

SL POWER SLE12 SERIES

12 Watt Single Output
External Power Adapters



Medical



Industrial



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.

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

AT A GLANCE

Total Power

12 Watts

Input Voltage

90 to 264 VAC

of Outputs

Single



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	$\leq 10 \mu\text{A}$ @ 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	$\pm 7\%$ for 5.0 V model, $\pm 5\%$ for other models
Start-up Delay	$\leq 3 \text{ s}$
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
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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

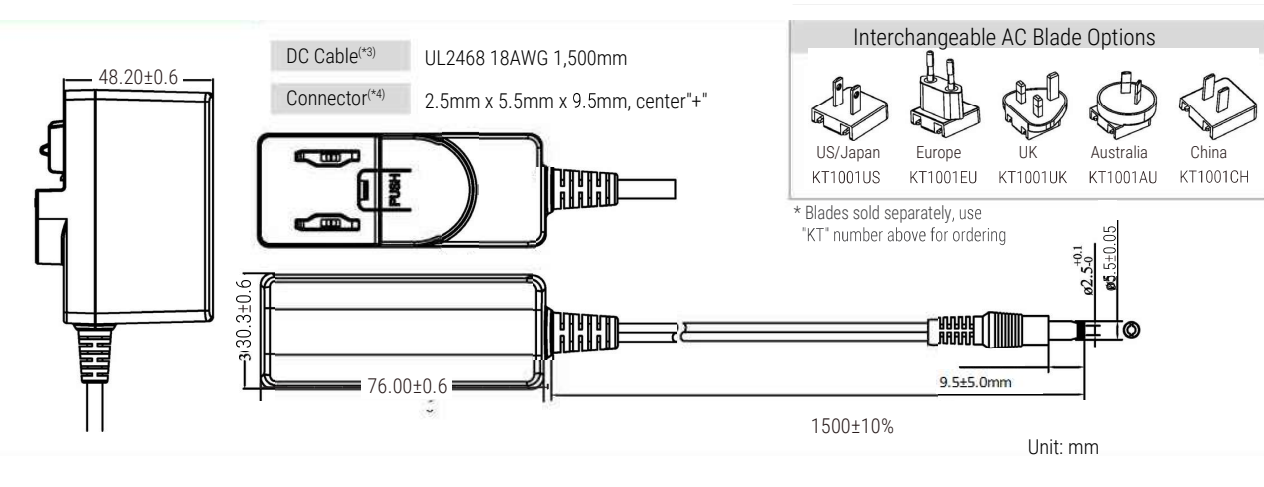
ORDERING INFORMATION - SLE12 SERIES

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	$\pm 1\%$	$\pm 5\%$	79.01%
SLE12S1203B01	12.0 W	12.0 V	1.0 A	150 mV pk-pk	$\pm 1\%$	$\pm 5\%$	83.30%
SLE12S1803B01	12.0 W	18.0 V	0.6 A	150 mV pk-pk	$\pm 1\%$	$\pm 5\%$	83.30%
SLE12S2403B01	12.0 W	24.0 V	0.5 A	150 mV pk-pk	$\pm 1\%$	$\pm 5\%$	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 μ F ceramic in parallel with 10 μ F 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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