

## 20D Series Plug-in Switch Mode Power Supply Unit

### INPUT

| MODEL                          |   | 9V DC    | 12V DC   |
|--------------------------------|---|----------|----------|
| AC Input Voltage               | Min   | 90V      | 90V      |
|                                | Normal  | 100–240V | 100–240V |
|                                | Max   | 264V     | 264V     |
| AC Input Frequency             | Min   | 47Hz     | 47Hz     |
|                                | Normal  | 50 60Hz  | 50/60Hz  |
|                                | Max   | 63 Hz    | 63 Hz    |
| AC Input Current 230V AC (max) |   | 0.3A     | 0.3A     |
| Input Power (max)              |   | 17.14W   | 17.14W   |
| AC Inrush Current*             | No damage shall be incurred and input fuse shall not blow |          |          |
| Primary current protection     | An internal fuse on the AC input line is provided.        |          |          |
| Configuration                  | Wall-mount, AU pin, 2 conductors <Active, Neutral>        |          |          |

\* 230V AC 50Hz. Full-load. 25°C, Cold start.

### Power consumption at no load

| MODEL               | 9V DC     | 12V DC    |
|---------------------|-----------|-----------|
| Input current       | ≤25mA     | ≤25mA     |
| Input 230V AC 50 Hz | ≤0.5W max | ≤0.5W max |

### OUTPUT

| MODEL                    | 9V DC     | 12V DC   |
|--------------------------|-----------|----------|
| Normal DC Output Voltage | +9.0V     | +12.0V   |
| Maximum Load Current     | 2.0A      | 1.5A     |
| Minimum Load Current     | 0.0A      | 0.0A     |
| Rated Output Power       | 18.0W     | 18.0W    |
| Efficiency (Minimum)     | 76.0% *   | 76.0% ** |
| Total Output Regulation  | ±5%       |          |
| Line Regulation ***      | ±2%       |          |
| Ripple and Noise ****    | 100mV     | 120mV    |
| Turn-on Delay (max)      | 2 Seconds |          |

\* At normal input voltage.

\*\* At normal input voltage and ¼, ½, ¾ and full load.

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

\*\*\*\* Voltage measured P-P at 20MHz and output parallel with 0.1uF & 10uF electrolytic capacitors to ground.

\*\*\*\*\* At nominal AC voltage and full load.

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### MECHANICAL

| Model            |        | 9V DC                              | 12V DC            |
|------------------|--------|------------------------------------|-------------------|
| Output Cord      | Wire   | 18AWG/2C                           | 18AWG/2C          |
|                  | Length | 2000mm                             | 1800mm            |
| Output Plug      |        | 5.5 x x2.1 x x11mm R/A             | 5.5 x 1.0 x x10mm |
| Weight (Max)     |        | 200g                               |                   |
| Dimensions (Max) |        | 101(L) x 51(W) x 36(H)mm.          |                   |
| Input Plug Type  |        | Desk type, 2-pin (Active, Neutral) |                   |

### 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  |                                  |   |
| Vibration Test        | Frequency                    | 10 ~ 300Hz                       | A nominal function test shall be passed after the vibration test. |
|                       | Sweep                        | 2 hours. For each axis (X, Y, Z) |   |
|                       | Acceleration                 | 2G                               |   |
|                       | Displacement                 | 0.4mm                            |   |



### SAFETY

|  |   |
|--|---|
| Dielectric withstanding voltage test (Hi-pot test) input to output | 3000V AC 10mA for 1 minute..                            |
| Leakage Current  | 0.25mA maximum at normal AC input voltage and frequency |

### RELIABILITY

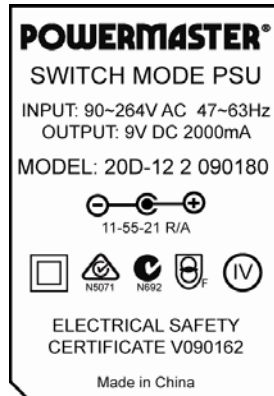
|                                  |  |
|----------------------------------|--|
| Mean Time Between Failure (MTBF) | The power supply is designed to have a MTBF of 50,000 hours. |
|----------------------------------|--|

