



LEAN LINE  
SL POWER ELECTRONICS



Medical



Industrial

## FEATURES AND BENEFITS

Medical & ITE Safety Approvals	CoC V5 Tier 2(2016)
2 x MOPP Input to Output Isolation	≤0.15W Standby Power
Suitable for Medical Equipment Up to Class BF <sup>(*)</sup>	12V to 52V Outputs, Up to 90W
Low Leakage Current ≤100μA	5,000m Operating Altitude
DOE Efficiency Level VI	AC Inlet IEC60320 C8 (class II) or C14 (class I) input



## MODEL SELECTION

Model Number	Volts <sup>(*)</sup>	Current	Rated Power	Ripple & Noise <sup>(max)(*)</sup>	Voltage Tolerance	Line & Load Regulation	Efficiency (Average)	Start Up Delay
SLE90S1203N01	12.0V	7.0A	84.0W	150mV pk-pk	±5%	Line: ±1% Load: ±5%	88.6%	≤3s
SLE90S1903N01	19.0V	4.7A	90.0W	200mV pk-pk	±5%		88.6%	≤3s
SLE90S2403N01	24.0V	3.75A	90.0W	200mV pk-pk	±5%		88.6%	≤3s
SLE90S4803N01	48.0V	1.9A	90.0W	480mV pk-pk	±5%		88.6%	≤3s
SLE90S1203F01	12.0V	7.0A	84.0W	150mV pk-pk	±5%	Line: ±1% Load: ±5%	88.6%	≤3s
SLE90S1903F01	19.0V	4.7A	90.0W	200mV pk-pk	±5%		88.6%	≤3s
SLE90S2403F01	24.0V	3.75A	90.0W	200mV pk-pk	±5%		88.6%	≤3s
SLE90S4803F01	48.0V	1.9A	90.0W	480mV pk-pk	±5%		88.6%	≤3s

Notes:

1. Measured at output connector with 20MHz bandwidth and 0.1μF ceramic in parallel with 10μF electrolytic capacitors.
2. Other output voltages in the range of 12V through 52V are available, contact us for details.
3. "N" in the model number (SLE90S2403N01) indicates IEC60320 C8 inlet (class II). "F" indicates C14 type, (class I). C6 (class I) and C18 (class II) inputs are available, Contact SL Power for details.
4. "03" in the model number indicates 2.5 x 5.5 x 9.5mm straight barrel type connector. Other output connector options are available, please contact our sales representative for details.
5. Power supply is not provided with a line cord.
6. Power supplies are not medical equipment (applied parts), medical product manufacturers shall take responsibility for further evaluation of class B/BF/CF compliance of their end product.

## INPUT

Input Voltage and Frequency	90VAC–264VAC 47Hz–63Hz
Input Current	1.5A at 90VAC
Inrush Current	100A max at 240VAC cold start
Touch Leakage Current <sup>(max)</sup>	≤100μA at 264VAC

## SAFETY

CB	Medical: IEC60601-1, ANSI/AAMI ES60601-1 ITE: IEC62638-1, UL62638-1
UL	Medical: CAN/CSA C22.2 NO. 60601-1 ITE: CAN/CSA C22.2 NO. 62638-1
TUV	Medical: EN60601-1 ITE: EN62638-1
CCC	China GB4943



