

**DESCRIPTION:****200W Wide input AC/DC switching power supply**

The rated output power of TPC/LR-200-XS series is 200W, input voltage range : 90-264VAC, output voltage : 12V,24V. High reliability, precision,efficiency , ultra-small size, no external heat sink required, stable output voltage and etc, 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

AC input selectable by switch (115Vac/230Vac)	100% full load burn-in test	short circuit, over-load,over-voltage protection
Operating temperature : -25℃~70℃	RoHS complaint	Cooling by free air convection
Altitude up to 5000m	High efficiency, long life and high reliability	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/LR-200-12S	220	90-132 / 180-264	12	12.00-12.10	16.67	0-16.67	200	≥86.5
TPC/LR-200-24S	220	90-132 / 180-264	24	24.00-24.10	8.33	0-8.33	200	≥88.5

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 0<Ta≤70℃	12V 24V output voltage	≤150mVp-p		
Ripple and noise,Ta is ambient -25<Ta≤0℃		≤150mVp-p at 12V , ≤300mVp-p at 24V		
Dynamic load characterstics, -25<Ta≤70℃	12V output voltage	1.667A-16.67A: <±1200mV	1.667A-8.335A: <±600mV	8.335A-16.67A: <±600mV
	24V output voltage	0.833A-8.33A: <±2400mV	0.833A-4.165A: <±1200mV	4.165A-8.33A: <±600mV
Output adjustment range @25℃	12V output voltage	10.2V~13.8V		
	24V output voltage	21.6V-28.8V		
Voltage regulation@-25~70℃	±1.5%			
Line regulation@-25~70℃	±0.5%			
Load regulation@-25~70℃	±0.5%			
Temp. coefficient@-25~70℃	±0.03%/℃			
Set-up time@25℃	≤2.0S / 50mS (230Vac/115Vac input, full load) @ 12V 16.67A output /24V 8.33A output			
Hold-up time@25℃	≥16mS(230Vac input, Full load) ≥12mS(115Vac input, Full load) @ 12V 16.67A output /24V 8.33A output			
Overshoot&Undershoot@-25~70℃	<5.0%			

INPUT CHARACTERISTICS

Conditions	Parameter
Input voltage range	90Vac~132Vac 180Vac~264Vac
Rated input voltage range	100Vac~120Vac 200-240Vac
Frequency Range	47Hz~63Hz

INPUT CHARACTERISTICS

Set-up voltage@-25~70℃	90/180Vac (90/180VAC 50% load set-up, 100/200VAC 80% load set-up @25℃)
Input current@25℃	≤4A@115Vac / ≤2.2A@230Vac
Inrush current @25℃	≤60A@115/230Vac Cold start
Standby power@25℃	<0.5W

PROTECTION @-25~70℃

Conditions	Parameter
Over-power	120%~180% of rated power, Hiccup mode, auto recovery
Over-voltage	120%~140% of rated output voltage, constant voltage, auto recovery
Over-load	120%~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.	-25℃~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	GB4943 / EN60950 for reference
Withstand Voltage	I/P-O/P:3.0KVac/10mA; I/P-FG:2KVac/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≤2.0mA; I/P-O/P ≤0.25mA 240Vac
Isolation resistance	I/P-O/P: 10M ohms; I/P-FG : 10M ohms; O/P-FG : 10M ohms
EMC emission	EN55032 Class B/FCC Part15 Class B
EMC immunity	EN61000-4-2,3,4,5,6,8,11

