

## 300W, IP66-Rated, Rugged Industrial, AC-DC Power Supply with Wide Input Ranges HBC 65-D3 Series (IP66)

- Packaged in waterproof enclosure
- Internal module ruggedized and conformal coated
- Single regulated output
- Full electronic protection
- Field-proven design
- N+1 redundancy available



The rugged industrial quality AC-DC power supplies utilize field proven topology to generate the required output power. They are packaged in waterproof, rugged, die cast aluminum IP66 enclosures. The input and output are via sealed cable glands, circular connectors or custom connections. The internal boards are ruggedized and conformal coated for immunity to high levels of shock and vibration. Cooling is by internal conduction to the walls of the IP66 enclosure and by baseplate to an external chassis or cabinet wall, with additional convection via the outside surface. If installed on a heat-sinking surface, cooling is further enhanced and the converters achieve higher output power. Optional built-in redundancy diode allows for parallel and N+1 operation. Full electronic protection, low component count, large design headroom, and the use of components with established reliability contribute to high MTBF. The unit is manufactured at our plant under strict quality control.

### SPECIFICATIONS

#### Input Voltage

115Vac (95 – 132V) 47 - 63Hz  
230Vac (190 – 264V) 47 - 63Hz  
250Vdc (210 – 290V)  
300Vdc (250 – 350V)  
Other voltages on request

#### Input Protection

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

#### Isolation

2250VDC input to chassis  
4300VDC input to output  
8mm spacing  
500VDC output to chassis

#### Standards

Designed to meet EN60950-1 and corresponding UL and CSA standards

#### EMI

EN55022 Class A with margins or as required

#### Switching Frequency

55KHz ±3KHz

#### Hold Up Time

Minimum 10ms at full load for 5% drop of output voltage at nominal input

#### Output Voltage/Current

12Vdc, 24Vdc, 48Vdc or 125Vdc  
300W continuous output power  
Output is floating; either terminal can be grounded  
Other outputs and increased output power on request

#### Redundancy Diode

Installed on request

#### 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

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

#### Output Overload Protection

Rectangular current limiting with short-circuit protection (no hiccup)  
Thermal shutdown in case of insufficient cooling (self resetting)

#### Output Overvoltage Protection

Double regulator loop completely stable and independent of main loop

#### Efficiency

Output voltage dependent.  
Typically 80% at full load

#### Operating Temperature Range

-25 °C to 55 °C for full specification  
Extended temperature ranges available on request

#### Temperature Drift

0.03% per °C over operating temperature range

#### Cooling

Conduction to customer heat-sink or chassis and by additional natural convection via the surface of the IP66 enclosure

#### Environmental Protection

IP66 enclosure  
Internal module: Ruggedized and conformal coated  
Potting of the internal module is also available

#### Shock/Vibration

IEC 61373 Cat 1 A&B

#### Humidity

5-100% condensing

#### MTBF

150,000 at 45°C  
Demonstrated MTBF is significantly higher

#### Indicators

None

#### Control Input

None

#### Alarm Output

Not installed  
Optional output Fail Alarm

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

D3: 360 x 160 x 90 mm  
14.2" x 6.3" x 3.5"  
D3 with baseplate:  
406 x 160 x 94 mm  
(16" x 6.3" x 3.7")

#### Weight

Approx. 4.6 kg (10 lb)

#### Connections

Internal barrier-type terminal block accessible via sealed cable glands.  
Optional connectors instead of cable glands

#### RoHS Compliance

Fully compliant

#### Warranty

Two years subject to application within good engineering practice



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