



**Product Features**

- Meets medical & I.T.E. safety
- 2 MOPP input to output isolation
- Touch current  $\leq 100\mu\text{A}$
- Earth Leakage current  $\leq 5\text{mA}$
- Energy efficiency level VI
- $\text{PF} > 0.95 @ 230\text{VAC}$  full load
- $\leq 0.15\text{W}$  standby power
- 11V-54V outputs, up to 120W
- Up to 5,000m operating altitude

**NEW**



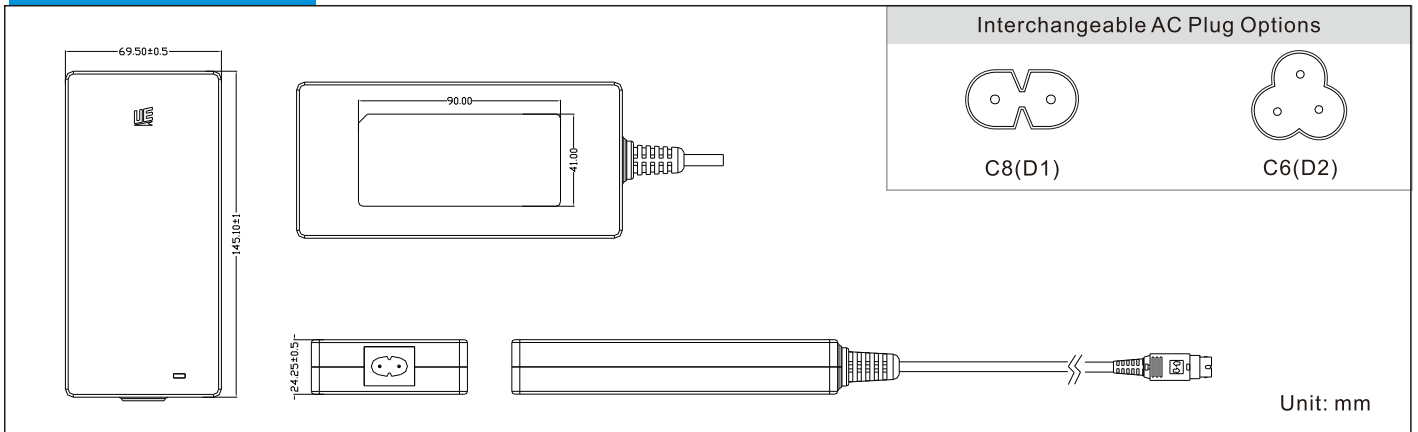
★★★★

**Models & Parameters**

| Model Number         | Voltage <sup>(*)</sup><br>(V) | Current<br>(A) | Rated Power | Ripple & Noise<br>(max) | Voltage Tolerance | Line & Load Regulation | Efficiency | Start Up Delay |
|----------------------|-------------------------------|----------------|-------------|-------------------------|-------------------|------------------------|------------|----------------|
| UES120D"Z"-XXXXYYSPA | 11.0-12.0                     | 0.01-10.00     | 120.00W     | 150mVpk-pk              | ±5%               | Line: ±1%<br>Load: ±5% | 92.0%      | ≤3s            |
|                      | 12.1-13.0                     | 0.01-9.23      | 120.00W     | 150mVpk-pk              | ±5%               |                        | 92.0%      | ≤3s            |
|                      | 13.1-14.0                     | 0.01-8.57      | 120.00W     | 150mVpk-pk              | ±5%               |                        | 92.0%      | ≤3s            |
|                      | 14.1-15.0                     | 0.01-8.00      | 120.00W     | 150mVpk-pk              | ±5%               |                        | 92.0%      | ≤3s            |
|                      | 17.1-18.0                     | 0.01-6.66      | 120.00W     | 180mVpk-pk              | ±5%               |                        | 93.0%      | ≤3s            |
|                      | 18.1-19.0                     | 0.01-6.31      | 120.00W     | 180mVpk-pk              | ±5%               |                        | 93.0%      | ≤3s            |
|                      | 19.1-20.0                     | 0.01-6.00      | 120.00W     | 200mVpk-pk              | ±5%               |                        | 93.0%      | ≤3s            |
|                      | 20.1-21.0                     | 0.01-5.71      | 120.00W     | 200mVpk-pk              | ±5%               |                        | 93.0%      | ≤3s            |
|                      | 21.1-22.0                     | 0.01-5.45      | 120.00W     | 200mVpk-pk              | ±5%               |                        | 93.0%      | ≤3s            |
|                      | 22.1-23.0                     | 0.01-5.21      | 120.00W     | 200mVpk-pk              | ±5%               |                        | 93.0%      | ≤3s            |
|                      | 23.1-24.0                     | 0.01-5.00      | 120.00W     | 240mVpk-pk              | ±5%               |                        | 93.0%      | ≤3s            |
|                      | 24.1-25.0                     | 0.01-4.80      | 120.00W     | 240mVpk-pk              | ±5%               |                        | 93.0%      | ≤3s            |
|                      | 25.1-26.0                     | 0.01-4.61      | 120.00W     | 240mVpk-pk              | ±5%               |                        | 93.0%      | ≤3s            |
|                      | 26.1-27.0                     | 0.01-4.44      | 120.00W     | 240mVpk-pk              | ±5%               |                        | 93.0%      | ≤3s            |
|                      | 33.1-34.0                     | 0.01-3.52      | 120.00W     | 300mVpk-pk              | ±5%               |                        | 94.0%      | ≤3s            |
|                      | 34.1-35.0                     | 0.01-3.42      | 120.00W     | 300mVpk-pk              | ±5%               |                        | 94.0%      | ≤3s            |
|                      | 35.1-36.0                     | 0.01-3.33      | 120.00W     | 300mVpk-pk              | ±5%               |                        | 94.0%      | ≤3s            |
|                      | 36.1-37.0                     | 0.01-3.24      | 120.00W     | 300mVpk-pk              | ±5%               |                        | 94.0%      | ≤3s            |
|                      | 37.1-38.0                     | 0.01-3.15      | 120.00W     | 300mVpk-pk              | ±5%               |                        | 94.0%      | ≤3s            |
|                      | 38.1-39.0                     | 0.01-3.07      | 120.00W     | 300mVpk-pk              | ±5%               |                        | 94.0%      | ≤3s            |
|                      | 39.1-40.0                     | 0.01-3.00      | 120.00W     | 300mVpk-pk              | ±5%               |                        | 94.0%      | ≤3s            |
|                      | 47.1-48.0                     | 0.01-2.50      | 120.00W     | 400mVpk-pk              | ±5%               |                        | 94.0%      | ≤3s            |
|                      | 48.1-49.0                     | 0.01-2.44      | 120.00W     | 400mVpk-pk              | ±5%               |                        | 94.0%      | ≤3s            |
|                      | 49.1-50.0                     | 0.01-2.40      | 120.00W     | 400mVpk-pk              | ±5%               |                        | 94.0%      | ≤3s            |
|                      | 50.1-51.0                     | 0.01-2.35      | 120.00W     | 400mVpk-pk              | ±5%               |                        | 94.0%      | ≤3s            |
|                      | 51.1-52.0                     | 0.01-2.30      | 120.00W     | 400mVpk-pk              | ±5%               |                        | 94.0%      | ≤3s            |
|                      | 52.1-53.0                     | 0.01-2.26      | 120.00W     | 400mVpk-pk              | ±5%               |                        | 94.0%      | ≤3s            |
|                      | 53.1-54.0                     | 0.01-2.22      | 120.00W     | 400mVpk-pk              | ±5%               |                        | 94.0%      | ≤3s            |

