

PSB4/54/12/4.
5



connectwell
THE RIGHT CONNECTION

4.5A ,Single Phase Din Rail Mountable Step Type Switching Power Supplies

- Full Range Input selection from 90 to 264VAC
- Typical efficiency of 84%
- Compact design with a width of only 71mm
- Two years product warranty

GENERAL SPECIFICATION

Switching Frequency (typ.)	55 KHz
Min. Isolation Voltage -AC (Input-Output)	3000 VAC
Min. Isolation Voltage -DC (Input-Output)	4242 VDC
Isolation Resistance (Input-Output @500VDC)	100 MΩ
Ambient Temperature Range (Operational at Vi norm)	-25 to +71 deg.C
Derating from +61°C to +71°C (see derating curve)	2.5% per °C
Ambient Temperature Range (Storage)	-25 to +85 deg.C
Relative Humidity Range	20 - 95 % RH
Temperature Coefficient Range	+/- 0.03 % / Degree celcius
MTBF (Bellcore Issue 6 @40°C, GB)	582000 hr
Altitude During Operation (IEC 60068-2-13)	2000 m
Dimension	L91 x W71 x D56.5 mm
Cooling	Free Air Convection
Pollution Degree	2

ORDERING INFORMATION

Cat. No.	PSB4/54/12/4.5
Output Voltage	12 VDC
Output Current	4.5 A
Output Wattage	54 W
Efficiency (min.)	82%
Efficiency (typ.)	84%
Input Voltage Range	90 - 264 VAC
Standard Packing Qty	1

PHYSICAL SPECIFICATIONS

Dimensions (H x W x D)	91 x 71 x 56.5 mm
Weight	250 g
Case Material	Plastic
Packing	0.31 kg ; 48 pcs / 16kg / 2.28 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, UL 1310 Class 2 Power Recognized ISA 12.12.01(Class 1, Division 2, Groups A, B, C and D)
TUV	EN 60950-1, CB scheme
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
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	Single
AC Input Voltage Range	90 to 264
DC Input Voltage Range	120 to 375

PSB4/54/12/4.
5



connectwell
THE RIGHT CONNECTION

INPUT SPECIFICATIONS

Rated Max. Input Voltage	240 VAC
Rated Min. Input Voltage	100 VAC
Line Frequency-Max.	63 Hz
Line Frequency-Min.	47 Hz
Max. Inrush Current (Vi: 115 VAC)	30 A
Max. Inrush Current (Vi: 230 VAC)	60 A
Rated Input Current -Typ. (Vi : 115 VAC)	1.1 mA
Rated Input Current -Max. (Vi : 115 VAC)	1.5 mA
Power Dissipation (Vi: 230 VAC, Io norm)	10.2 W
Leakage Current (Input-Output)	0.25 mA

OUTPUT SPECIFICATIONS

Output Voltage	12 VDC
Output Current	4.5 A
Output Voltage Accuracy (Adjusted before shipment)	+ 1 %
Minimum Load	0 %
Line Regulation	+/-1 %
Load Regulation	+/- 1 %
Output Voltage Trim Range	12- 14 VDC
Rated Continuous Loading	4.5A @ 12VDC / 3.8A @ 14VDC
Hold Up Time (Vi: 115VAC)	16 msec
Hold Up Time (Vi: 230VAC)	60 msec
Turn On Time	1000 ms
Turn On Time With 3500 µF	1500 msec
Rise Time	150 ms
Rise Time With 3500 µF	500 ms
Fall Time	150 msec
Transient Recovery Time	2 ms
Ripple and Noise (BW = 20MHz)	50 mV
Power Back Immunity	18 VDC
Capacitor Load	3500 µF
DC On Indicator	Green
DC ON Indicator Threshold at start up (Green LED)	9-10.8 VDC
DC LOW Indicator Threshold after start up (Red LED)	9-10.8 VDC
Efficiency	86%

CONTROL AND PROTECTION SPECIFICATIONS

Input fuse	T2A / 250VAC internal
Internal surge voltage protection: IEC61000-4-5	Varistor
Rated over load protection	110-150%
Over voltage protection	15 - 16.5 VDC
Output short circuit	Fold forward
Degree of protection	IP20

