



SDU400T3R1 Series 180 - 400 Watts

180 - 400 Watt AC - DC Open Frame Power Supply
UL, EN, IEC 60950-1 2nd Edition, RoHS 2 Compliant

Date: 2/11/16

Rev: 021116

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The SDU400T3R1 Series open frame switch mode power supply has 400 Watts convection cooled output in a 1U height with UL, EN, IEC 60950-1, 2nd Edition approval. It also offers PFC to EN61000-3-2 Class D, and peak power set to 700 Watts for 500 μ s.

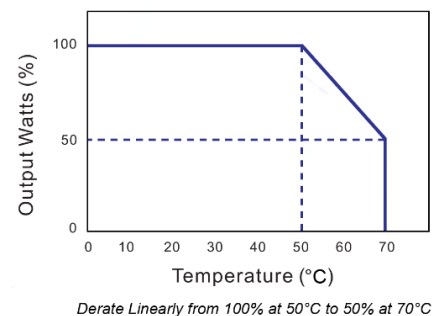


Input Voltage	90 Vac to 264 Vac
Input Frequency	47 Hz to 63 Hz
Input Current	6 A Max. at 90 Vac
Power Factor Correction	Meets EN61000-3-2 Class D Limits
Safety Ground Leakage Current	0.5 mA Max. at 240 Vac, Full Load
Output Voltage & Current	See Table on Page 2
Ripple & Noise (Pk-Pk)	1% Max. at Full Load
Adjustability	Output can be trimmed to an additional \pm 5%
Logic Signals	Power Good, Remote Sense, and Remote On/Off: See Table on Page 2
Input Voltage Protection	Power shut down under 80 ± 10 Vac, and recovered over 90 Vac
Over-Voltage Protection	130% Max.
Over-Current Protection	110% to 140% Max., Auto-Recovery
Over-Temperature Protection	110 °C \pm 5 °C Max., Auto-Recovery
Short Circuit Protection	Continuous without damage, Auto-Recovery
Overshoot	Not to exceed 5% over the nominal voltage
Temperature Coefficient	\pm 0.04% / °C Max.
Transient Response	50 % Load Change: 2.5 ms Max.
Efficiency	80% Min. at 115 Vac, Full Load
Switching Frequency	60 kHz PFC, 27 kHz PWM
Line Regulation	\pm 1% Max. at Full Load
Load Regulation	\pm 1% Max.
Start-Up Time	2 s Max.
Hold-Up Time	16 ms Min.
Withstanding Voltage	Primary to Secondary: 3,000 Vac
Ground Testing	25 A applied from field ground to earth ground: 0.1 Ω Max.
Inrush Current	70 A Max. at 230 Vac, at 25 °C Cold Start
Mean Time Between Failure	Full Load at 25 °C Ambient: 100,000 Hours Min.
Operating Temperature	See Derating Curve
Storage Temperature	-20 °C to 85 °C
Industry Compliance	Directive 2011/65/EU (RoHS 2)
EMI Requirements	Meets Conduction Limits of: FCC Part 15 Subject J Class B, CISPR-22 Class B, and CE Marked
Safety Compliance	UL 60950-1, CSA C22.2 No. 950 – 95, EN 60950

Features:

- Universal Input 100 - 240 VAC
- 3 Vdc to 60 Vdc Output
- Convection Cooling
- Fused Input Protection
- Peak Power 700 W within 500 μ s Duty Duration
- \pm 5% Adjustable Output
- Active Power Factor Correction
- Over-Voltage, Over-Current, Over-Temperature, and Short Circuit Protection
- 100% Burn-In
- RoHS 2 Compliant

Derating Curve





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Output Voltage and Current Table

Preset Voltage	Output Voltage Range *	Output Current Limited to Output Power †	Maximum Output Power
5 Vdc	3 – 5 Vdc	60 A	-
10 Vdc	6 – 10 Vdc	40 A	-
12 Vdc	11 – 13 Vdc	36.36 – 30.76 A	400 W
15 Vdc	13.5 – 16 Vdc	29.62 – 25.00 A	400 W
18 Vdc	17 – 21 Vdc	23.52 – 19.04 A	400 W
24 Vdc	22 – 25 Vdc	18.18 – 16.00 A	400 W
28 Vdc	26 – 30 Vdc	15.38 – 13.33 A	400 W
36 Vdc	31 – 40 Vdc	12.90 – 10.00 A	400 W
48 Vdc	41 – 50 Vdc	9.75 – 8.00 A	400 W
54 Vdc	51 – 60 Vdc	7.84 – 6.66 A	400 W

† To find Output Current:

Output Current =
Max Power ÷ Output Voltage

Example: Output Current for 24 Vdc Output

Output Current = 400 W ÷ 24 V
Output Current = 16.66 A

SDU 400T3R1

- Other Options: R = Standard
CR = Conformal Coating
- Output Connector: A = Pin Header
B = Terminal Block
- Output Voltage: See Table
- Input Options: A = Pin Header
B = Terminal Block

Logic Signals

Power Good	
<ul style="list-style-type: none"> Designated as PG on CN3. This signal will go high 100-500 ms after the output reaches the regulation limit. It goes low at least 1 ms before loss of regulation and has ability to sink 100 mA. 	
Remote Sense	
<ul style="list-style-type: none"> Designated as RS+ and RS- on the CN3. 0.5V max compensation for cable losses with respect to the main output voltage under 12V units. 	
Remote On/Off	
<ul style="list-style-type: none"> Designated as RSW on CN3. Requires a low signal to inhibit output. 	



