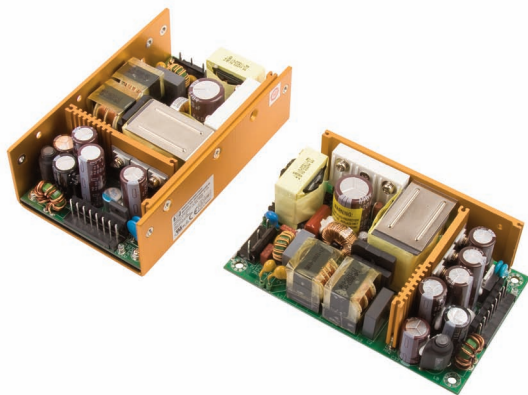


150 Watts

SDU Series



- Medical Approvals
- 3.2" x 5" Footprint
- Fits 1U Applications
- High Efficiency
- 12 V & 24 V Outputs
- U-Channel or Open Frame Versions
- 3 Year Warranty

Specification

Input

Input Voltage	• 90-264 VAC
Input Frequency	• 47-63 Hz
Input Current	• 2.0 A at 90 VAC, 1 A at 230 VAC
Inrush Current	• Max 100 A at 230 VAC, cold start 25 °C
Power Factor	• >0.9 at >40% load
No Load Input Power	• <1 W
Earth Leakage Current	• <250 µA at 264 VAC
Input Protection	• F5 A / 350 V internal in line fuse

Output

Output Voltage	• See table
Output Voltage Trim	• ±10%
Initial Set Accuracy	• ±1%
Minimum Load	• No minimum load required
Start Up Delay	• 3.0 s max at 120 VAC
Start Up Rise Time	• 30 ms typical
Hold Up Time	• 20 ms min at full load, 120 VAC
Line Regulation	• ±0.5%
Load Regulation	• ±2%
Over/Undershoot	• 3% max
Transient Response	• 4% max deviation, recovery to within 1% in 500 µs for a 50% load change
Ripple & Noise	• 1% pk-pk, 20 MHz bandwidth
Overvoltage Protection	• 112-130% Vnom with auto recovery
Overload Protection	• 110-185%
Short Circuit Protection	• Trip & restart (hiccup mode), auto recovery
Temperature Coefficient	• 0.04% /°C

General

Efficiency	• Typically 87%
Isolation	• 4000 VAC Input to Output 1500 VAC Input to Ground 1000 VDC Output to Ground
Protection Level	• Primary to secondary: 2 x MOPP Primary to earth: 1 x MOPP
Switching Frequency	• 65 kHz PFC typical, 55 kHz - 65 kHz PWM typical at full load
Power Density	• 8.4 W/in ³
MTBF	• 110 kHrs to MIL-HDBK-217F at 25 °C, GB

Environmental

Operating Temperature	• 0 °C to +70 °C, derate at 2.5%/ °C from +50 °C to +70 °C
Storage Temperature	• -20 °C to +85 °C
Operating Humidity	• 5-90%, non-condensing
Storage Humidity	• 5-95%, non-condensing
Cooling	• Convection-cooled
Operating Altitude	• 3000 m
Vibration	• 5-50 Hz, acceleration 7.35 m/s ² on X, Y and Z axis

EMC & Safety

Emissions	• EN55011 Level B conducted & radiated
Harmonic Currents	• EN61000-3-2 class A EN61000-3-2 class C for loads ≥40%
Voltage Flicker	• EN61000-4-2, level 3 Perf Criteria A
ESD Immunity	• EN61000-3-3
Radiated Immunity	• EN61000-4-3, 3 V/m Perf Criteria A
EFT/Burst	• EN61000-4-4, level 2 Perf Criteria A
Surge	• EN61000-4-5, installation class 3, Perf Criteria A
Conducted Immunity	• EN61000-4-6, 3V Perf Criteria A
Dips & Interruptions	• EN61000-4-11, 30% 500 ms, 60% 100 ms, 100% 10 ms, 100% 5000 ms Perf Criteria A, A, A, B high line, A, B, A, B low line. See note 5
Safety Approvals	• ANSI AMMI ES60601-1:2005, CSA C22-2 No 60601-1:08, EN60601-1:2006

