

## 800Vdc Input, 2000W Rugged, Industrial Quality DC/DC Converter HVI 2K-F6W



- Rugged industrial quality
- High input voltage
- Wide DC-input voltage range
- Full electronic protection
- Cooling by high quality built-in fans

This rugged, industrial quality DC-DC power converter utilizes field-proven technology to generate the required output power. It is based on mature design topology with a track record in numerous applications. Cooling is by high quality built-in fans with which draw air into the unit, and by conduction via the baseplate. All heat generating components are installed on aluminum heatsink blocks that are thermally connected to the base plate. This also ensures exceptional ruggedness. Conformal coating provides protection against humidity and airborne contaminants. An optional built-in redundancy diode allows for paralleling and N+1 operation or back-up battery connected. 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 is manufactured at our plant under strict quality control.

### SPECIFICATIONS

#### Input Voltage

800Vdc nominal  
700-900Vdc operating range  
Other input range on request

#### Input Protection

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

#### Isolation

3000Vdc input-chassis  
4300Vdc input-output  
5600Vdc type test  
1000Vdc output-chassis

#### Standards

Designed to meet EIC 61010-1 and related standards

#### EMI

EN55032 Class A with margins

#### Switching Frequency

55kHz  $\pm$ 3kHz

#### Output Voltage

24V, 28V, 36V, 48V or 110Vdc  
2000W continuous  
Output is floating; either terminal can be grounded  
Other outputs on request

#### Redundancy Diode

None  
Available as option

#### Line/Load Regulation

Better than  $\pm$ 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% Vrms or 1% Vpp of the output voltage (20MHz BW)

#### Output Overload Protection

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

#### Output Overvoltage Protection

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

#### Efficiency

Min 80% at full load depending on input/output configuration

#### Operating Temperature Range

0°C to 50°C for full specification  
Wider range available as option

#### Temperature Drift

0.03% per °C over operating temperature range

#### Cooling

Forced air by high quality built-in fans and conduction to customer heat sink or chassis  
Fans draw air into the unit.

#### Environmental Protection

Ruggedizing  
Conformal coating  
Heavy ruggedizing available as option

#### Shock/Vibration

IEC 61373 Cat 1 A&B

#### Humidity

5 – 95% non-condensing

#### MTBF

120,000 hours @45°C (fans excluded)  
Demonstrated MTBF is significantly higher.

#### Indicators

Green Output ON LED visible through the cooling slots

#### Control Input

None on standard version  
Available as option

#### Alarm Outputs

None  
Available as option

#### Package/Dimensions (W x H x L)

F6W: 254 x 65 x 349 mm  
10" x 2.6" x 13.75"  
including terminal block and mounting flanges  
Mounting holes are clear

#### Weight

Approx. 3.4 kg (7.5 lb)

#### Connections

Input: Phoenix FRONT 4-V-7.62 assembly;  
Output: Terminal block or threaded M6 studs with stud boots

#### RoHS Compliance

Compliant

#### Warranty

Two years subject to application within good engineering practice

**The specifications on this data sheet are generic and are subject to change. Enhancements to these specifications can be provided upon request.**

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



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