



## 16.5~30W AC-DC Single Output and Medical Type Desktop

## MES30B series



## ■ Features :

- Universal AC input / Full range
- 2 pole AC inlet IEC320-C8
- Class II power ( without earth pin)
- Full output 3~48V safety approval
- Protections: Short circuit / Overload / Over voltage / Over temp.
- Fully enclosed plastic case
- Medical safety approved (MOPP level)
- Fix switching frequency and regulation
- Topology: Top switch circuit
- LED indicator for power on
- Approvals: UL / CUL / TUV / CB / FCC / CE
- 2 years warranty

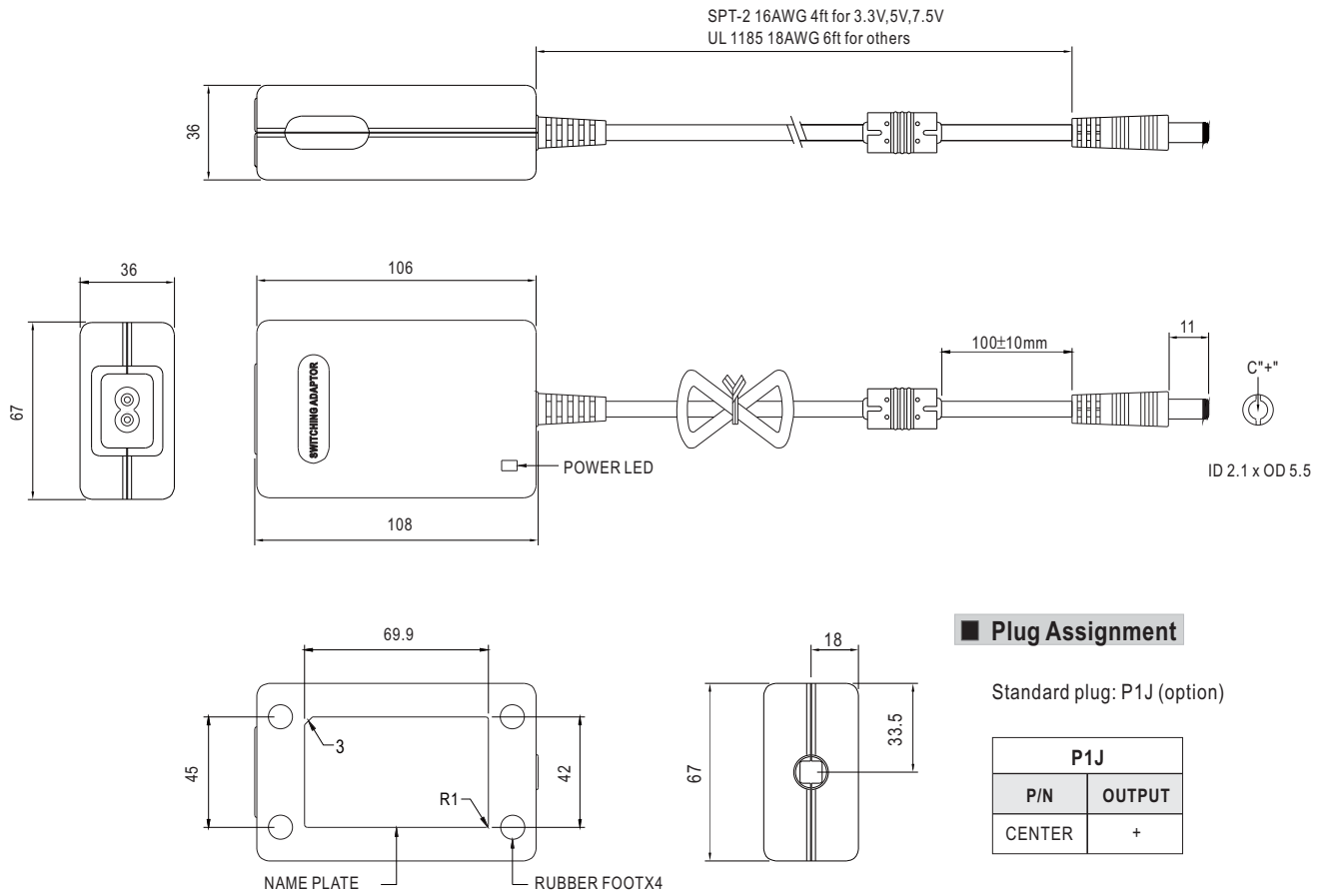


## SPECIFICATION

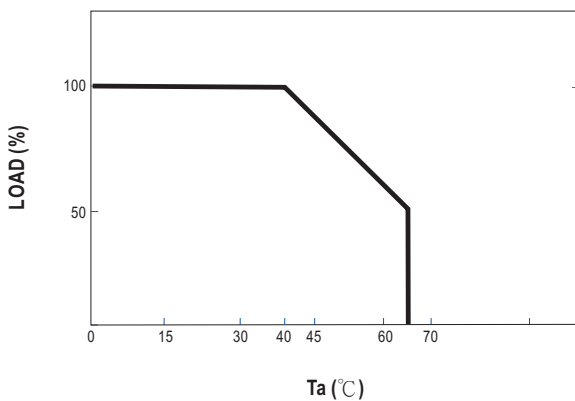
| ORDER NO.                 |                                        | MES30B-0P1J                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | MES30B-1P1J | MES30B-1-1P1J | MES30B-2P1J | MES30B-3P1J | MES30B-4P1J                 | MES30B-5P1J | MES30B-6P1J | MES30B-8P1J |
|---------------------------|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|-------------|-----------------------------|-------------|-------------|-------------|
| OUTPUT                    | SAFETY MODEL NO.                       | MES30B-0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | MES30B-1    | MES30B-1-1    | MES30B-2    | MES30B-3    | MES30B-4                    | MES30B-5    | MES30B-6    | MES30B-8    |
|                           | DC VOLTAGE                      Note.2 | 3.3V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 5V          | 7.5V          | 9V          | 12V         | 15V                         | 18V         | 24V         | 48V         |
|                           | RATED CURRENT                          | 5A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 5A          | 3.33A         | 3.33A       | 2.5A        | 2.0A                        | 1.66A       | 1.25A       | 0.62A       |
|                           | CURRENT RANGE                          | 0 ~ 5A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0 ~ 5A      | 0 ~ 3.33A     | 0 ~3.33A    | 0 ~ 2.5A    | 0 ~ 2.0A                    | 0 ~ 1.66A   | 0 ~ 1.25A   | 0 ~ 0.62A   |
|                           | RATED POWER                            | 16.5W                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 25W         | 25W           | 30W         | 30W         | 30W                         | 30W         | 30W         | 30W         |
|                           | RIPPLE & NOISE (max.) Note.3           | 30mVp-p                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 30mVp-p     | 40mVp-p       | 50mVp-p     | 50mVp-p     | 60mVp-p                     | 70mVp-p     | 80mVp-p     | 100mVp-p    |
|                           | VOLTAGE ADJ. RANGE                     | Fixed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |             |               |             |             |                             |             |             |             |
|                           | VOLTAGE TOLERANCE Note.4               | ±8.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | -5% ~ +8%   | ±4.0%         | ±4.0%       | ±3.0%       | ±2.0%                       | ±2.0%       | ±2.0%       | ±2.0%       |
|                           | LINE REGULATION              Note.5    | ±1.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ±1.0%       | ±1.0%         | ±1.0%       | ±1.0%       | ±1.0%                       | ±1.0%       | ±1.0%       | ±1.0%       |
|                           | LOAD REGULATION              Note.6    | ±8.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | -5% ~ +8%   | ±4.0%         | ±4.0%       | ±3.0%       | ±2.0%                       | ±2.0%       | ±2.0%       | ±2.0%       |
| SETUP, RISE, HOLD UP TIME |                                        | 300ms, 50ms, 16ms at full load                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |             |               |             |             |                             |             |             |             |
| INPUT                     | VOLTAGE RANGE                          | 90 ~ 264VAC    135 ~ 370VDC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |               |             |             |                             |             |             |             |
