

FSP300-P37J Series

FEATURES

- Class-I Design
- IEC 62368-1 safety standard
- EN55032 Class B emission
- Remote ON input (optional)
- Standby power less than 0.5W

SAFETY STANDARD APPROVAL



DESCRIPTION

This AC-DC switching power supplies in a package of 180 x 84 x 37 mm is a Class-I (with Protection Earth) safety construction and feature with 0.5W low input power consumption at 0.2W load which is comply with Energy Star requirement. This PSU is capable of delivering 300 watts continuous power at 50°C operation temperature(12V and 15V are 35 °C). Product is suitable for industry control applications.

INPUT SPECIFICATIONS

Input voltage:	85 to 264 VAC
Input frequency:	47-63 Hz
Input current:	3.5 A (rms) for 100 VAC 1.6 A (rms) for 230 VAC
Earth leakage current:	500 μ Amax. @ 264 VAC, 50 Hz
Remote ON (optional)	PSU is normally off and has no output voltage until a HIGH-level signal is input.

Vout



Remote ON



OUTPUT SPECIFICATIONS

Output voltage adjustment:	$\pm 10\%$ by VR, total output $\leq 300W$
Total output power:	300 watts maximum
Ripple and noise:	120mV peak to peak maximum
Protection:	
OVP	Auto recovery
OCP & Shorted	Auto recovery
OTP	Latch off

ENVIRONMENTAL SPECIFICATIONS

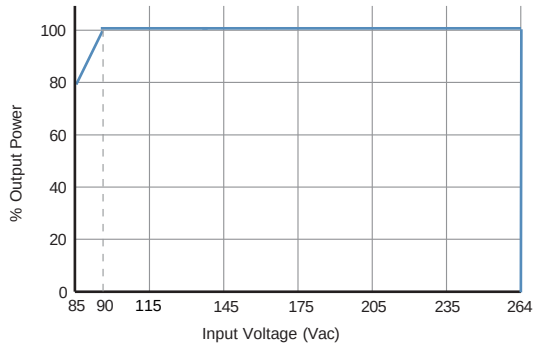
Operating temperature:	-20°C to +70°C
Storage temperature:	-20°C to +75°C
Relative humidity:	10% to 95% non-condensing
Derating:	See derating curve

GENERAL SPECIFICATIONS

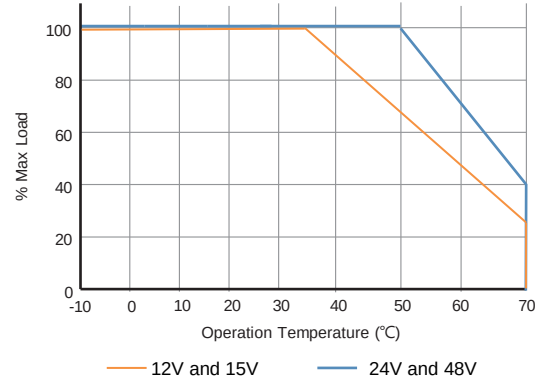
Fuse rating:	6.3A/250V
Operating altitude :	5000 meters above sea level
Efficiency:	Refer to rating table
Turn-On Delay Time	700 mS typ
Hold-up time:	20 mS typ at 100% load
Line regulation:	$\pm 1\%$ maximum at full load
Inrush current:	20 A @ 100 VAC / 60 Hz, at 25°C cold start 50 A @ 230VAC / 50 Hz, at 25°C cold start
Power factor:	≥ 0.99 @ 90 VAC, ≥ 0.91 @ 264 VAC
Withstand voltage:	3000 VAC from input to output 2000 VAC from input to FG 1500 VAC from output to ground
Isolation resistance	Input to output 100M ohm @500Vdc
MTBF:	1200K hours mini. at full load at 25°C ambient temperature, calculated per Telcordia SR-332
EMC Performance	
EN55032:	Class B conducted, class B radiated
EN61000-3-2:	Harmonic distortion, class 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

DERATING CURVE

INPUT VOLTAGE DERATING CURVE



OUTPUT POWER DERATING CURVE



OUTPUT VOLTAGE/CURRENT RATING CHART

Model	Output						Efficiency (typical) @ 100 / 230 Vac
	V1	Min. Current	Max. Current ⁽¹⁾	Tolerance	Ripple & Noise ⁽²⁾	Max. Power	
FSP300-P37J-A12	12V	0 A	25 A	±5 %	120 mV	300W	91 / 93%
FSP300-P37J-A15	15V	0 A	20 A	±5 %	200 mV	300W	91 / 93%
FSP300-P37J-A24	24V	0 A	12.5 A	±5 %	300 mV	300W	91.5 / 93.5%
FSP300-P37J-A48	48V	0 A	6.3 A	±5 %	300 mV	300W	91.5 / 93.5%

NOTES:

- PSU is the PCB form factor. Suffix "C" in model no. is for the enclosed form, e.g. FSP150-P36P-A12C
- 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 μ F capacitor in parallel with a 0.1 μ F ceramic capacitor across the output.

