



**DESCRIPTION :** **100W Wide input AC/DC switching power supply**

The rated output power of TPC/LPD-100-XS series is 90-110.4W, input voltage range: 90-264VAC, output voltage: 5V,12V,15V,24V,28V,36V,48V,High reliability, precision,efficiency, ultra-small size, no external heat sink required, with short circuit, over-load,over-voltage protection, Widely used in telecommunications, industrial control, instrument, data acquisition, signal control, New Energy, Security,and other electronic systems.

**FEATURES**

Universal AC input : 90VAC-264VAC	100% full load burn-in test	short circuit, over-load,over-voltage protection
Operating temperature: -30℃~70℃	RoHS complaint	Low standby power consumption<0.5W
All using 105℃ long-life electrolytic capacitors	High reliability,efficiency, long life	Can bear 300VAC for 5s, 1U low profile

**SELECTION GUIDE**

Part Number	Input		Output					Efficiency @25℃ (Typ) %
	Volatge (VAC)		Voltage (VDC)	Pre-set voltage @25℃ (V)	Rated current (A)	Current range(A)	Rated power(W)	
	Rated	Range values						
TPC/LPD-100-5S	220	90-264	5	5.00-5.10	18.0	0-18	90	86
TPC/LPD-100-12S	220	90-264	12	12.00-12.20	8.5	0-8.5	102	87
TPC/LPD-100-15S	220	90-264	15	15.00-15.20	7.0	0-7.0	105	88
TPC/LPD-100-24S	220	90-264	24	24.00-24.20	4.5	0-4.5	108	90
TPC/LPD-100-28S	220	90-264	28	28.00-28.20	3.6	0-3.6	100.8	90
TPC/LPD-100-36S	220	90-264	36	36.00-36.20	3.0	0-3.0	108	90.5
TPC/LPD-100-48S	220	90-264	48	48.00-48.20	2.3	0-2.3	110.4	90.5

All specifications typical at TA=25℃, nominal input voltage and rated output current unless otherwise specified.

**OUTPUT CHARACTERISTICS**

Conditions	Conditions	Parameter
Ripple and noise, Ta is ambient, @25℃	12V output voltage	≤120mVp-p
	15V output voltage	≤150mVp-p
	24V, 28V,36V,48V output voltage	≤200mVp-p
Output adjustment range @25℃	5V output voltage	4.5V-5.5V
	12V output voltage	10.8V-13.2V
	15V output voltage	13.5V~16.5V
	24V output voltage	21.6V-26.4V
	28V output voltage	25.2V-30.8V
	36V output voltage	32.4V~39.6V
	48V output voltage	43.2V-52.8V
Voltage regulation accuracy@-30~70℃	±3% @5V, ±1% @12V 15V 24V 28V 36V 48V	
Line regulation@-30~70℃	±0.5%	
Load regulation@-30~70℃	±1.0%	
Temp. coefficient@-25~70℃	±0.03%/℃	
Set-up time@25℃	≤500mS / 30mS ( 230Vac/115Vac input, full load )	
Hold-up time@25℃	≥20mS(230Vac input, Full load) ≥10mS(115Vac input, Full load)	
Overshoot&Undershoot@-30~70℃	<5.0%	

**INPUT CHARACTERISTICS**

Conditions	Parameter
Input voltage range	90Vac~264Vac 120-370VDC
Max. input voltage	300Vac input, no damage, dwell time 5000 mS
Rated input voltage range	100Vac~240Vac 120-370VDC
Frequency Range	47Hz~63Hz
Set-up voltage@-30~70℃	90Vac (refer to the derating curve)
Input current@25℃	≤1.9A@115Vac / ≤1.2A@220Vac
Inrush current @25℃	≤65A@230Vac Cold start
Standby power@25℃	<0.5W

**PROTECTION @-30~70℃**

Conditions	Parameter
Over-power	110%~180% of rated power, Hiccup mode, auto recovery
Over-voltage	115%~150% of rated output voltage, constant voltage, auto recovery
Over-load	110%~180% of rated current, Hiccup mode, auto recovery
Output short circuit protection	Long-term mode, Auto recovery

