

Single Output Industrial Power Supplies

Features

- ◆ Limited Lifetime Warranty
- ◆ UL508 approved
- ◆ SEMI F47 Compliant (high line AC)
- ◆ Universal Input (85 - 265VAC)
- ◆ High Efficiency
- ◆ Wide Range AC Input



Key Market Segments & Applications



| Specifications | | | HWS15 | HWS30 | HWS50 | HWS100 | HWS150 |
|----------------------------------|-------|--|--|----------------|----------------|--------------|---------------|
| Input Voltage range | - | | 85 - 265VAC (47 - 63Hz) or 120 - 370VDC | | | | |
| Input Current (Typ) | (1) A | | 0.4 / 0.2 | 0.8 / 0.4 | 0.7 / 0.35 | 1.3 / 0.65 | 1.9 / 0.95 |
| Inrush Current | (1) A | | 14 / 28 | | | | |
| Power Factor | - | | Meets EN61000-3-2 | | | | |
| Temperature Coefficient | - | | <0.02%/°C | | | | |
| Overcurrent Protection | - | | >104% | | | | |
| Overvoltage Protection | V | | Yes (See page 2) | | | | |
| Hold Up Time (Typ) | ms | | 20 | | | | |
| Leakage Current (max) | mA | | <0.5mA (Typ 0.3mA at 100VAC, 0.5mA at 230VAC) | | | | |
| Remote Sense | - | | No | | Yes | | |
| Indicator | - | | Green LED = ON | | | | |
| Operating Temperature (no cover) | °C | | -10°C to +70°C, derate linearly to 20% load from 50°C to 70°C ⁽²⁾ | | | | |
| Storage Temperature | °C | | -30 to +85°C | | | | |
| Humidity (non condensing) | - | | Operating: 30 - 90%RH, Non operating 10 - 95%RH | | | | |
| Cooling | - | | Convection | | | | |
| Withstand Voltage | - | | Input to Ground 2kVAC, Input to Output 3kVAC, Output to Ground 500VAC for 1 min. | | | | |
| Isolation Resistance | - | | >100M at 25°C & 70%RH, Output to Ground 500VDC | | | | |
| Vibration (non operating) | - | | 10 - 55Hz (1 minute sweep), 19.6m/s ² constant X, Y, Z 1 hour | | | | |
| Shock | - | | < 196.1m/s ² | | | | |
| Safety Agency Certifications | - | | UL60950-1, CSA60950-1, EN60950-1, EN50178, UL508, CE Mark ⁽³⁾ | | | | |
| Line Dip | - | | Complies with SEMI F47 (200VAC line only) | | | | |
| Conducted & Radiated EMI | - | | EN55011 / EN55022-B, FCC-B, VCCI-B | | | | |
| Recommended EMI Filter | - | | RSEL-2001W | | RSEL-2002W | RSEL-2003W | |
| Immunity | - | | IEC61000-4-2 (Level 3,2), -3, -4, -5, -6 (Level 3), -8, -11 (Level 4) | | | | |
| Weight (Typ) | g | | 180 | 220 | 280 | 450 | 500 |
| Size (WxHxD) | in | | 1.04x3.23x3.15 | 1.04x3.23x3.74 | 1.04x3.23x4.72 | 1.1x3.23x6.3 | 1.46x3.23x6.3 |
| Size (WxHxD) /A version | - | | 1.24x3.23x3.15 | 1.24x3.23x3.74 | 1.24x3.23x4.72 | 1.3x3.23x6.3 | 1.65x3.23x6.3 |
| Warranty | - | | Limited lifetime warranty (See Lambda's terms & conditions) | | | | |

