

AC-DC Converter

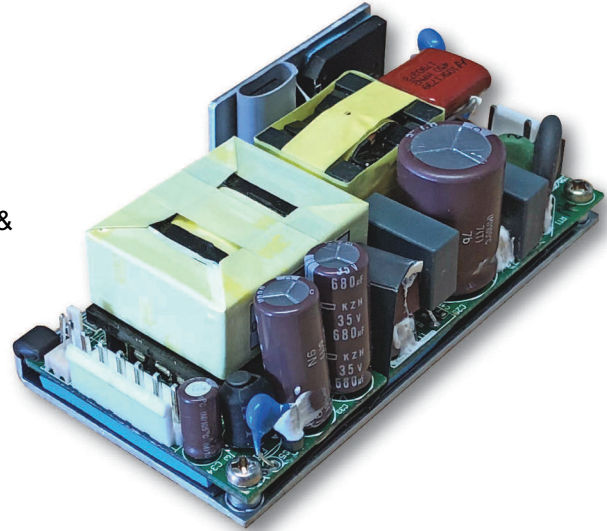
**POWER
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PSY280 Series, single output 150-300 watts output power

Features

- Compact 2 x 4" footprint
- 90-264VAC input with active PFC
- 150W convection, 180W conduction, 250W forced air & 300W with forced air and conduction cooling.
- Wide operating temperature range of -30° to +85°C (derating above +50°C)
- High efficiency up to 92%
- Short circuit, over current, overvoltage and over temperature protection
- 12V 0.3A fan supply
- Suitable for Class I & Class II applications



Electrical Specification

AC input:	90-264VAC, 47-63Hz
AC input current:	3.6A max at 100VAC input, max load output
Efficiency at 25-100% load:	90-92% depending on output voltage version
Efficiency at 10% load	80-83% depending on output voltage version
No load power consumption:	0.15W max without fan
DC output voltage:	see table below
DC output current:	see table below
DC output power:	150W convection, 180W conduction, 250W fan, 300W fan & conduction
Turn on delay time:	1 second max
Output hold up time:	10mS minimum at 100VAC input to 95% output V
High capacitive load ability:	700-13,000uF
Total output regulation:	±2% including line, load & temperature
Over voltage protection:	latch off protection mode
Over load protection:	110-125% max load with auto recovery
Short circuit protection:	output can be shorted without damage with auto recovery
Fan output:	12V 0.3A
Operating temperature:	-30° to +85°C see derating curves below
Storage temperature:	-30° to +85°C
Relative humidity:	10-95% non condensing
Operating altitude:	5000 metres
MTBF:	calculated 170k to 189k hours depending on output model

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Electrical Specification (continued)

Electrostatic discharge (ESD):	EN61000-4-2 ±8kV air discharge, ±4kV contact, no damage		
Low voltage dips:	EN61000-4-11		
100V AC	95% dips 10mS	Criterion A	
	30% dips 100mS	Criterion B	
	60% dips 100mS	Criterion B	
	95% dips 5000mS	Criterion B	
240V AC	95% dips 10mS	Criterion A	
	30% dips 100mS	Criterion A	
	60% dips 100mS	Criterion A	
	95% dips 5000mS	Criterion B	
Lightning surge immunity:	IEC61000-4-5 Line-Line ±1kV, Line-Earth ±2kV Criterion A		
Fast transients:	IEC61000-4-4 ±2kV Criterion A		
Radiated susceptibility:	EN61000-4-3 10V/M, 80% AM Criterion A		
Conducted Immunity:	IEC61000-4-6 10V/M, 80% AM, Criterion A		
Harmonic current:	IEC61000-3-2 input power >75W, Class D		
Electromagnetic interference (EMI):	Radiated & Conducted EN55032'B', FCC part 15-B, CISPR32-B		
Safety approvals: (PENDING)	CB EN62368-1, CE, UL/cUL62368-1		
Dielectric strength (HI-POT):	4000VAC I/P to O/P, 2500VAC I/P to Earth, 1000VAC O/P to Earth		
Earth leakage current:	100µA max at 264VAC 60Hz		
Insulation resistance:	500VDC between primary & secondary for 1 min >100MΩ		

Models & Output Voltages & Current

Model Number	Output Voltage	Output Current (Convection)	Output Current (Conduction)	Output Current (Forced air)	Output Current (Conduction & Forced air)
PSY280S12	12V	11.67A	14.17A	20.00A	21.66A
PSY280S18	18V	7.78A	9.44A	15.55A	16.70A
PSY280S24	24V	6.25A	7.50A	11.66A	12.50A
PSY280S30	30V	5.00A	6.00A	9.33A	10.00A
PSY280S48	48V	3.13A	3.75A	5.83A	6.25A
PSY280S54	54V	2.78A	3.33A	5.18A	5.56A

