

PST960/48/20



20A ,3 Phase Din Rail Mountable Switching Power Supplies

- Full Range Input selection from 340 to 575 VAC
- Typical efficiency of 93%
- Compact design with a width of only 275.8 mm
- Parallel function available (Switch)
- Two years product warranty

GENERAL SPECIFICATION

Switching Frequency (typ.)	52 KHz
Min. Isolation Voltage -AC (Input-FG)	1500 VAC
Min. Isolation Voltage -AC (Input-Output)	3000 VAC
Min. Isolation Voltage -DC (Input-FG)	2121 VDC
Min. Isolation Voltage -DC (Input-Output)	4242 VDC
Isolation Resistance (Input-Output @500VDC)	100 MΩ
Ambient Temperature Range (Operational at Vi norm)	-40 TO +71 Degree Celcius
Derating from +61°C to +71°C (see derating curve)	2.5% per °C
Ambient Temperature Range (Storage)	-40 TO +85 Degree Celcius
Relative Humidity Range	20 - 95 % RH
Temperature Coefficient Range	+/- 0.03 % / Degree celcius
MTBF (Bellcore Issue 6 @40°C, GB)	390000 hr
Altitude During Operation (IEC 60068-2-13)	4850 m
Dimension	L126.2 XW275.8 X D118.8 mm
Cooling	Free air convection
Pollution Degree	2

ORDERING INFORMATION

Cat. No.	PST960/48/20
Output Voltage	48 VDC
Output Current	20 A
Output Wattage	960 W
Efficiency (min.)	91 %
Efficiency (typ.)	93 %
Input Voltage Range	340 -575 VAC
Standard Packing Qnty	1

PHYSICAL SPECIFICATIONS

Dimensions (H x W x D)	126.2 x 275.8 x 118.8 mm
Weight	3400 g
Case Material	Metal
Packing	3.68 kg ; 6 pcs / 23 kg / 2.41 CUFT

APPROVALS



ACCESSORIES

IMAGES	CAT. NO.	DESCRIPTION	STD. PACK
	CA501-1M	Din 32 Rail unslotted 1 meter	50
	CA501-1M-S	Din 32 Rail slotted 1 meter	50
	CA501-2M	Din 32 Rail unslotted 2 meter	50
	CA501-2M-S	Din 32 Rail slotted 2 meter	50
	CA701-1M	Din 35 Rail unslotted 1 meter	50
	CA701-2M	Din 35 Rail unslotted 2 meter	50
	CA701-2M-S	Din 35 Rail slotted 2 meter	50
	CA701-1M-S	Din 35 Rail slotted 1 meter	50
	CA701-15-1M	Din 35 Rail 15 deep unslotted 1 meter	50
	CA701-15-1M-S	Din 35 Rail 15 deep slotted 1 meter	50
	CA701-15-2M	Din 35 Rail 15 deep unslotted 2 meter	50
	CA701-15-2M-S	Din 35 Rail 15 deep slotted 2 meter	50
	CA202	End Clamp in Polyamide suitable for Din 35 / Din 35-15 Rails	25
	CA702	End Clamp in Polyamide 66 suitable for Din 32 / Din 35 / Din 35-15 Rails	50
	SCPH1	Phillips Screwdriver for Phillips Recess screws	10

STANDARD 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 E N 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
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)

INPUT SPECIFICATIONS

Input Phase	3 Phase
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INPUT SPECIFICATIONS

Nominal Input Voltage	1Ø or 3Ø 380-480 VAC
AC Input Voltage Range	340 - 575 VAC
DC Input Voltage Range	480 - 820 VDC
Rated Max. Input Voltage	500 VAC
Rated Min. Input Voltage	400 VAC
Line Frequency-Max.	63 Hz
Line Frequency-Min.	47 Hz
Inrush Current	30 A
Max. Inrush Current	35 A
Rated Input Current -Max. (Vi : 400 VAC)	1.72 A
Rated Input Current -Typ. (Vi : 500 VAC)	1.5 A
Rated Input Current -Max. (Vi : 400 VAC)	2.4 A
Power Dissipation (Vi: 400 VAC, Io norm)	90 W
Leakage Current (Input-Output)	0.25 mA
P.F.C.	0.8

OUTPUT SPECIFICATIONS

Output Voltage	48 VDC
Output Current	20 A
Output Voltage Accuracy (Adjusted before shipment)	+ 1 %
Minimum Load	0 %
Line Regulation	+/- 1 %
Load Regulation: Single Mode	+/- 1 %
Load Regulation: Parallel Mode	+/- 5 %
Output Voltage Trim Range	47 - 56 VDC
Rated Continuous Loading	20A @ 48Vdc / 17 A @ 56 Vdc
Hold Up Time	15 msec
Turn On Time	1000 ms
Turn On Time With 7000 µF	1500 msec
Rise Time	150 ms
Rise Time With 7000 µF	500 ms
Fall Time	150 msec
Transient Recovery Time	2 ms
Ripple and Noise (BW = 20MHz)	80 mV
Power Back Immunity	63 VDC
Capacitor Load	7000 µF
DC On Indicator	Green
DC ON Indicator Threshold at start up (Green LED)	37-43VDC
DC LOW Indicator Threshold after start up (Red LED)	37-43 VDC
Parallel Operation	2 Units
Efficiency	93 %