OTHERS

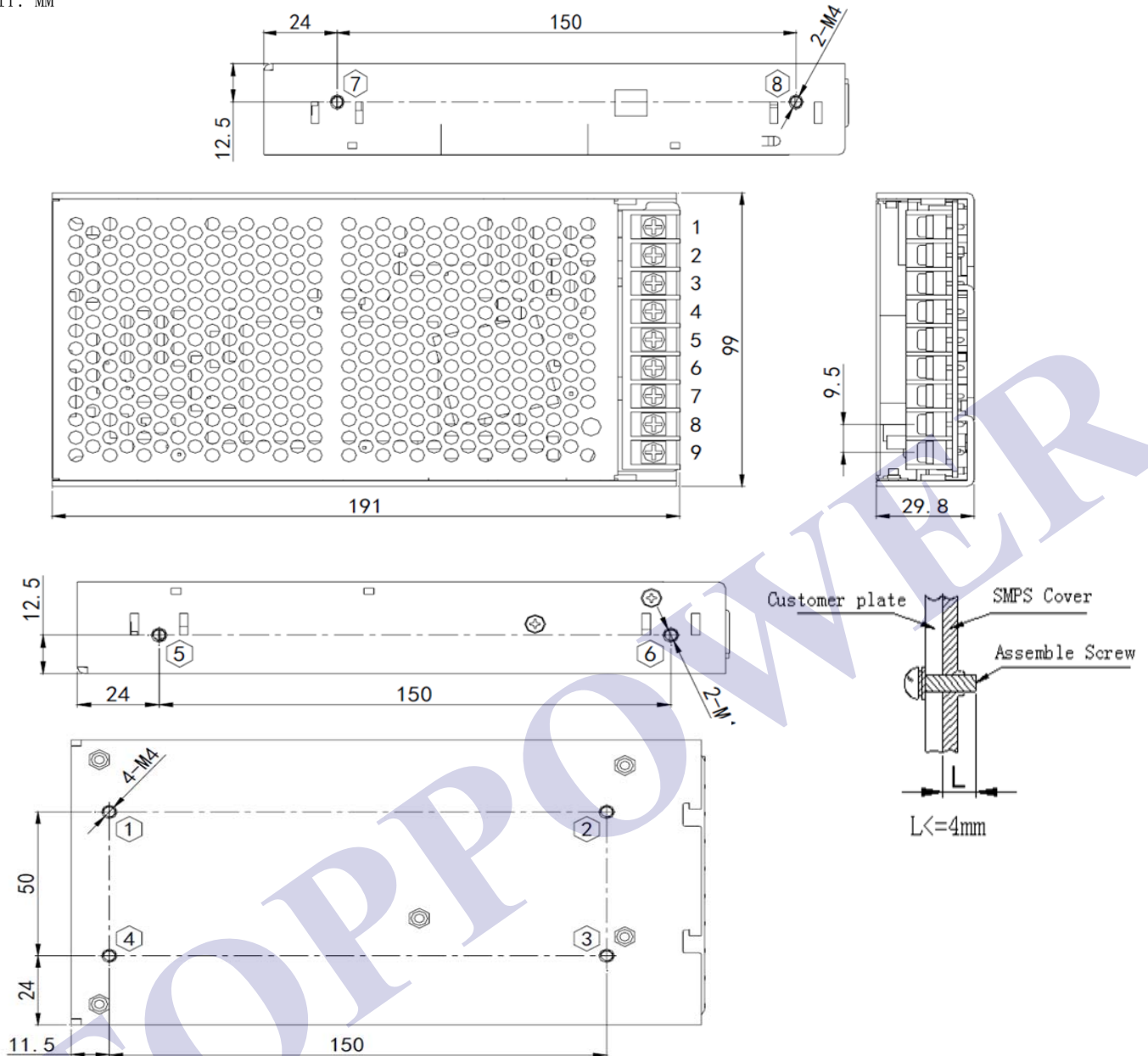
Conditions	Parameter
Cooling method	Cooling by free air flow
Dimension (L*W*H)	190*99*30mm
Net Weight	0.57kg

RELIABIILITY CHARACTERISTICS

Conditions	Parameter
MTBF	100,000Hrs AT 25℃, MIL-217 Method 2 Components Stress Method
Design electrolytic capacitor life-time	>2years AT 50℃ 230VAC input 80% output

MECHANICAL DIMENSIONS

UNIT: MM



1. Mounting Way

Mounting position	Mounting type	Mounting position No.	Screw Type	L max	Mounting Torque(max)
Bottom mounting	Fixing by Screw	①—④	M4	4mm	12Kgf.cm
Side mounting		⑤—⑧	M4	4mm	