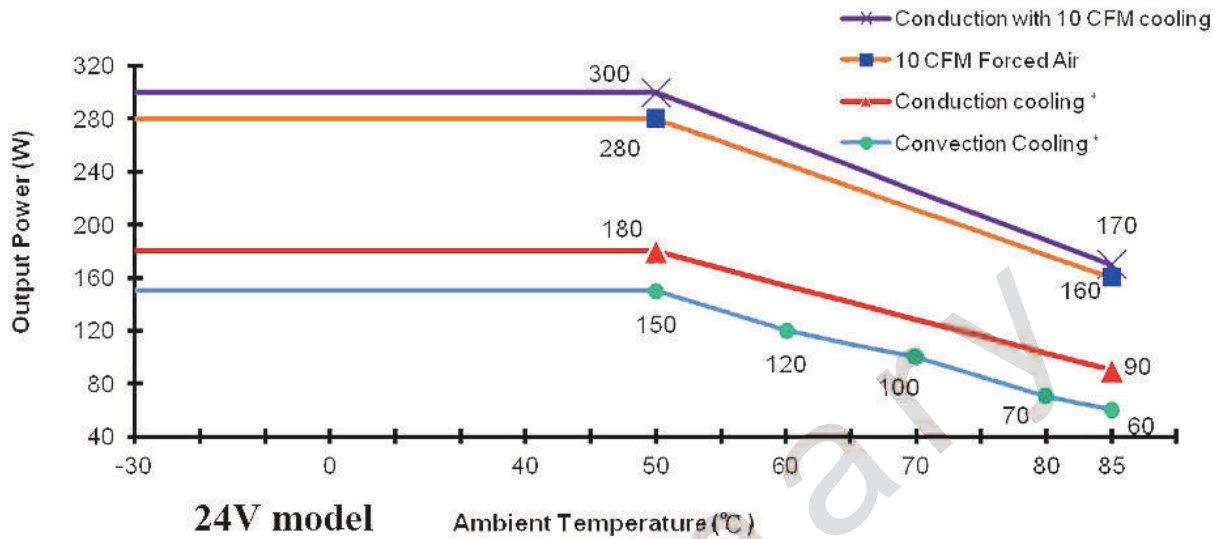
NOTE: Other models are available with output voltages from 9V to 57V DC still within the safety approvals. These will be subject to minimum order quantities and specifications may differ to above depending on output voltage required. Consult sales office for further details.

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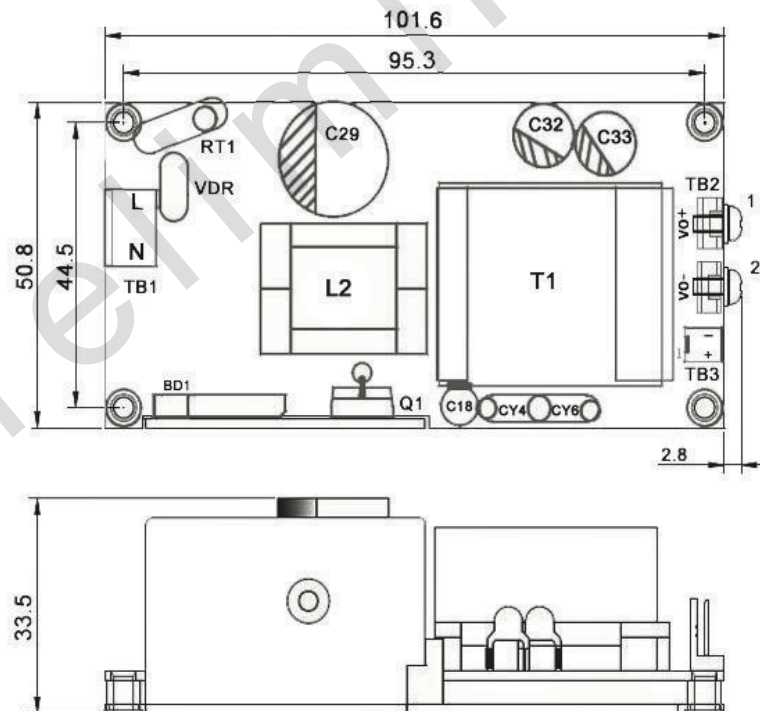
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Temperature Derating Curves



Mechanical (mm)



Matching Connectors

TB1 AC Input Connector	
PIN 1	Neutral
PIN 2	No Pin
PIN 3	Line

JST B2P3-VH or equivalent, mated with JST VHR-3N housing or equivalent

TB2 DC Output Connector	
PIN 1-3	+V OUT
PIN 4-6	0V OUT

Alternatively Ring Terminal AMP 8-31886-1 for 16AWG wire

TB3 FAN Output	
PIN 1	+12V Out
PIN 2	0V Out

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