



- Ultra High Efficiency (Up to 94%)
- High Power Factor Correction
- Constant Output Voltage
- Up to 305VAC Input Operation
- Waterproof to IP67
- Lightning Protection
- Comprehensive Protection Circuitry
- Approved to UL8750 & EN61347
- RoHS Compliant
- 3 Year Warranty

### Electrical Specifications

#### Input

|                     |                                  |
|---------------------|----------------------------------|
| Input Voltage       | 90-305VAC                        |
| Input Frequency     | 47-63 Hz                         |
| Input Current       | 3.3A @ 110VAC<br>1.6A @ 220VAC   |
| Inrush Current      | 50A @ 230VAC/25°C/Cold Start     |
| Power Factor        | See table                        |
| Leakage Current     | 250µA @ 120VAC<br>500µA @ 240VAC |
| No Load Input Power | ≤3W                              |

#### Output

|                            |   |
|----------------------------|---|
| Output Voltage             | See table   |
| Minimum Load               | No minimum load required  |
| Start Up Delay             | 0.2S max. @110VAC   |
| Hold Up Time               | ≥10mS @ 110VAC, full load   |
| Line Regulation            | ±1%   |
| Load Regulation            | ±3%   |
| Transient Response         | ±5% max. deviation, recovery to within spec in 10ms for a 50% step load change at a 1A/µs slew rate |
| Ripple & Noise             | 2% pk-pk, 20MHz bandwidth   |
| Overvoltage Protection     | Latch mode; power on to return to normal operation  |
| Overload Protection        | Hiccup mode; auto restart when fault removed  |
| Short Circuit Protection   | No damage to unit; auto recovery when fault removed   |
| Overtemperature Protection | 110°C nominal internal component temperature  |

Note: All specifications typical at 25°C unless noted.

#### General

|                      |   |
|----------------------|---|
| Efficiency           | See tables  |
| Isolation            | 3kVAC input to output<br>1.8kVAC input to ground<br>0.5kVAC output to ground<br>227kHrs @110VAC, 54VDC output<br>80% load, 25°C |
| MTBF (MIL-HDBK-217F) | 8.78"L x 3.86"W x 1.75"H<br>3.40 lbs.   |
| Dimensions           |   |
| Net Weight           |   |

#### Environmental

|                     |                                |
|---------------------|--------------------------------|
| Operating Temp.     | -35°C to +70°C maximum         |
| Operating Humidity  | 10% to 100% RH, non-condensing |
| Storage Temperature | -40°C to +85°C                 |

#### Safety & EMC

|                      |  |
|----------------------|--|
| Safety Approvals     | UL8750 Approved  |
| USA                  | Compliance to UL1012, UL935  |
| Canada               | Compliance to CAN/CSA-C22.2 No. 0<br>CSA-C22.2 No. 107.1,<br>CSA-C22.2 No. 250.0 |
| Europe               | EN61347-1 Approved   |
| EMI                  | EN55015 (Radiated & Conducted)   |
| Harmonic Currents    | EN61000-3-2  |
| Voltage Flicker      | EN61000-3-3  |
| ESD Immunity         | EN61000-4-2; 8kV air; 4kV contact  |
| Radiated Immunity    | EN61000-4-3  |
| EFT/Burst            | EN61000-4-4  |
| Surge                | EN61000-4-5; 2kV line-line;<br>4kV line-earth                                    |
| Conducted Immunity   | EN61000-4-6  |
| Magnetic Field       | EN61000-4-8  |
| Dips / Interruptions | EN61000-4-11   |

Your Partners in Power.....

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Website: [www.powerpartners-inc.com](http://www.powerpartners-inc.com)

