

Features

- 2:1 wide input range
- Short circuit, overload, over-voltage protected
- 1500VDC I/O isolation
- Built in EMI filter, low ripple noise
- Fixed switching frequency at 83KHz
- 100% full load burn-in test
- Low cost, high reliability
- 1 year warranty
- 150 watts

| Model ^{1,2,4} | Input Voltage | Output Voltage | Output Current | Ripple ³ & Noise | Load/Line Regulation | Efficiency |
|------------------------|---------------|----------------|----------------|-----------------------------|----------------------|------------|
| VSD-150B-12 | 19~36V DC | 12V DC | 12.5 A | 120mV | ±0.5% | 75% |
| VSD-150B-24 | 19~36V DC | 24V DC | 6.3 A | 150mV | ±0.3% | 77% |
| VSD-150C-12 | 36~72V DC | 12V DC | 12.5 A | 120mV | ±0.5% | 77% |
| VSD-150C-24 | 36~72V DC | 24V DC | 6.3 A | 150mV | ±0.3% | 80% |
| VSD-150D-12 | 72~144V DC | 12V DC | 12.5 A | 120mV | ±0.5% | 79% |
| VSD-150D-24 | 72~144V DC | 24V DC | 6.3 A | 150mV | ±0.3% | 82% |

Notes:

- 1 D models can also take 85~132VAC
- 2 All parameters Not specifically mentioned are measured at normal input, rated load and 25°C of ambient temp.
- 3 Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor.
- 4 The power supply is considered a component which will be installed into final equipment. The final equipment must be re-confirmed that it still meets EMC directives.



Input Voltage

| Parameter | Conditions/Description | Min | Nom | Max | Units |
|---------------|------------------------|-----|-----|-----|-------|
| Input voltage | B | 19 | 24 | 36 | DC |
| | C | 36 | 48 | 72 | DC |
| | D | 72 | 120 | 144 | DC |

Output

| Parameter | Conditions/Description | Min | Nom | Max | Units |
|-------------------------|---|------|-----------|------|-------|
| DC Voltage adj. | | 11 | 12 | 16 | VDC |
| | | 23 | 24 | 30 | VDC |
| Over Voltage Protection | | 16.8 | | 20 | VDC |
| | | 31.5 | | 37.5 | VDC |
| DC output power | For all models | | 150 Watts | | |
| Overload | Fold back current limiting For all models. | | 105~160% | | |
| Hold up time | 24mS in D mode | 50 | | | mS |
| Set up | For all models | 2.5s | | | |

Protection Circuit

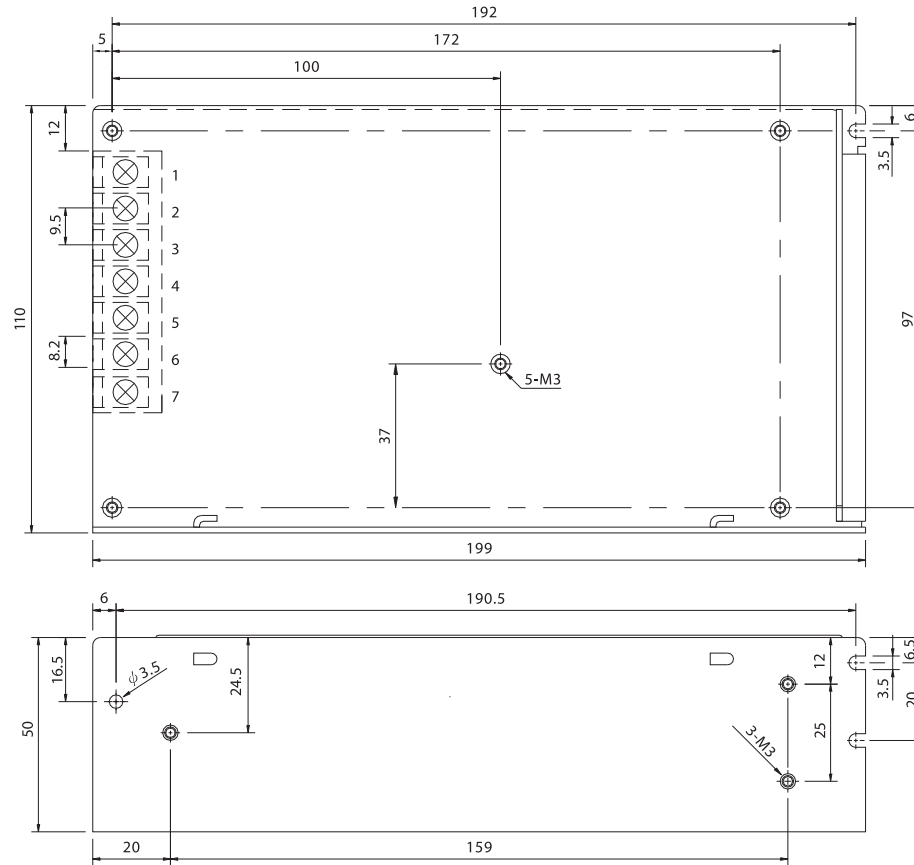
| Parameter | Conditions/Description |
|---------------------|---|
| Input Fuse | Built-in ac fuse. A blown fuse usually indicates permanent damage to the power supply serviceable by factory only. |
| Overload | Current limiting starts at 110-140% of the rated output current in foldback mode and recovers automatically. |
| Short circuit | Short circuit can be continuous. Recovers automatically upon removal of short. |
| Output Over-voltage | Output is protected against overvoltage. Unit shuts down and latches when voltage at output terminals exceeds 130%. AC input needs to be reset to restart the power supply. |
| Voltage Tolerance | Model B is $\pm 2\%$, $\pm 1\%$ for all other models |
| Over temp. | Power supply shuts down when temperature is in excess of 85 °C. Auto recovery. |