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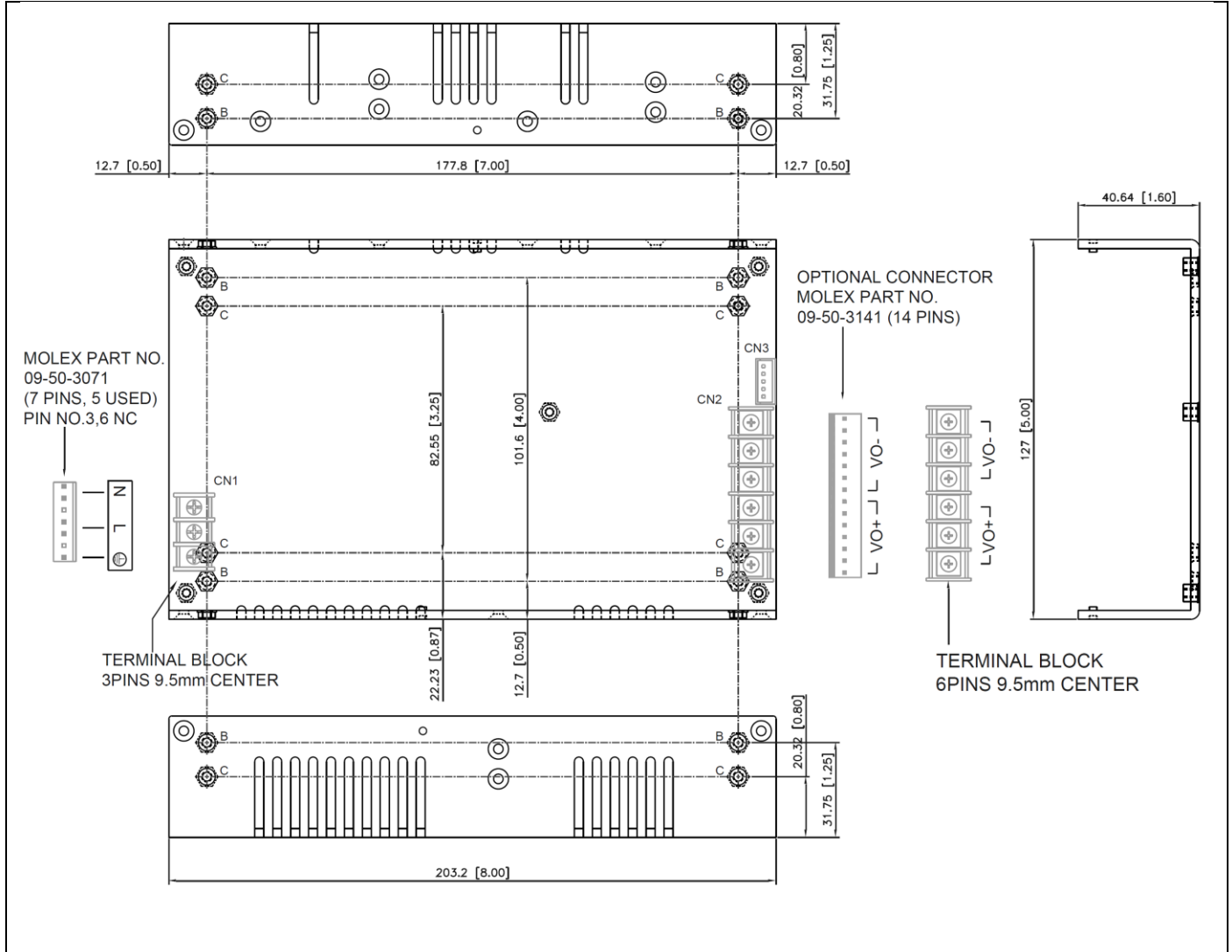
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Mechanical Specification (mm, [in])



• Input Connector Mating:

- Pin Header: Molex Part No. 09-50-3071 or Equivalent (7 pin, 5 used)
- Barrier Terminal Block: Howder Part No. HD-121-3P, 3 Pin, 9.35 mm center

• Output Connector Mating:

- Pin Header: Molex Part No. 09-50-3141 or Equivalent
- Barrier Terminal Block: Howder Part No. HD-121-6P

• Logic Signals Mating

- CN3: JST HXP-3 or Equivalent with Mating Pins SXH-002T-P0.6 for 30-26 AWG