

## 42D Series T1235-001 Plug-in Switch Mode Power Supply Unit

### INPUT

|                                    | MINIMUM  | NORMAL        | MAXIMUM |
|------------------------------------|--|---------------|---------|
| AC Input Voltage                   | 90V AC   | 100 – 240V AC | 264V AC |
| AC Input Frequency                 | 47 Hz  | 50 / 60 Hz    | 63 Hz   |
| AC Input Current – 115V AC (max)   |  |               | 0.8A    |
| AC Input Current – 230V AC (max)   |  |               | 0.4A    |
| AC Inrush Current* – 115V AC, 60Hz | No damage shall occur and the input fuse shall not blow. |               |         |
| AC Inrush Current* – 230V AC, 50Hz |  |               |         |
| Primary current protection         | An internal fuse on the AC input line is provided.       |               |         |
| Configuration                      | 3-conductors, <Active, Neutral, Earth>                   |               |         |

\* At full-load, 25°C, cold start.

### Power consumption at no load (maximum)

|                     |           |
|---------------------|-----------|
| Input 110V AC 60 Hz | 0.50W max |
| Input 230V AC 50 Hz | 0.75W max |

### OUTPUT

|                               |  |
|-------------------------------|--|
| Normal DC Output Voltage      | +12.0V   |
| Minimum Load Current          | 0.0A   |
| Maximum Load Current          | 3.5A   |
| Maximum Output Power          | 42W  |
| Ripple and Noise *            | 120mV  |
| Efficiency (min) **           | 80%  |
| Over-voltage protection (max) | 15.75V DC  |
| Over-current protection ***   | 8A   |
| Total Output Regulation       | +/- 5%   |
| Dynamic Load Regulation ****  | +/- 5%   |
| Short-circuit protection      | No damage when shorting the DC output to ground.   |
| Open-circuit protection       | When primary power is applied with no load on any output level, no damage or hazardous conditions should occur.  |
| Drop-out                      | With half cycle input voltage drop-out, the unit shall meet the regulation requirement and operate within the prescribed voltages with a drop-out pulse repetition rate of 500mS under full load and with normal AC input voltage. |

\* Voltage measured P-P at 20MHz and output parallel with 0.1uF & 47uF capacitor to ground. Temperature at 25°C and normal AC input voltage.

\*\* At normal input voltage and full load.

\*\*\* Maximum with auto recovery function.

\*\*\*\* For 50% ~ 100% ~ 50% load change at any frequency up to 250Hz with 50% duty.

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### MECHANICAL

|                 |  |
|-----------------|--|
| Dimensions      | 102.5(L) x 57.5(W) x 34.5(H)mm maximum.              |
| Weight          | 280g maximum.  |
| Input Plug Type | IEC-C14 3-pin 3-conductors, <Active, Neutral, Earth> |
| Output Cord     | Wire: SPT-1, VW-1, 18AWG, 1828mm.                    |
| Output Plug     | 11(L) x 5.5(D) x 2.1(ID)mm                           |

### ENVIRONMENTAL

|                       |                              |
|-----------------------|------------------------------|
| Cooling               | Natural convection.          |
| Operating Temperature | 0°C to +40°C                 |
| Storage Temperature   | -20°C to +60°C               |
| Operating Humidity    | 20 ~ 85 % RH. Non-condensing |
| Storage Humidity      | 5 ~ 95 % RH. Non-condensing  |

### SAFETY

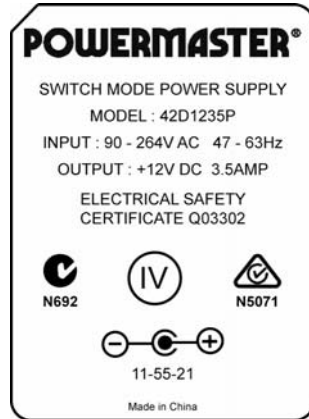
|   |  |
|---|--|
| Dielectric withstanding voltage test (Hi-pot test) input to output        | 1,800V AC, 10mA, 1 second<br>OR<br>2,545V DC, 10mA, 1 second.          |
| Dielectric withstanding voltage test (Hi-pot test) input to safety ground | 1,500V AC, 10mA, 1 minute<br>OR<br>1,800V AC, 10mA, 1 second.          |
| Ground continuity test. Primary inlet F.G to secondary ground             | 25A for 3 seconds, 100mΩ maximum.                                      |
| Insulation Resistance   | > 100MΩ at 500V DC between Primary Active, Neutral line and secondary. |
| Leakage Current   | 0.5mA maximum at normal AC input voltage and frequency                 |

