

SMR Series



- Up to 900 W Peak Output Power
- Single Outputs from 12 V to 60 V
- Compact Package
- Remote On/Off
- Semi F47 Compliant
- Optional Current Share
- 3 Year Warranty

Specification

Input

| | |
|-----------------------|--|
| Input Voltage | • 90-264 VAC (120-370 VDC) |
| Input Frequency | • 47-63 Hz |
| Input Current | • 11 A at 90 VAC, 5 A at 230 VAC |
| Inrush Current | • 70 A at 230 VAC |
| Power Factor | • EN61000-3-2 class A EN61000-3-2 class C for loads $\geq 20\%$ |
| Earth Leakage Current | • <2.4 mA max at 264 VAC |
| Input Protection | • Fitted with a T12 A/250 V fuse |

Output

| | |
|----------------------------|---|
| Output Voltage | • See table |
| Output Voltage Trim | • $\pm 5\%$ |
| Initial Set Accuracy | • $\pm 1\%$ |
| Minimum Load | • 1% to meet ripple & noise spec |
| Start Up Delay | • 1.5 s at 230 VAC |
| Start Up Rise Time | • 40 ms typical |
| Hold Up Time | • 16 ms min at 120 VAC |
| Line Regulation | • $\pm 0.5\%$, low line to high line |
| Load Regulation | • $\pm 1\%$, 1-100% load (see note 4) |
| Over/Undershoot | • 5% max |
| Transient Response | • 5% max deviation, 500 μ s recovery to within 1% for a 50% load change |
| Ripple & Noise | • 1% of nominal output voltage (see note 2) |
| Overvoltage Protection | • 110-130% recycle input to reset |
| Overtemperature Protection | • Measured internally with auto recovery |
| Overload Protection | • 110-140% with auto recovery |
| Short Circuit Protection | • Trip and restart (Hiccup mode) |
| Remote Sense | • Compensates for up to 0.5 V line drop (not available with current share) |
| Remote On/Off | • On = TTL Logic HIGH, or open circuit Off = TTL Logic LOW or short circuit |
| Current Share | • Optional single wire current share within 10% for up to 4 units (add suffix '-I' to model number) Note that this option includes output blocking diodes. Remote sense is not available with current share. |

General

| | |
|---------------------|--|
| Efficiency | • 80% min for 12 V model 82% min for others models at 230 VAC |
| Isolation | • 3000 VAC Input to Output 1500 VAC Input to Ground 250 VDC Output to Ground |
| Switching Frequency | • 60 kHz PFC, 25 kHz PWM typical |
| Power Density | • 8.2 W/In ³ |
| Signals | • Green LED for Power On, Power Good TTL HIGH within 100-500 ms and LOW ≤ 1 ms before loss of regulation |
| Current Monitor | • 0.5 V to 3 V output denoting 0-100% output current |
| MTBF | • 150 kHrs min to MIL-HDBK-217F at 25 °C, GB |

Environmental

| | |
|-----------------------|--|
| Operating Temperature | • 0 °C to +70 °C, derates from 100% load at +50 °C to 50% load at +70 °C |
| Cooling | • Internal fan |
| Operating Humidity | • 5-90%, non-condensing |
| Storage Temperature | • -20 °C to +85 °C |
| Operating Altitude | • 3000 m |
| Vibration | • 5-50 Hz, acceleration 7.35 ms ² on X, Y and Z axis |

EMC & Safety

| | |
|----------------------|---|
| Emissions | • FCC Part 15 & EN55022 Level B conducted and radiated |
| Harmonic Currents | • EN61000-3-2 class A EN61000-3-2 class C for loads $\geq 20\%$ |
| Voltage Flicker | • EN61000-3-3 |
| ESD Immunity | • EN61000-4-2, level 3 Perf Criteria A |
| 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% 10 ms, 60% 100 ms, 100% 5000 ms Perf Criteria A, B, B |
| Safety Approvals | • UL60950, CSA C22.2 No. 950, EN60950-1:2001, CE Mark LVD, SEMI F47 compliant (high line only) at 100% rated power output |

