

Ultra Compact, 1.5W to 12W Single and Dual DC-DC Converters



- ◆ Compact Footprint / Low Profile
- ◆ 5V, 12V, 24V & 48V Inputs
- ◆ 3.3 to 30V* Single, ± 12 to 15V Dual Outputs
- ◆ Output Voltage Adjustment
- ◆ Input - Output Isolation
- ◆ RoHS Compliant Design

Key Market Segments & Applications

Telecommunications
Datamcom
Instrumentation

Features & Benefits

Feature

- ◆ Compact
- ◆ Self contained
- ◆ Multiple Input Voltage configurations
- ◆ Open frame (no potting)

Benefit

- ◆ Less pcb area used
- ◆ Requires no external components
- ◆ Easier system configuration
- ◆ Lighter in weight

Specifications

Nominal Output Voltage	V	3.3V	5V	12/15V (24/30V)*
DC Input	V	5V: 4.5-9.0V, 12V: 9-18V, 24V: 18-36V, 48V: 36-76V		
Efficiency	-	73 to 84% model dependant		
Output Voltage Accuracy	%	$\pm 5\%$		
Output Adjustment	V	2.84V-3.67V	4.3V-6V	12V-15V (24-30V)*
Line Regulation	mV	20		
Load Regulation	mV	40		
Temperature Coefficient	%	$< 0.02\%/^{\circ}\text{C}$		
Preload		No preload required		
Output Ripple	mV	100	100	120
Overcurrent Protection	-	Output current limiting with automatic recovery.		
Overvoltage protection	-	No		
Remote On/Off (1)	-	Logic low (open to shutdown)		
Cooling	-	Convection/Forced Air Cooled		
Operating Temp. Range	-	-40 to 85°C with 1m/s air (see derating chart)		
Storage Temperature	$^{\circ}\text{C}$	-40°C to 85°C		
Humidity (Non condensing)	-	5 - 95% RH		
Isolation Voltage	-	500VAC 1 min. Input-Output, Input-Chassis		
Isolation Resistance	-	$> 100\text{M}$ at 25°C and 70%RH, 500VDC Output-Chassis		
Shock	m/s^2	196.1 m/s^2		
Vibration (non operating)	-	10-55-10Hz (sweep for 1 min.) 0.825mm constant (Max 147 m/s^2) 1 hour X, Y, Z		
Weight	-	PS1R5: 4g, PS3: 5g, PS6: 8g, PS10: 14g		
Size (L"x W"x H")	in	PSS/PSD1R5: 0.79x0.63x0.31; PSS/PSD3: 1.1x0.63x0.31 PSS/PSD6: 1.12x0.8x0.31, PSS10: 1.61x1.02x0.31		

Note: See Installation Manual for full specifications, test methods of parameters and application notes

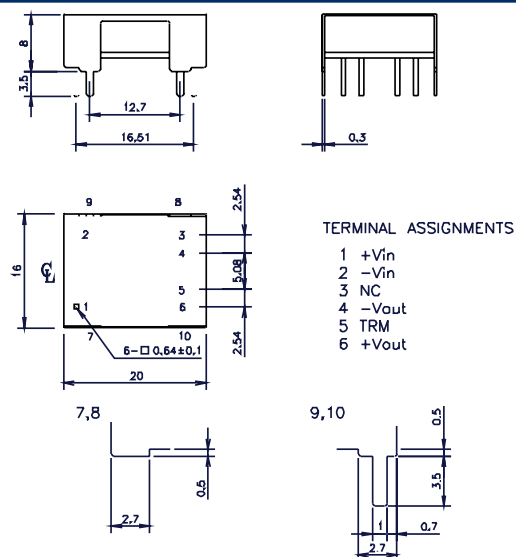
* For 24/30V output use PSD models - connect across +Vout & -Vout and leave "common" pin not connected

