

SL POWER SLE12 SERIES

12 Watt Single Output
External Power Adapters



Medical



Industrial

LEAN LINE
POWER ADAPTERS

Advanced Energy's SL Power SLE12 series of plug-in wall-mount AC-DC power adapters feature both medical and ITE safety approvals. It meets Department of Energy Level VI and European Code of Conduct V5 Tier 2 Directive efficiency standards.

AT A GLANCE

Total Power

12 Watts

Input Voltage

90 to 264 VAC

of Outputs

Single

SPECIAL FEATURES

- Medical and ITE safeties
- Interchangeable AC plugs
- 2 x MOPP input to output isolation
- Suitable for medical equipment up to class BF
- Low leakage current less than 10 μ A
- Overvoltage, overcurrent and short circuit protection
- EU CoC V5 Tier 2 compliant
- DoE Efficiency level VI
- \leq 0.075 W standby power
- Up to 5000 m operating altitude

SAFETY

- CB Medical: IEC 60601-1, ANSI/AAMI ES 60601-1
ITE: IEC 60950-1, UL 62368
- UL Medical: CAN/CSA C22.2 No. 60601-1
ITE: CAN/CSA C22.2 No. 60950-1
- TUV Medical: EN 60601-1
ITE: EN 60950-1
- RCM ITE: AS/NZS 60950-1



ELECTRICAL SPECIFICATIONS

| Input | |
|------------------------------|---|
| Input Voltage Range | 90 to 264 VAC |
| Frequency | 47 to 63 Hz |
| Input Current | 0.5 A @ 90 VAC |
| Inrush Current | 50 A @ 240 VAC cold start |
| Touch Leakage Current | ≤ 10 μA @ 264 VAC |
| Isolation Safety Rating | Input to output: 4,000 VAC (2 x MOPP) |
| Dielectric Withstand Voltage | Input to output: 5,656 VDC |
| Insulation Resistance | Input to output: 10 Mohms, 500 VDC |
| Output | |
| Output Voltage | 5.0 V, 12.0 V, 18.0 V, 24.0 V |
| Voltage Regulation | ±7% for 5.0 V model, ±5% for other models |
| Start-up Delay | ≤ 3 s |
| Overvoltage Protection | 120% to 150% rated output voltage, recycle input to reset |
| Overload Protection | 120% to 200% rated output power, auto-recovery |
| Short Circuit Protection | Trip and restart, hiccup mode |

RELIABILITY

| | |
|------|--------------------------------------|
| MTBF | > 100,000 hours MIL-HDBK-217 at 25°C |
|------|--------------------------------------|

ENVIRONMENTAL SPECIFICATIONS

| | |
|-----------------------|--|
| Operating Temperature | -5 to +45°C ambient |
| Storage Temperature | -20 to +75°C |
| Operating Humidity | 10% to 90% RH, non-condensing |
| Storage Humidity | 5% to 90% RH |
| Operating Altitude | 5,000 m |
| Weight | 120 g |
| Dimension | 76.0 x 30.3 x 48.2 mm |
| Packing Quantity | Individual box: 50/carton, egg-crate: 100/carton |

EMC/EMI COMPLIANCE

| | |
|--|---|
| Conducted Emissions | Medical: IEC/EN 60601-1-2, CISPR 11 ITE: EN 55022, CISPR 22 |
| Radiated Emissions | Medical: IEC/EN 60601-1-2, CISPR 11 ITE: EN 55022, CISPR 22 |
| Immunity | Medical: IEC/EN 60601-1-2 ITE: EN 55024, CISPR 24 |
| Electro-Static Discharge (ESD) Immunity on Power Ports | EN 61000-4-2, ±15 kV air, ±8 kV contact |
| Radiated RF EM Fields Susceptibility | EN 61000-4-3, 10 V/m, 3 V/m (80 MHz to 2700 MHz) |
| Electrical Fast Transients (EFT) / Bursts | EN 61000-4-4, ±2 kV on AC port, ±1 kV on signal ports |
| Surges, Line to Line (DM) and Line to Ground (CM) | EN 61000-4-5, ±1 kV line to line (diff mode), compatible ±4 kV line to line (diff mode) |
| Conducted RF Immunity | EN 61000-4-6, 3 Vrms, 6 Vrms (0.15 MHz to 80 MHz) |
| Power Frequency Magnetic Field Immunity | EN 61000-4-8, 30 A/m |
| Voltage Dip Immunity | EN 61000-4-11, 0%, 70%, 0% of UT |
| Harmonic Current Emissions | EN 61000-3-2, Class A |
| Flicker Test | EN 61000-3-3 |

