

## 20~25W AC-DC Single Output Wall-mounted type

## ES25E series



Features :

- Universal AC input / Full range
- 2 pole EURO plug
- Class  ${\rm I\!I}\,$  power (without earth pin)
- Full output 5~48V safety approval
- Protections: Short circuit / Over load / Over voltage
- PWM 3842 control circuit and regulated
- Fully enclosed plastic case
- LED for power on
- Approvals: TUV / CB / CE / FCC
- 1 year warranty

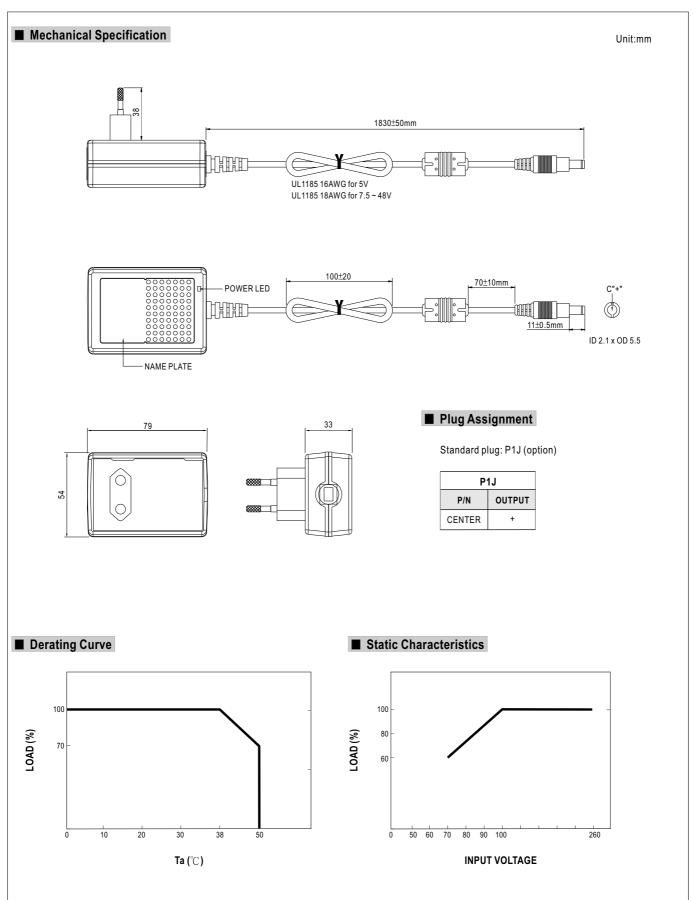
## **SPECIFICATION**



| ORDER NO.                    |   | ES25E05-P1J   | ES25E07-P1J | ES25E09-P1J | ES25E12-P1J | ES25E15-P1J | ES25E18-P1J | ES25E24-P1J | ES25E28-P1J | ES25E36-P1J  | ES25E48-P1.  |
|------------------------------|---|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|
| OUTPUT                       | SAFETY MODEL NO.  | ES25E05-050   | ES25E07-075 | ES25E09-090 | ES25E12-120 | ES25E15-150 | ES25E18-180 | ES25E24-240 | ES25E30-280 | ES25E36-360  | ES25E48-480  |
|                              | DC VOLTAGE Note.2   | 5V  | 7.5V        | 9V          | 12V         | 15V         | 18V         | 24V         | 28V         | 36V          | 48V          |
|                              | RATED CURRENT   | 4.0A  | 2.93A       | 2.77A       | 2.08A       | 1.66A       | 1.38A       | 1.04A       | 0.89A       | 0.69A        | 0.52A        |
|                              | CURRENT RANGE   | 0.4~4.0A  | 0.3~2.93A   | 0.2~2.77A   | 0.1~2.08A   | 0.1~1.66A   | 0.1~1.38A   | 0.1~1.04A   | 0.1~0.89A   | 0.06 ~ 0.69A | 0.05 ~ 0.524 |
|                              | RATED POWER (max.)  | 20W   | 22W         | 25W          | 25W          |
|                              | RIPPLE & NOISE (max.) Note.3  | 50mVp-p   | 80mVp-p     | 80mVp-p     | 80mVp-p     | 100mVp-p    | 150mVp-p    | 180mVp-p    | 240mVp-p    | 240mVp-p     | 240mVp-p     |
|                              | VOLTAGE TOLERANCE Note.4  | ±5.0%   | ±5.0%       | ±5.0%       | ±3.0%       | ±3.0%       | ±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%        | ±1.0%        |
|                              | LOAD REGULATION Note.6  | ±5.0%   | ±5.0%       | ±5.0%       | ±3.0%       | ±3.0%       | ±3.0%       | ±2.0%       | ±2.0%       | ±2.0%        | ±2.0%        |
|                              | SETUP, RISE, HOLD TIME  | 200ms, 50ms, 16ms at full load  |             |             |             |             |             |             |             |              |              |
| INPUT                        | VOLTAGE RANGE   | 90~264VAC 135~370VDC  |             |             |             |             |             |             |             |              |              |
|                              | FREQUENCY RANGE   | 47 ~ 63Hz   |             |             |             |             |             |             |             |              |              |
|                              | EFFICIENCY (Typ.)   | 70%   | 72%         | 74%         | 76%         | 77%         | 78%         | 80%         | 82%         | 82%          | 83%          |
|                              | AC CURRENT  | 0.7A / 100VAC   |             |             |             |             |             |             |             |              |              |
|                              | INRUSH CURRENT (max.)   | 40A / 230VAC  |             |             |             |             |             |             |             |              |              |
|                              | LEAKAGE CURRENT(max.)   | 0.25mA / 240VAC   |             |             |             |             |             |             |             |              |              |
| PROTECTION                   | OVER LOAD   | 110 ~ 150% rated output power 130 ~ 180% rated output power   |             |             |             |             |             |             |             |              |              |
|                              |   | Protection type : Hiccup mode, recovers automatically after fault condition is removed  |             |             |             |             |             |             |             |              |              |
|                              |   | 105 ~ 135% rated output voltage   |             |             |             |             |             |             |             |              |              |
