

**DESCRIPTION:****792W wide input AC/DC switching power supply**

The rated output power of TPC/PDF-800-XS series is 792W, input voltage range: 90-264VAC, output voltage: 24V, 36V, 48V, High reliability, precision, efficiency, ultra-small size, no external heat sink required, stable output voltage and etc, with over current protection, short circuit, overload protection, Widely used in telecommunications, industrial control, instrument, data acquisition, signal control, New Energy, Security, and other electronic systems.

FEATURES

AC input : 90VAC-264VAC	short circuit, overload, over-voltage protection	Operating temperature: -30℃~70℃
RoHS complaint	High reliability, efficiency, 100% full load burn-in test	Built-in active PFC function, PF>0.96
Build in DC OK signal	Using ZVS technology to reduce power dissipation	Built in AC inrush current limiting circuit(<20A)
1 U low profile, 41mm	Built in Fan speed control	Built in Remote Sense Function

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						
TPC/PDF-800-24S	220	90-264	24	24.00-24.10	33	0-33	792	>89
TPC/PDF-800-36S	220	90-264	36	35.75-36.25	22	0-22	792	>89
TPC/PDF-800-48S	220	90-264	48	48.00-48.10	16.5	0-16.5	792	>89

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℃	24V 36V 48V	≤200mVp-p
Ripple and noise, Ta is ambient, -30<Ta≤0℃	24V 36V 48V	≤200mVp-p
Dynamic load characteristics, -0<Ta≤70℃	24V	3.3A-33A: Vp-p<±1200mV 3.3A-15A: Vp-p<±750mV 15A-33A: Vp-p<±750mV (2mS)
	36V	2.2A-22A: Vp-p<±1800mV 2.2A-11A: Vp-p<±1800mV 11A-22A: Vp-p<±1800mV (2mS)
	48V	1.65A-16.5A: Vp-p<±1200mV 1.65A-8.25A: Vp-p<±750mV 8.25A-16.5A: Vp-p<±750mV (2mS)
Dynamic load characteristics, -30<Ta≤0℃	24V	3.3A-33A: Vp-p<±2400mV 3.3A-15A: Vp-p<±1200mV 15A-33A: Vp-p<±1200mV (2mS)
	36V	2.2A-22A: Vp-p<±1800mV 2.2A-11A: Vp-p<±1800mV 11A-22A: Vp-p<±1800mV (2mS)
	48V	1.65A-16.5A: Vp-p<±2400mV 1.65A-8.25A: Vp-p<±1200mV 8.25A-16.5A: Vp-p<±1200mV (2mS)
Output adjustment range @25℃	24V	21.6~26.4V
	36V	32.4~39.6V
	48V	43.2~52.8V
Voltage regulation accuracy @-30~70℃	±2%	
Line regulation @-30~70℃	±0.5%	
Load regulation @-30~70℃	±2%	
Temp. coefficient @-30~70℃	±0.03%/℃	
Set-up time @25℃	≤3.0S@ (220Vac input, Full load)	
Hold-up time @25℃	≥8mS@ (220Vac input, Full load)	
Overshoot&Undershoot	<5.0%	

INPUT CHARACTERISTICS

Conditions	Parameter
Input voltage range	90Vac~264Vac
Rated input voltage range	100Vac~240Vac
Frequency Range	47Hz~63Hz
Set-up voltage @-30~70℃	90Vac (refer to the derating curve)
Input current @25℃	<12 A
Inrush current @25℃	<20A@220Vac Cold start
Power Factor(Typical)	PF≥0.96/230VAC PF≥0.98/115VAC Full Load
Leakage Current	Input—output: ≤0.25mA Input—PG: ≤3.5mA

