

**DESCRIPTION:****30-36W Wide input AC/DC switching power supply**

The rated output power of TPC/PS-35-XS series is 30-36W, input voltage range: 90-264VAC, output voltage: 5V, 12V, 15V, 24V, 36V, 48V, High reliability, precision, efficiency, ultra-small size, no external heat sink required, stable output voltage and etc, with over current protection, EMI filter circuit, the rectifier filter circuit, short circuit, overload, internal thermal 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 : -20℃~65℃
RoHS complaint	High reliability, efficiency, 100% full load burn-in test	All using 105℃ long-life electrolytic

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/PS-35-5S	220	90-264	5.0	5.00-5.05	6.00	0-6.00	30	>78
TPC/PS-35-12S	220	90-264	12.0	12.00-12.05	3.00	0-3.00	36	>81
TPC/PS-35-13.5S	220	90-264	13.5	13.50-13.05	2.60	0-2.60	35	>82
TPC/PS-35-15S	220	90-264	15.0	15.00-15.05	2.40	0-2.40	36	>83
TPC/PS-35-24S	220	90-264	24.0	24.00-24.05	1.50	0-1.50	36	>83
TPC/PS-35-36S	220	90-264	36.0	36.00-36.05	1.00	0-1.00	36	>84
TPC/PS-35-48S	220	90-264	48.0	48.00-48.05	0.75	0-0.75	36	>86

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≤60℃	5V output voltage	≤80mVp-p
Ripple and noise, Ta is ambient, 0<Ta≤60℃	12V, 13.5V, 15V, 24V, 36V, 48V output voltage	≤120mVp-p
Ripple and noise, Ta is ambient, -20<Ta≤0℃	5V output voltage	≤150mVp-p
Ripple and noise, Ta is ambient, -20<Ta≤0℃	12V, 13.5V, 15V, 24V, 36V, 48V output voltage	≤200mVp-p
Dynamic load characteristics, -20<Ta≤65℃	5V output voltage	0.6-3A ± 600mv 3-6.A ± 600mv
	12V output voltage	0.3-1.5A ± 600mv 1.5-3.0A ± 600mv
	13.5V output voltage	0.26-1.3A ± 600mv 1.3-2.6A: ± 600mv
	15V output voltage	0.24-1.2A ± 600mv 1.2-2.4A: ± 600mv
	24V output voltage	0.15-0.7A ± 600mv 0.75-1.5A ± 600mv
	36V output voltage	0.1-0.5A ± 600mv 0.5-1A: ± 600mv
	48V output voltage	0.1-0.4A: ± 600mv 0.4-0.75A: ± 600mv
Output adjustment range @25℃	5V output voltage	4.75~5.5V
	12V output voltage	11.4~13.2V
	13.5V output voltage	12.8~14.85V
	15V output voltage	14.25~16.5V
	24V output voltage	22.8~26.4V
	36V output voltage	32.4~39.6V
	48V output voltage	45.6~52.8V
Voltage regulation accuracy @-20~65℃	± 1%	
Line regulation @-20~65℃	± 0.5%	
Load regulation @-20~65℃	± 1%	
Temp. coefficient @-20~65℃	± 0.03%/℃	

Set-up time @25℃	≤2.0S@115Vac input	≤1.0S@(230Vac input, Full load)
Hold-up time @25℃	≥10mS@115Vac input	≥20mS@(230Vac 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 @-20~65℃	90Vac (refer to the derating curve)
Input current @25℃	<1.0 A
Inrush current @25℃	<23A@115 Vac input <45A@230Vac input

PROTECTION @-20~65℃

Conditions	Parameter	Notes
Over-power（5Voutput）	31.5W~54W	Protection type: Hiccup model, auto recovery
Over-power（12Voutput）	37.8W~64.8W	
Over-power（13.5Voutput）	36.86W~63.2W	
Over-power（15Voutput）	37.8W~64.8W	
Over-power（24Voutput）	37.9W~64.8W	
Over-power（36Voutput）	37.8W~64.8W	
Over-power（48Voutput）	37.4W~64.8W	Protection type:Constant voltage, auto recovery
Over-current（5Voutput）	6.3A~10.8A	
Over-current（12Voutput）	3.15A~5.4A	
Over-current（13.5Voutput）	2.73A~4.68A	
Over-current（15Voutput）	2.52A~4.32A	
Over-current（24Voutput）	1.58A~2.7A	
Over-current（36Voutput）	1.05A~1.8A	
Over-current（48Voutput）	0.78A~1.35A	Protection type: Hiccup model, auto recovery
Over-voltage（5Voutput）	5.75V~7.5V	
Over-voltage（12Voutput）	13.8V~16.2V	
Over-voltage（13.5Voutput）	15.5V~18.2V	
Over-voltage（15Voutput）	17.25V~20.25V	
Over-voltage（24Voutput）	27.6V~32.4V	
Over-voltage（36Voutput）	41.4V~48.6V	Long-term model , auto recovery
Over-voltage（48Voutput）	55.2V~64.8V	
Output short circuit protection	Long-term model , auto recovery	