**ENVIRONMENT CHARACTERISTICS**

Conditions	Parameter
Operating amb. Temp.&Humi.	-30℃~70℃; 20%~90%RH No condensing (refer to the derating curve)
Storage Temp. & Humi.	-40℃~85℃; 10%~95%RH No condensing
Vibration	10 ~ 500Hz, 5G 10min./1cycle, period for60min. each along X,Y, Z axes
Pulse	20G/11mS pulse ,3 times at each X,Y,Z axes
Altitude	5000m

**SAFETY&EMC STANDARDS @25℃**

Conditions	Parameter
Safety Standards	Meet UL60950-1, TUV EN60950-1, EN61558-1/-2-16,CCC GB4943
Withstand Voltage	I/P-O/P:3.75KVac/10mA; I/P-FG:2.0KVac/10mA; O/P-FG:0.5KVdc/10mA test time:1min.
Grounding test	Test condition: 40A / 2min.; Grounding resistance: <0.1 ohms.
Leakage Current	I/P-Grounding≤0.75mA; I/P-O/P ≤0.25mA 240Vac input 63Hz
Isolation resistance	I/P-O/P: 100M ohms; I/P-FG : 100M ohms; O/P-FG : 100M ohms
EMC emission	Compliance to EN55032 Class B/FCC Part15 Class B
EMC immunity	Compliance to EN61000-4-2,3,4,5,6,8,11
Harmonic Current	Compliance to EN61000-3-2, CLASS A

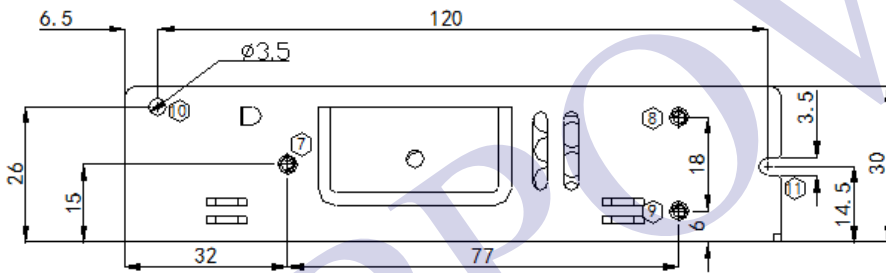
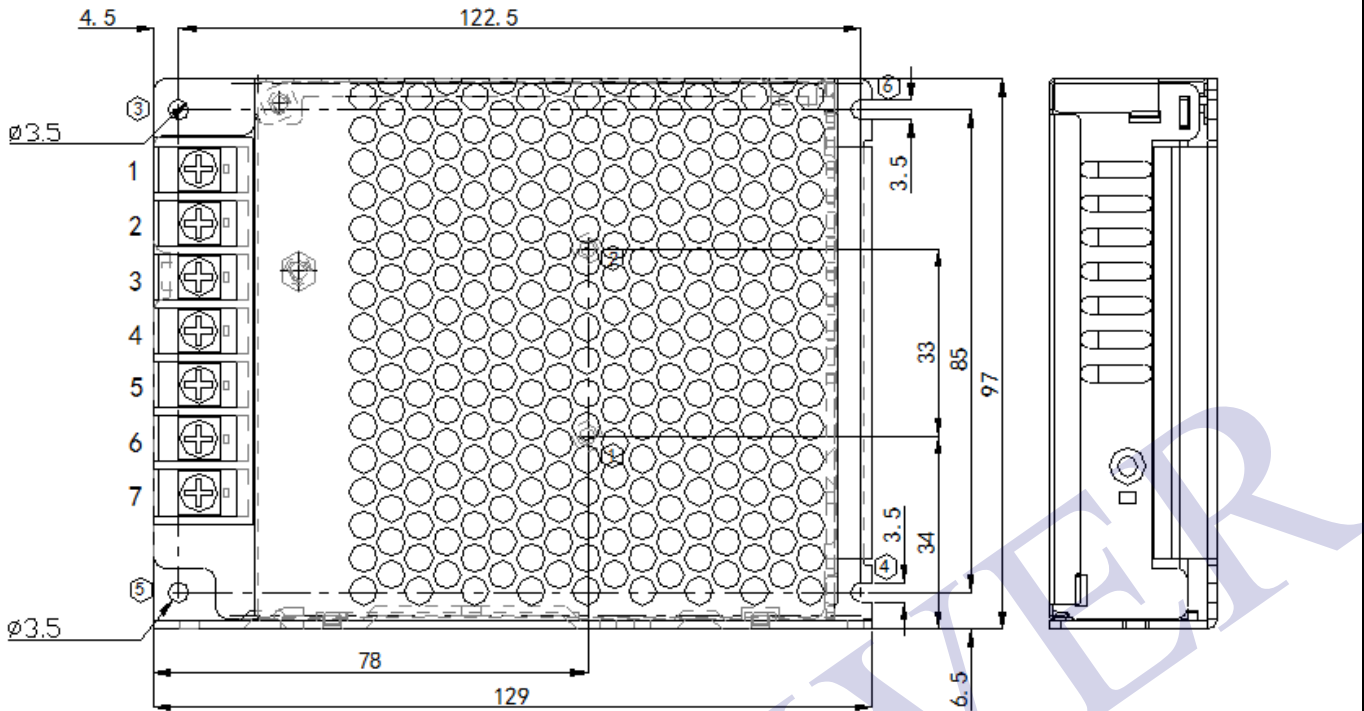
**OTHERS**

