

Wall Industries, Inc.

DCHF100W SERIES

2:1 Input Voltage Range
5, 12, 24, & 48VDC Single Outputs
100 Watts Output Power
DC/DC Chassis Mount Power Converters



FEATURES

- Single Output
- RoHS Compliant
- $\pm 10\%$ Voltage Adjustment Range
- Free Air Convection
- 2:1 Input Voltage Range
- High Reliability
- Built-in EMI Filter
- 100W Output Power
- 5, 12, 24, and 48VDC Output Voltages Available
- Dimensions: 7.83 x 3.86 x 1.54 Inches
- Short Circuit and Over Current Protection

DESCRIPTION

The DCHF100W series of DC/DC power converters offers 100W of output power in a 7.83" x 3.86" x 1.54" enclosed case. This series has 2:1 input voltage ranges of 18-36VDC, 36-72VDC, and 72-144VDC. The DCHF100W series also has 5V, 12V, 24V, and 48VDC single outputs available. Some features include $\pm 10\%$ output adjustability, a built-in EMI filter, and over current and short circuit protection. These supplies are also RoHS compliant.

| SPECIFICATIONS: DCHF100W Series | | | | | | |
|---|-----------------------------|------------------|---|-----|--------|------|
| All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted. We reserve the right to change specifications based on technological advances. | | | | | | |
| SPECIFICATION | TEST CONDITIONS | | Min | Nom | Max | Unit |
| INPUT SPECIFICATIONS | | | | | | |
| Input Voltage Range | 24VDC nominal input models | | 18 | 24 | 36 | VDC |
| | 48VDC nominal input models | | 36 | 48 | 72 | |
| | 110VDC nominal input models | | 72 | 110 | 144 | |
| OUTPUT SPECIFICATIONS | | | | | | |
| Output Voltage | | | See Table | | | |
| Output Voltage Adjustment Range | | | -10 | | +10 | % |
| Line Regulation | Full load | | ≤ -0.5 | | ≤ +0.5 | % |
| Load Regulation | | | | 0.5 | | % |
| Output Current | | | See Table | | | |
| Output Power | | | See Table | | | |
| Ripple & Noise | | | See Table | | | |
| PROTECTION | | | | | | |
| Over Current Protection | | | 110 | | 130 | % Io |
| Short Circuit Protection | | | Yes | | | |
| GENERAL SPECIFICATIONS | | | | | | |
| Efficiency | | | See Table | | | |
| Withstand Voltage | Input to Output | All for 1 minute | 1000 | | | VDC |
| | Input to FG | | 1000 | | | |
| | Output to FG | | 500 | | | |
| Isolation Resistance | At 500VDC | | > 100 | | | MΩ |
| ENVIRONMENTAL SPECIFICATIONS | | | | | | |
| Operating Temperature | | | -10 | | +50 | °C |
| Operating Humidity (non-condensing) | | | 20 | | 90 | % RH |
| Storage Temperature | | | -20 | | +85 | °C |
| Storage Humidity (non-condensing) | | | 20 | | 95 | % RH |
| Cooling Method | | | Free air convection | | | |
| PHYSICAL SPECIFICATIONS | | | | | | |
| Dimensions (L x W x H) | | | 7.83 x 3.86 x 1.54 inches (199 x 98 x 39 mm) | | | |
| Weight | | | 1.2 lbs (550g) | | | |
| SAFETY & EMC CHARACTERISTICS | | | | | | |
| Safety Standards | | | Design refer to LVD | | | |
| EMC Standards | | | Design refer to EN55022, EN61000-4 | | | |