MODEL NO. RULE:

FSP 300 - P37J - A12 C S ⁽¹⁾ ⁽²⁾

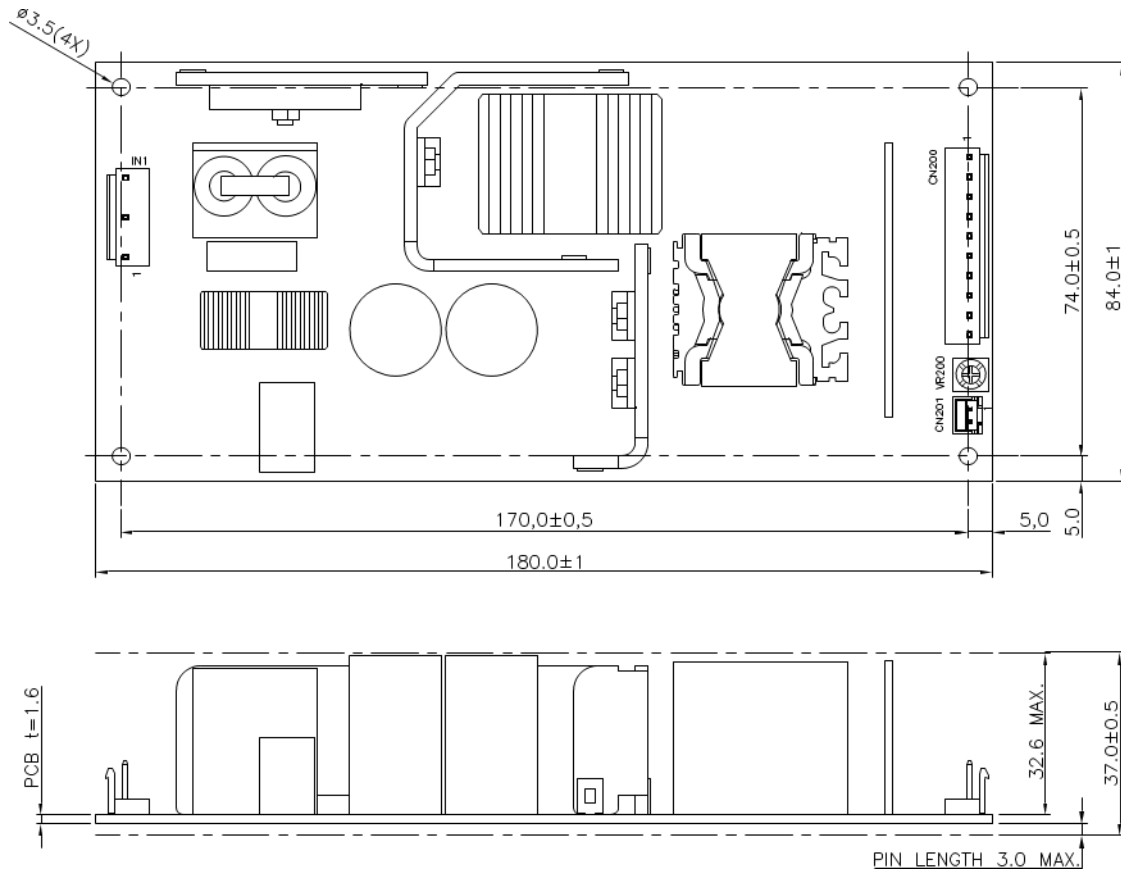
The suffix definition of model no.

(1) Suffix C denotes the metal enclosed form factor.

(2) Suffix S denotes the remote ON.

MECHANICAL SPECIFICATIONS

PCB form factor



Pin assignment of IN1

Pin No.	Function	Wafer
1	L	JST B3P5-VH or EQUIVALENT
2		
3	N	
4		
5	FG	

Pin assignment of CN200

Pin No.	Function	Wafer
1	-V	JST B10P-VH or EQUIVALENT
2	-V	
3	-V	
4	-V	
5	-V	
6	+V	
7	+V	
8	+V	
9	+V	
10	+V	

Pin assignment of CN201

Pin No.	Function	Wafer
1	R/C+	JST B2B-XH-A or EQUIVALENT
2	R/C-	

*optional function

NOTES:

1. Dimension showed in mm.
2. To ensure compliance with level B emissions, connect the three PCB mounting holes with metallic standoffs to the chassis.
3. Weight: PCB form factor 580 grams (1.28 lbs.) approx.