TECHNICAL DATASHEET

300W Panel Mount Power Supplies

FSP300-PBA Series

FSP300-PBA Series

FEATURES

- Class-I Design
- IEC 62368-1 safety standard
- EN55032 Class B emission
- Remote Off input (PS_Off)
- Peak power 450W

SAFETY STANDARD APPROVAL

DESCRIPTION

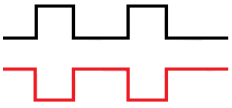
This AC-DC switching power supplies in a package of 170 x 115 x 39.9 mm is a Class-I (with Protection Earth) safety construction. This PSU is capable of delivering 300 watts continuous power and 450 watts peak power (except 12V at 400 watts) at 50℃ operation temperature. Product is suitable for industry control applications.

INPUT SPECIFICATIONS

Input voltage:	100 to 240 VAC
Input frequency:	47.5 to 63 Hz
Input current:	5 A (rms) for 115 VAC 2.5 A (rms) for 230 VAC
Earth leakage current:	750 μAmax. @ 264 VAC, 63 Hz
PS Off	PSU is normally ON until a High-level signal is input.

Vout

PS Off



OUTPUT SPECIFICATIONS

Output voltage adjustment	±1V
Total output power:	300watts maximum
Ripple and noise:	240mV peak to peak maximum
Protection:	
OVP	Auto recovery
OCP & Shorted	Auto recovery
OTP	Auto recovery

ENVIRONMENTAL SPECIFICATIONS

Operating temperature:	-20℃ to +70℃
Storage temperature:	-40℃ to +85℃
Relative humidity:	10% to 95% non-condensing
Derating:	See derating curve

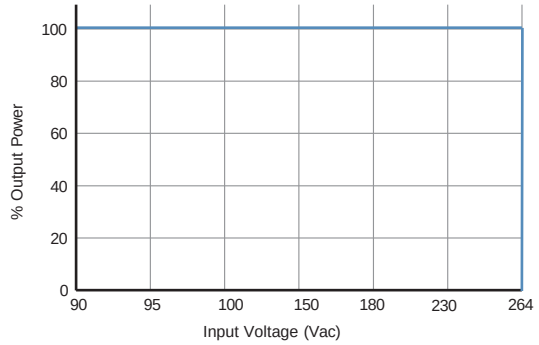
GENERAL SPECIFICATIONS

Fuse protection:	6.3 A , 250 VAC
Operating altitude :	5000 meters above sea leavel
Efficiency:	Refer to rating table
Turn-On Delay Time	≤ 2 sec at 100% load
Hold-up time:	16 mS minimum @ 115 VAC & 100% load
Line regulation:	±1% maximum at full load
Inrush current:	25 A @ 115 VAC / 60 Hz, at 25℃ cold start 50 A @ 230VAC / 50 Hz, at 25℃ cold start
Power factor:	≥ 0.99 @ 115 VAC, ≥ 0.99 @ 230 VAC
Withstand voltage:	3000 VAC from input to output 2000VAC from input to ground, 1500 VAC from output to ground
Isolation resistance	Input to output 100M ohm @ 500Vdc
MTBF:	850K hours mini. at full load at 25℃ ambient temperature, calculated per Telcordia SR-332

