### Specification

#### Input
- **Input Voltage**: 80-275 VAC (See derating curve)
- **Input Frequency**: 47-63 Hz
- **Input Current**: 2.4 A typical at 115 VAC, full load
  1.2 A typical at 230 VAC, full load
- **Inrush Current**: 30 A max at 230 VAC, cold start at 25 °C
- **Power Factor**: >0.9
- **Earth Leakage Current**: 250 µA max at 264 VAC/60 Hz
- **Input Protection**: Internal T5.0 A/250 V fuse in line and neutral

#### Output
- **Output Voltage**: 12-48 VDC (see tables)
- **Output Voltage Trim**: ±3% (see Mechanical Details)
- **Initial Set Accuracy**: ±0.5% V1, ±5% V2
- **Minimum Load**: No minimum load required
- **Start Up Delay**: 1 s typically
- **Start Up Rise Time**: 50 ms typical
- **Hold Up Time**: 16 ms min at 115 VAC
- **Drift**: ±0.2% after 20 min warm up
- **Line Regulation**: ±0.5% max
- **Load Regulation**: ±1% V1, ±5% V2
- **Over/Undershoot**: 5% typical
- **Transient Response**: 4% max. deviation, recovery to within 1% in 500 µs for a 50-75-50% load change
- **Ripple & Noise**: 1% pk-pk, 20 MHz bandwidth
- **Overvoltage Protection**: 115-140% Vnom, recycle input to reset (V1 only)
- **Overload Protection**: 125-165% Inom V1 only
- **Short Circuit Protection Temperature Coefficient**: 0.05%/°C
- **Remote On/Off (Inhibit/Enable)**: Uncommitted isolated optocoupler diode, powered diode inhibits V1

### General
- **Efficiency**: Up to 95%
- **Isolation**: 4000 VAC Input to Output, 1500 VAC Input to Ground, 500 VAC Output to Ground
- **Switching Frequency**: PFC 30-500 kHz, Boost 25.6 kHz, Main 51.2 kHz
- **Signals**: Power Fail - open collector, transistor offset AC good, ≥5 ms warning offset of output
- **MTBF**: 365 kHrs to MIL-HDBK-217F at 25 °C, GB

### Environmental
- **Operating Temperature**: -20 °C to +70 °C derate linearly from +50 °C at 2.5%/°C to 50% load at +70 °C. See derating curve and longform datasheet for thermal considerations. (-40 °C consult sales)
- **Cooling**: Convection cooled
- **Operating Humidity**: 95% RH, non-condensing
- **Storage Temperature**: -40 °C to +85 °C
- **Operating Altitude**: 3000 m
- **Shock**: 30 g pk, half sine, 6 axes
- **Vibration**: 2 g rms, 5 Hz to 500 kHz, 3 axes

### EMC & Safety
- **Low Voltage PSU EMC Emissions**: EN61204-3, high severity level
  - EN55011/22 level B conducted
  - EN55011/22 level B radiated
  - RTCA D0160D 21.4 Cat. M radiated
  - MIL-STD 461D-F, CE102
  - EN61000-3-2, class A
  - EN61000-3-2, class C for loads ≥40%
- **Harmonic Currents**: EN61000-3-3
- **Voltage Flicker**: EN61000-3-3
- **Radiated Immunity**: EN61000-4-3, level 3 Perf Criteria A
- **EFT/Burst**: EN61000-4-4, level 3 Perf Criteria A
- **Surge**: EN61000-4-5, installation class 3 Perf Criteria A
- **Conducted Immunity**: EN61000-4-6, level 3 Perf Criteria A, MIL-STD 461 CS114
- **Dips & Interruptions**: EN61000-4-11, 30% 10 ms, 60% 100 ms, 100% 500 ms, Perf Criteria A, B, B
  - EN60601-1-2, 30% 500 ms, 60% 100 ms, 100% 10 ms, 100% 5000 ms, Perf Criteria A, A, B - 230 VAC. Consult longform datasheet for 115 V operation.

### Safety Approvals
- **Equipment Protection Class**: See Safety Approvals (see next page)
### Mechanical Details

**Input Connector**
- **Pin 1**: Line
- **Pin 2**: Neutral
- **Pin 3**: Earth

Input connector mates with Molex housing 09-50-1051 and Molex series 5194 crimp terminals.

**CON 1** mates with JST housing PHDR-10VS with contact SPHD-001T-P0.5

**Signals Connector**
- **CON 1**
  - **Pin 1**: 5 V Standby Return
  - **Pin 2**: 5 V Standby
  - **Pin 3**: 5 V Standby Return
  - **Pin 4**: 5 V Standby
  - **Pin 5**: 5 V Standby Return
  - **Pin 6**: 5 V Standby
  - **Pin 7**: Power Fail (Collector)
  - **Pin 8**: Power Fail (Emitter)
  - **Pin 9**: Remote On / Off (Cathode)
  - **Pin 10**: Remote On / Off (Anode)

CON 1 mates with JST housing PHDR-10VS with contact SPHD-001T-P0.5

**Output Connector**
- **CON 3**
  - **Pin 1**: +V1
  - **Pin 2**: V1 RTN

Output terminals M4 Screws in 2 positions. Torque to 0.9 lbs-in (10 cNm) max.

Output terminals allow connection from either top or side

**Notes**
1. At AC switch on the output (V1) may momentarily rise when the unit is disabled using the 5 V standby supply in conjunction with the Remote On/Off function. (See longform datasheet for details)
2. All dimensions in inches (mm).
3. Tolerance \( \pm 0.02 \) (0.50); \( \pm 0.01 \) (0.25)
4. Weight 1.7 lb (780 g) approx

### Safety Approvals

IEC60950-1 CB report, CSA 22.2 No. 60950-1, UL60950-1, TUV EN60950-1

IEC60601-1 CB report, CSA 22.2 No. 60601-1, UL60601-1, TUV 60601-1, TUV IEC61010-1

### Models and Ratings

<table>
<thead>
<tr>
<th>Output Power</th>
<th>Output Voltage V1</th>
<th>Output Current V1</th>
<th>Standby Supply V2</th>
<th>Model Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal</td>
<td>Peak  (^{(1)})</td>
<td>Nominal</td>
<td>Peak  (^{(1)})</td>
<td></td>
</tr>
<tr>
<td>250 W</td>
<td>300 W</td>
<td>12.0 V</td>
<td>20.8 A</td>
<td>25.00 A</td>
</tr>
<tr>
<td>250 W</td>
<td>300 W</td>
<td>15.0 V</td>
<td>16.7 A</td>
<td>20.00 A</td>
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<tr>
<td>250 W</td>
<td>300 W</td>
<td>24.0 V</td>
<td>10.4 A</td>
<td>12.50 A</td>
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<tr>
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<td>300 W</td>
<td>28.0 V</td>
<td>8.9 A</td>
<td>10.70 A</td>
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<tr>
<td>250 W</td>
<td>300 W</td>
<td>36.0 V</td>
<td>6.9 A</td>
<td>8.30 A</td>
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<td>250 W</td>
<td>300 W</td>
<td>48.0 V</td>
<td>5.2 A</td>
<td>6.25 A</td>
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</tbody>
</table>

Notes
1. Peak duration is 500 ms max, average power must not exceed 250 W.