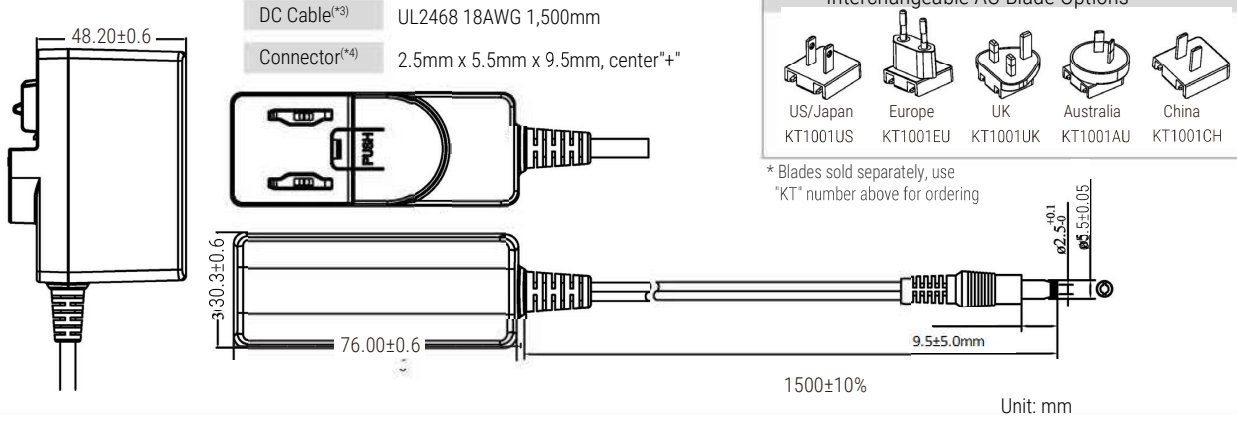
ORDERING INFORMATION - SLE12 SERIES

| Model Number ^{3,4,5} | Maximum Power | Output Voltage ¹ | Maximum Load | Ripple & Noise ² | Line Regulation | Load Regulation | Efficiency (Average) |
|-------------------------------|---------------|-----------------------------|--------------|-----------------------------|-----------------|-----------------|----------------------|
| SLE12S0503B01 | 10.0 W | 5.0 V | 2.0 A | 150 mV pk-pk | ± 1% | ± 5% | 79.01% |
| SLE12S1203B01 | 12.0 W | 12.0 V | 1.0 A | 150 mV pk-pk | ± 1% | ± 5% | 83.30% |
| SLE12S1803B01 | 12.0 W | 18.0 V | 0.6 A | 150 mV pk-pk | ± 1% | ± 5% | 83.30% |
| SLE12S2403B01 | 12.0 W | 24.0 V | 0.5 A | 150 mV pk-pk | ± 1% | ± 5% | 83.30% |

Note:

- Other output voltages in the range of 4.0 V through 24.0 V are available, contact our sales representative for details.
- Measured at output connector with 20 MHz bandwidth and 0.1 µF ceramic in parallel with 10 µF electrolytic capacitors.
- "B" in the model number (SLE12S0503B01) indicates interchangeable blade model.
- "03" in the model number indicates 2.5 x 5.5 x 9.5 mm straight barrel type connector. Other output connector options are available, please contact our sales representative for details.
- Power supply is not fitted with the AC blade, this is to be ordered separately. See outline drawing below for details
- Power supplies are not medical equipment (applied parts), medical product manufacturers take responsibility for further evaluation of class B/BF/CF compliance of their end product.

MECHANICAL DRAWINGS





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ABOUT ADVANCED ENERGY

Advanced Energy (AE) has devoted more than three decades to perfecting power for its global customers. AE designs and manufactures highly engineered, precision power conversion, measurement and control solutions for mission-critical applications and processes.

Our products enable customer innovation in complex applications for a wide range of industries including semiconductor equipment, industrial, manufacturing, telecommunications, data center computing, and medical. With deep applications know-how and responsive service and support across the globe, we build collaborative partnerships to meet rapid technological developments, propel growth for our customers, and innovate the future of power.

PRECISION | POWER | PERFORMANCE | TRUST

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