Conditions	Parameter
Cooling method	Cooling by free air flow
Dimension (L*W*H)	129*97*30mm
Net Weight	0.29kg

**RELIABILITY CHARACTERISTICS**

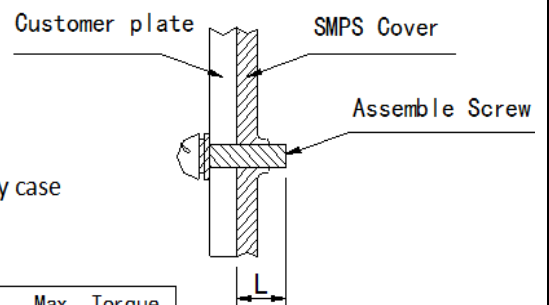
Conditions	Parameter
MTBF	200,000Hrs AT 25℃, MIL-217 Method 2 Components Stress Method

**MECHANICAL DIMENSIONS**



Mounting Position	Mounting Type	Mounting Position No.	Screw Type	Lmax	Mounting Torque(max)
Bottom Mounting	Fixing by screws	① — ②	M3	4.0mm	6.5Kgf.cm (max)
		③ — ④	M3	4.0mm	
		⑤ — ⑥	M3	4.0mm	
Side Mounting	Fixing by screws	⑦ — ⑧	M3	4.0mm	6.5Kgf.cm (max)
		⑨ — ⑩	M3	4.0mm	

- 1, Dimensional Unit: mm
- 2, Unmarked Tolerance is GB/T 1804-m
- 3, Choose the best installation method.



Remarks: 1. For safety purpose, the length of screw inside the power supply case shall comply with the above table (refer the right drawing)

