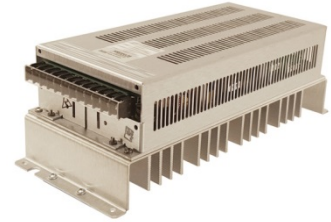


250W, Dual-output, PFC-input AC-DC Power Supply with Convection Cooling by Heatsink Assembly Fins for Railway and other Heavy Duty Applications PFC 252R-HSA-F3 Series



- Field-proven rugged design
- For train and mobile applications
- Meets requirements of EN50155
- Two individually regulated outputs
- Convection cooling via heatsink assembly
- Full electronic protection

This rugged, railway quality dual output power supply with PFC-input utilizes field-proven PFQ 252 technology to generate the required output power. It is based a mature design with a track record in numerous applications. Pure convection cooling is achieved by a heatsink assembly attached to the under-surface of the unit. Ruggedizing and conformal coating provide immunity to shock, vibration, humidity and airborne contaminants. Full electronic protection, low component count, large design headroom and the exclusive use of components with established reliability contribute to a high MTBF. The unit meets the requirements of EN50155 for electronic equipment used on railway rolling stock. It is manufactured at our plant under strict quality control. The power supply is chassis-mounted. A DIN-rail option is available for trackside applications.

SPECIFICATIONS

Input Voltage

95V to 264Vac universal, 47-63Hz
Input current: 3.2Arms max at 95V
Power factor meets EN61000-3-2
Consult factory for other voltages

Input Protection

Inrush current limiting
Varistor
Internal safety fuse
Lower voltage than the specified minimum input will not damage the unit

Isolation

2250Vdc input to chassis
4300Vdc input to output
8mm spacing
1000Vdc output to chassis

Standards

Designed to meet EN 60950-1 and EN 50155

Immunity

Meets criteria as requested of EN50155, EN50121-3-2 EN 50121-4 including:
EN61000-4-2 (ESD)
EN61000-4-3 (RF Immunity)
EN61000-4-4 (Fast Transients)
EN50155 (Surge)
EN61000-4-6 (Conducted Immunity)
EN50155 (Voltage Variations)

EMI

EN50121-3-2

Hold Up Time

Min. 5ms at nominal input for 5% Drop of the output voltage

Switching Frequency

80kHz \pm 5kHz

Output Voltage

V1: any voltage 12V to 110Vdc
10A to 14A max
V2: any voltage 5V to 24Vdc
8A to 2A
Both outputs are individually regulated.
Returns are common
Consult factory for other voltages

Redundancy diode

None installed
Available as option

Line/Load Regulation

\pm 1% combined from no load to full load on both outputs

Dynamic Response

Max 5% voltage deviation for 10% to 50% load step, with better than 1msec recovery time

Output Ripple/Noise

Better than 1% of output voltage peak to peak or 0.2% RMS of the output voltage (20MHZ BW) on both outputs

Overload Protection

Rectangular current limiting with short-circuit protection (hiccup type)

Output Overvoltage Protection

V1: double regulator loop
V2: transistor

Efficiency

80 to 90% at full load depending on input/output configuration

Operating Temperature

-25°C to +60°C cold-plate temperature range for full specification without derating. Consult factory for extended temperature range

Temperature Drift

0.03% per °C over operating temperature range

Cooling

Natural air convection by a heatsink assembly attached to the under-surface of the unit

Environmental Protection

Ruggedizing
Conformal coating

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5 – 95% non-condensing

MTBF

Min. 125,000 hours @45°C
Demonstrated MTBF is significantly higher

Indicators

Green output ON LED visible through cooling slots

Control Input

None

Alarm Output

None
Available as option

Package/Dimensions (W x H x L)

F3 on HSA heatsink block:
132 x 102 x 323mm
(5.2" x 4" x 12.7")

Weight

3kg (6.6 lbs)

Connections

12-pole barrier type terminal block with 9.5mm spacing

RoHS

Compliant

Warranty

Two years subject to application within good engineering practice

Terminal Block Pin-out

DC OUTPUT						DC INPUT					
NOT USED	NOT USED	V2	V1	RTN	RTN	NOT USED	NOT USED	NOT USED	GND	N	PH
1	2	3	4	5	6	7	8	9	10	11	12

Enhancements to these general specifications and customizing can be accommodated upon request. Specifications are subject to change.

Designer and manufacturer of DC-DC converters, AC-DC power supplies, DC-AC sine wave inverters, AC-AC frequency converters, DC-output UPS systems, complete rack mount systems and DC-input fluorescent lamp inverters since 1982. Custom or standard. ABSOPULSE is a ABBT-approved Facility.



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