

PT505 250W DIN-Rail DC/DC power supply for marine and offshore applications



- GL Approved for bridge use
- EN60945 compliant
- Input 18 - 32 Vdc
- Efficiency above 88%
- Adjustable output
- Overload and overvoltage protection
- Thermal overload protection
- DC OK signal and potential free contact
- Conformal coating
- Cooling by free air convection
- DIN-Rail mounting on back or side
- RoHS compliant
- MTBF (acc. MIL-HDBK-217F): 700000 hours

Input

Input Range	18 - 32 V _{dc}
Inrush Current	20 A; cold start @ 25°C
Input current	<11.4 A @ 24 V _{dc}
Input fuse	20 AT; internal, not user serviceable
Efficiency	>88%

EMC Specifications

Emissions	EN60945	conducted & radiated
Harmonics	EN61000-3-2	compliant
ESD	EN61000-4-2	Air ± 8 kV
		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	3V _{RMS} , 150kHz-80MHz
Conducted LF	IEC60533	3V _{RMS} , 50Hz-12kHz
HV immunity	IEC60947-2	2kV, 60s

Output

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

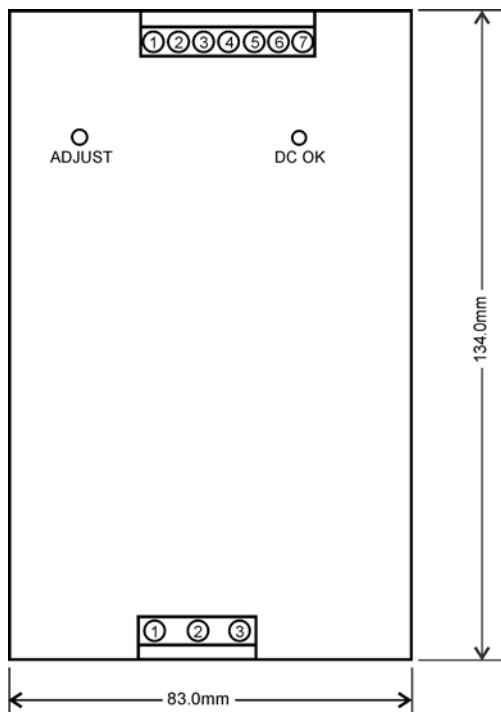
Environmental

Thermal performance	
Operating	-25 - +70°C without derating
Storage	-40 - +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
	4g; 25 - 100 Hz (1 octave/min)
Altitude	10,000 feet; operating
	30,000 feet; non-operating

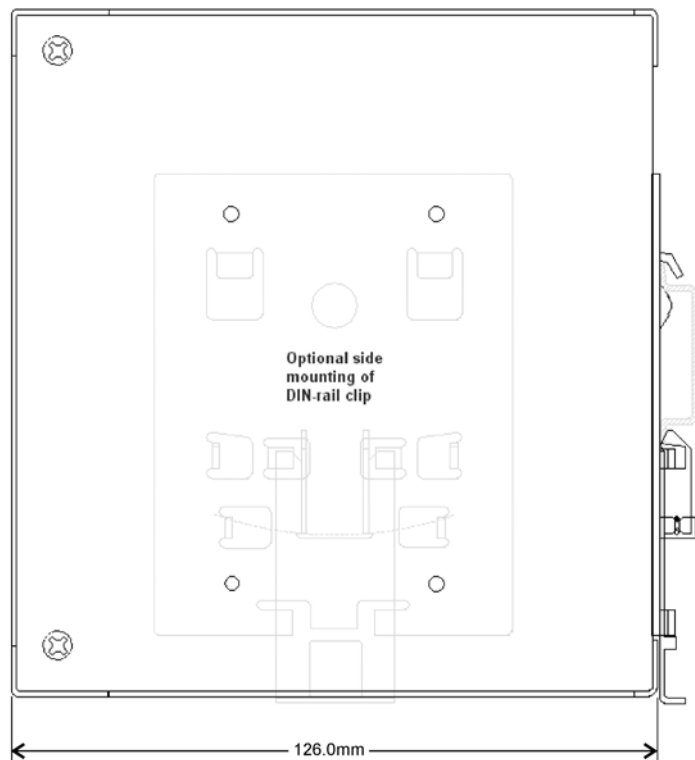
General

Isolation voltage	Input/Output	1500 V _{ac}
	Input/Chassis	1500 V _{ac}
Safety	According to UL508C	
Weight	Approximately 1.2 kg	
Warranty	2 Years	

Front view



Side view



Input Connector

Pin Function

- | | |
|---|---------|
| 1 | GND |
| 2 | - Input |
| 3 | + Input |

Dimensions

Height 134 mm

Width 83 mm

Depth 126 mm Excluding DIN-Rail mounting device

Add 10 mm for standard mounting device and EN50022 DIN-Rail

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 |

Approvals



Germanischer Lloyd Certificate 33 853-06 HH
Environmental category: D, EMC1
Guidelines for the Performance of Type
Approvals Chapter 2, Edition 2003



Low Voltage Directive 73/23/EEC and 93/68/EEC
EMC Directive 89/336/EEC and 92/31/EEC and 93/68/EEC

Wire Gauge

- | | |
|----------|---------------------------|
| AWG | 24 – 12 |
| Solid | 0.2 – 4 mm ² |
| Flexible | 0.2 – 2,5 mm ² |

Other Power Technics products for Marine and Offshore Applications

PT506	75 W	DIN-Rail AC/DC Power Supply
PT502	125 W	DIN-Rail AC/DC Power Supply
PT503	250 W	DIN-Rail AC/DC Power Supply
PT504	500 W	DIN-Rail AC/DC Power Supply

Specifications subject to change without notice

Rev. 4