



# PSS/PSD Series

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



- ◆ Compact Footprint / Low Profile
- ◆ Through Hole or SMT Versions
- ◆ 5V, 12V, 24V & 48V Inputs
- ◆ 3.3 to 30V\* Single,  $\pm 12$  to 15V Dual Outputs
- ◆ Output Voltage Adjustment
- ◆ Input - Output Isolation
- ◆ RoHS Compliant Design
- ◆ 5 Year Warranty

### Key Market Segments & Applications

Telecommunications  
 Datacom  
 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, suitable for surface mount (/S version)

### 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	PSS: 20mV, PSD: 40mV		
Load Regulation	mV	PSS: 40mV, PSD: 600mV		
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)		
Operating Temp. - Convection	-	-40 to 85°C, derates linearly to 40% load from 50 to 85°C		
Operating Temp. - Forced Air	-	-40 to 85°C with 1m/s air full load		
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	$\text{m/s}^2$	196.1 $\text{m/s}^2$		
Vibration (non operating)	-	10-55-10Hz (sweep for 1 min.) 0.825mm constant (Max 147 $\text{m/s}^2$ ) 1 hour X, Y, Z		
Weight	-	PS1R5: 4g, PS3: 5g, PS6: 8g, PS10:14g		
Size (L"x W"x H") (Through hole and SMT package)	in	PSS/PSD1R5: 0.79 x 0.63 x 0.31; PSS/PSD3: 1.02 x 0.63 x 0.31 PSS/PSD6: 1.12 x 0.8 x 0.31, PSS10: 1.59 x 0.866 x 0.31		
Warranty	-	Five Years		

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

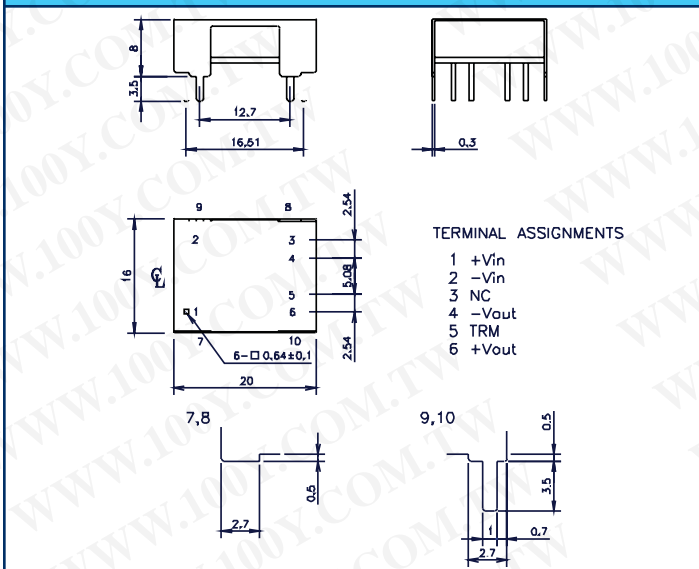
(1) Not available on PS1R5

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[Http://www.100y.com.tw](http://www.100y.com.tw)

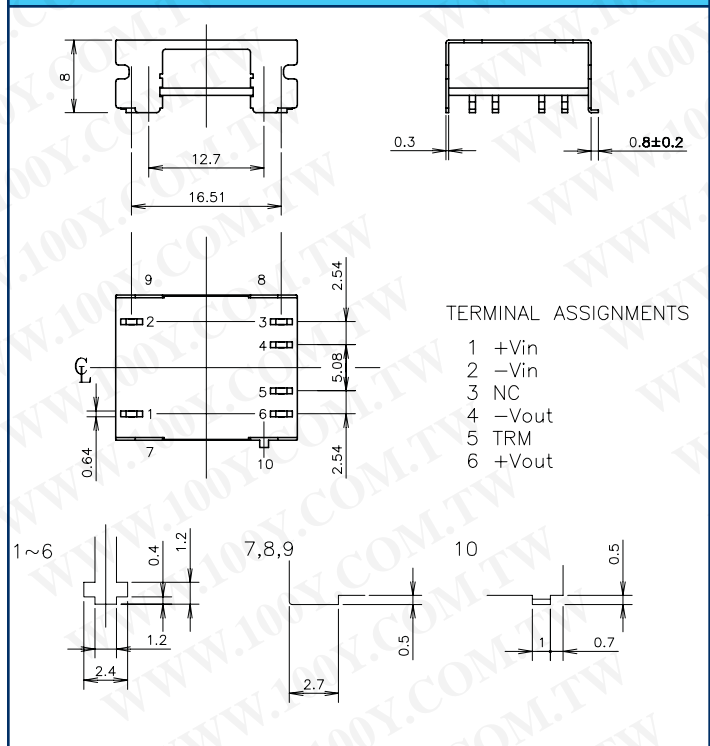
## Model Selector

Output Voltage (V)	Output Current (A)	Max Output Power (W)	5V Input	12V Input	24V Input	48V Input
<b>Single Outputs</b>						
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
<b>Dual Outputs</b>						
±12(15)*	±0.065 (0.052)	1.44	PSD1R5-5-1212	PSD1R5-12-1212	PSD1R5-24-1212	PSD1R5-48-1212
±12(15)*	±0.13 (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)*	±0.50 (0.40)	10.8		PSD10-12-1212	PSD10-24-1212	PSD10-48-1212

## PSS1R5 Outline Drawing



## PSS1R5/S Outline Drawing



## Options

Suffix	Description
Blank	Through hole mounting
/S	Surface mount

## Other Lambda Industrial Products

X	10 - 20W, 24 & 48V 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](http://www.lambdapower.com/products/ps-series.htm)

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