

P R B X

POWERBOX Marine Line PT502 Series 120W Single Output AC/DC DIN-Rail Switch Mode Power Supply

Features

GL Approved for bridge use
EN60945 compliant
Universal input (90 – 265Vac)
Up to 88% efficiency
Active Power Factor Correction
Adjustable output
Overload and overvoltage protection
Conformal coating
Thermal overload protection
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

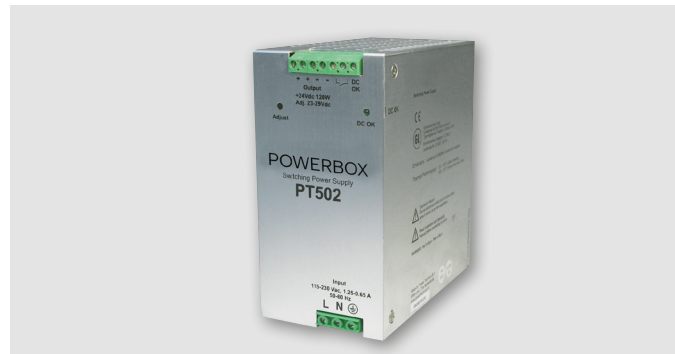
Input range 90-265VAC, 125-375VDC.
Frequency 45-63 Hz. 440Hz with reduced PFC.
Inrush current 30A, cold start @ 230VAC/25°C.
Input current <0.65A @ 230VAC.
Input fuse 1.5AT, internal, not user serviceable.
Efficiency 88%.
Leakage current <3.5mA.

Output

Output voltage 24VDC, adjustable 23-29V.
Output power 120W.
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 7A (<100ms).
Overtemp. protection ±90°C internal temperature.
Turn-on delay <2s @ 90VAC.
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 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 vibration strain ±1.6 mm displacement;
2 – 25 Hz.
Altitude 10,000 feet operating.
30,000 feet non-operating.

General

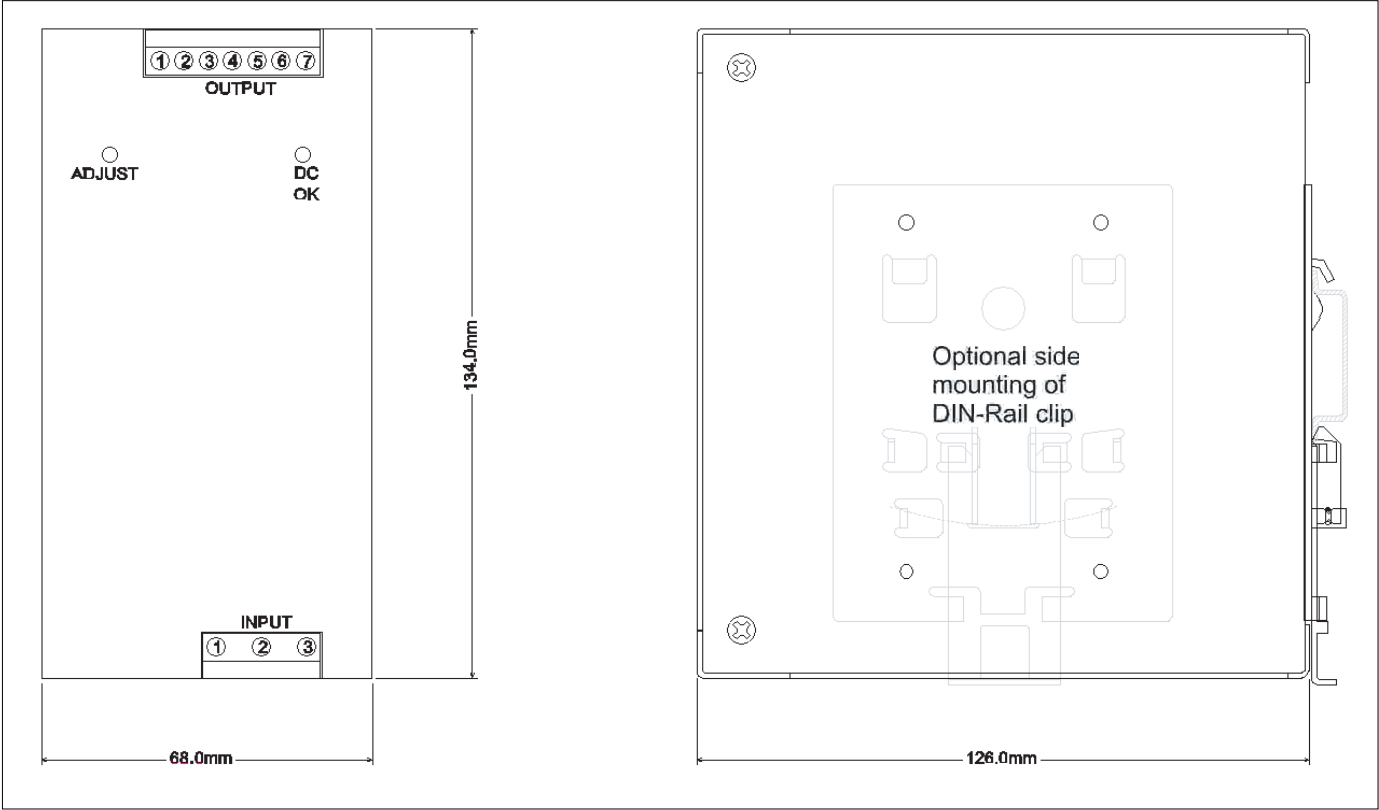
Isolation voltage 2000VAC Input/Output.
2000VAC Input/Chassis.
Dimensions (HxWxD) 134 x 68 x 126 mm.
Excluding DIN-Rail mounting device.
Add 10mm for standard mounting device and
EN50022 DIN-Rail.
Weight Approximately 0.9 kg.
Warranty 2 years.

Standards

Safety standards According to UL508C.
EMC Directive 89/336/EEC and 92/31/EEC and 93/68/EEC
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.
GL approval Germanischer Lloyd Certificate 33 853-06 HH.
Environmental category: D, EMC1.
Guidelines for the Performance of Type
Approvals Chapter 2, Edition 2003.
CE approval EMC Directive 2014/30/EU.
Low Voltage Directive is 2014/35/EU.

POWERBOX Marine Line
PT502 Series
120W
Single Output
AC/DC DIN-Rail Switch Mode Power Supply

Mechanical



Pin Connection

Input Connector

Pin	Function
1	Line
2	Neutral
3	Safety Ground

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

Specifications are subject to change without notice.