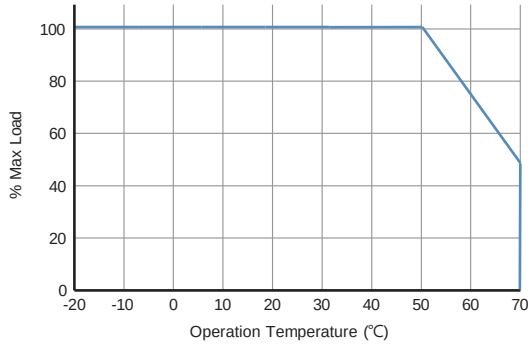
EMC Performance

EN55032:	Class B conducted, class B radiated
EN61000-3-2:	Harmonic distortion, class A and D
EN61000-3-3:	Line flicker
EN61000-4-2:	ESD, ±8 KV air and ±4 KV contact
EN61000-4-3:	Radiated, Radio Frequency, Electromagnetic field (RS): 3 V/m
EN61000-4-4:	Fast transient/burst, ±1 KV
EN61000-4-5:	Surge, ±2 KV diff., ±4 KV com.
EN61000-4-6:	Conducted Radio Frequency Disturbances (CS), 3 Vrms
EN61000-4-8:	Power Frequency Magnetic field, 3 A/m
EN61000-4-11:	Voltage dip immunity & voltage interruptions 30% reduction for 500mS, criteria A >95% reduction for 10mS, criteria A >95% reduction for 5000mS, criteria B

INPUT VOLTAGE DERATING CURVE



OUTPUT POWER DERATING CURVE

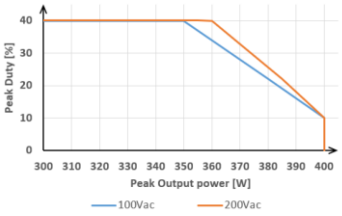


OUTPUT VOLTAGE/CURRENT RATING CHART

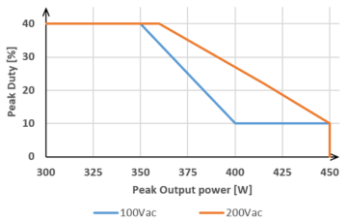
Model	Output							Efficiency (typical)
	V1	Min. Current	Max. Current	Tolerance	Ripple & Noise (1)	Max. Power	Peak Power (2)	@ 115 / 230 Vac
FSP300-PBA-A12	12 V	0A	25 A	±3 %	120 mV	300W	400W	85 / 88%
FSP300-PBA-A24	24 V	0A	12.5 A	±3 %	240 mV	300W	450W	87 / 90%
FSP300-PBA-A48	48 V	0A	6.25 A	±3 %	480 mV	300W	450W	87 / 90%

NOTES:
1. Ripple and noise is maximum peak to peak voltage value measured at output within 20 MHz bandwidth, at rated line voltage and output load ranges, and with a 22 μF capacitor in parallel with a 0.1 μF ceramic capacitor across the output.
2.Refer to Fig. 1 and Fig. 2 for peak power definition.

