Patron
Passive Elektronic

PPC/PDF-800-XS Series

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

The rated output power of PPC/PDF-800-XS series is792W, input voltage range 90-264VAC, output voltage:24V,36V,48V,High reliability, precision,effificency , ultra-small size, no external heat sink required, stable output voltage and etc, with over current protection,short circuit,overloadprotection, 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,effificency,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						
PPC/PDF-800-24S	220	90-264	24	24.00-24.10	33	0-33	792	>89
PPC/PDF-800-36S	220	90-264	36	35.75-36.25	22	0-22	792	>89
PPC/PDF-800-48S	220	90-264	48	48.00-48.10	16.5	0-16.5	792	>89

All specifications typical at TA=25°C, 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 characterstics, -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 characterstics, -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%	

PPC/PDF-800-XS Series

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

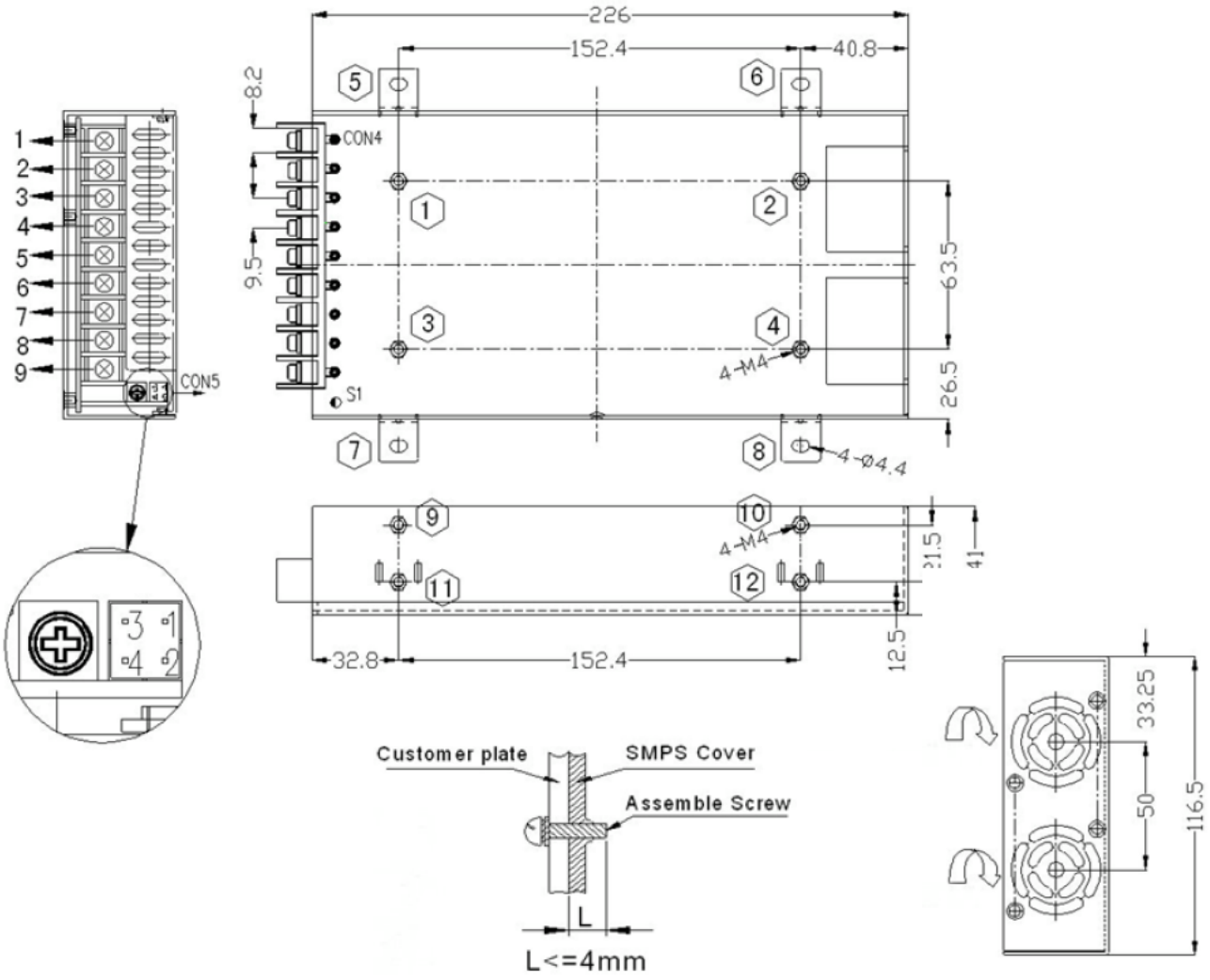
OTHERS

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

RELIABIILITY CHARACTERISTICS

Conditions	Parameter
MTBF	200，000Hrs AT 25℃, 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	

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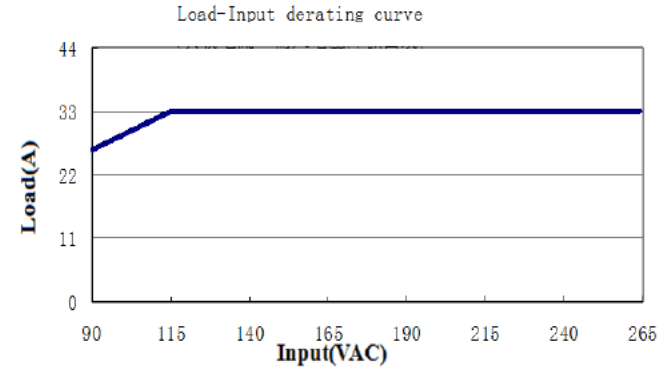
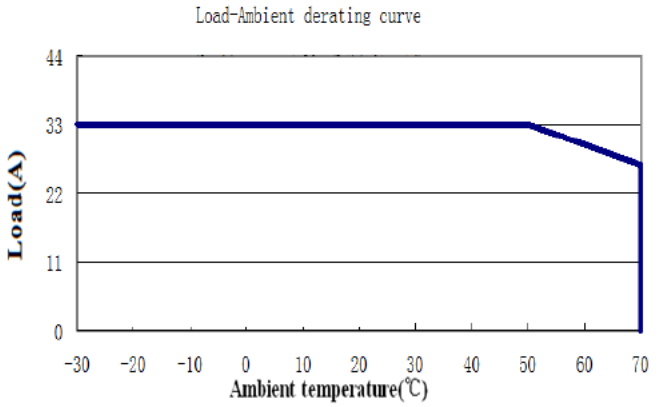
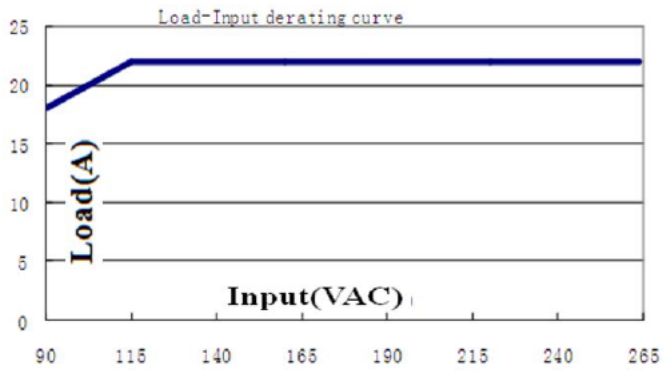
DERATING CURVE