PROTECTION @-30~70℃

Conditions	Parameter	Notes
Over-Load @24V	36.3A~44.55A	constant current, auto recovery
Over-Load @36V	24.2A~29.7A	
Over-Load @48V	18.15A~22.3A	
Over-power	871.2W~1069.2W	constant current, auto recovery
Over-voltage @24V	27.6V~36V	110%~130% of rated output voltage, constant voltage
Over-voltage @36V	41V~45V	
Over-voltage @48V	55.2V~60V	
Over-temperature	24V 36V 48V	105℃+5℃(detect on Mosfet temperature);shut down,auto recovery after the temperature goes down to 75℃
Output short circuit protection	Long-term model , constant current,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, 2G, 10min./1cycle, period for60min. each along X,Y, Z axes
Pulse	20G/11mS pulse ,3 times at each X,Y,Z axes
Altitude	5000m (36V 48V) 2000m (24V)

SAFETY&EMC STANDARDS @25℃

Conditions	Parameter
Safety Standards	IEC60950/UL60950/TUV EN60950-1 (for reference)
Withstand Voltage	I/P-O/P:3.0KVac/10mA; I/P-FG:1.5KVac/10mA; O/P-FG:0.5KVdc/10mA test time:1min.
Isolation resistance	I/P-O/P: 10M ohms; I/P-FG : 10M ohms; O/P-FG : 10M ohms
Grounding test	Test condition: 40A / 2min.Grounding resistance: <0.1 ohms.
DC OK signal	4~6V
EMC emission	Compliance to EN55022, CLASS B FCC PART15
EMC immunity	Compliance to EN61000-4-2,3,4,5,6,8,11 heavy industry Leve
Harmonic Current	Compliance to EN61000-3-2,Class D

OTHERS

Conditions	Parameter
Cooling method	Cooling by force air (Built-in fan,the fan speed is controlled by load and internal temp.)
Dimension (L*W*H)	226*116.5*41mm
Net Weight	1.22kg

