

PST240

240 W, Three Phase Din Rail
Mountable Switching Power Supplies

FEATURES

- Full Range Input selection from 340 to 575 VAC
- Typical efficiency of 90%
- Compact design with a width of only 89 mm
- Parallel function available (Switch)
- Two years product warranty



ORDERING INFORMATION

Cat. No.	Input Voltage	Output Wattage	Output Voltage	Output Current	Eff. (min.)	Eff. (typ.)
PST240/24/10	3Ø 340~575 VAC	240 WATTS	+ 24 VDC	10 A	88%	90%
PST240/48/5	3Ø 340~575 VAC	240 WATTS	+ 48 VDC	5 A	89%	91%

SPECIFICATIONS

All Specifications Typical At Nominal Line, Full Load, 25° C Unless Otherwise Noticed

GENERAL						
Characteristics	Conditions	min.	typ.	max.	unit	
Switching Frequency	Vi nom, Io nom		25		KHz	
Isolation Voltage	Input-Output	3000 / 4242			VAC / VDC	
	Input-FG	1500 / 2121			VAC / VDC	
Isolation Resistance	Input-Output, @ 500 VDC	100			MΩ	
Ambient Temperature	Operating at Vi nom	-40		+ 71	°C	
Derating (see derating curve)	Vi nom, from +61°C to +71°C			2.5	% / °C	
Storage Temperature	Non Operational	-40		+ 85	°C	
Relative Humidity	Vi nom, Io nom	20		95	% RH	
Temperature Coefficient	Vi nom, Io min			± 0.03	% / °C	
MTBF	Bellcore Issue 6 @40°C, GB	12V model 24V model	488000		Hours	
			519000		Hours	
Altitude During Operation	IEC 60068-2-13			4850	m	
Dimension	Screw Terminal Type		L124 x W89 x D118.8		mm	
Cooling	Free Air Convection					
Pollution Degree			2			
Connection Wire Range	0.2 - 4 sq.mm / 24 - 10 AWG					
Wire Stripping Length	8 mm					
Tightening Torque	Input - 1 Nm (9 lb.in) Output - 0.6 Nm (5.5 lb.in)					
Housing Material	Metal					
Product Weight	1100 g					

INPUT SPECIFICATIONS						
Characteristics	Conditions	min.	typ.	max.	unit	
Nominal Voltage * 1			1Ø or 3Ø 380 ~ 480VAC			
Rated Input Voltage	Io nom	400		500	VAC	
Input Voltage Range	Ta min ... Ta max, AC in	340		575	VAC	
	Io nom, DC in	480		820	VDC	
Input Current	Vi : 400 / 500 VAC, Io nom		0.65 / 0.55		A	
Rated Input Current	Vi : 340 VAC, Io nom			0.85	A	
Line Frequency	Vi nom, Io nom	47		63	Hz	
Inrush Current	Vi : 115 / 230 VAC, Io nom		20		A	
Power Dissipation	Vi : 230 VAC, Io nom	12V model 24V model	30		W	
			24		W	
Leakage Current	Input-Output			0.25	mA	
	Input-FG			3.5	mA	
P.F.C. (Passive)	Vi nom, Io nom		0.55			

