250W, Rugged Dual-output, Industrial Quality DC-DC Converter with 200-370Vdc Input
DCH 282-F1W Series

- Rugged industrial quality
- Two regulated outputs
- Wide DC-input voltage range
- Conduction/convection cooled – no fan
- Full electronic protection
- Field-proven design concept

This rugged, industrial quality, dual-output DC-DC converter generates up to 250W continuous output power, depending on the input/output configuration. The design is based on field proven DCW 150 topology. The unit has two fully independent regulated isolated outputs. Cooling is by conduction via baseplate. Additional cooling is achieved by natural convection through the cooling slots. 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. 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**
- 200 – 370Vdc
- Consult factory for other input voltages and ranges

**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**
- Corresponding to input/output voltage:
  - 1500Vdc input to chassis
  - 2250VDC input to output
  - 500VDC min. output to chassis
  - 1500Vdc input to chassis

**Standards**
- Designed to meet EN62368-1 and related standards

**EMI**
- EN55032 Class A with margins

**Switching Frequency**
- 47kHz ±2kHz

**Output Voltage**
- V1: Any voltage 5V to 125Vdc
- V2: Any voltage 5V to 150Vdc
- The current on each output is limited to 10A
- Both outputs are fully regulated
- The outputs are floating; either terminal can be grounded
- Returns are isolated.

**Efficiency**
- Typically 85% at full load depending on input/output configuration

**Operating Temperature**
- 0°C to 50°C for full specification
- Extended temperature ranges available

**Temperature Drift**
- 0.03% per °C over operating temperature range

**Dynamic Response**
- Max 5% voltage deviation for 10% to 50% load step, with better than 1ms recovery time

**Output Ripple/Noise**
- Better than 1% of output voltage peak to peak or 0.2% RMS of the output voltage (20MHz BW)

**Output Overvoltage Protection**
- Individual current limiting with short circuit protection on both outputs (cycling mode)

**Output Overvoltage Protection**
- Double regulator loop and transzors on both outputs

**Indicators**
- Green output ON LED on both outputs, visible through cooling slots

**Control Input**
- None

**Alarm Output**
- None on standard version
- Available as option

**Package/Dimensions (W x H x L)**
- F1W: 163 x 51 x 198 mm
- 6.43” x 2” x 7.78” Includes baseplate, excludes terminals. Mounting holes are clear.

**Weight**
- 1.4 kg (3 lbs)

**Connections**
- 12-pole barrier-type terminal block, 3/8” spacing

**RoHS**
- 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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