FIG 1. PEAK OUTPUT POWER

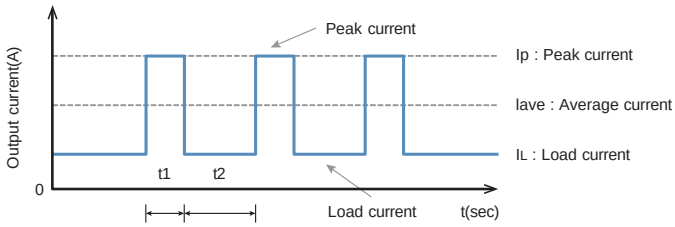


12V PSU



24V and 48V PSU

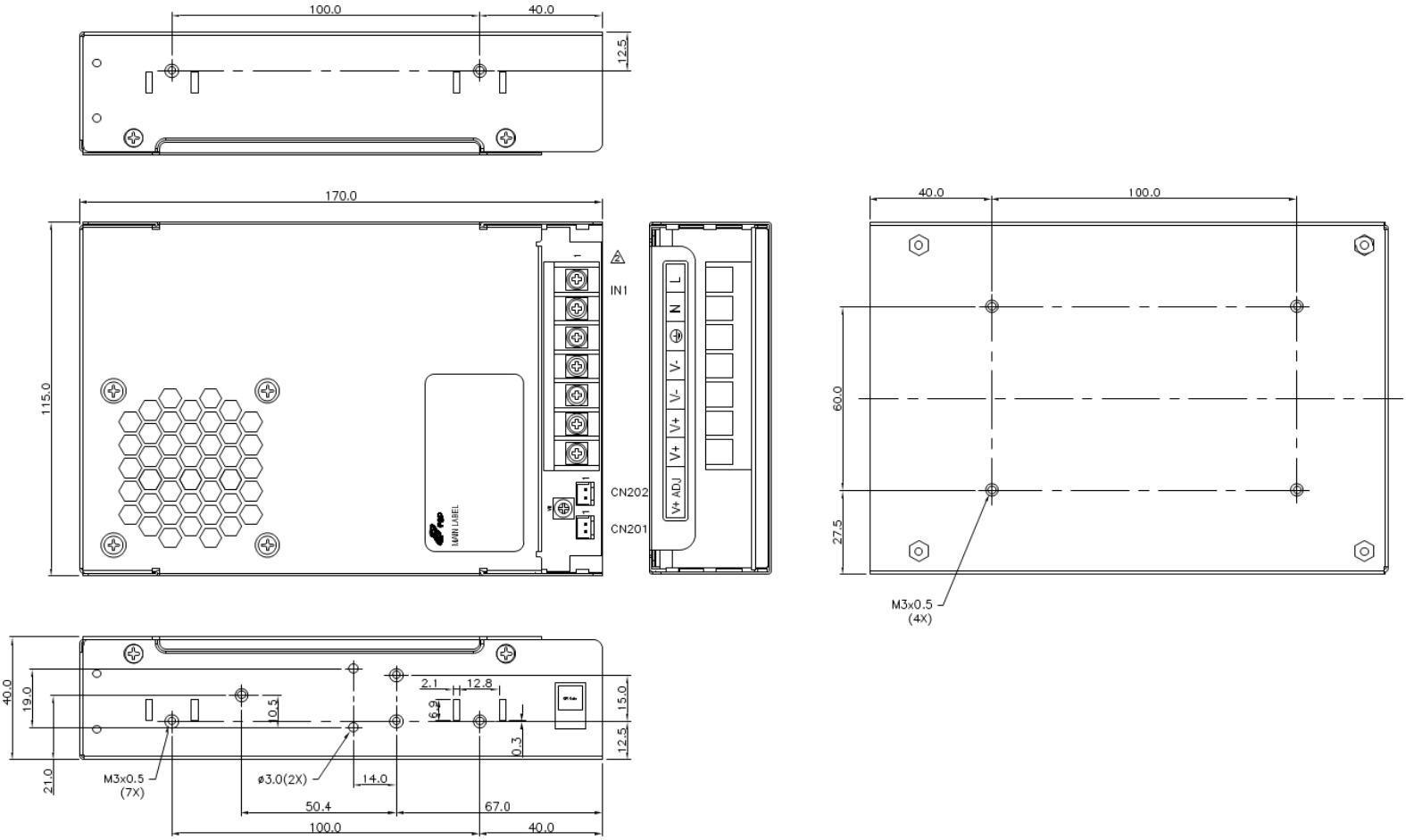
FIG 2. DESCRIPTION OF PEAK CURRENT



Definitions:

- Peak output power [W] = Peak current [A] * Output voltage [V]
- t1 ≦ 5 sec
- Ip ≦Rated peak current
- Duty =t1/(t1+t2) x 100[%] ≦40%
- Iave =(Ip×t1+IL×t2)/(t1+t2) ≦Rated current

MECHANICAL SPECIFICATIONS



Pin assignment of IN1

Pin No.	Function	Wafer
1	AC/L	DINKLE DT-49-C91W-07 or EQUIVALENT
2	AC/N	
3	FG	
4	V-	
5	V-	
6	V+	
7	V+	

Pin assignment of CN201

Pin No.	Function	Wafer
1	PS_OFF	JST B2B-XH-A or EQUIVALENT
2	PS_OFF RTN	

Pin assignment of CN202

Pin No.	Function	Wafer
1	Power Good	JST B2B-XH-A or EQUIVALENT
2	Power Good RTN	

NOTES:
1. Dimension showed in mm.
2. Weight: Enclosed form factor 780 grams (1.72 lbs.) approx.