CONTROL AND PROTECTION SPECIFICATIONS

Input fuse	T5 A / 500 VAC internal / phase
Internal surge voltage protection: IEC61000-4-5	Varistor
Rated over load protection	120 -140 %
Over voltage protection	60 - 68 VDC
Output short circuit	Hiccup mode
Degree of protection	IP20

PIN CONFIGURATION

PIN NO	POSITION	DESIGNATION	DESCRIPTION
1	OUT	V -	Negative output terminal
2	OUT	V -	Negative output terminal
3	OUT	V+	Positive output terminal
4	OUT	V+	Positive output terminal
5	OUT	G	Parallel GND PIN for current share
6	OUT	p	Parallel PIN for current share
7	OUT	RDY	A normal open relay contact for DC ON level control (Never connect except 24V model)
8	OUT	RDY	(Never connect except 24V model)
9	IN	L3	Input terminals
10	IN	L2	Input terminals
11	IN	L1	Input terminals
12	IN	Earth	Ground this terminal to minimize high-frequency emissions
	OTHER	DC ON	Operation indicator LED
	OTHER	DC LO	DC LOW voltage indicator LED
	OTHER	Vout ADJ.	Trimmer-potentiometer for Vout adjustment

CONNECTION DETAILS

Connector size range 2 (0.2~4mm2) flexible / solid cable, Output: AWG20-6 - Input connector can withstand torque at maximum 9 pound-inches. - Output connector can withstand torque at maximum 5.5 pound-inches. 8 m/m stripping at cable end recommends 0 Use copper conductors only, 60 / 75 C Input and Rdy, P, G Control : AWG24 - 10 2 (0.5~10mm) flexible / solid cable - Output connector can withstand torque at maximum 15.6 pound-inches 10m/m stripping at cable end recommends

INSTALLATION DETAILS

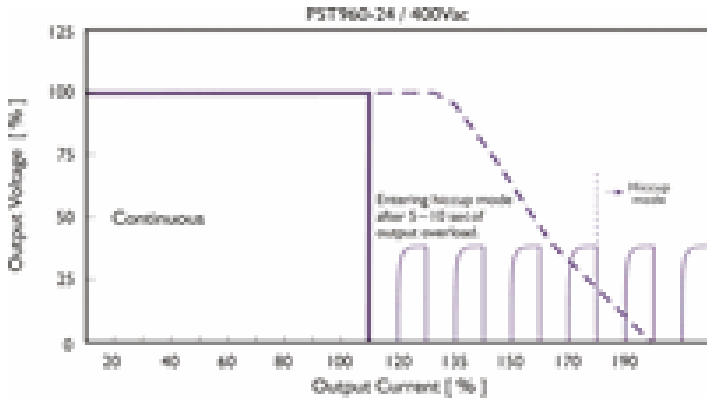
Ventilation / Cooling Normal convection All sides 25mm free space For cooling recommended

CIRCUIT SCHEMATIC

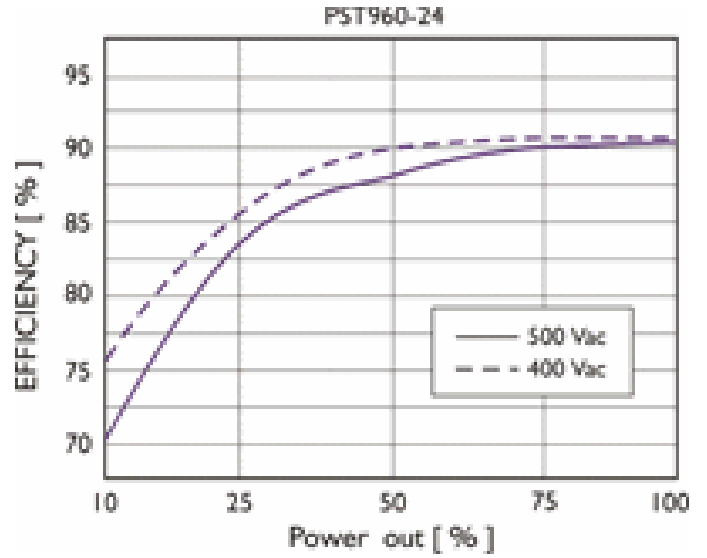




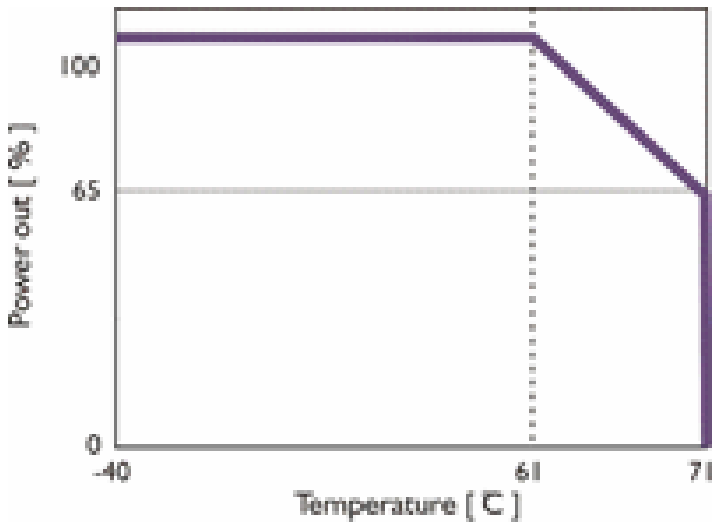
CURRENT LIMITED CURVE



EFFICIENCY CURVE



DERATING CURVE



DIMENSIONAL DIAGRAM

