

600Vdc Input, 150W Rugged Industrial Quality DC/DC Converter HVI 150-F2 Series

- Rugged, industrial quality
- Wide DC-input voltage range
- Field-proven design
- Conduction/convection cooled (no fans)
- Full electronic protection
- Wide DC-input voltage range



This rugged, industrial quality DC/DC converter series uses field proven design topology to generate the specified output power. It is a mature design with a track record in numerous applications. The unit accepts a 600Vdc input voltage. To ensure high reliability and long operating life, all critical components on the primary side are designed and tested for corona inception levels that are significantly higher than the operating voltages. Full electronic protection, low component count, large design headrooms, and the use of components with established reliability result in a high MTBF. Cooling is via base plate to a heat-sinking surface and by natural convection. Customized versions are also available. The unit is manufactured at our plant under strict quality control.

SPECIFICATIONS

Input Voltage

600Vdc nominal
450V- 800V operating range
Other input range on request

Input Protection

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

Isolation

3000Vdc input to chassis
3000Vdc input to output
5600Vdc type test
500Vdc output to chassis

Standards

Designed to meet EN 60950 and related standards

EMI

EN 55022 Class A with margins

Switching Frequency

47kHz +/- 2kHz

Output Voltage

24Vdc or 48Vdc
Output is floating; either terminal can be grounded
Other outputs on request

Redundancy Diode

None
Available as option

Line/Load Regulation

+/-1% combined from zero 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 0.2% rms or 1% pp of the output voltage (20MHz BW)

Output Overload Protection

Rectangular current limiting with short-circuit protection (hiccup)
Thermal shutdown in case of insufficient airflow (self-resetting)

Output Overvoltage Protection

Second regulator loop, completely stable and independent of main regulator loop

Efficiency

Typically 80% at full load

Operating Temperature Range

0°C to 50°C cold plate temperature for full specification without derating
Extended temperature ranges available.

Temperature Drift

0.03% per °C over operating temperature range

Cooling

Conduction to customer heatsink or chassis and natural convection

Environmental Protection

Basic ruggedizing and conformal coating
Heavy ruggedizing available on request

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5 – 95%, non condensing

MTBF

130,000 hours @ 45 °C
Demonstrated MTBF is significantly higher.

Indicators

Green "Output ON" LED visible through cooling slots

Control Input

None
Available as option

Alarm Outputs

None.
Available as option

Package/Dimensions (W x H x L)

F2: 114 x 58 x 256 mm
(4.5" x 2.3" x 10.1") including terminal block and flanges.
Mounting holes are clear

Weight

1.2kg (2.6 lbs)

Connections

Barrier type terminal block with 3/8" spacing

RoHS Compliance

Fully compliant

Warranty

Two years subject to application within good engineering practice

Terminal Block Pin-Out

DC OUTPUT				GND	DC INPUT				
NOT USED	+	-	⊥	NOT USED	+	NOT USED	-	NOT USED	
1	2	3	4	5	6	7	8	9	



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