(1) 100/200VAC

(2) -40°C Start up, see options table

(3) UL60601-1, EN60601-1, see options table

Output Ratings

| Model | Voltage | Adjust Range | Max Curr. A | Load Reg mV | Line Reg mV | Ripple Noise mV | Over voltage V | Eff. typ % (1) |
|-------------|---------|--------------|-------------|-------------|-------------|-----------------|----------------|----------------|
| HWS15-3/A | 3.3V | 2.97 - 3.96 | 3 | 40 | 20 | 120 | 4.13-4.95 | 68/71 |
| HWS30-3/A | 3.3V | 2.97 - 3.96 | 6 | 40 | 20 | 120 | 4.13-4.95 | 70/73 |
| HWS50-3/A | 3.3V | 2.97 - 3.96 | 10 | 40 | 20 | 120 | 4.13-4.95 | 76/78 |
| HWS100-3/A | 3.3V | 2.97 - 3.96 | 20 | 40 | 20 | 120 | 4.13-4.95 | 78/81 |
| HWS150-3/A | 3.3V | 2.97 - 3.96 | 30 | 40 | 20 | 120 | 4.13-4.95 | 78/81 |
| HWS15-5/A | 5V | 4.0 - 6.0 | 3 | 40 | 20 | 120 | 6.25-7.25 | 77/79 |
| HWS30-5/A | 5V | 4.0 - 6.0 | 6 | 40 | 20 | 120 | 6.25-7.25 | 77/80 |
| HWS50-5/A | 5V | 4.0 - 6.0 | 10 | 40 | 20 | 120 | 6.25-7.25 | 82/84 |
| HWS100-5/A | 5V | 4.0 - 6.0 | 20 | 40 | 20 | 120 | 6.25-7.25 | 83/86 |
| HWS150-5/A | 5V | 4.0 - 6.0 | 30 | 40 | 20 | 120 | 6.25-7.25 | 83/86 |
| HWS15-12/A | 12V | 9.6 - 14.4 | 1.3 | 96 | 48 | 150 | 15-17.4 | 80/81 |
| HWS30-12/A | 12V | 9.6 - 14.4 | 2.5 | 96 | 48 | 150 | 15-17.4 | 81/83 |
| HWS50-12/A | 12V | 9.6 - 14.4 | 4.3 | 96 | 48 | 150 | 15-17.4 | 81/83 |
| HWS100-12/A | 12V | 9.6 - 14.4 | 8.5 | 96 | 48 | 150 | 15-17.4 | 83/86 |
| HWS150-12/A | 12V | 9.6 - 14.4 | 13 | 96 | 48 | 150 | 15-17.4 | 83/86 |
| HWS15-15/A | 15V | 12.0 - 18.0 | 1 | 120 | 60 | 150 | 18.8-21.8 | 80/81 |
| HWS30-15/A | 15V | 12.0 - 18.0 | 2 | 120 | 60 | 150 | 18.8-21.8 | 81/83 |
| HWS50-15/A | 15V | 12.0 - 18.0 | 3.5 | 120 | 60 | 150 | 18.8-21.8 | 81/83 |
| HWS100-15/A | 15V | 12.0 - 18.0 | 7 | 120 | 60 | 150 | 18.8-21.8 | 83/86 |
| HWS150-15/A | 15V | 12.0 - 18.0 | 10 | 120 | 60 | 150 | 18.8-21.8 | 83/86 |
| HWS15-24/A | 24V | 19.2 - 28.8 | 0.65 | 192 | 96 | 200 | 30-34.8 | 82/83 |
| HWS30-24/A | 24V | 19.2 - 28.8 | 1.3 | 192 | 96 | 200 | 30-34.8 | 83/86 |
| HWS50-24/A | 24V | 19.2 - 28.8 | 2.2 | 192 | 96 | 150 | 30-34.8 | 82/84 |
| HWS100-24/A | 24V | 19.2 - 28.8 | 4.5 | 192 | 96 | 150 | 30-34.8 | 84/87 |
| HWS150-24/A | 24V | 19.2 - 28.8 | 6.5 | 192 | 96 | 150 | 30-34.8 | 85/88 |
| HWS15-48/A | 48V | 38.4 - 52.8 | 0.33 | 384 | 192 | 200 | 55.2-64.8 | 80/80 |
| HWS30-48/A | 48V | 38.4 - 52.8 | 0.65 | 384 | 192 | 200 | 55.2-64.8 | 82/83 |
| HWS50-48/A | 48V | 38.4 - 52.8 | 1.1 | 384 | 192 | 200 | 55.2-64.8 | 83/85 |
| HWS100-48/A | 48V | 38.4 - 52.8 | 2.1 | 384 | 192 | 200 | 55.2-64.8 | 84/87 |
| HWS150-48/A | 48V | 38.4 - 52.8 | 3.3 | 384 | 192 | 200 | 55.2-64.8 | 85/88 |