Models and Ratings

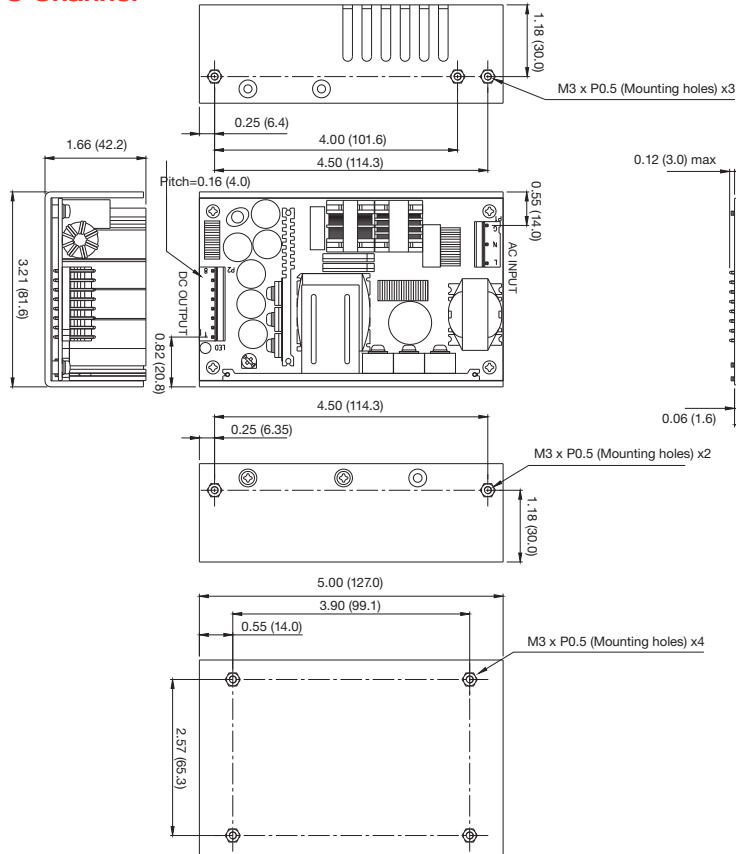
Output Power	Output Voltage	Output Current	Efficiency ⁽²⁾	Model Number ^(3,4)
150 W	12 V	12.50 A	85%	SDU150PS12B
150 W	24 V	6.25 A	86%	SDU150PS24B

Notes

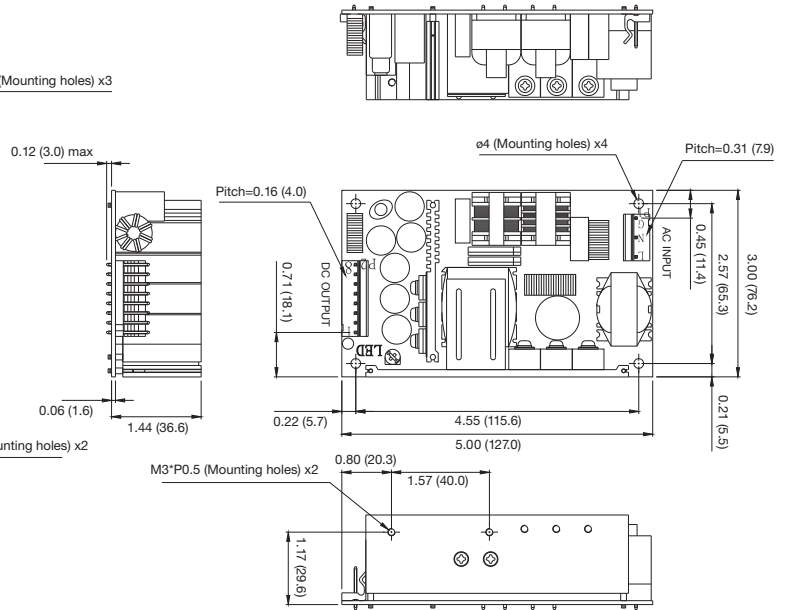
1. See derating curves for temperature and input curves.
2. Average efficiencies measured at 25%, 50%, 75% and 100% load with 230 VAC input.
3. For optional PCB only version, delete letter B from the model number e.g. SDU150PS24.
4. For optional 2 pin Molex input, add suffix '-D' to model number e.g. SDU150PS24B-D.
5. At low line, 60% dip for 100 ms can meet performance criteria A with 50% load.

Mechanical Details

U Channel



Open Frame



P2 Pin Connections	
Pin 1	V1
Pin 2	V1
Pin 3	V1
Pin 4	V1
Pin 5	Return
Pin 6	Return
Pin 7	Return
Pin 8	Return

Notes

1. All dimensions are in inches (mm), tolerance: ± 0.02 (± 0.5)
2. Input connector P1 mates with Molex housing 09-50-3051 and Molex 2478 series crimp terminals.
3. Output connector P2 mates with Molex housing 09-50-3131 and Molex 3081 series crimp terminals.
4. Maximum mounting screw penetration: 0.14 (3.5).
5. Weight: U Channel: 1.27 lbs (580 g)
Open Frame: 0.86 lbs (390 g)

Derating Curve

