

SDS60 Series



- Factory Set Non-standard Outputs
- Universal AC Input
- Low Profile - 1.2" (30.5mm)
- Fits 1U Applications
- Single, Dual, Triple & Quad Outputs
- Extensive Range
- High Efficiency

Specification

Input

Input Voltage	• 90-264 VAC
Input Frequency	• 47-63 Hz
Input Current	• 1.6 A at 115 VAC • 1.0 A at 230 VAC
Inrush Current	• <15 A at 115 VAC • <30 A at 230 VAC
Earth Leakage Current	• <0.30 mA at 115 VAC • <0.45 mA at 230 VAC
Input Protection	• 2 A/250 VAC internal fuse

Output

Output Voltage	• See table
Output Voltage Trim	• $\pm 10\%$ on V1 only
Initial Set Accuracy	• Single output models: $\pm 1\%$ • Multi output models: $\pm 5\%$
Minimum Load	• 10% required on V1 & V2 of multi output models to maintain regulation, unit will start up with no load
Start Up Delay	• 1 s typical
Hold Up Time	• 20 ms typical
Line Regulation	• $\pm 1\%$ from low line to high line
Load Regulation	• $\pm 3\%$ typical, 5% max on multi output models ($\pm 10\%$ with no load on V1)
Transient Response	• 4% max. deviation, 500 μ s recovery time for a 50% load change
Ripple & Noise	• 1% pk-pk typical
Overvoltage Protection	• 112-132%, recycle input to reset
Overload Protection	• 110-150% with auto recovery
Short Circuit Protection	• Trip and restart (Hiccup mode)
Temperature Coefficient	• 0.04% / $^{\circ}$ C

General

Efficiency	• 80% typical, 85% max
Isolation	• 3000 VAC Input to Output • 1500 VAC Input to Ground • 500 VAC Output to Ground
Switching Frequency	• 60 kHz typical
Power Density	• 3.5 W/In ³
Signals	• Green DC OK LED
MTBF	• >100 kHrs per MIL-HDBK-217F

Environmental

Operating Temperature	• 0 $^{\circ}$ C to +70 $^{\circ}$ C, derate linearly from 100% load at 50 $^{\circ}$ C to 50% load at 70 $^{\circ}$ C
Cooling	• Convection cooled
Operating Humidity	• 5-95% RH, non-condensing
Storage Temperature	• -40 $^{\circ}$ C to +85 $^{\circ}$ C

EMC & Safety

Emissions	• EN55022, CISPR22 and FCC Part 15 , level B conducted
Harmonic Currents	• EN61000-3-2
Voltage Flicker	• EN61000-3-3
ESD Immunity	• EN61000-4-2, level 2 Perf Criteria B
Radiated Immunity	• EN61000-4-3, 3 V/m Perf Criteria B
EFT/Burst	• EN61000-4-4, level 2 Perf Criteria B
Surge	• EN61000-4-5, level 3 Perf Criteria B
Conducted Immunity	• EN61000-4-6, 3 V Perf Criteria B
Magnetic Field	• EN61000-4-8, 1 A/m Perf Criteria B
Dips & Interruptions	• EN61000-4-11, 30% 10 ms, 60% 100 ms, 100% 5000 ms Perf Criteria A, B, B
Safety Approvals	• EN60950, UL1950, CSA C22,2 No. 234 CE Mark LVD

Models and Ratings

Maximum Output Power	Output Voltage	Output Current	Factory Set Voltage Range ⁽¹⁾	Current Range	Total Regulation	Model Number
50.0 W	3.3 V	15.1 A	3.0-5.0 VDC	16.6-10.0 A	5%	SDS60US03†
55.0 W	5.0 V	11.0 A	5.0-6.0 VDC	11.0-10.0 A	5%	SDS60US05†
60.0 W	7.0 V	8.6 A	6.0-9.0 VDC	10.0-6.7 A	4%	SDS60US07
63.0 W	9.0 V	7.0 A	9.0-11.0 VDC	6.7-5.4 A	3%	SDS60US09†
63.0 W	12.0 V	5.0 A	11.0-13.0 VDC	5.4-4.6 A	3%	SDS60US12†
63.0 W	15.0 V	4.2 A	13.0-16.0 VDC	4.6-3.9 A	3%	SDS60US15†
63.0 W	19.0 V	3.3 A	16.0-21.0 VDC	3.9-2.8 A	3%	SDS60US19
63.0 W	24.0 V	2.6 A	21.0-27.0 VDC	2.8-2.2 A	2%	SDS60US24†
63.0 W	30.0 V	2.1 A	27.0-33.0 VDC	2.2-1.8 A	2%	SDS60US30
63.0 W	36.0 V	1.8 A	33.0-40.0 VDC	1.8-1.5 A	2%	SDS60US36
63.0 W	48.0 V	1.3 A	40.0-50.0 VDC	1.5-1.2 A	2%	SDS60US48†