|                              | OVER VOLTAGE  | Protection type : Shut down o/p voltage, re-power on to recover   |             |             |             |             |             |             |             |              |              |
| ENVIRONMENT                  | WORKING TEMP.   | 0 ~ +50°C (Refer to output load derating curve)   |             |             |             |             |             |             |             |              |              |
|                              | WORKING HUMIDITY  | 20% ~ 90% RH non-condensing   |             |             |             |             |             |             |             |              |              |
|                              | STORAGE TEMP., HUMIDITY   | -20 ~ +85℃, 10 ~ 95% RH   |             |             |             |             |             |             |             |              |              |
|                              | TEMP. COEFFICIENT   | ±0.03% / °C (0~50°C)  |             |             |             |             |             |             |             |              |              |
|                              | VIBRATION   | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes   |             |             |             |             |             |             |             |              |              |
| SAFETY &<br>EMC<br>(Note. 7) | SAFETY STANDARDS  | TUV EN60950-1 Approved  |             |             |             |             |             |             |             |              |              |
|                              | WITHSTAND VOLTAGE   | I/P-O/P:3KVAC   |             |             |             |             |             |             |             |              |              |
|                              | ISOLATION RESISTANCE  | I/P-O/P:100M Ohms / 500VDC  |             |             |             |             |             |             |             |              |              |
|                              | EMI CONDUCTION & RADIATION  | Compliance to EN55022 class B, FCC PART 15 / CISPR22 class B  |             |             |             |             |             |             |             |              |              |
|                              | HARMONIC CURRENT  | Compliance to EN61000-3-2,3   |             |             |             |             |             |             |             |              |              |
|                              | EMS IMMUNITY  | Compliance to EN61000-4-2,3,4,5,6,8,11, Light industry level, criteria A  |             |             |             |             |             |             |             |              |              |
| OTHERS                       | MTBF  | 500Khrs min. MIL-HDBK-217F(25°C)  |             |             |             |             |             |             |             |              |              |
|                              | DIMENSION   | 79*54*33mm (L*W*H)  |             |             |             |             |             |             |             |              |              |
| CONNECTOR                    | PACKING   | 220g; 60pcs / 13kg / CARTON   |             |             |             |             |             |             |             |              |              |
|                              | PLUG  | Standard type P1J: $2.1\phi$ * $5.5\phi$ * 11mm, tuning fork type, center positive for stock ; Other type available by customer requested |             |             |             |             |             |             |             |              |              |
| NOTE                         | CABLE Standard type UL1185 6ft (5ft only for 5V) (with ferrite core) for stock ; Other type available by customer requested   1.All parameters are specified at 230VAC input, rated load, 25°C 70% RH. Ambient.   2.DC voltage: The output voltage set at point measure by plug terminal & 50% load.   3.Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1uf & 47uf capacitor.   4.Tolerance: includes set up tolerance, line regulation, load regulation.   5.Line regulation is measured from low line to high line at rated load.   6.Load regulation is measured from 20% to 100% rated load   7.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. |   |             |             |             |             |             |             |             |              |              |



## ES25E series



File Name:ES25E-SPEC 2006-03-28