### COMPLIANCE

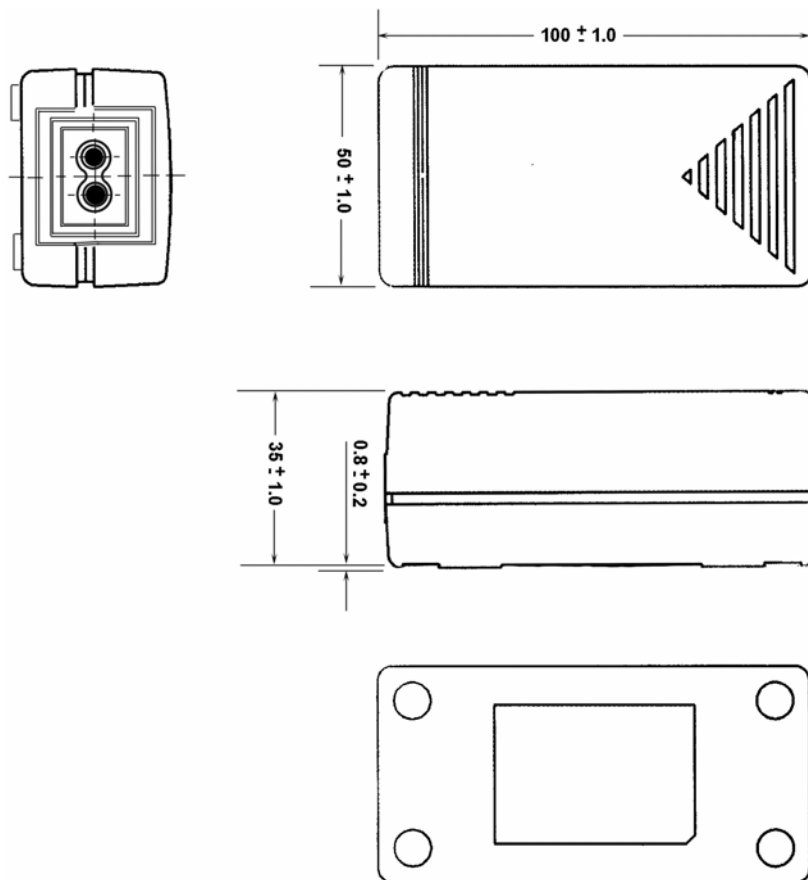
|                               |  |            |   |
|-------------------------------|--|------------|---|
| Electrical Safety             | Certificate V090162  |            | <br><b>N5071</b> |
| EMC                           | <br><b>N692</b> |            |   |
| Energy Efficiency (MEPS Mark) | <b>9V</b>  | <b>12V</b> |   |
|                               | (IV)   | (IV)       |   |