|                           | FREQUENCY RANGE                        | 47 ~ 63Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |               |             |             |                             |             |             |             |
|                           | EFFICIENCY (Typ.)                      | 56%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 70%         | 72%           | 74%         | 76%         | 78%                         | 78%         | 80%         | 82%         |
|                           | AC CURRENT                             | 0.8A / 100VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |             |               |             |             |                             |             |             |             |
|                           | INRUSH CURRENT (max.)                  | 35A / 230VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |               |             |             |                             |             |             |             |
|                           | LEAKAGE CURRENT (max.) Note.7          | Touch current < 80μA/264VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |               |             |             |                             |             |             |             |
| PROTECTION                | OVERLOAD                               | 112 ~ 250% rated output power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |             |               |             |             | 150~350% rated output power |             |             |             |
|                           |                                        | Protection type : Hiccup mode, recovers automatically after fault condition is removed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |               |             |             |                             |             |             |             |
|                           | OVER VOLTAGE                           | 110 ~ 140% rated output voltage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |               |             |             |                             |             |             |             |
|                           |                                        | Protection type : Hiccup mode, recovers automatically after fault condition is removed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |               |             |             |                             |             |             |             |
| ENVIRONMENT               | OVER TEMPERATURE                       | Tj 135℃ typically (IC1) detect on main control IC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |               |             |             |                             |             |             |             |
|                           |                                        | Protection type : Shut down o/p voltage, recovers automatically after temperature goes down                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |               |             |             |                             |             |             |             |
|                           | WORKING TEMP.                          | 0 ~ +65℃ (Refer to "Derating Curve")                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |             |               |             |             |                             |             |             |             |
|                           | WORKING HUMIDITY                       | 20% ~ 90% RH non-condensing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |               |             |             |                             |             |             |             |
|                           | STORAGE TEMP., HUMIDITY                | -20 ~ +85℃, 10 ~ 95% RH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |               |             |             |                             |             |             |             |
| SAFETY & EMC<br>(Note. 8) | TEMP. COEFFICIENT                      | ±0.03% / °C ( 0 ~ 50℃)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |               |             |             |                             |             |             |             |