(1) Not available on PS1R5

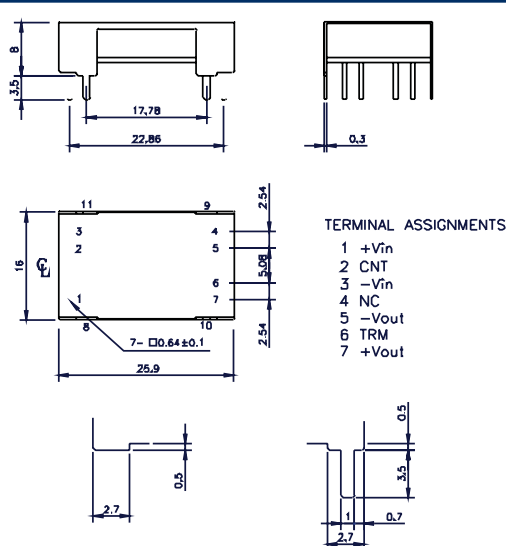
Model Selector

Output Voltage (V)	Output Current (A)	Max Output Power (W)	5V Input	12V Input	24V Input	48V Input
Single Outputs						
3.3	0.4	1.32	PSS1R5-5-3R3	PSS1R5-12-3R3	PSS1R5-24-3R3	PSS1R5-48-3R3
3.3	0.6	1.98	PSS3-5-3R3	PSS3-12-3R3	PSS3-24-3R3	PSS3-48-3R3
3.3	1.2	3.96	PSS6-5-3R3			
3.3	1.5	4.95		PSS6-12-3R3	PSS6-24-3R3	PSS6-48-3R3
3.3	2.0	6.6	PSS10-5-3R3	PSS10-12-3R3		
3.3	2.5	8.25			PSS10-24-3R3	PSS10-48-3R3
5.0	0.3	1.5	PSS1R5-5-5	PSS1R5-12-5	PSS1R5-24-5	PSS1R5-48-5
5.0	0.6	3.0	PSS3-5-5	PSS3-12-5	PSS3-24-5	PSS3-48-5
5.0	1.0	5.0	PSS6-5-5	-	-	-
5.0	1.2	6.0	-	PSS6-12-5	PSS6-24-5	PSS6-48-5
5.0	1.6	8.0	PSS10-5-5			
5.0	2.0	10.0	-	PSS10-12-5	PSS10-24-5	PSS10-48-5
12 (15)	0.125 (0.1)	1.5	PSS1R5-5-12	PSS1R5-12-12	PSS1R5-24-12	PSS1R5-48-12
12 (15)	0.25 (0.2)	3.0	PSS3-5-12	PSS3-12-12	PSS3-24-12	PSS3-48-12
12 (15)	0.5 (0.4)	6.0	PSS6-5-12	PSS6-12-12	PSS6-24-12	PSS6-48-12
12 (15)	0.7 (0.56)	8.4	PSS10-5-12			
12 (15)	1.0 (0.8)	12.0		PSS10-12-12	PSS10-24-12	PSS10-48-12
Dual Outputs						
±12(15)*	±0.06 (0.48)	1.44	PSD1R5-5-1212	PSD1R5-12-1212	PSD1R5-24-1212	PSD1R5-48-1212
±12(15)*	±0.125 (0.1)	3.0	PSD3-5-1212	PSD3-12-1212	PSD3-24-1212	PSD3-48-1212
±12(15)*	±0.25 (0.2)	6.0	PSD6-5-1212	PSD6-12-1212	PSD6-24-1212	PSD6-48-1212
±12(15)*	±0.35 (0.28)	8.4	PSD10-5-1212			
±12(15)*	±0.45 (0.36)	10.8		PSD10-12-1212	PSD10-24-1212	PSD10-48-1212
Available Q1 2005						

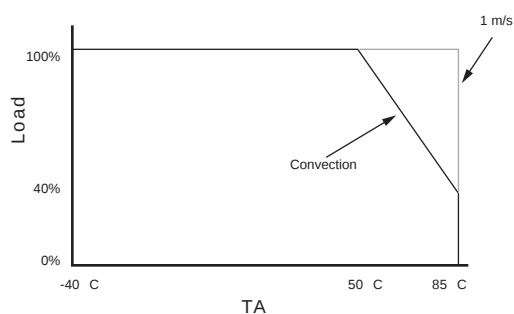
PSS1R5 Outline Drawing



PSS3 Outline Drawing



Derating Curve



Other Lambda Industrial Products

X	10 - 20W, 24 & 48V input DC-DC converters
SX	Surface Mount 20, 24 & 48W input DC-DC converters
PX	10 - 40W 12, 24, 48V DC-DC converters
PAQ, PAH, PAF	50 - 700W quarter, half & full bricks

For Additional Information, please visit
www.lambdapower.com/products/ps-series.htm