ENVIRONMENT CHARACTERISTICS

Conditions	Parameter
Operating amb. Temp.&Humi.	-20℃~65℃; 20%~90%RH No condensing (refer to the derating curve)
Storage Temp. & Humi.	-30℃~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

SAFETY&EMC STANDARDS @25℃

Conditions	Parameter
Safety Standards	EN60950, IEC60950, UL60950 (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: 32A / 2min.; Grounding resistance: <0.1 ohms.
Leakage Current @ 25℃	I/P-Grounding≤3.5mA; I/P-O/P ≤0.25mA (264Vac input, 63Hz)
EMC emission	Compliance to EN55022, CLASS B FCC PART15B
EMC immunity	Compliance to EN61000-4-2,3,4,5,8,11 heavy industry Leve

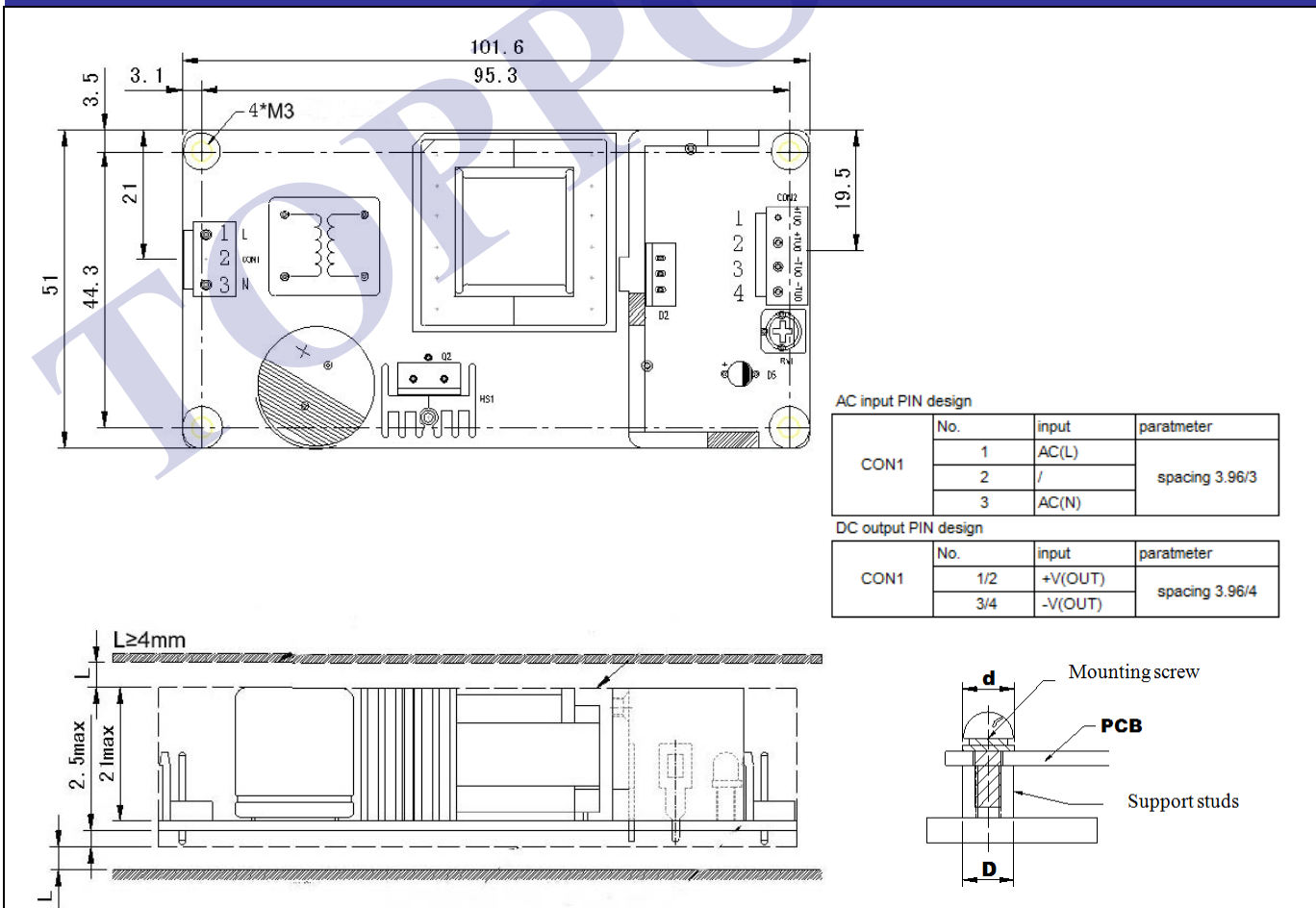
OTHERS

