Marine Line
PT505-48 Series
250W
Single Output
DC/DC DIN-Rail Switch Mode Power Supply

Features

Input 36 – 60 Vdc
Efficiency above 88%
Adjustable output
Overload and overvoltage protection
Thermal overload protection
Conformal coating
DC OK signal and potential free contact
Cooling by free air convection
DIN-Rail mounting on back or side
RoHS compliant
MTBF (acc. MIL-HDBK-217F): 700000 hours

Input

Input range	36-60VDC.
Inrush current	20A, cold start @ 48VDC / 25°C.
Input current	<5,5A @ 48VDC.
Input fuse	20AT, internal, not user serviceable.
Efficiency	>90%.

Output

Output voltage	24V, adjustable 23-29V.
Output power	250W.
Minimum load	0A.
Load regulation	±0.5%.
Temperature coefficient	±0.02%/°C.
Overvoltage protection	32V.
Overload protection	Hiccup mode. Latching optional.
Peak short circuit current	20A (≤100ms).
Overtmp. protection	±90°C internal temperature.
Turn-on delay	≤1s @ 18VDC.
DC OK signalling	Green LED on front.
	Open collector; active low; <25mA,
	<30V when not active. Potential free contact;
	active closed; I <1A, open voltage <30V.

Environmental

Thermal performance	
Operating temperature	–25°C to +70°C without derating.
Storage temperature	–40°C to +85°C.
Humidity	5-95%, condensing @ +55°C.
	Conformal coating.
Vibration	EN60068-2-6 1g; 50 – 150 Hz (1 octave/min).
Altitude	10,000 feet operating.
	30,000 feet non-operating.



General

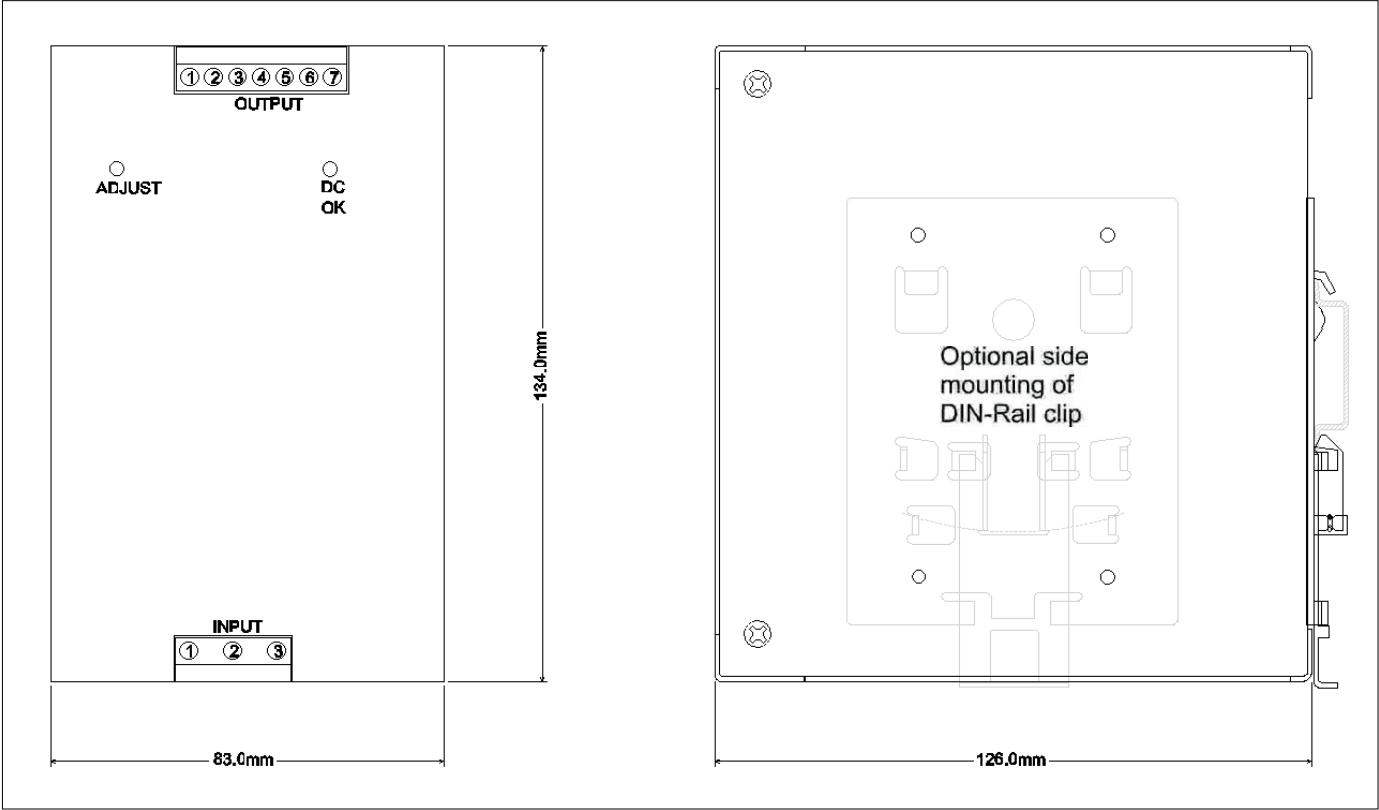
Isolation voltage	1500VAC Input/Output.
	1500VAC Input/Chassis.
Dimensions (HxWxD)	134 x 83 x 126 mm.
	Excluding DIN-Rail mounting device.
	Add 10mm for standard mounting device and
	EN50022 DIN-Rail.
Weight	Approximately 1.2 kg.
Warranty	2 years.

Standards

Safety standards	According to UL508C.
EMC Emissions	EN55022-B conducted & radiated.
Harmonics	EN61000-3-2 compliant.
ESD	EN61000-4-2 Air ±8kV. Contact ±4 kV.
Electromagnetic fields	EN61000-4-3 10V/m 8MHz-2GHz.
EFT/Burst	EN61000-4-4 2kV.
Surge	EN61000-4-5 Line-Line 0.5kV, Line-GND 1kV.
Conducted immunity	EN61000-4-6 3VRMS, 150kHz-80MHz.
Conducted LF	IEC60533 3VRMS, 50Hz-12kHz.
HV immunity	IEC60947-2 2kV, 60s.
CE	EMC Directive 2014/30/EU.
	Low Voltage Directive is 2014/35/EU.

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Mechanical



Pin Connection

Input Connector	
Pin	Function
1	GND
2	-Input
3	+Input

Output Connector	
Pin	Function
1	Output DC+
2	Output DC+
3	Output DC-
4	Output DC-
5	DC OK, Potential Free Contact
6	DC OK, Potential Free Contact
7	DC OK, Open Collector

Wire Gauge	
AWG	24-12
Solid	0,2-4mm ²
Flexible	0,2-2,5mm ²