**General and Safety**

| Parameter | Conditions/Description | Min | Nom | Max | Units |
|-------------------------|---|--|-----|-----|-------|
| Operating temp. | (refer to output derating curve) | -10 | | 60 | °C |
| Storage temp. | | -20 | | 85 | °C |
| Operating humid. | Non-condensing | 20% | | 90% | RH |
| Storage humid. | Non-condensing | 10% | | 95% | RH |
| Temperature coefficient | | ±0.3% / °C (0~50°C) on a 5 volt output | | | |
| EMI | EN55022(CISPR22) CLASS B | | | | |
| Safety (EMC) | EN55022 Class B (radiation), En61000-4-2, 3, 4, 6, 8, ENV50204 for VSD-100B/C models only. Does not apply to VSD-100D series. | | | | |
| Vibration | 2G 10min/i cycle, 60 min on X, Y and Z Axis | 10 | | 500 | Hz |
| Withstand Voltage | I/P-O/P | 1500 | | | VDC |
| | I/P-FG | 1500 | | | VDC |
| | O/P-FG | 500 | | | VDC |
| Isolation Resistance | I/P-O/P, I/P-FG, O/P-FG | 100mΩ min. / 500VDC | | | |
| Cooling | Convection | | | | |

Mechanical

| Parameter | Conditions/Description | Min | Nom | Max | Units |
|-----------|---------------------------|-----|-----|-----|-------|
| Weight | | | | 600 | grams |
| Enclosure | 199(L) x 98(W) x 38(H) mm | | | | |



Terminal Pin. No Assignment

| Pin No. | Assignment | Pin No. | Assignment |
|---------|------------|---------|--------------|
| 1,2 | INPUT ※ | 4,5 | DC OUTPUT -V |
| 3 | FG \perp | 6,7 | DC OUTPUT +V |

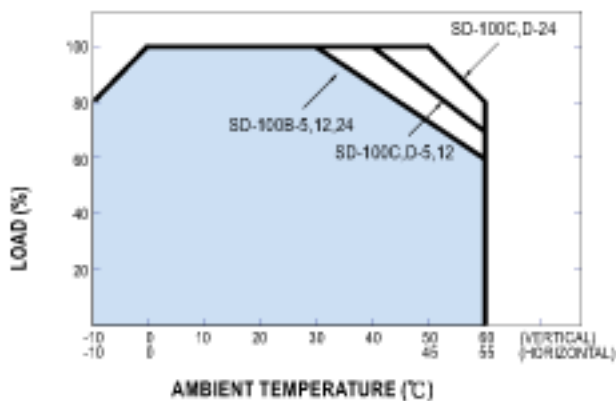
※ VSD-150B,C

| Pin No. | Assignment |
|---------|-------------|
| 1 | DC INPUT V+ |
| 2 | DC INPUT V- |

※ VSD-150D

| Pin No. | Assignment |
|---------|-------------|
| 1,2 | AC/DC INPUT |

Output Derating



Static Characteristics