Models and Ratings

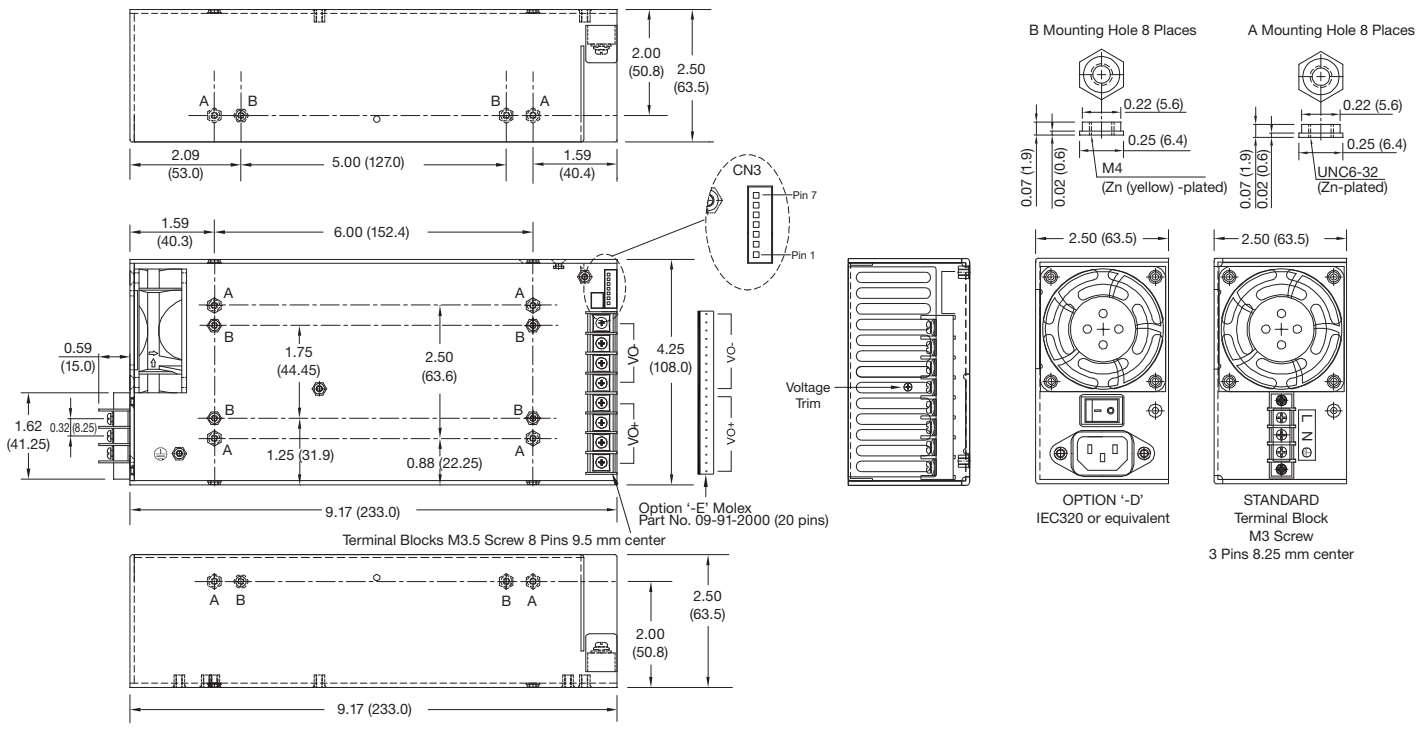
| Output Power | Output Voltage ⁽³⁾ | Output Current | | Ripple & Noise ⁽²⁾ | Model Number |
|--------------|-------------------------------|----------------|---------------------|-------------------------------|---------------------------|
| | | Maximum | Peak ⁽¹⁾ | | |
| 750 W | 12 V | 62.50 A | 75.00 A | 120 mV | SMR800PS12 |
| | 15 V | 50.00 A | 56.00 A | 150 mV | SMR800PS15 ⁽⁶⁾ |
| | 18 V | 41.67 A | 50.00 A | 180 mV | SMR800PS18 ⁽⁶⁾ |
| 800 W | 24 V | 33.39 A | 37.50 A | 240 mV | SMR800PS24 |
| | 27 V | 29.62 A | 33.33 A | 270 mV | SMR800PS27 ⁽⁶⁾ |
| | 36 V | 22.22 A | 25.00 A | 360 mV | SMR800PS36 ⁽⁶⁾ |
| | 48 V | 16.67 A | 18.75 A | 480 mV | SMR800PS48 |
| | 54 V | 14.81 A | 16.67 A | 540 mV | SMR800PS54 ⁽⁶⁾ |
| | 60 V | 13.33 A | 15.00 A | 600 mV | SMR800PS60 ⁽⁶⁾ |

Notes

1. Peak current can be taken for 500 μ s, average power should not exceed the maximum power.
2. Ripple & Noise is measured using 0.1 μ F ceramic and 22 μ F electrolytic capacitor, 20 MHz bandwidth.
3. Alternative output voltages available. Consult sales.
4. Load regulation increases to 2% for 0-100% load change.
5. For Top Fan versions replace SMR with SMT. Contact sales for mechanical details.
6. For U-channel versions replace SMR with SMS. Contact sales for mechanical details
7. For output currents >50 A please use remote sense to meet load regulation ratings.
8. Available for OEM quantities, contact Sales.

Mechanical Details

Cover Version - SMR



| CN3 (Signals) | |
|---------------|-----------------|
| Pin | Function |
| 1 | Current monitor |
| 2* | Current share |
| 3 | Return |
| 4 | Power good |
| 5 | Remote On/Off |
| 6* | -Remote sense |
| 7* | +Remote sense |

*If optional current share is fitted then remote sense function is excluded.

Options

| Option | SMR | SMT | SMS |
|---|-----|-----|-----|
| Current Share + output blocking diodes ⁽¹⁾ | -I | -I | -I |
| Molex Output Connector ⁽¹⁾ | -E | -E | -E |
| Molex Input Connector ⁽¹⁾ | | -F | -F |
| Molex Input Molex Output ⁽¹⁾ | | -G | -G |
| IEC320 Inlet | -D | | |
| IEC Inlet Molex Outlet ⁽¹⁾ | -F | | |

(1) Available for OEM quantities, contact Sales. For multiple option codes, place codes in alphabetical order, e.g SMS800PS12-EI

Notes

- All dimensions are in inches (mm).
- Weight: 3.30 lbs (1.5 kg) approx.
- Tolerance: ± 0.012 (± 0.3)
- Logic connector CN3 mates with: JST XHP-7 or equivalent & JST SXH-002T-P0.6 crimp terminals.
- Maximum mounting screw penetration: 0.12 (3.0) on base & 0.25 (6.3) on each side.
- Maximum screw terminal torque: Output: 15.7 lbs-in (1.8 Nm) Input: 7 lbs-in (0.8 Nm)