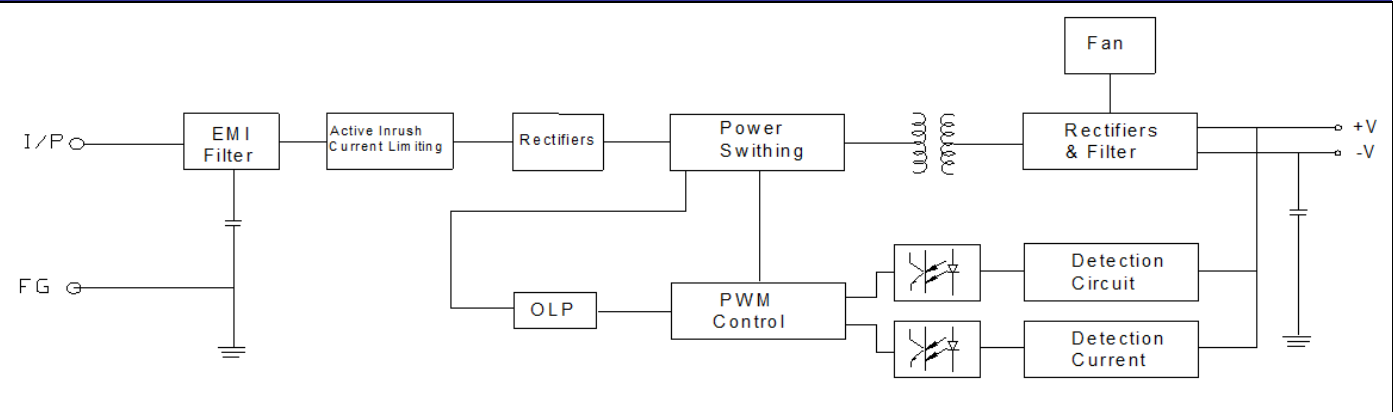
2. Instruction of AC output Connector

Part No.	Function	Connector	Requirement	Torque(max)
1	AC-L	95 Terminal Block	22-12AWG	11Kgf.cm
2	AC-N			
3	⏏			

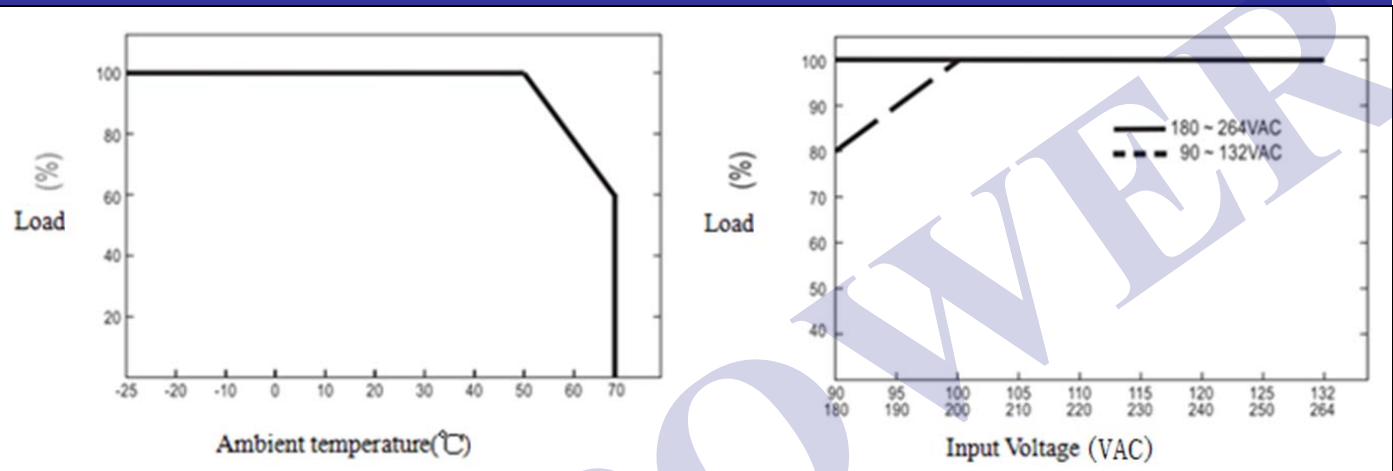
3. Instruction of DC output Connector

Part No.	Function	Connector	Requirement	Torque(max)
4/5/6	-V	95 Terminal Block	22-12AWG	11Kgf.cm
7/8/9	+V			

BLOCK DIAGRAM



DERATING CURVE



MODEL SELECTION

