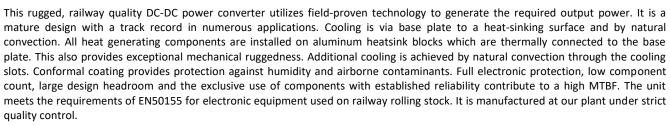
50W, Rugged, Railway Quality DC-DC Converter MIM 50R-FM Series

- Rugged, field-proven design
- For train and mobile applications
- Conduction/convection cooled
- Full electronic protection
- Wide input ranges (EN50155)
- Compact size (66 x 38 x 147.3 mm)



SPECIFICATIONS

Input Voltage (nominal, range)

24Vdc (14.4 – 34V) 48Vdc (29 – 67V)

72Vdc (43 - 101V)

96Vdc (58 – 135V)

110Vdc (66 – 154V) Other inputs available on request

Input Protection

Inrush current limiting
Surge protection
Reverse polarity protection
Internal safety fuse
Lower voltage than the specified
minimum input will not damage the
unit.

Isolation

1500Vdc input to chassis 3000Vdc input to output 1500Vdc output to chassis

Standards

Designed to meet EN62368-1 and EN50155

ImmunityMeets criteria of EN 50155 and

EN50121-3-2 including: EN61000-4-2 (ESD) EN61000-4-3 (RF Immunity) EN61000-4-4 (Fast Transients) EN50155 (Surge)

EN61000-4-6 (Conducted Imm.) EN50155 (Voltage Variations) EMI

EN55032 Class A with margins

Switching Frequency

135kHz ±5kHz

Output Voltage/Current

12Vdc/4A or 24Vdc/2A
Output is floating, either terminal
can be grounded
Other outputs available on request

Redundancy Diode

None

Line/Load Regulation

±1% combined from no load to full load.

Dynamic Response

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

Output Ripple / Noise

Better than 1% peak to peak or 0.2% RMS of the output voltage (20MHz BW)

Output Overload Protection

Rectangular current limiting with hiccup-type short-circuit protection

Output Overvoltage Protection

Transzorb across the output

Efficiency

Min. 80% at full load

Operating Temperature Range

-25°C to +70°C cold plate temperature for full specification

Temperature Drift

0.03% per °C over operating temperature range

Cooling

Conduction via base plate and natural convection

Environmental Protection

Ruggedizing Conformal coating

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5 - 95% non-condensing

MTBF

150,000 hours @ $45\,^{\circ}$ C Demonstrated MTBF is significantly higher

Indicators

None

Control Input

None

Alarm Output

None

Package / Dimensions (W x H x L)

FM: 66 x 38 x 147.3 mm 2.6" x 1.5" x 5.8"

Includes baseplate and screws on sides of unit, excludes terminals Mounting holes are clear

Weight

400g (0.9 lb)

Connections

5-pole terminal block (3/8" spacing)

RoHS Compliance

Compliant

Warranty

Two years subject to application within good engineering practice

ABSOPULSE power supplies are designed and built to customer requirements. The specifications on this data sheet are generic guidelines only and are subject to change.

OEM of industrial and railway quality DC-DC converters, AC-DC power supplies and battery chargers, DC-AC sine-wave inverters, phase and frequency converters, DC-output UPS systems and complete power systems in 19" and 23" racks since 1982. Custom or standard. ABSOPULSE is a BABT-approved Facility.



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