

## Single Output Industrial Power Supplies

### Features

- ◆ Limited Lifetime Warranty
- ◆ UL508 approved
- ◆ SEMI F47 Compliant (high line AC)
- ◆ Universal Input (85 - 265VAC)
- ◆ Higher Efficiency Than HWS series



### Key Market Segments & Applications



### Specifications

| Model                              |                  | HWS15A/A                                                                         | HWS30A/A       | HWS50A/A       | HWS100A/A    | HWS150A/A     |
|------------------------------------|------------------|----------------------------------------------------------------------------------|----------------|----------------|--------------|---------------|
| Input Voltage Range                | -                | 85 - 265VAC (47 - 63Hz) or 120 - 370VDC* (Withstands 300VAC for 5s)              |                |                |              |               |
| Input Current (Typ) (1)            | A                | 0.35 / 0.2                                                                       | 0.65 / 0.4     | 0.65 / 0.35    | 1.3 / 0.65   | 1.9 / 0.95    |
| Inrush Current (1)                 | A                | 14 / 28                                                                          |                |                |              |               |
| Power Factor (1)                   | -                | Meets EN61000-3-2                                                                |                |                |              |               |
|                                    | -                | -                                                                                | -              | 0.97/0.91      | 0.98/0.93    | 0.98/0.93     |
| Temperature Coefficient            | %/°C             | <0.02%/°C                                                                        |                |                |              |               |
| Overcurrent Protection             | %                | >105%                                                                            |                |                |              |               |
| Overvoltage Protection             | V                | Yes                                                                              |                |                |              |               |
| Hold Up Time (Typ)                 | ms               | 20                                                                               |                |                |              |               |
| Leakage Current (max)              | mA               | >0.5mA (Typ 0.2mA at 100VAC, 0.4mA at 230VAC)                                    |                |                |              |               |
| Remote Sense                       | -                | No                                                                               |                |                | Yes          |               |
| Indicator                          | -                | Green LED = ON                                                                   |                |                |              |               |
| Operating Temperature (with 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)          | %RH              | Operating: 30 - 90%RH, Non operating 10 - 95%RH                                  |                |                |              |               |
| Cooling                            | -                | Convection                                                                       |                |                |              |               |
| Withstand Voltage                  | VAC              | Input to Ground 2kVAC, Input to Output 3kVAC, Output to Ground 500VAC for 1 min. |                |                |              |               |
| Isolation Resistance               | M Ohms           | >100M at 25°C & 70%RH, Output to Ground 500VDC                                   |                |                |              |               |
| Vibration (non operating)          | -                | 10 - 55Hz (1 minute sweep), 19.6m/s <sup>2</sup> constant X, Y, Z 1 hour         |                |                |              |               |
| Shock                              | m/s <sup>2</sup> | < 196.1 m/s <sup>2</sup>                                                         |                |                |              |               |
| Safety Agency Approvals            | -                | UL60950-1, CSA60950-1, EN60950-1, EN50178, UL508, CE Mark                        |                |                |              |               |
| Line Dip                           | -                | Complies with SEMI F47 (200VAC line only)                                        |                |                |              |               |
| Conducted & Radiated EMI           | -                | EN55011 / EN55022-B, FCC-B, VCCI-B                                               |                |                |              |               |
| Immunity                           | -                | IEC61000-4-2, -3, -4, -5, -6, -8, -11; IEC61000-6-2                              |                |                |              |               |
| Weight (Typ)                       | g                | 190                                                                              | 240            | 300            | 470          | 520           |
| Size (WxHxD) (with cover)          | Inches           | 1.24x3.23x3.15                                                                   | 1.24x3.23x3.74 | 1.24x3.23x4.72 | 1.3x3.23x6.3 | 1.65x3.23x6.3 |
|                                    | mm               | 31.5x82x80                                                                       | 31.5x82x95     | 31.5x82x120    | 33x82x160    | 42x82x160     |
| Warranty                           | -                | Limited lifetime warranty (See website for terms & conditions)                   |                |                |              |               |