Maximum Output Power	Output 1 ^(2,3,4)	Output 2 ^(2,3,4)	Output 3 ⁽³⁾	Output 4 ⁽³⁾	Model Number
63.0 W	5.00 VDC / 7.0 A	12.0 VDC / 3.0 A			SDS60UD01
48.0 W	3.30 VDC / 7.0 A	5.0 VDC / 5.0 A			SDS60UD04
63.0 W	3.30 VDC / 6.0 A	12.0 VDC / 3.0 A	-12.0 VDC / 0.8 A		SDS60UT00†
63.0 W	3.30 VDC / 6.0 A	12.0 VDC / 3.0 A	-5.0 VDC / 0.8 A		SDS60UT01
63.0 W	3.30 VDC / 6.0 A	12.0 VDC / 3.0 A	+5.0 VDC / 0.8 A		SDS60UT02
53.5 W	3.30 VDC / 5.0 A	5.0 VDC / 5.0 A	+12.0 VDC / 1.0 A		SDS60UT03†
53.5 W	3.30 VDC / 5.0 A	5.0 VDC / 5.0 A	-12.0 VDC / 1.0 A		SDS60UT04
63.0 W	5.00 VDC / 6.0 A	12.0 VDC / 3.0 A	-12.0 VDC / 0.8 A		SDS60UT05†
63.0 W	5.00 VDC / 6.0 A	12.0 VDC / 3.0 A	-5.0 VDC / 0.8 A		SDS60UT06†
63.0 W	5.00 VDC / 6.0 A	15.0 VDC / 3.0 A	-15.0 VDC / 0.8 A		SDS60UT07†
63.0 W	5.00 VDC / 6.0 A	24.0 VDC / 2.0 A	-24.0 VDC / 0.5 A		SDS60UT08
63.0 W	5.00 VDC / 6.0 A	24.0 VDC / 2.0 A	-12.0 VDC / 0.8 A		SDS60UT09
63.0 W	5.00 VDC / 6.0 A	24.0 VDC / 2.0 A	+12.0 VDC / 0.8 A		SDS60UT10†
63.0 W	3.30 VDC / 6.0 A	12.0 VDC / 3.0 A	-12.0 VDC / 0.8 A	-5.0 VDC / 0.8 A	SDS60UQ00
63.0 W	3.30 VDC / 6.0 A	12.0 VDC / 3.0 A	-12.0 VDC / 0.8 A	+5.0 VDC / 0.8 A	SDS60UQ01†
63.0 W	5.00 VDC / 6.0 A	12.0 VDC / 3.0 A	-12.0 VDC / 0.8 A	-5.0 VDC / 0.8 A	SDS60UQ02†
63.0 W	5.00 VDC / 6.0 A	12.0 VDC / 3.0 A	-12.0 VDC / 0.8 A	+24.0 VDC / 0.8 A	SDS60UQ03†
63.0 W	5.00 VDC / 6.0 A	12.0 VDC / 3.0 A	-12.0 VDC / 0.8 A	-24.0 VDC / 0.8 A	SDS60UQ04
63.0 W	5.00 VDC / 6.0 A	15.0 VDC / 3.0 A	-15.0 VDC / 0.8 A	-5.0 VDC / 0.8 A	SDS60UQ05†
59.3 W	5.00 VDC / 6.0 A	24.0 VDC / 1.8 A	-15.0 VDC / 0.1 A	+12.0 VDC / 0.8 A	SDS60UQ06

Notes

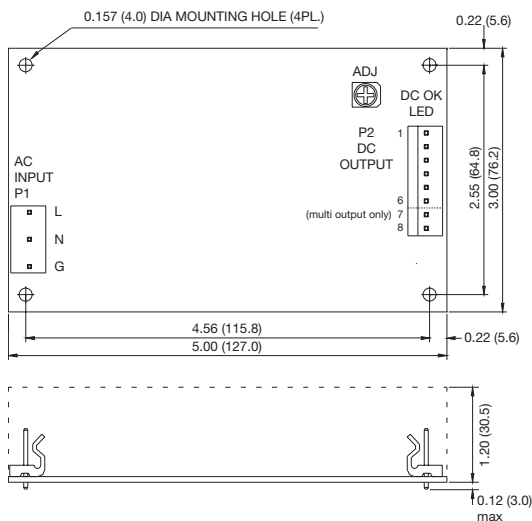
1. If an output voltage within the factory set voltage range is required, a model number will be allocated at the time of order.
2. 10% minimum load required on V1 & V2 of multi output units to maintain regulation of ±5%. Regulation increases to ±10% with no load.
3. Other output combinations are available - contact sales for more information.
4. On multi output units V2 tracks V1, if V1 is adjusted by 5%, V2 changes by 5%.
5. For optional U bracket, add suffix 'B' to model number. For optional cover, add suffix '-C' to model number.
6. For optional 2 pin AC input use suffix 'C' (open frame) or change 'B' suffix to 'D' (U bracket)

† Available from Farnell InOne. See pages 236-237

Mechanical Details

All dimensions are in inches (mm)

Weight: 0.44 lbs (0.2 kg) approx



Tolerance: ±0.02 (0.5)

PIN CONNECTIONS				
Pin	Single Output	Dual Output	Triple Output	Quad Output
1	Output 1	Output 2	Output 2	Output 2
2	Output 1	Output 1	Output 1	Output 1
3	Output 1	Output 1	Output 1	Output 1
4	Return	Common	Common	Common
5	Return	Common	Common	Common
6	Return	N/C	Output 3	Output 3
7				Output 4
8				Output 4

Notes:

1. Input connector mates with Molex housing 09-50-3051 and Molex 2878 series crimp terminal.
2. Output connector mates with Molex housing 09-50-3061 or 9-50-3081 and Molex 2878 series crimp terminal.
3. For optional cover kit order part number SDS60 COVER KIT†, to receive unit with cover fitted add suffix 'C' to model number. Cover size: 5.46 x 3.55 x 1.55 (140 x 91 x 39.7mm).
4. For mating connectors and cable harness order part numbers:
 SDS60 CON† - Single, dual and triple output models
 SDS60Q CON† - Quad output models
 SDS60 LOOM† - Single output models cable harness
 SDS60DT LOOM† - Dual and triple output models cable harness
 SDS60Q LOOM† - Quad output models cable harness