### RELIABILITY

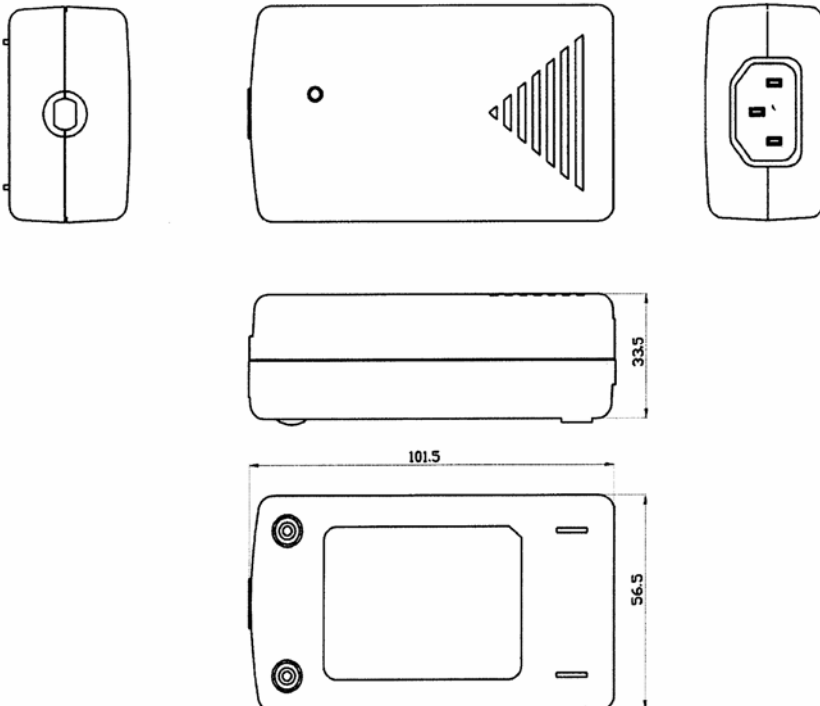
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|----------------------------------|--|
| Mean Time Between failure (MTBF) | The power supply is designed to have a MTBF of 50,000 operating hours at 90% confidence-level. |
| Burn-in Test                     | 4 hours at 40°C +/- 5°C, normal input voltage, 80% of maximum load.                            |

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**RATING PLATE** (Typical only)

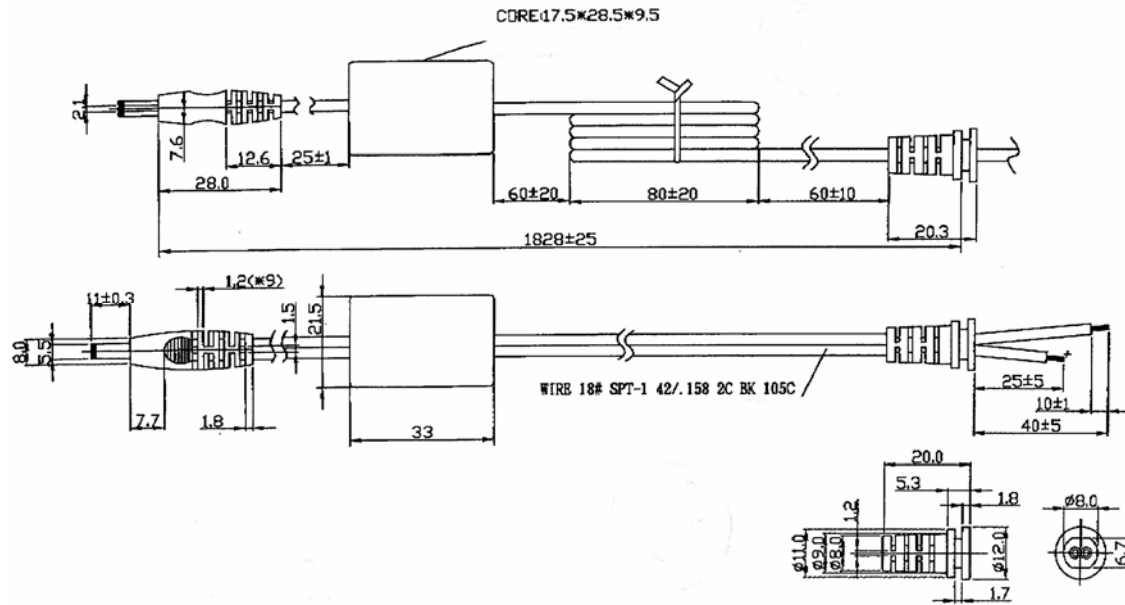


**PRODUCT OUTLINE DRAWING**



**42D Series T1235-001 Plug-in Switch Mode Power Supply Unit**

**DC OUTPUT CORD DRAWING**



**PACKING DRAWING**