RELIABILITY CHARACTERISTICS

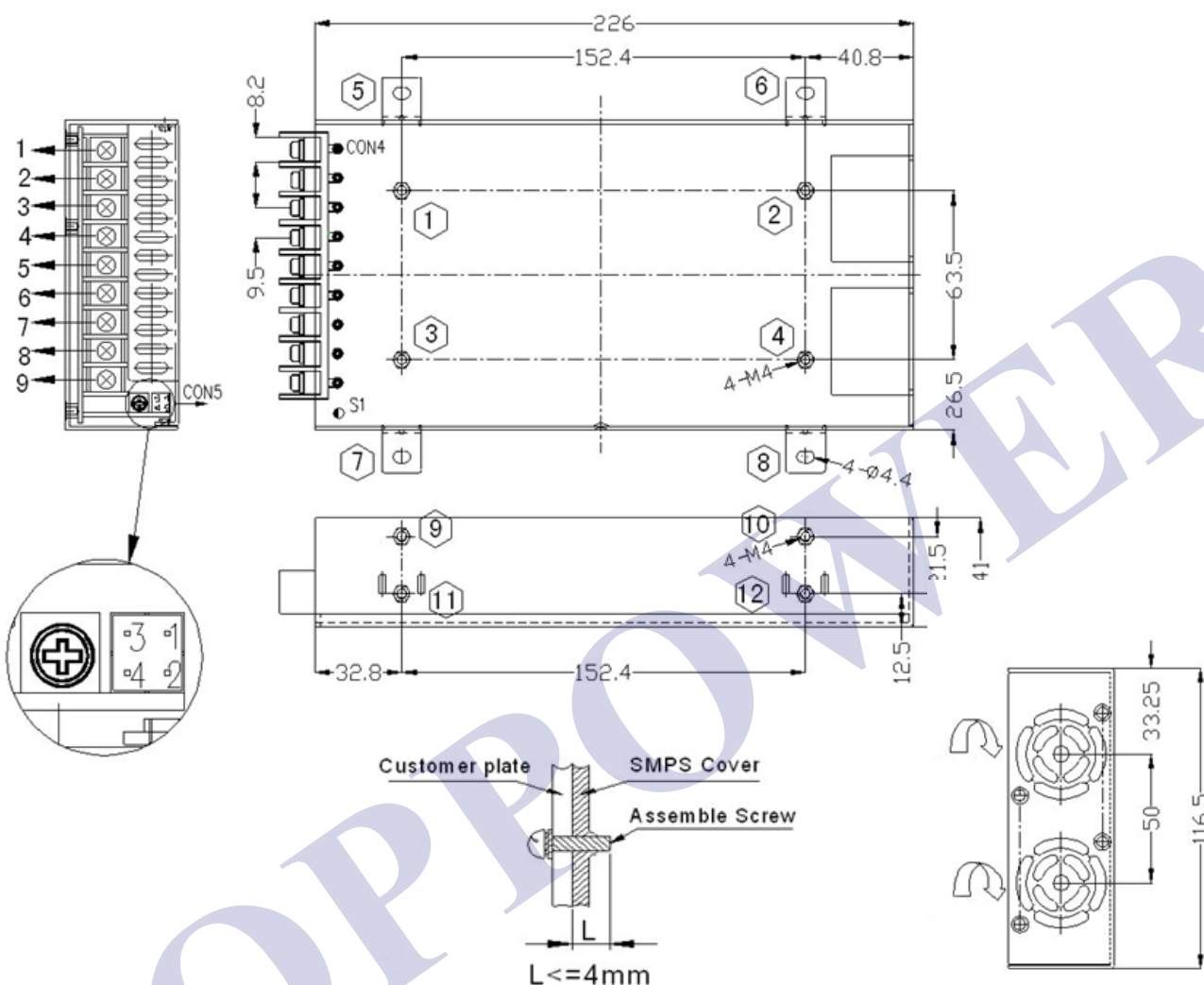
Conditions

Parameter

MTBF

200, 000Hrs AT 25°C, MIL-217 Method 2 Components Stress Method

MECHANICAL DIMENSIONS



1.AC terminal blocks installation information

	Terminal No.	Function	Wire Spec	Recommended torque
CON4	1	L	22~12AWG	12Kgf.cm(max)
	2	N		
	3	⊕		

2.DC terminal blocks installation information

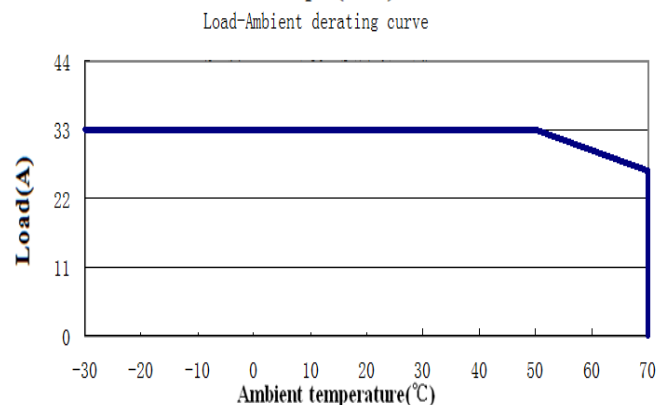
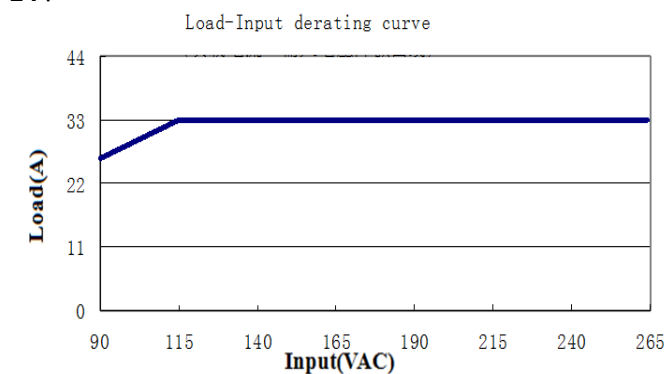
Terminal No.	Function	Wire Spec	Recommended torque
4 / 5/6	+V	22~12AWG	12Kgf.cm(max)
7/8/9	-V		

