

# 40W, High Reliability Power Supply for Critical Applications

## HRW 40 Series



- Rugged industrial quality
- Convection cooled
- Single output
- Fully protected
- Stock or short delivery

The HRW 40 series power supply was developed for critical industrial applications. It uses field-proven technology to generate 40W output power. It is a mature product with a track record in numerous applications. The input accepts any AC voltage from 85V to 264Vac or DC voltage from 100V to 360Vdc. Low component count, large design headroom, the use of components with established reliability and no optocouplers in feedback loop result in a high MTBF. Convection cooling is sufficient for the specified 40W output power. The HRW 40 is also fully protected. It is manufactured at our plant under strict quality control. A redundant version is also available. Typical applications for the HRW 40 include systems where a fail-safe logic supply voltage is critical and in fan drives where a fan supply voltage failure would lead to the entire system failing.

### SPECIFICATIONS

**Input Voltage**

85Vac to 264Vac; 47-420Hz  
100Vdc to 360Vdc

**Input Protection**

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

**Isolation**

2250Vdc input to chassis  
4300Vdc input to output  
500Vdc output to chassis

**Standards**

Designed to meet EN60950 and related standards

**EMI**

EN 55022 Class B

**Hold Up Time**

Minimum 10ms at full load for 5% drop of output voltage at 115V and higher input

**Output Voltages**

12Vdc/3A or 24Vdc/1.5A  
Consult factory for other output voltages.

**Redundancy Diode**

Optional

**Line/Load Regulation**

±5% combined from 10% load to full load. No optocouplers for high reliability

**Output Ripple/Noise**

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

**Overload Protection**

Current limiting with short circuit protection (hiccup mode)

**Output Overvoltage Protection**

Transzorb on output

**Efficiency**

Min 80% at full load

**Operating Temperature**

0 to +50°C with convection cooling

**Temperature Drift**

0.03% per °C over operating temperature range

**Cooling**

Convection only is sufficient

**MTBF**

500,000 hours @ 45 °C  
Demonstrated MTBF is significantly higher.

**Indicators**

None.

**Environmental Protection**

Basic ruggedizing. Full ruggedizing and conformal coating as option

**Dimensions**

PCB Size: 3" x 5"  
Component height: 1.5"  
Weight: 0.5 lb (0.25kg)

**Connections and Packaging:**

Open PCB version is standard  
Header pins with 0.156" spacing  
(Enclosed case version as option)

**Warranty**

Twelve months subject to application within good engineering practice

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

*Designer and manufacturer of quality converters, inverters, UPS systems, complete rack mount systems and DC-input fluorescent lamp inverters since 1982. Custom or standard.  
ABSOPULSE is a BAPT-approved Facility*



**ABOPULSE ELECTRONICS LTD**  
110 Walgreen Road  
Ottawa, Ontario. K0A 1L0. CANADA  
Tel: (613) 836-3511 Fax: (613) 836-7488  
E-mail: [absopulse@absopulse.com](mailto:absopulse@absopulse.com)  
[www.absopulse.com](http://www.absopulse.com)