PIN CONFIGURATION

PIN NO	POSITION	DESIGNATION	DESCRIPTION
1	OUT	-	Negative output terminal
2	OUT	-	Negative output terminal
3	OUT	+	Positive output terminal
4	OUT	+	Positive output terminal
5	IN	L	Input terminals (phase conductor, no polarity at DC input)
6	IN	N	Input terminals (neutral conductor, no polarity at DC input)
	OTHER	DC ON	Operation indicator LED
	OTHER	DC LO	DC LOW indicator LED
	OTHER	Vout ADJ.	Trimmer-potentiometer for Vout adjustment

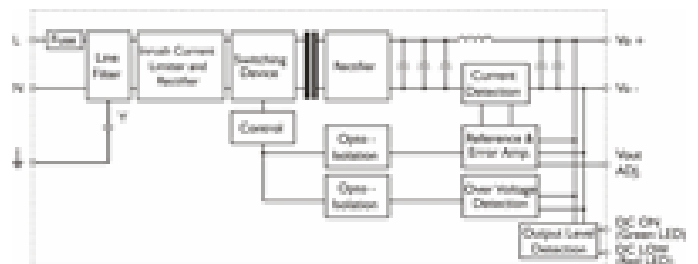
CONNECTION DETAILS

AWG24-12 (0.2~2mm²) flexible / solid cable, 7 m/m stripping at cable end recommends 0 Use copper conductors only, 60 / 70 C - Connector can withstand torque at maximum 6 pound-inches.

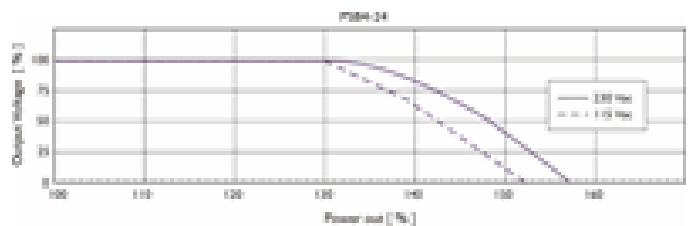
INSTALLATION DETAILS

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

CIRCUIT SCHEMATIC



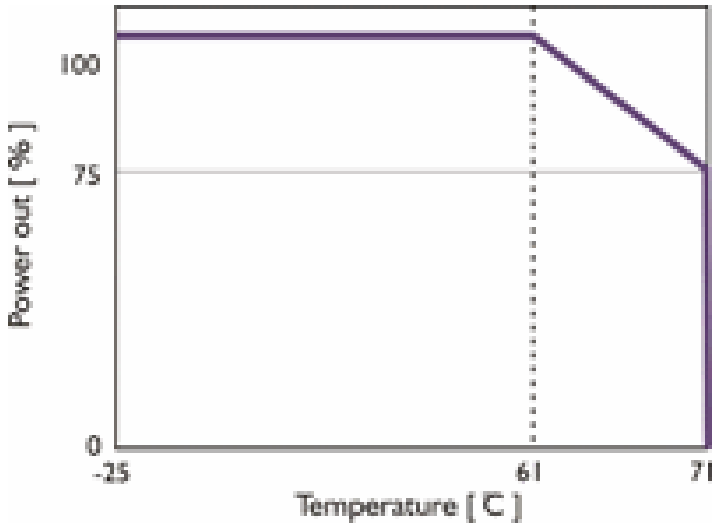
CURRENT LIMITED CURVE



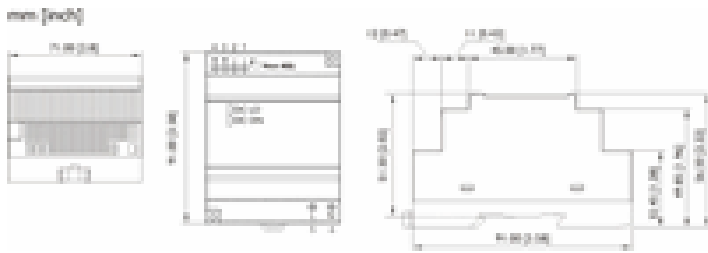
PSB4/54/12/4.
5



DERATING CURVE



DIMENSIONAL DIAGRAM



EFFICIENCY CURVE

