



DC/AC inverter for railway applications



Description

The 750W At-Seat-Power series is a range of medium power inverters that provide a 230Vac 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 voltages 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 EN50155 |
| Input Protection | Reverse polarity protection via shunt diode that will trip an external circuit breaker. Surges and transients EN50155 |
| Inrush Current | 5 x nominal current (after 0.1ms) |
| Efficiency | 85% typically |
| Hold-up time | 10ms to EN50155 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 | 230Vac |
| Setting Tolerance | ±1% at 50% load, 15°C to 25°C |
| Output frequency | 50Hz |



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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 1.0kV ac (tested at 1.5kV dc) |
| | Input to Case 1.0kV ac (tested at 1.5kV dc) |
| | Output to Case 1.0kV ac (tested at 1.5kV dc) |
| | Relay Contacts 1.0kV ac |
| Indicators & signalling | Input present Green LED |
| | Output present Green LED |
| | Overload trip 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 |

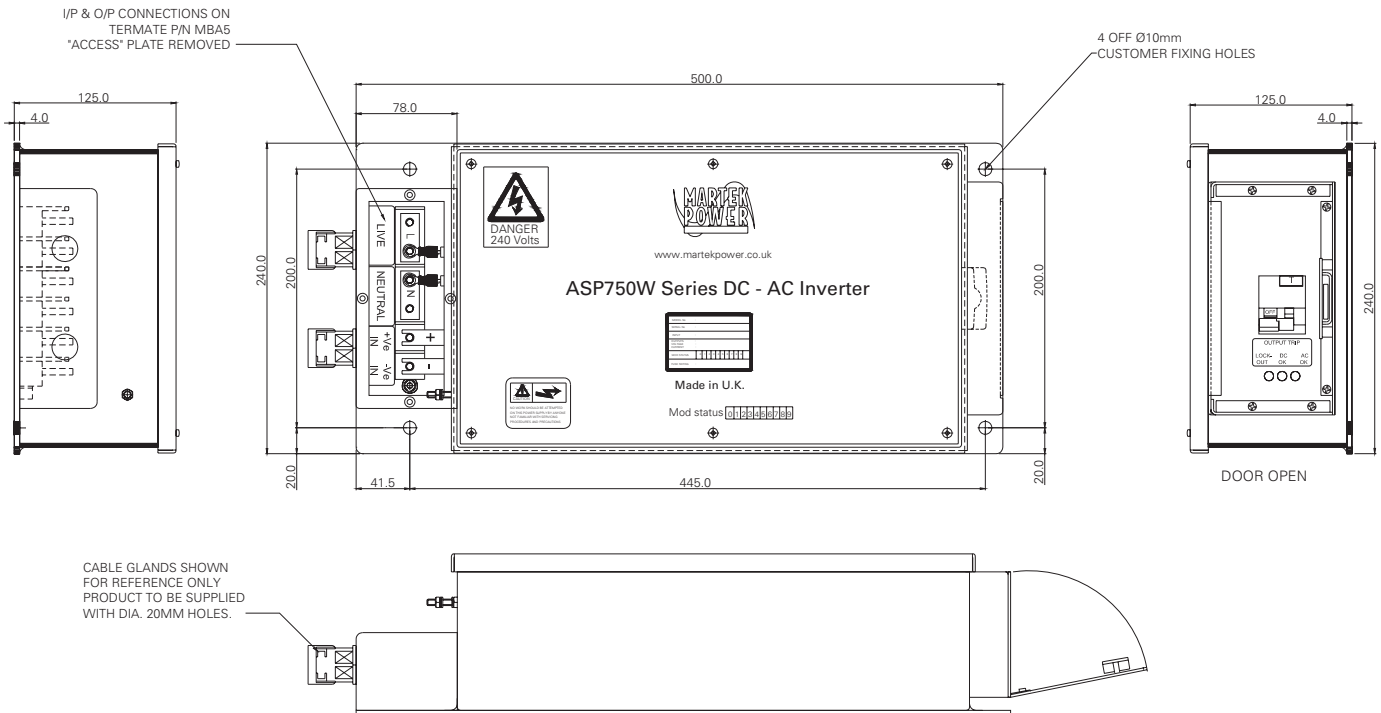
Applicable norms

| Parameter | Detail |
|-----------|------------------------------------|
| EMC | EN50155 (2007), EN50121-3-2 (2006) |
| Other | EN50155 (2007) |

Mechanical characteristics

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

Technical drawing



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