*1. Single phase input is permissible, but output load is derated to 75%

OUTPUT SPECIFICATIONS

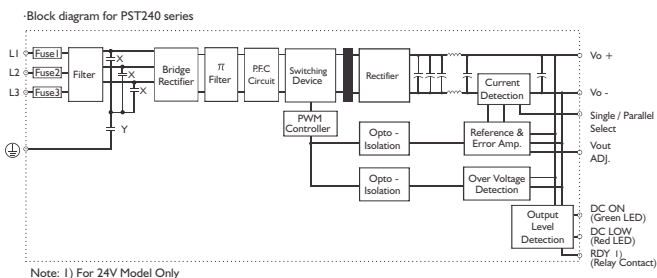
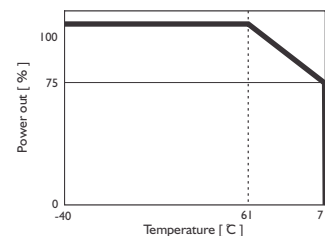
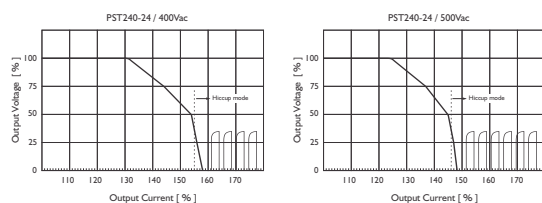
Characteristics	Conditions	min.	typ.	max.	unit
Output voltage accuracy (Adjusted before shipment)	Vi nom, Io max	0		+ 1	%
Minimum Load	Vi nom	0			%
Line Regulation	Io nom, Vi min ...Vi max			± 1	%
Load Regulation	Vi nom			± 1	%
	Single mode			± 5	%
	Parallel mode				%
Voltage Trim Range	Vi nom, 24V model	22.5		28.5	VDC
	48V model	47		56	VDC
Rated Continuous Loading	Vi nom, 24V model	10 A @ 24Vdc / 8.4 A @ 28.5Vdc			
	48V model	5 A @ 48Vdc / 4.2 A @ 56Vdc			
Hold Up Time	Vi : 115 / 230 VAC , Io nom	20			ms
Turn On Time	Vi nom, Io nom			1000	ms
	Vi nom, Io nom → with 7000 µF CAP			1500	ms
Rise Time	Vi nom, Io nom			150	ms
	Vi nom, Io nom → with 7000 µF CAP			500	ms
Fall Time	Vi nom, Io nom			150	ms
Transient Recovery Time	Vi nom, 1~0.5 Io nom			2	ms
Ripple & Noise	Vi nom, Io nom, BW = 20MHz			100	mV
Power Back Immunity	Vi nom, Io nom	35			VDC
	12V model	63			VDC
Capacitor Load	Vi nom, Io nom			7000	µF
DC ON Indicator Threshold at start up (Green LED)	Vi nom, Io nom	17.6		19.4	VDC
DC LOW Indicator Threshold at start up (Green LED)	Vi nom, Io nom	37		43	VDC
DC LOW Indicator Threshold at start up (Green LED)	Vi nom, Io nom	17.6		19.4	VDC
	48V model	37		43	VDC
Parallel Operation	0.1 Io min ~ 0.9 Io max			2	unit
Efficiency	Vi nom, Io nom, Po / Pi	Up to 91%, See model list and typ efficiency curve			

CONTROL AND PROTECTION

Characteristics	Conditions	min.	typ.	max.	unit
Input fuse			2A / 600 VAC internal / phase		
Internal surge voltage protection	IEC 61000-4-5		Varistor		
Rated over load protection	Vi nom (see typ current limited curve)	120		140	%
Power Rdy (for 24V model only)	Threshold voltage of contact closed (at start up)	17.6		19.4	VDC
	Electrical isolation	500			VDC
	Contact rating at 60VDC			0.3	A
Over voltage protection	Vi nom, Io nom	30		33	VDC
	(Auto Recovery)	60		68	VDC
Output short circuit			Hiccup Mode		
Over Temperature	Detect on heat sink, shut down O/P voltage, recovers automatically after temperature goes down.	100		110	°C
Degree of protection			IP20		

Standards Used For Testing

UL / cUL	UL 508 Listed UL 60950-1, Recognized ISA 12.12.01(Class I, Division 2, Groups A, B, C and D)
TUV	EN 60950-1, CB scheme, EN 61558-1, EN 61558-2-17 (meet EN 60204)
CE	EN 61000-6-3, EN 55022 Class B, EN 61000-3-2, EN 61000-3-3 EN 61000-6-2, EN 55024, EN 61000-4-2 Level 4, EN 61000-4-3 Level 3 EN 61000-4-4 Level 4, EN 61000-4-5 L-N Level 3, L / N-FG Level 4 EN 61000-4-6 Level 3, EN 61000-4-8 Level 4, EN 61000-4-11 ENV 50204 Level 2, EN 61204-3
CQC	GB4943, GB9254, GB17625.1
Vibration Resistance	Meet IEC 60068-2-6 (Mounting by rail : 10-500 Hz, 2G, along X, Y, Z each Axis, 60 min for each Axis)
Shock Resistance	Meet IEC 60068-2-27 (15G, 11ms, 3 Axis, 6 Faces, 3 times for each Face)

CIRCUIT SCHEMATIC**DERATING CURVE****TYP. CURRENT LIMITED CURVE****TYP. EFFICIENCY CURVE**