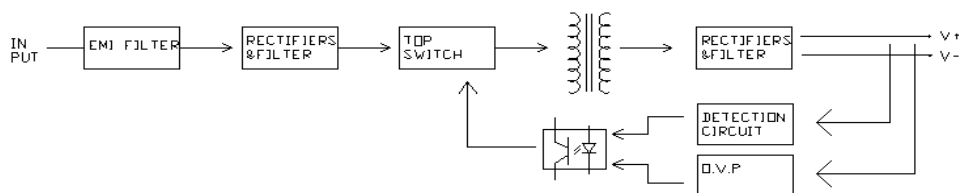
Conditions	Parameter
Cooling method	Cooling by free air flow
Dimension (L*W*H)	101.6*50.8*24mm
Net Weight	0.23kg

RELIABILITY CHARACTERISTICS

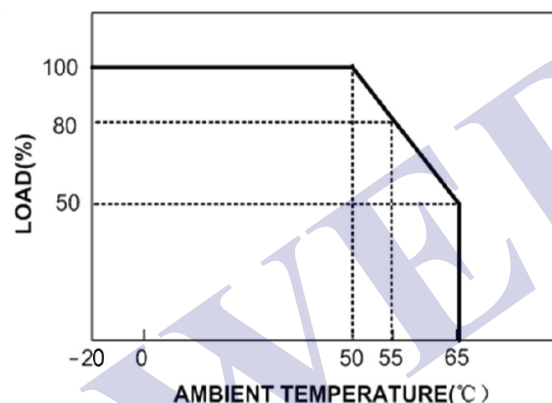
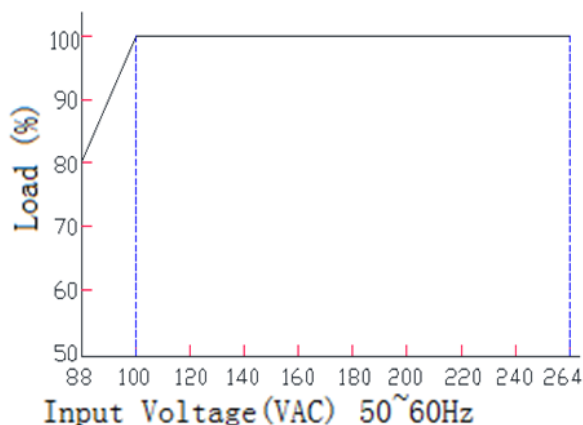
Conditions	Parameter
MTBF	200, 000Hrs AT 35℃, MIL-217 Method 2 Components Stress Method

MECHANICAL DIMENSIONS

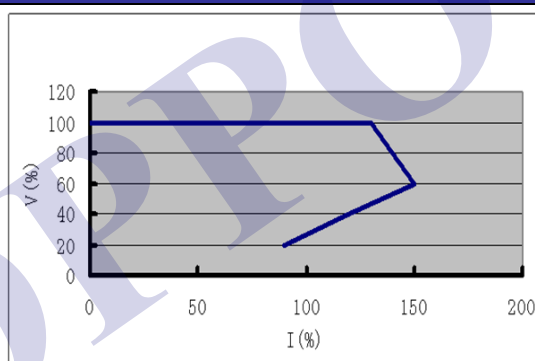




DERATING CURVE

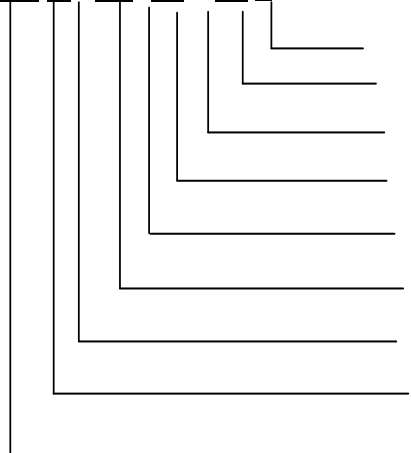


OUTPUT CHARACTERISTICS CURVE



MODEL SELECTION

TP C / PS -35 - 12 S



S: Single output; D: Dual output

Output voltage

Delimiter

Rated output Power

Delimiter

Series

Delimiter

Type

Brand

TOPPOWER