Specifications subject to change.  
PIL300U-V: 01/08/2010



### Models and Ratings Chart

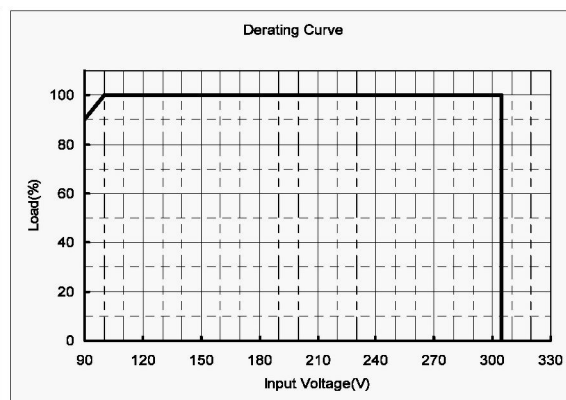
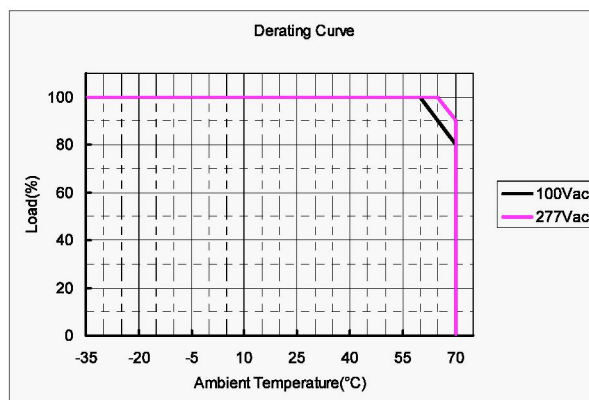
| Nominal Output Voltage | Output Voltage Range (Note 3) | Max. Output Current | Max. Output Power | Typical Efficiency (Note 1) | Power Factor |        | Model Number (Note 2) |
|------------------------|-------------------------------|---------------------|-------------------|-----------------------------|--------------|--------|-----------------------|
|                        |                               |                     |                   |                             | 110VAC       | 220VAC |                       |
| 12VDC                  | 11.4 - 12.6VDC                | 22.90A              | 275W              | 91.5%                       | 0.99         | 0.93   | <b>PIL300U-V12</b>    |
| 24VDC                  | 22.8 - 25.2VDC                | 12.50A              | 300W              | 93.0%                       | 0.99         | 0.96   | <b>PIL300U-V24</b>    |
| 36VDC                  | 34.2 - 37.8VDC                | 8.33A               | 300W              | 94.0%                       | 0.99         | 0.96   | <b>PIL300U-V36</b>    |
| 42VDC                  | 39.9 - 44.1VDC                | 7.14A               | 300W              | 93.5%                       | 0.99         | 0.96   | <b>PIL300U-V42</b>    |
| 48VDC                  | 45.6 - 50.4VDC                | 6.25A               | 300W              | 93.5%                       | 0.99         | 0.96   | <b>PIL300U-V48</b>    |
| 52VDC                  | 49.4 - 54.6VDC                | 5.76A               | 300W              | 93.5%                       | 0.99         | 0.96   | <b>PIL300U-V52</b>    |
| 54VDC                  | 51.3 - 56.7VDC                | 5.55A               | 300W              | 94.0%                       | 0.99         | 0.96   | <b>PIL300U-V54</b>    |
| 56VDC                  | 53.2 - 58.8VDC                | 5.35A               | 300W              | 94.0%                       | 0.99         | 0.96   | <b>PIL300U-V56</b>    |
| 60VDC                  | 57.0 - 63.0VDC                | 5.00A               | 300W              | 94.0%                       | 0.99         | 0.96   | <b>PIL300U-V60</b>    |
| 84VDC                  | 79.8 - 88.2VDC                | 3.57A               | 300W              | 94.0%                       | 0.99         | 0.96   | <b>PIL300U-V84</b>    |
| 105VDC                 | 99.75 - 110.25VDC             | 2.85A               | 300W              | 94.0%                       | 0.99         | 0.96   | <b>PIL300U-V105</b>   |
| 150VDC                 | 142.5 - 157.5VDC              | 2.00A               | 300W              | 94.0%                       | 0.99         | 0.96   | <b>PIL300U-V150</b>   |

Note 1: Measured at 220VAC input and full load.

Note 2: Additional suffix may be included to denote variations or modifications to the base product.

Note 3: Voltage factory set to nominal, unless otherwise specified.

### Derating Curve



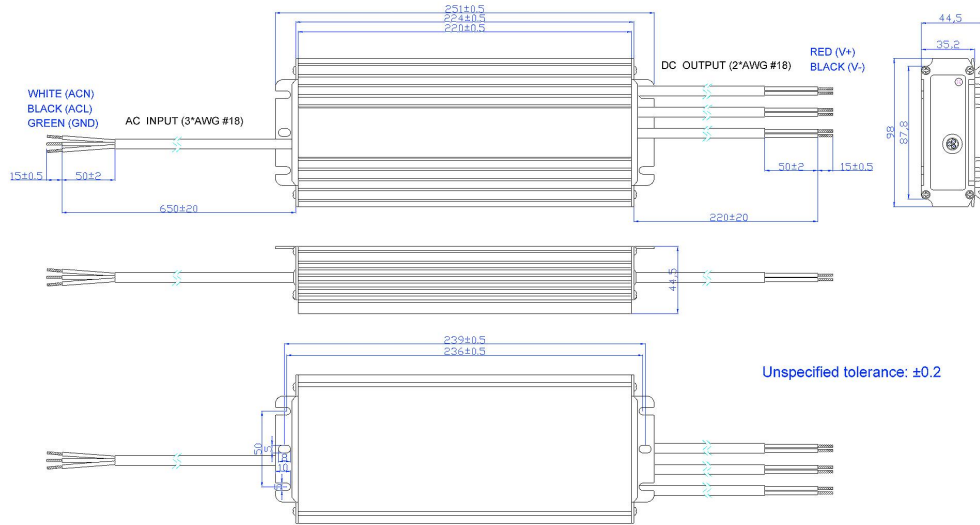
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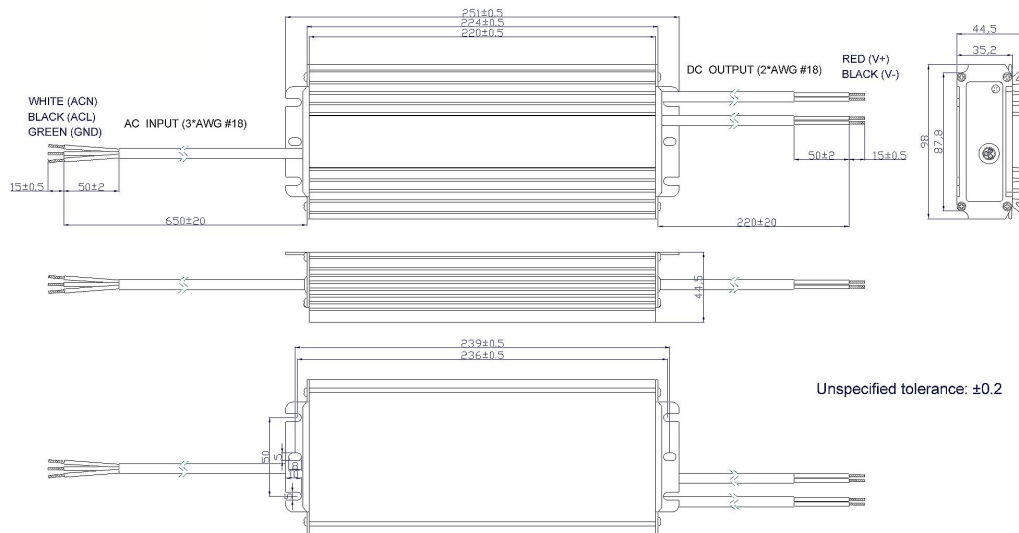
### Mechanical Outline Drawing Model PIL300W-V12