3.Signal terminal blocks installation information

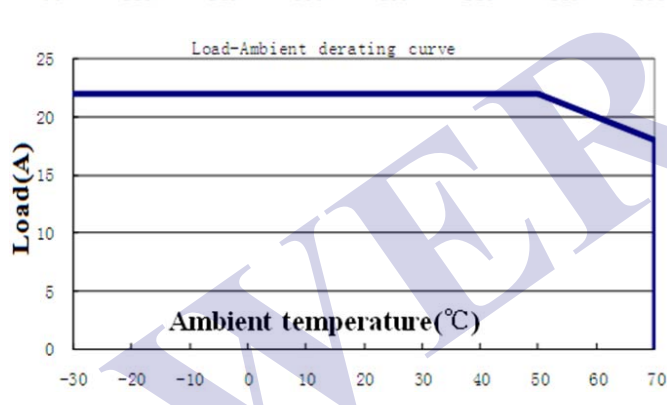
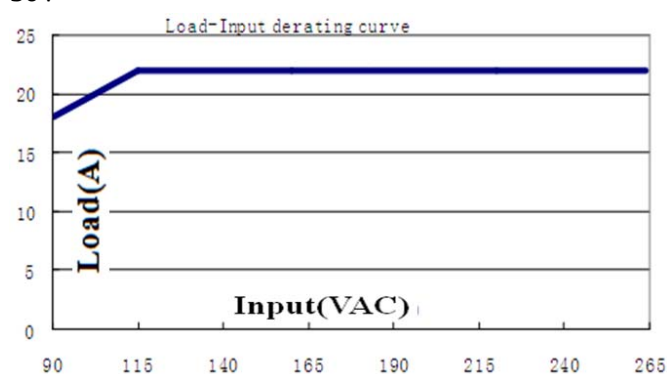
	Terminal No.	Function	Terminal Standard
CON5	1	+S	2008-2X2PIN
	2	-S	
	3	DC OK	
	4	GND	