**20D Series Plug-in Switch Mode Power Supply Unit**

**RATING PLATE (Typical)**

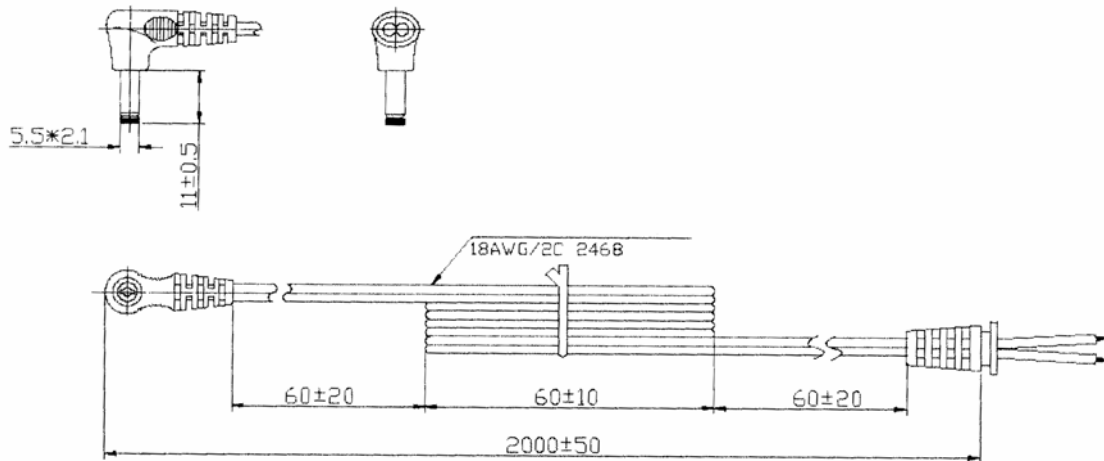


**PRODUCT OUTLINE DRAWING**

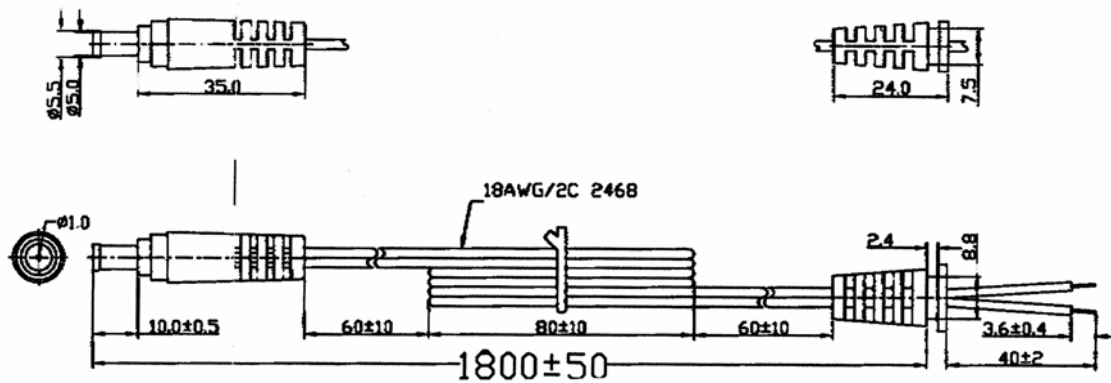


**20D Series Plug-in Switch Mode Power Supply Unit**

**DC OUTPUT CORD DRAWING  
(T0920-021)**

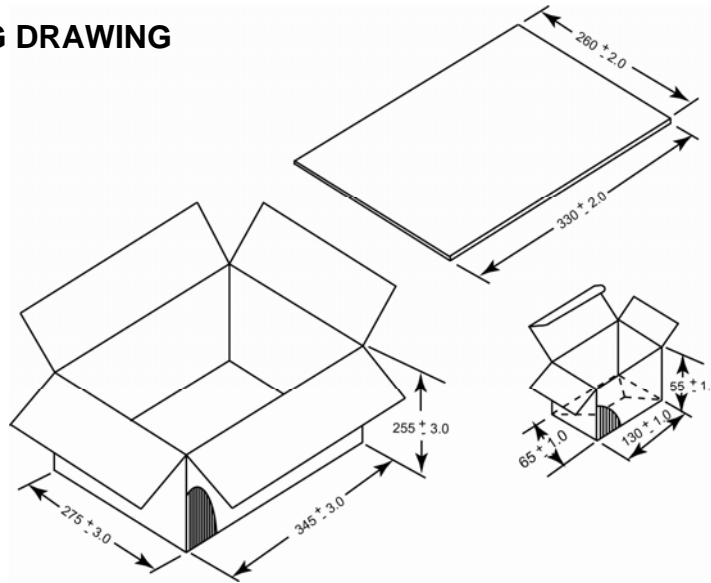


**DC OUTPUT CORD DRAWING  
(T1220-021)**



**20D Series Plug-in Switch Mode Power Supply Unit**

**PACKING DRAWING**



**BOX LABEL (Typical)**



**MASTER CARTON LABEL (Typical)**