Note:

The three DC output cables are connected in parallel within the unit. Please connect all three sets of red and all three sets of black output cables together within the application or ensure that each carries the same current. The maximum current rating for each AWG#18 cable is 10A.

### Mechanical Outline Drawing Models PIL300U-V24, PIL300U-V36, PIL300U-V42



Note:

The two DC output cables are connected in parallel within the unit. Please connect both red and both black output cables together within the application or ensure that each carries the same current. The maximum current rating for each AWG#18 cable is 10A.

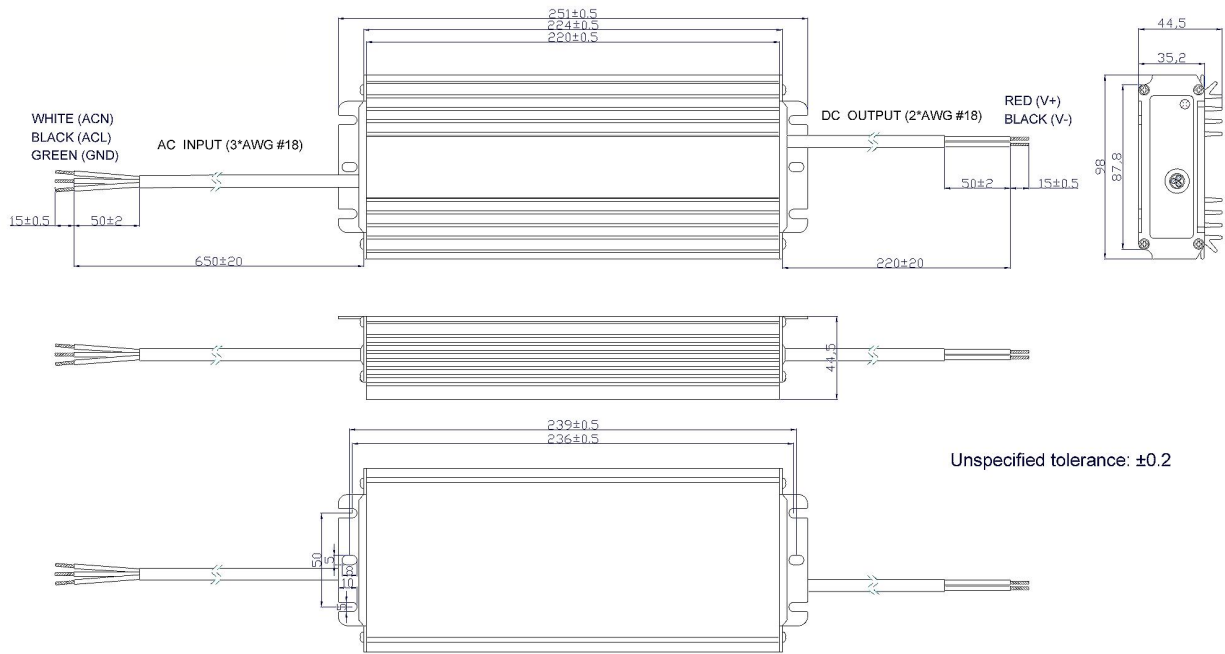
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### Mechanical Outline Drawing All Other Models



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