Martek Power
750W ASP Series
Datasheet

DC/AC inverter for railway applications

Description

The 750W At-Seat-Power series is a range of medium power inverters that provide a 230V ac true sinewave output with very low distortion. Designed for connection directly to the train auxiliary supply, the inverters incorporate surge and transient filtering, ensuring compliance with both the traditional and latest rail specifications and norms for protection and EMC. The rugged construction and various mounting options ensure compliance with vibration and shock requirements.

Special features include:

- True sinewave output
- Very low distortion
- Ideal for mobile phone and laptop charging
- Low profile for behind seat mounting
- IP65 rated main enclosure
- RCBO output protected behind lockable access door

Input specifications

The following input voltage versions are available as standard:

110V	(66.0 - 137.5V)	dc	(Suffix A)	
72V	(43.2 - 90.0V)	dc	(Suffix D)	
52V	(31.2 - 65.0V)	dc	(Suffix C)	
36V	(21.0 - 50.4V)	dc	(Suffix F)	
24V	(16.8 - 33.6V)	dc	(Suffix B)	(24V version de-rated to 600W)

Parameter	Detail
Input Ripple	To RIA 13 and EN 50155
Input Protection	Reverse polarity protection via shunt diode that will trip an external circuit breaker. Surges and transients EN 50155
Inrush Current	5 x nominal current (after 0.1ms)
Efficiency	85% typically
Hold-up time	10ms to EN 50155 Class S2

Output specifications

Parameter	Detail
Maximum Output Power	750W continuous (800W peak for 15 seconds) Maximum base plate temperature of 65°C for full power
Output Voltage	230V ac
Setting Tolerance	±1% at 50% load, 15°C to 25°C
Output frequency	50Hz

Output specifications (Continued)

Parameter	Detail	
Frequency Tolerance	±2%	
Waveform	True Sinewave	
Harmonic Distortion	<6%	
Output Current	Nominal 3.3 Amps	
Line & Load Regulation	±4.0% combined	
Temperature Coefficient	<0.02% / °C	
Output Ripple	Typically 5% Pk-Pk of Output Voltage	
Short circuit protection	Operates instantaneously if output exceeds 10A (typically) Auto recovery	
Overload protection	Inverter shuts down if output power exceeds approximately 800W for longer than 16 to 20 seconds. LED indications provided. Resets automatically after approximately 10 seconds.	
Earth leakage protection	MCBO (combined RCD and circuit breaker) also allows physical isolation of output	
Thermal Protection	Output shuts off when safe internal temperature is exceeded. Auto recovery	
Isolation	Input to Output Input to Case Output to Case	1.0kV ac (tested at 1.5kV dc) 1.0kV ac (tested at 1.5kV dc) 1.0kV ac (tested at 1.5kV dc)
Indicators & signalling	Input present Output present Overload trip	Green LED Green LED Red LED

Environmental details

Parameter	Detail
Operating Temperature	-25°C to +55°C (no derating)
Storage Temperature	-40°C to +80°C
Cooling	By convection Maximum base plate temperature of 65°C for full power
Relative Humidity	95% max
Shock & Vibration	EN 50155 (EN 61373)
Environmental Protection	IP65

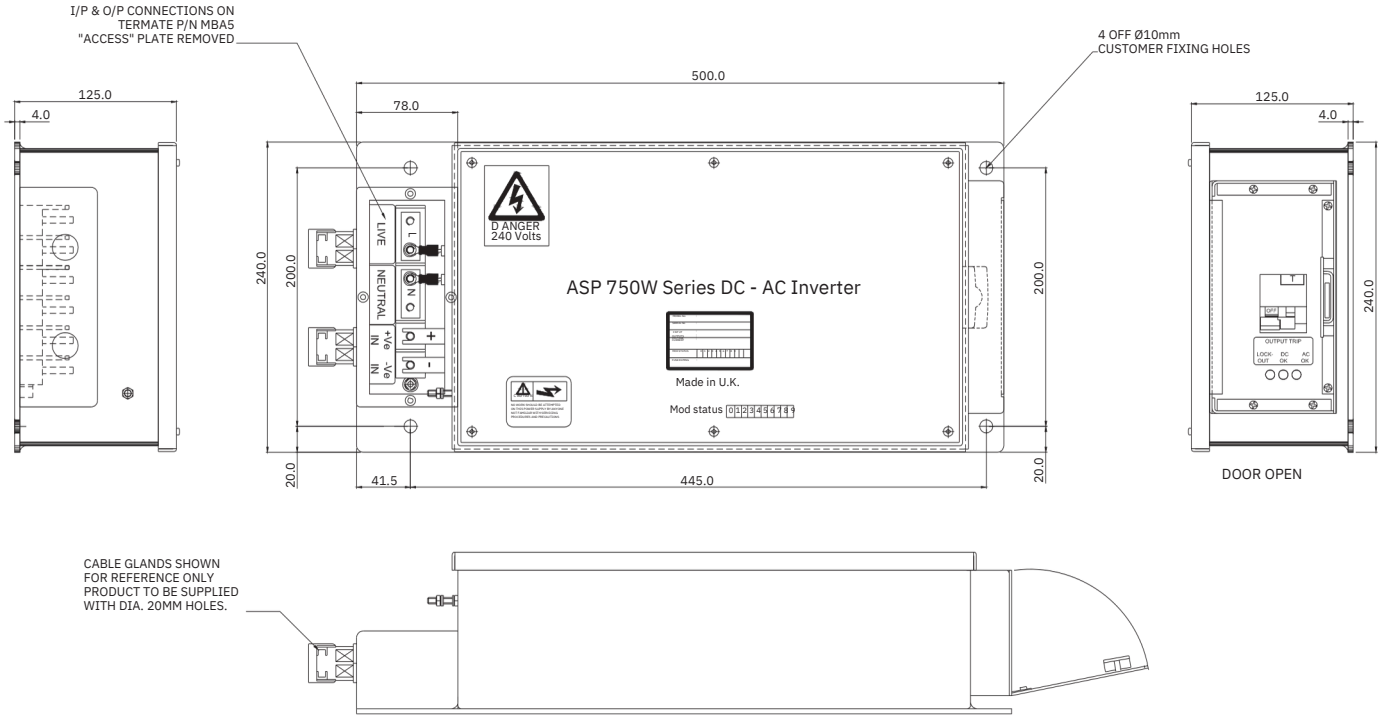
Applicable norms

Parameter	Detail
EMC	EN 50155 (2007), EN 50121-3-2 (2006)
Other	EN 50155 (2007)

Mechanical characteristics

Parameter	Detail
Construction	Fully enclosed in sealed aluminium case
Dimensions	Length = 500 mm (includes mounting plate) Width = 240 mm Height = 125mm
Weight	<6kg
Connections	M5 studs within the main enclosure accessible via cable glands
Fixings	See below for guidance

Technical drawing



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