Model encoding: replace "Z" with "1" for C8 (Class II), "2" for C6 (Class I) AC inlets

**Mechanical Details**



Notes  
 (\*) Other options are available, please contact our sales representative for details.

**Input**

|  |   |
|--|---|
| Input Voltage Range                    | 90-264VAC (Class I); 80-264VAC (Class II) |
| Frequency Range                        | 47-63Hz                                   |
| Input Current                          | 2.0A at 80/90VAC                          |
| Inrush Current                         | 120A max at 240VAC cold start             |
| Touch Leakage Current <sup>(max)</sup> | ≤ 100µA at 264VAC                         |

**Environmental**

|                       |                               |
|-----------------------|-------------------------------|
| Operating Temperature | -10°C to 40°C                 |
| Storage Temperature   | -20°C to 60°C                 |
| Operating Humidity    | 10% to 90% RH, non-condensing |
| Storage Humidity      | 5% to 90% RH                  |
| Operating Altitude    | 5,000m                        |

**General**

|            |                                  |
|------------|----------------------------------|
| Dimensions | 145.1(L) 69.5(W) 24.25(H)mm      |
| Weight     | 450g                             |
| MTBF       | >100,000hrs MIL-HK8K-217 at 25°C |

**Protection**

|               |  |
|---------------|--|
| Overload      | 120-170% rated output power, auto recovery   |
| Over Voltage  | 120-150% rated output voltage input to reset |
| Short Circuit | Trip and restart (hiccup mode)               |

**Safety Approvals**

| Safety Agency / Mark | Medical   | ITE         |
|----------------------|---|-------------|
| CB                   | IEC60601-1 / IEC60601-1-11                                    | IEC62368-1  |
| UL                   | ANSI/AAMI ES60601-1 / 60601-1-11<br>CAN/CSA-C22.2 NO. 60601-1 | UL62368     |
| TüV Rheinland/Mark   | EN60601-1 / EN60601-1-11                                      | -           |
| TüV Rheinland/GS     | -   | EN62368-1   |
| CE                   | -   | EN62368     |
| CCC                  | -   | GB4943.1    |
| PSE                  | -   | J62368      |
| KC                   | -   | K60950-1    |
| BSMI                 | -   | CNS14436-1  |
| FCC                  | -   | FCC PART 15 |

**EMC**

| Emission             | Medical                   | ITE                                   |
|----------------------|---------------------------|---------------------------------------|
| Conduction           | IEC/EN60601-1-2, CISPR 11 | EN55032, CISPR 32                     |
| Radiation            | IEC/EN60601-1-2, CISPR 11 | EN55032, CISPR 32                     |
| Harmonic Currents    | EN61000-3-2, Class A      | EN61000-3-2, Class A                  |
| Voltage Flicker      | EN61000-3-3               | EN61000-3-3                           |
| Immunity             | IEC/EN60601-1-2           | EN55035, CISPR 35                     |
| ESD                  | IEC61000-4-2              | ±15KV air, ±8KV contact               |
| Radiated Immunity    | IEC61000-4-3              | 10V/m, 3V/m 80MHz - 2.7GHz            |
| EFT/Burst            | IEC61000-4-4              | ±2KV on AC port, ±1KV on signal ports |
| Surge                | IEC61000-4-5              | ±2KV line to line (different mode)    |
| Conducted Immunity   | IEC61000-4-6              | 3Vrms, 6Vrms (0.15MHz-80MHz)          |
| Magnetic Field       | IEC61000-4-8              | 30 A/m                                |
| Dips & Interruptions | IEC61000-4-11             | 0%, 70%, 0% of UT                     |

**Others**

|                              |                                  |
|------------------------------|----------------------------------|
| Dielectric Withstand Voltage | 5,656VDC input to output         |
| Insulation Resistance        | 10M Ohms, 500VDC input to output |