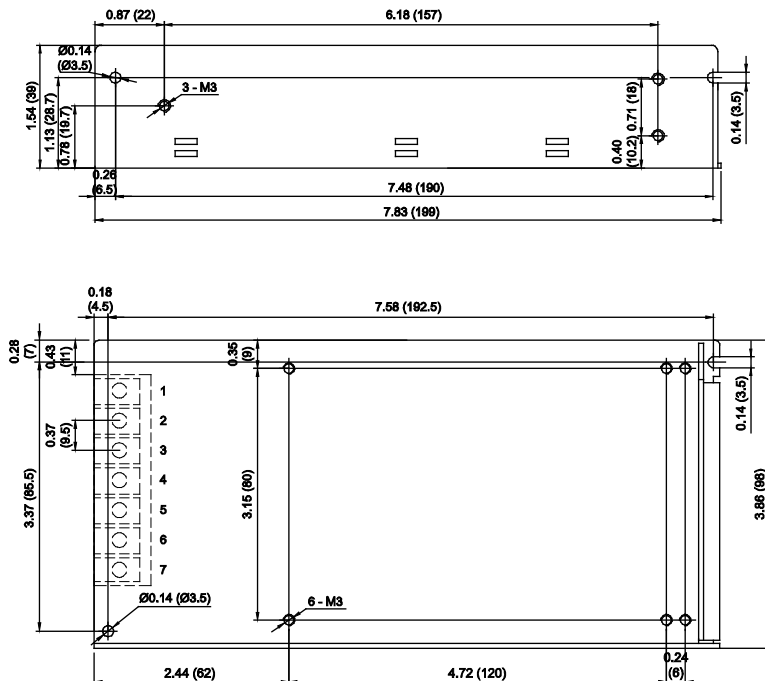
Due to advances in technology, specifications are subject to change without notice.

MODEL SELECTION TABLE

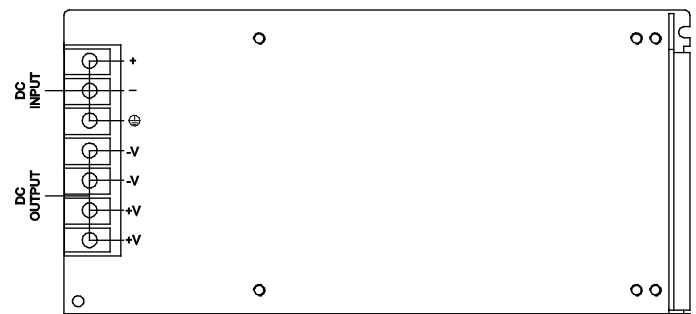
| Model Number | Input Voltage Range | Output Voltage | Output Current | Ripple & Noise | Output Power | Efficiency |
|-------------------|---------------------------|----------------|----------------|----------------|--------------|------------|
| DCHF100W-SD24-5 | 24 VDC (18 - 36 VDC) | 5 VDC | 20A | 100mVp-p | 100W | 74% |
| DCHF100W-SD24-12 | | 12 VDC | 8.5A | 120mVp-p | 100W | 75% |
| DCHF100W-SD24-24 | | 24 VDC | 4.2A | 150mVp-p | 100W | 78% |
| DCHF100W-SD24-48 | | 48 VDC | 2.1A | 200mVp-p | 100W | 79% |
| DCHF100W-SD48-5 | 48 VDC (36 - 72 VDC) | 5 VDC | 20A | 100mVp-p | 100W | 74% |
| DCHF100W-SD48-12 | | 12 VDC | 8.5A | 120mVp-p | 100W | 75% |
| DCHF100W-SD48-24 | | 24 VDC | 4.2A | 150mVp-p | 100W | 78% |
| DCHF100W-SD48-48 | | 48 VDC | 2.1A | 200mVp-p | 100W | 79% |
| DCHF100W-SD110-5 | 110 VDC (72 - 144 VDC) | 5 VDC | 20A | 100mVp-p | 100W | 74% |
| DCHF100W-SD110-12 | | 12 VDC | 8.5A | 120mVp-p | 100W | 75% |
| DCHF100W-SD110-24 | | 24 VDC | 4.2A | 150mVp-p | 100W | 78% |
| DCHF100W-SD110-48 | | 48 VDC | 2.1A | 200mVp-p | 100W | 79% |

MECHANICAL DRAWING

Unit: inches (mm)



| PIN CONNECTIONS | |
|------------------|----------------|
| Pin No | Assignment |
| 1 | DC Input (V+) |
| 2 | DC Input (V-) |
| 3 | FG |
| 4,5 | DC Output (V-) |
| 6,7 | DC Output (V+) |
| Screw Size: M3*6 | |



COMPANY INFORMATION

Wall Industries, Inc. has created custom and modified units for over 50 years. Our in-house research and development engineers will provide a solution that exceeds your performance requirements on-time and on budget. Our ISO9001: 2015 certification is just one example of our commitment to producing a high quality, well-documented product for our customers.

Our past projects demonstrate our commitment to you, our customer. Wall Industries, Inc. has a reputation for working closely with its customers to ensure each solution meets or exceeds form, fit and function requirements. We will continue to provide ongoing support for your project above and beyond the design and production phases. Give us a call today to discuss your future projects.

Contact **Wall Industries** for further information:

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