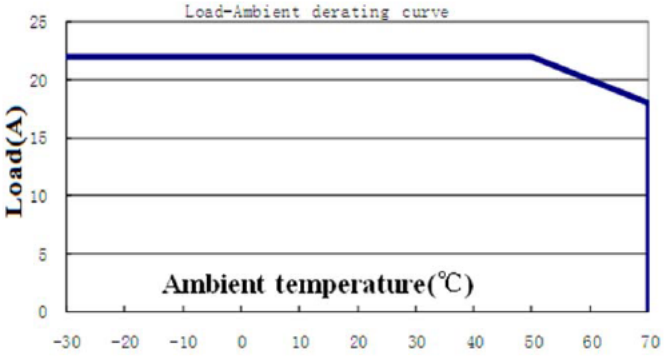
24V



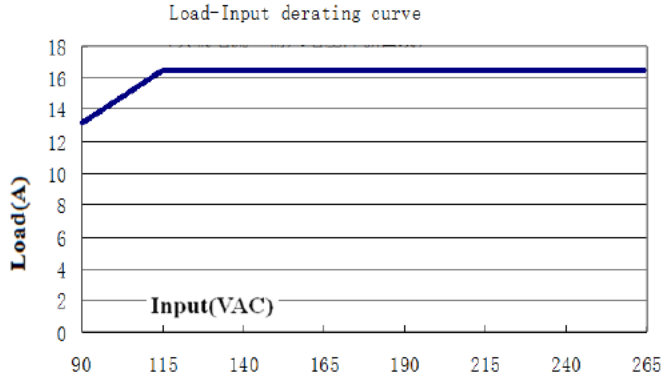


36V

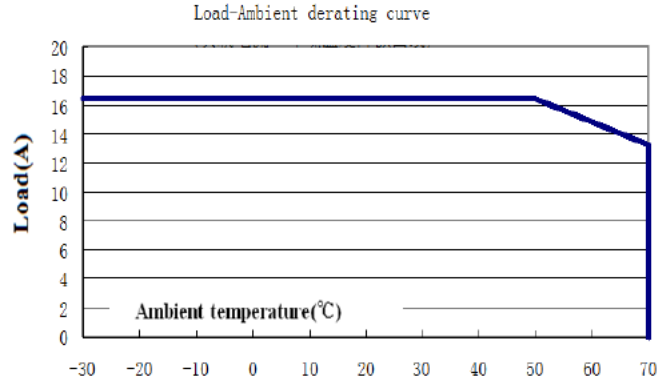




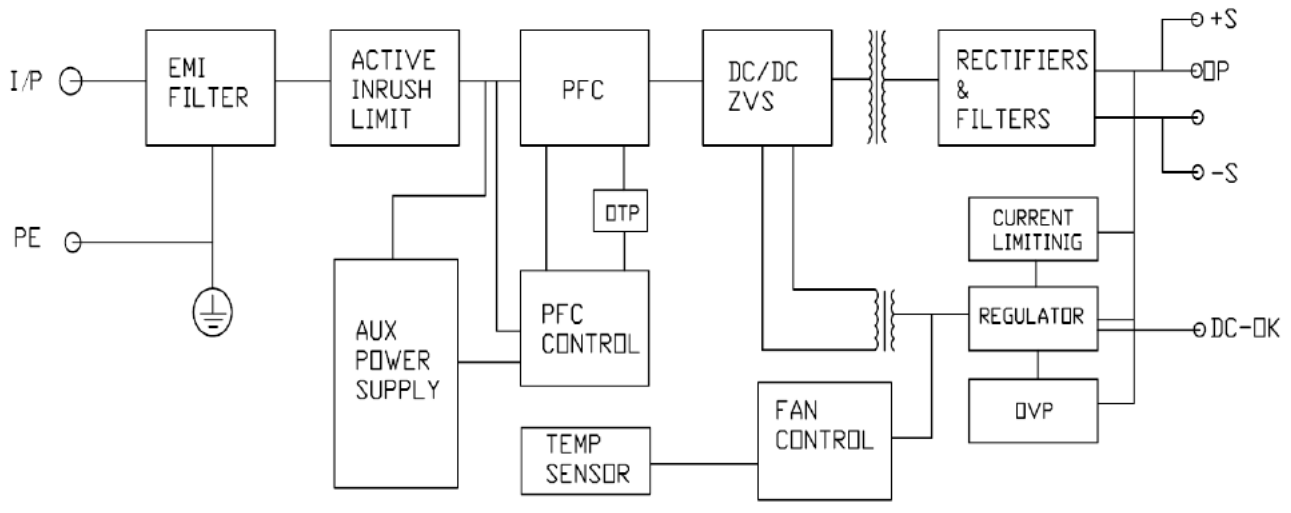
48V



48V



BLOCK DIAGRAM



MODEL SELECTION