Options

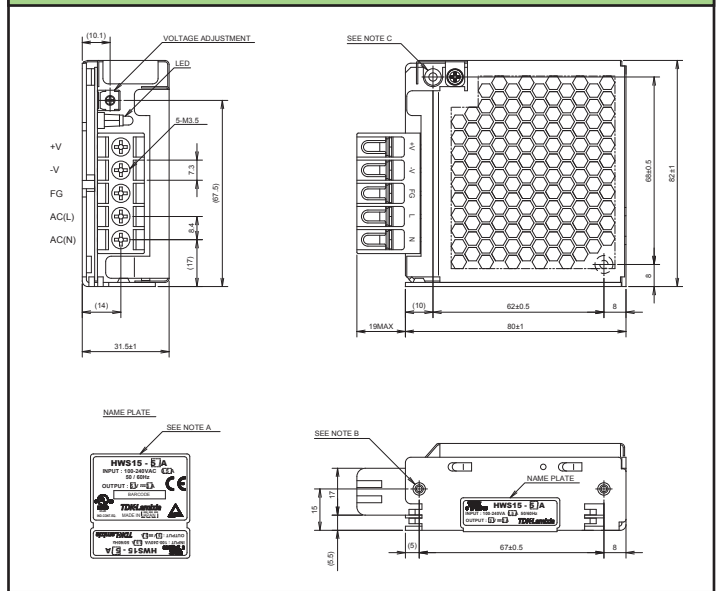
| Suffix | Description |
|--------|--|
| Blank | Screw terminals, no cover |
| /A | Screw terminals, cover |
| /R | Remote on/off (50-150W only) |
| /HD | See HWS50-1500/HD Datasheet for details. -40 to +71(74)°C operation, conformally coated PCBs |
| /ME | See HWS30-1500/ME Datasheet for details. UL60601-1, EN60601-1 medical approvals |

Example: HWS50-24/RA

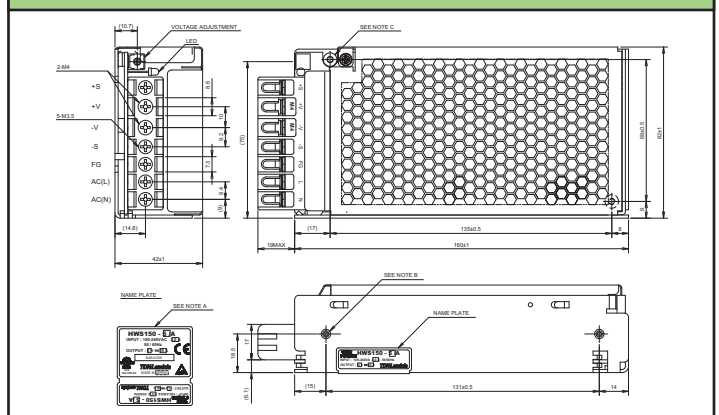
Other Industrial Products

| | |
|----------------|-----------------------------|
| HWS300-1800 | 300 to 1800W |
| LZSA | 500W to 1500W Single output |
| DPP, DLP & DSP | 10W to 480W DIN Rail Mount |

HWS15 Outline Drawing



HWS150 Outline Drawing



For Additional Information, please visit us.tdk-lambda.com/lp/products/hws-series.htm

