

1100Vdc Input, 600W Rugged Industrial Quality DC-DC Converter

HVT 600-F7W Series

- Rugged industrial quality
- High DC-input voltage
- Wide DC-input voltage range
- Field-proven design
- Full electronic protection
- Cooling by high quality built in fans
- N+1 redundancy available



This rugged, industrial quality DC-DC power converter utilizes field-proven HV1H 500 topology to generate the required output power. It is based on a mature design concept with a track record in numerous applications. Cooling is by high quality built-in fans and by conduction via the baseplate. The fans draw air into the unit. All heat generating components are installed on aluminum heatsink blocks which are thermally connected to the base plate. This also provides exceptional mechanical ruggedness. Conformal coating provides protection against humidity and airborne contaminants. An optional built-in redundancy diode allows for a number of units to be connected in parallel to achieve higher output power or N+1 redundancy. This output separation diode also makes the unit suitable for battery charging applications. 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

1100Vdc nominal
750-1400Vdc operating range
Other input range on request

Input Protection

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

Isolation

3000VDC input to chassis
4300VDC input to output,
5600 type test
1800VDC output to chassis

Standards

Designed to meet EN 61010-1 and
corresponding standards

EMI

EN55032 Class A with margins

Switching Frequency

55kHz \pm 3kHz

Output Voltage

36V, 48V, 110V, 125dc
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% rms or 1%
pp of the output voltage
(20MHz BW)

Output Overload Protection

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

Output Overvoltage Protection

Double regulator loop

Efficiency

Min. 85% at full load depending
on input/output configuration

Operating Temperature

0°C to 50°C for full specification
without derating
Extended temperature ranges
available on request

Temperature Drift

0.03% per °C over operating
temperature range

Cooling

Cooling by high quality built-in fans
and by conduction to customer
heatsink or chassis

Environmental Protection

Basic ruggedizing
Conformal coating
Heavy ruggedizing available
as option

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5 – 95%, non condensing

MTBF

105,000 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 (WxHxL)

F7W: 280 x 67 x 356mm
(11" x 2.6" x 14")
Mounting holes are clear

Weight

4 kg; 9 lbs

Connections

Input: 6-pole terminal block, 3.8"
spacing
Output: 12-pole terminal block,
3/8" spacing

RoHS Compliance

Compliant

Warranty

Two years subject to application
within good engineering practice

Terminal Block Pin-out

24VDC OUTPUT												120VDC INPUT					
NOT USED	NOT USED	+	+	+	NOT USED	-	-	-	NOT USED	NOT USED	NOT USED	GND	-	-	+	+	
1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6

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

Designer and manufacturer of quality ac-dc power supplies and battery chargers, converters, inverters, dc-output UPS systems, and complete rack mount systems in 19" or 23" racks. Custom or standard. ABSOPULSE is a BABT-approved Facility.



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