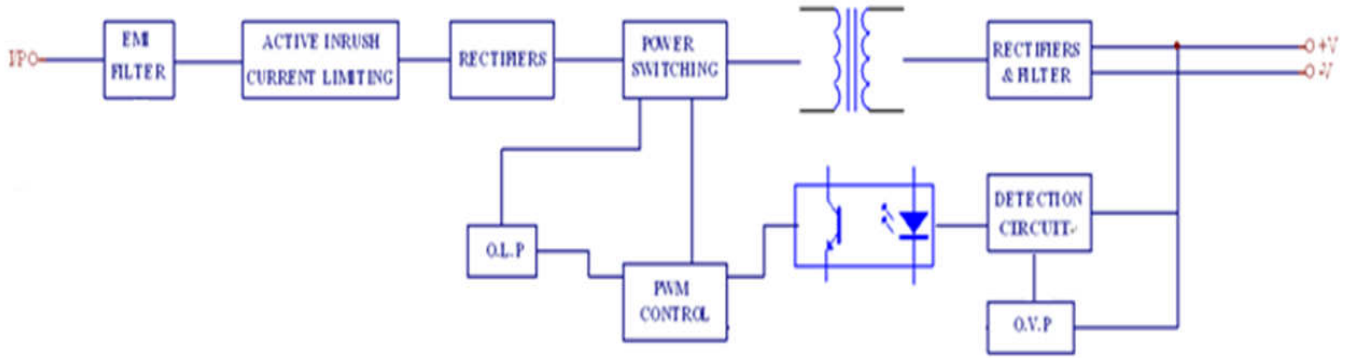
**1. Instruction of the AC Input Connectors**

Part number	Function	Connector	Requirement for Cables	Max. Torque
1	AC(L)	95 Terminal Block	22-12AWG	12Kgf.cm (max)
2	AC(N)			
3	⊕			

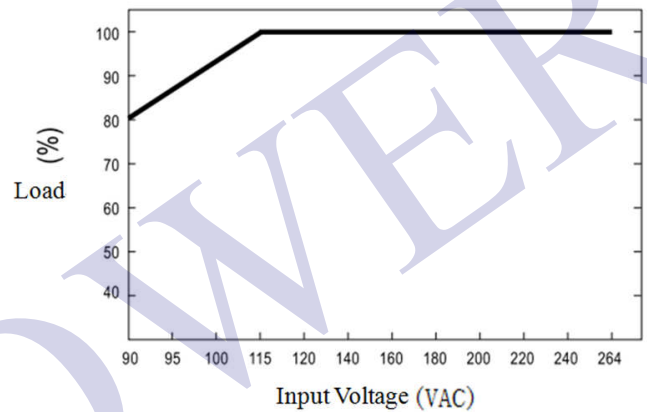
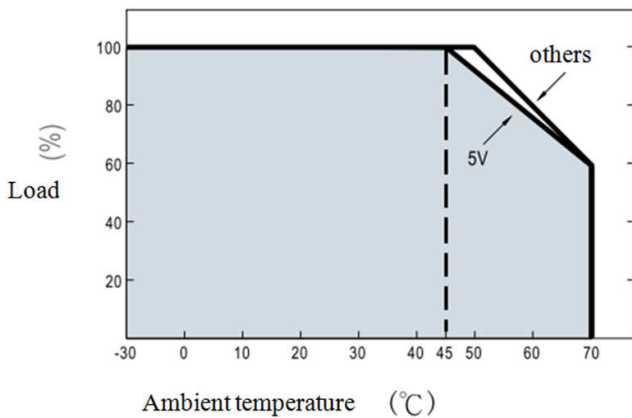
**2. Instruction of the DC Output Connectors**

Part number	Function	Connector	Requirement for Cables	Max. Torque
4/5	V-	95 Terminal Block	22-12AWG	12Kgf.cm (max)
6/7	V+			

**BLOCK DIAGRAM**

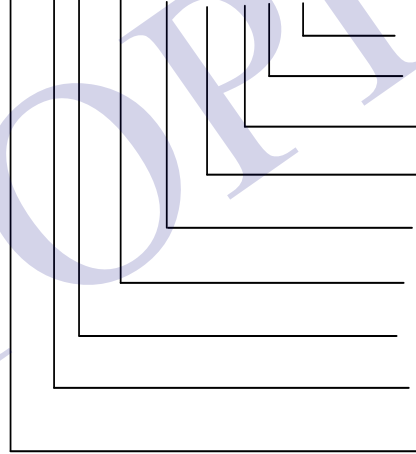


**DERATING CURVE**



**MODEL SELECTION**

**TP C / LPD - 100 - X S**



- S: Single output; D: Dual output
- Output voltage
- Delimiter
- Rated output power
- Delimiter
- Series
- Delimiter
- Type
- Brand
- TOPPOWER