|                           | VIBRATION                              | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |               |             |             |                             |             |             |             |
|                           | SAFETY STANDARDS                       | ANSI/AAMI ES60601-1, TUV EN60601-1, IEC60601-1 approved                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |               |             |             |                             |             |             |             |
|                           | WITHSTAND VOLTAGE                      | I/P-O/P: 565VDC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |               |             |             |                             |             |             |             |
|                           | ISOLATION RESISTANCE                   | I/P-O/P: 100M Ohms / 500VDC / 25℃ / 70% RH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |               |             |             |                             |             |             |             |
| OTHERS                    | EMC EMISSION                           | Compliance to EN55011(CISPR11) class B, EN61000-3-2,3, FCC part 18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |             |               |             |             |                             |             |             |             |
|                           | EMC IMMUNITY                           | Compliance to EN60601-1-2 (EN61000-4-2,3,4,5,6,8,11), light industry level, criteria A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |               |             |             |                             |             |             |             |
|                           | MTBF                                   | 400Khrs min.    MIL-HDBK-217F (25℃)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |             |               |             |             |                             |             |             |             |
| CONNECTOR                 | DIMENSION                              | 108*67*36mm (L*W*H)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |             |               |             |             |                             |             |             |             |
|                           | PACKING                                | 0.3kg ; 54pcs/ 20kg / CARTON                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |               |             |             |                             |             |             |             |
| NOTE                      | PLUG                                   | Standard type P1J: 2.1φ * 5.5φ * 11mm, turning fork type, center positive for stock ; Other type available by customer requested                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |             |               |             |             |                             |             |             |             |
|                           | CABLE                                  | SPT-2 16AWG 4FT for 3.3 ~ 7.5V ; UL1185 18AWG 6FT for 9 ~ 48V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |             |               |             |             |                             |             |             |             |
|                           |                                        | 1.All parameters are specified at 230VAC input, rated load, 25℃ 70% RH ambient.<br>2.DC voltage: The output voltage set at point measure by plug terminal & 50% load.<br>3.Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1uf & 47uf capacitor.<br>4.Tolerance: includes set up tolerance, line regulation, load regulation.<br>5.Line regulation is measured from low line to high line at rated load.<br>6.Load regulation is measured from 0% to 100% rated load.<br>7.Touch current was measured from primary input to DC output.<br>8.The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. |             |               |             |             |                             |             |             |             |

## Mechanical Specification

Unit:mm



## Derating Curve



## Static Characteristics