\* Safety certified for AC input only

(1) 100/200VAC

(2) HWS15A/A derates linearly to 50% load from 50 to 70°C

| Output Ratings |              |                      |                     |                     |                     |                         |                  |                           |
|----------------|--------------|----------------------|---------------------|---------------------|---------------------|-------------------------|------------------|---------------------------|
| Model          | Voltage<br>V | Adjust<br>Range<br>V | Max<br>Current<br>A | Load<br>Reg<br>(mV) | Line<br>Reg<br>(mV) | Ripple<br>Noise<br>(mV) | Overvoltage<br>V | Efficiency (typ)<br>% (1) |
| HWS15A-3/A     | 3.3V         | 2.97 - 3.96          | 3                   | 40                  | 20                  | 120                     | 4.13-4.95        | 70/71                     |
| HWS30A-3/A     | 3.3V         | 2.97 - 3.96          | 6                   | 40                  | 20                  | 120                     | 4.13-4.95        | 75/77                     |
| HWS50A-3/A     | 3.3V         | 2.97 - 3.96          | 10                  | 40                  | 20                  | 120                     | 4.13-4.95        | 76/78                     |
| HWS100A-3/A    | 3.3V         | 2.97 - 3.96          | 20                  | 40                  | 20                  | 120                     | 4.13-4.95        | 82/84                     |
| HWS150A-3/A    | 3.3V         | 2.97 - 3.96          | 30                  | 40                  | 20                  | 120                     | 4.13-4.95        | 82/84                     |
| HWS15A-5/A     | 5V           | 4.0 - 6.0            | 3                   | 40                  | 20                  | 120                     | 6.25-7.25        | 77/79                     |
| HWS30A-5/A     | 5V           | 4.0 - 6.0            | 6                   | 40                  | 20                  | 120                     | 6.25-7.25        | 80/82                     |
| HWS50A-5/A     | 5V           | 4.0 - 6.0            | 10                  | 40                  | 20                  | 120                     | 6.25-7.25        | 82/84                     |
| HWS100A-5/A    | 5V           | 4.0 - 6.0            | 20                  | 40                  | 20                  | 120                     | 6.25-7.25        | 84/86                     |
| HWS150A-5/A    | 5V           | 4.0 - 6.0            | 30                  | 40                  | 20                  | 120                     | 6.25-7.25        | 85/87                     |
| HWS15A-12/A    | 12V          | 9.6 - 14.4           | 1.3                 | 96                  | 48                  | 150                     | 15-17.4          | 80/83                     |
| HWS30A-12/A    | 12V          | 9.6 - 14.4           | 2.5                 | 96                  | 48                  | 150                     | 15-17.4          | 84/86                     |
| HWS50A-12/A    | 12V          | 9.6 - 14.4           | 4.3                 | 96                  | 48                  | 150                     | 15-17.4          | 83/85                     |
| HWS100A-12/A   | 12V          | 9.6 - 14.4           | 8.5                 | 96                  | 48                  | 150                     | 15-17.4          | 86/88                     |
| HWS150A-12/A   | 12V          | 9.6 - 14.4           | 13                  | 96                  | 48                  | 150                     | 15-17.4          | 85/88                     |
| HWS15A-15/A    | 15V          | 12.0 - 18.0          | 1                   | 120                 | 60                  | 150                     | 18.8-21.8        | 81/84                     |
| HWS30A-15/A    | 15V          | 12.0 - 18.0          | 2                   | 120                 | 60                  | 150                     | 18.8-21.8        | 85/87                     |
| HWS50A-15/A    | 15V          | 12.0 - 18.0          | 3.5                 | 120                 | 60                  | 150                     | 18.8-21.8        | 83/86                     |
| HWS100A-15/A   | 15V          | 12.0 - 18.0          | 7                   | 120                 | 60                  | 150                     | 18.8-21.8        | 86/88                     |
| HWS150A-15/A   | 15V          | 12.0 - 18.0          | 10                  | 120                 | 60                  | 150                     | 18.8-21.8        | 86/89                     |
| HWS15A-24/A    | 24V          | 19.2 - 28.8          | 0.65                | 150                 | 96                  | 150                     | 30-34.8          | 82/85                     |
| HWS30A-24/A    | 24V          | 19.2 - 28.8          | 1.3                 | 150                 | 96                  | 150                     | 30-34.8          | 86/88                     |
| HWS50A-24/A    | 24V          | 19.2 - 28.8          | 2.2                 | 150                 | 96                  | 150                     | 30-34.8          | 84/87                     |
| HWS100A-24/A   | 24V          | 19.2 - 28.8          | 4.5                 | 150                 | 96                  | 150                     | 30-34.8          | 87/89                     |
| HWS150A-24/A   | 24V          | 19.2 - 28.8          | 6.5                 | 150                 | 96                  | 150                     | 30-34.8          | 88/90                     |
| HWS15A-48/A    | 48V          | 38.4 - 52.8          | 0.33                | 240                 | 192                 | 200                     | 55.2-64.8        | 80/80                     |
| HWS30A-48/A    | 48V          | 38.4 - 52.8          | 0.65                | 240                 | 192                 | 200                     | 55.2-64.8        | 82/83                     |
| HWS50A-48/A    | 48V          | 38.4 - 52.8          | 1.1                 | 240                 | 192                 | 200                     | 55.2-64.8        | 84/86                     |
| HWS100A-48/A   | 48V          | 38.4 - 52.8          | 2.1                 | 240                 | 192                 | 200                     | 55.2-64.8        | 88/90                     |
| HWS150A-48/A   | 48V          | 38.4 - 52.8          | 3.3                 | 240                 | 192                 | 200                     | 55.2-64.8        | 89/91                     |

| Other Industrial Products |                            |
|---------------------------|----------------------------|
| HWS300-1800               | 300W to 1800W              |
| LZSA                      | 500W to 1500W (MIL STD)    |
| DRB, DRF, DSP & DPP       | 10W to 960W DIN Rail Mount |

| Options |             |
|---------|-------------|
| Suffix  | Description |
| Blank   | No cover    |
| /A      | Cover       |

For Additional Information, please visit  
[us.tdk-lambda.com/lp/products/hwsa-series.htm](http://us.tdk-lambda.com/lp/products/hwsa-series.htm)

