

# P R B X

## POWERBOX Marine Line PT511 Series 500W Single Output DC/DC DIN-Rail Power Supply

### Features

GL approved for bridge use
EN60945 compliant
Efficiency above 90%
Adjustable output
Overload and overvoltage protection
Thermal overload protection
Conformal coating
DC OK signal and potential free contact
Internal redundancy diode
Active current sharing
Cooling by free air convection
RoHS compliant
MTBF (acc. MIL-HDBK-217F): 700000 hours

### Input

Input range	18-32VDC.
Inrush current	20A, cold start @ 24VDC/25°C.
Input current	<32A @ 24VDC.
Input fuse	35AT, internal, not user serviceable.
Efficiency	>93%.

### Output

Output voltage	24V, adjustable 23-29V.
Output power	500W.
Minimum load	0A.
Load regulation	±1%.
Temperature coefficient	±0.02%/°C.
Overvoltage protection	<35V.
Overload protection	110-130% of output. Constant current mode.
Peak short circuit current	30A (<100ms).
Overtemp. protection	±90°C internal temp.
Turn-on delay	<2s @18VDC.
Share bus	Single wire bus.
Redundancy	Internal diode.
DC OK signalling	Green LED = DC OK Red LED = DC Fail 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%, non-condensing @ +55°C. Conformal coating.
Vibration	Germanischer Lloyd table 3.16 High vibrationstrain. ±1.6mm displacement, 2-25Hz. 4g; 25-100Hz (1 octave/min).
Altitude	10,000 feet operating. 30,000 feet non-operating.

### General

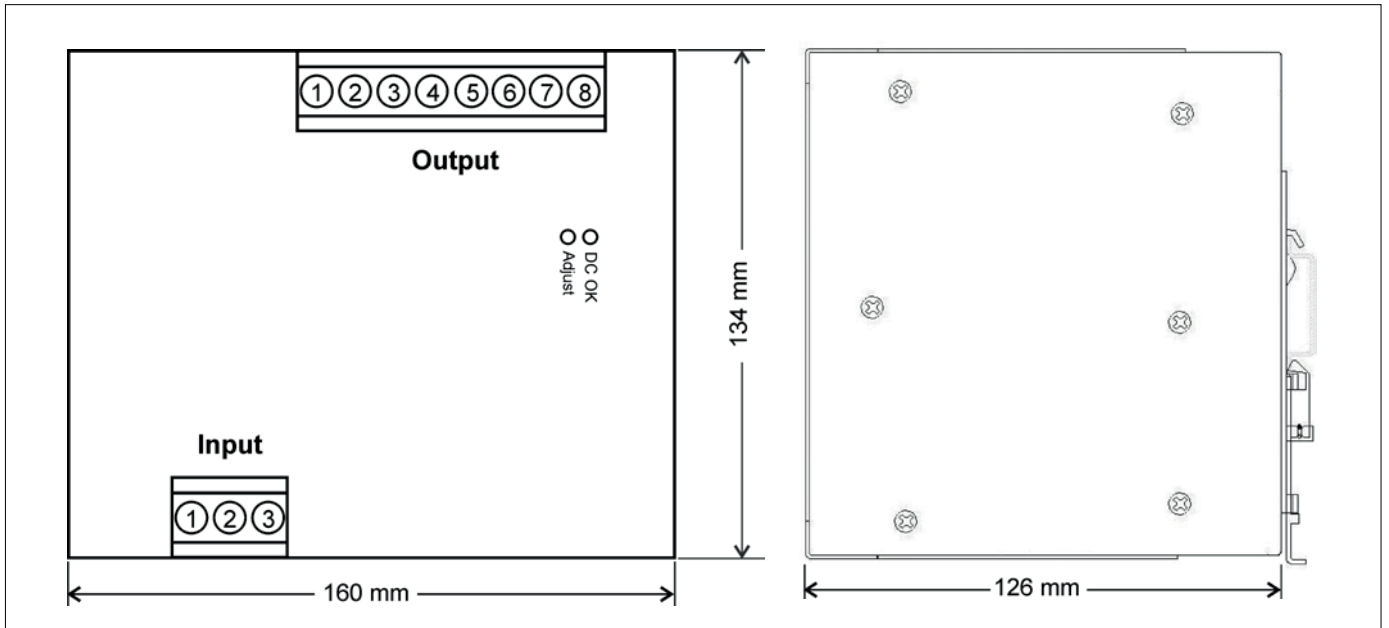
Isolation voltage	1500VAC Input/Output. 1500VAC Input/Chassis.
Dimensions (HxWxD)	134 x 160 x 126 mm, excluding DIN-Rail mounting device. Add 10mm for standard mounting device and EN50022 DIN-Rail.
Warranty	2 years.

### Standards

Safety standards	According to UL508C.
EMC Emissions	EN60945 conducted & radiated.
Harmonics	EN61000-3-2 compliant.
ESD	EN61000-4-2 Air ±8kV, Contact ±4kV.
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.
Pending	Germanischer Lloyd Environmental category: D, EMC1. Guidelines for the Performance of Type Approvals Chapter 2, Edition 2003.
CE	EMC Directive 2014/30/EU. Low Voltage Directive is 2014/35/EU.

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 500W  
 Single Output  
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Mechanical



Pin Connection

**Input Connector**

Pin	Function
1	Ground
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
8	CSCurrent Share Bus

**Wire Gauge**

Solid	0,2-6mm <sup>2</sup>
Stranded	0,2-4mm <sup>2</sup>

Specifications are subject to change without notice.