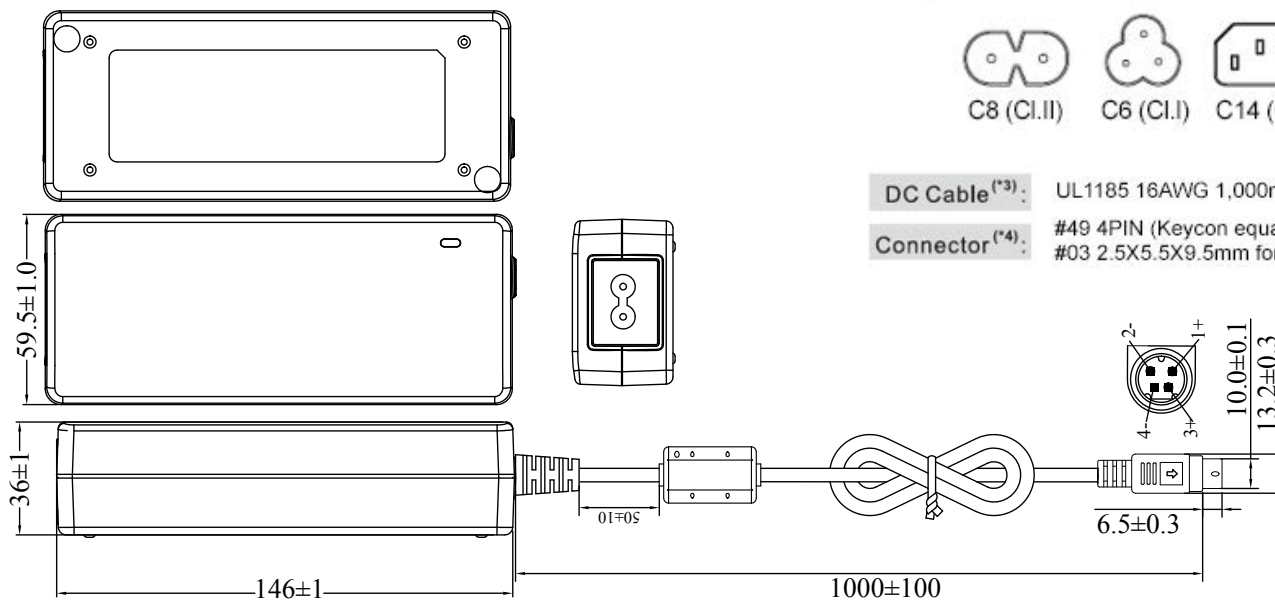
## EMI/EMC COMPLIANCE

Conducted Emissions	Medical: IEC/EN 60601-1-2, CISPR 11 ITE: EN55032, CISPR 22
Radiated Emissions	Medical: IEC/EN 60601-1-2, CISPR 11 ITE: EN55032, CISPR 22
Immunity	Medical: IEC/EN 60601-1-2 ITE: EN55024, CISPR 24
Electro-Static Discharge (ESD) Immunity on Power Ports	EN61000-4-2, ±15kV air, ±8kV contact
Radiated RF EM Fields Susceptibility <sup>3</sup>	EN61000-4-3, 10V/m, 3V/m (80MHz-2.7GMHz)
Electrical Fast Transients (EFT)/Bursts	EN61000-4-4, ±2kV on AC port, ±1kV on signal ports
Surges, Line to Line (DM) and Line to Ground (CM)	EN61000-4-5, ±1kV line to line (diff mode)
Conducted RF Immunity	EN61000-4-6, 3Vrms, 6Vrms (0.15MHz-80MHz)
Power Frequency Magnetic Field Immunity	EN61000-4-8, 30A/m
Voltage Dip Immunity	EN61000-4-11, 0%, 70%, 0% of UT
Harmonic Current Emissions	EN61000-3-2, Class A
Flicker Test	EN61000-3-3

## PACKAGING

Weight, Packing Qty	15.6Kg, Individual Box: 32/carton
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## MECHANICAL DRAWING



## ENVIRONMENT

Operating Temperature	0°C to 40°C
Storage Temperature	-20°C to 60°C
Weight	425 grams
Dimensions	146.0mm x 59.5mm x 36.0mm
Operating Humidity	10% RH to 90% RH, non-condensing
Storage Humidity	5% RH to 90% RH
Operating Altitude	5,000m
Dielectric Withstand Voltage	5,656VDC input to output
Insulation Resistance	10M Ohms, 500VDC input to output

## PROTECTION

Overload Protection	130%–200% rated output power, Auto-recovery
Overvoltage Protection	130%–150% rated output voltage input to reset
Short circuit Protection	Trip and restart - Hiccup Mode

## RELIABILITY

MTBF	>50,000 hours MIL-HDBK-217 at 25°C
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## ISOLATION

Isolation Safety Rating	4,000VAC Input to Output (2 x MOPP)
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