DERATING CURVE

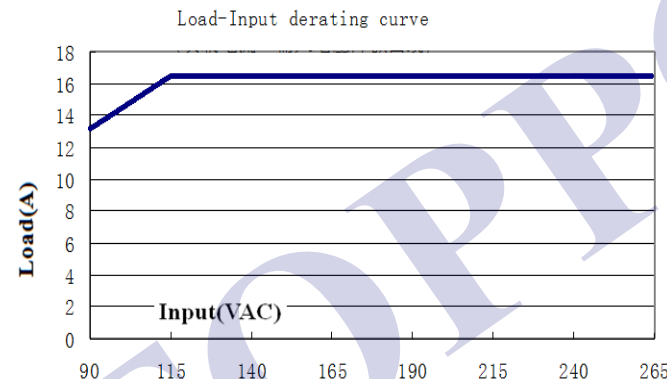
24V



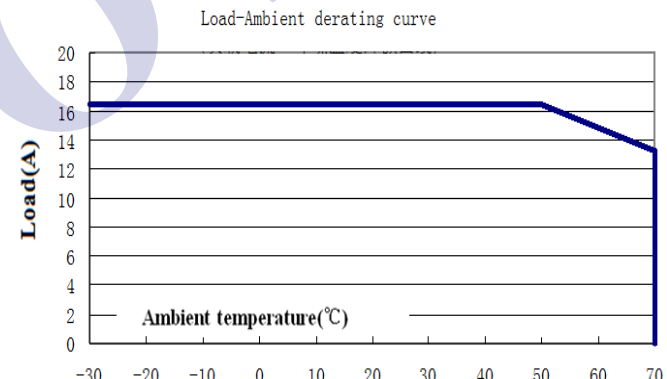
36V



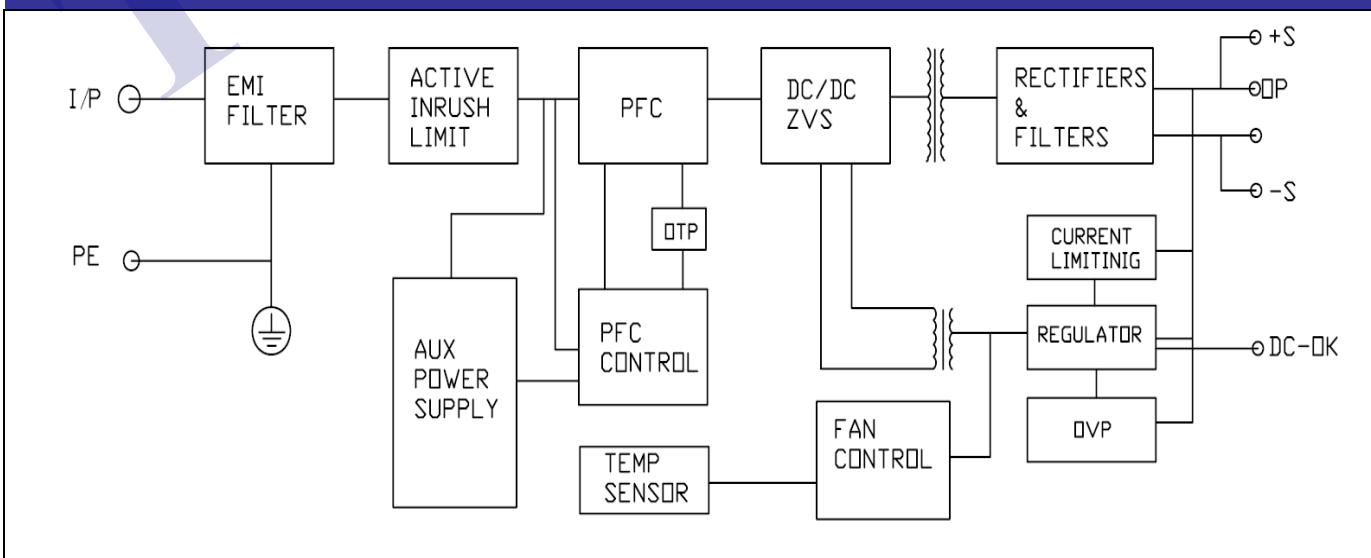
48V



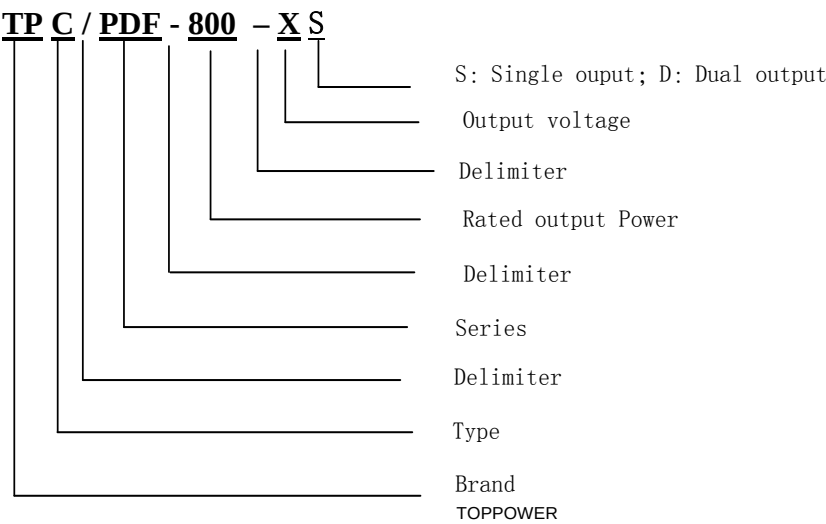
48V



BLOCK DIAGRAM



MODEL SELECTION



TOPPOWER