

FSP150-P37J Series

FEATURES

- Class-I Design
- IEC 62368-1 safety standard
- EN55032 radiated emission
- Remote ON / OFF input (optional)
- Standby power less than 0.5W
- Low profile 160×75×25.1 mm

SAFETY STANDARD APPROVAL



The safety certificate is proceeding.
(Please contact the sales office for details.)

DESCRIPTION

This AC-DC switching power supplies in a package of 2.95 x 6.3 inches 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 150 watts continuous power at specified operation temperature. Product is suitable for industry applications.

INPUT SPECIFICATIONS

Input voltage:	85 to 264 VAC
Input frequency:	47-63 Hz
Input current:	2.5 A (rms) for 100 VAC 1.2 A (rms) for 230 VAC
Earth leakage current:	750 μ A max. @ 264 VAC, 50 Hz
Remote ON / OFF	An external TTL high level to turn on PSU

OUTPUT SPECIFICATIONS

Output voltage/current:	See rating chart.
Total output power:	150 watts maximum
Ripple and noise:	1% peak to peak maximum
Protection:	OVP Auto recovery OCP & Shorted Auto recovery OTP Latch off
Temperature coefficient:	All outputs \pm 0.04% / $^{\circ}$ C maximum
Transient response:	Maximum excursion of 4% or better on all models, recovering to 1% of final value within 500 μ s after a 25% step load change

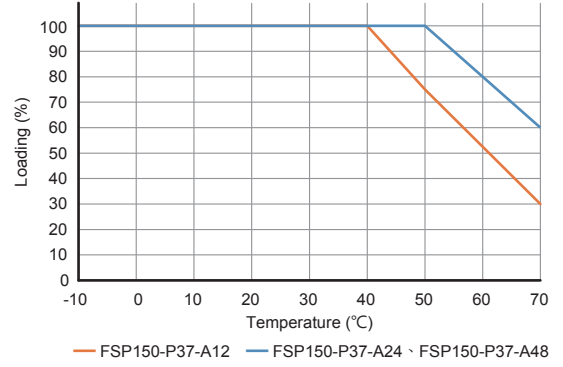
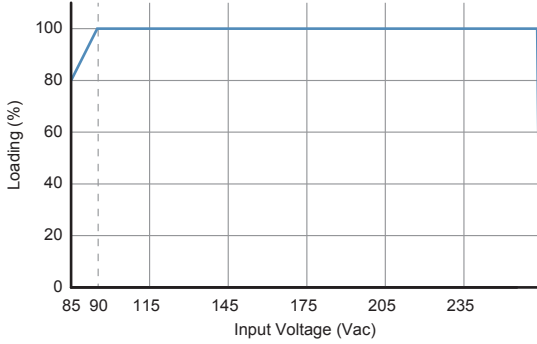
ENVIRONMENTAL SPECIFICATIONS

Operating temperature:	-20 $^{\circ}$ C to +70 $^{\circ}$ C
Storage temperature:	-40 $^{\circ}$ C to +85 $^{\circ}$ C
Relative humidity:	5% to 95% non-condensing
Derating:	See derating curve

GENERAL SPECIFICATIONS

Efficiency:	Refer to rating table
Turn-On Delay Time	\leq 1 sec at 100 VAC
Hold-up time:	20 mS minimum @ 100 VAC & 100% load
Line regulation:	\pm 1% maximum at full load
Inrush current:	15 A @ 100 VAC / 60HZ or 35 A @ 230 VAC / 50HZ, at 25 $^{\circ}$ C cold start
Withstand voltage:	3000 VAC from input to output 2000 VAC from input to ground, 1500 VAC from output to ground
Isolation resistance	Input to output 100M ohm @ 500Vdc
MTBF:	400,000 hours mini. at full load at 25 $^{\circ}$ C ambient temperature, calculated per Telcordia SR-332
EMC Performance	EN55032 /EN55035: Class B conducted, class B radiated
FCC:	Class B conducted, class B radiated
VCCI:	Class B conducted, class B radiated
EN61000-3-2:	Harmonic distortion, class D
EN61000-3-3:	Line flicker
EN61000-4-2:	ESD, \pm 8 KV air and \pm 4 KV contact
EN61000-4-3:	Radiated immunity, 3 V/m
EN61000-4-4:	Fast transient/burst, \pm 1 KV
EN61000-4-5:	Surge, \pm 1 KV diff., \pm 2 KV com.
EN61000-4-6:	Conducted immunity, 3 V/m
EN61000-4-8:	Magnetic field immunity, 1 A/m
EN61000-4-11:	Voltage dip immunity & voltage interruptions 30% reduction for 500ms, criteria A >95% reduction for 10ms, criteria A 100% reduction for 5000ms, criteria B

FSP150-P37J-A24 DERATING CURVE



OUTPUT VOLTAGE/CURRENT RATING CHART

Model ⁽¹⁾	Output						Efficiency (typical) @ 100 / 230 Vac
	V1	Min. Current	Max. Current	Tolerance	Ripple & Noise ⁽²⁾	Max. Power	
FSP150-P37J-A12	12 V	0 A	12.5 A	±5 %	120 mV	150W	86 / 89%
FSP150-P37J-A24	24 V	0 A	6.3A	±5 %	240 mV	150W	89 / 92%
FSP150-P37J-A48	48 V	0A	3.2A	±5 %	300 mV	150W	90 / 93%

NOTES:

1. PSU is the PCB form factor. Suffix " C" in model no. is for the enclosed form, e.g. FSP150-P37J-A12C
2. 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.

MODEL NO. RULE:

1	2	3	4	5	6	7	8	9	10	11	12	13
F	S	P	1	5	0	J	-	A	1	2	C	S

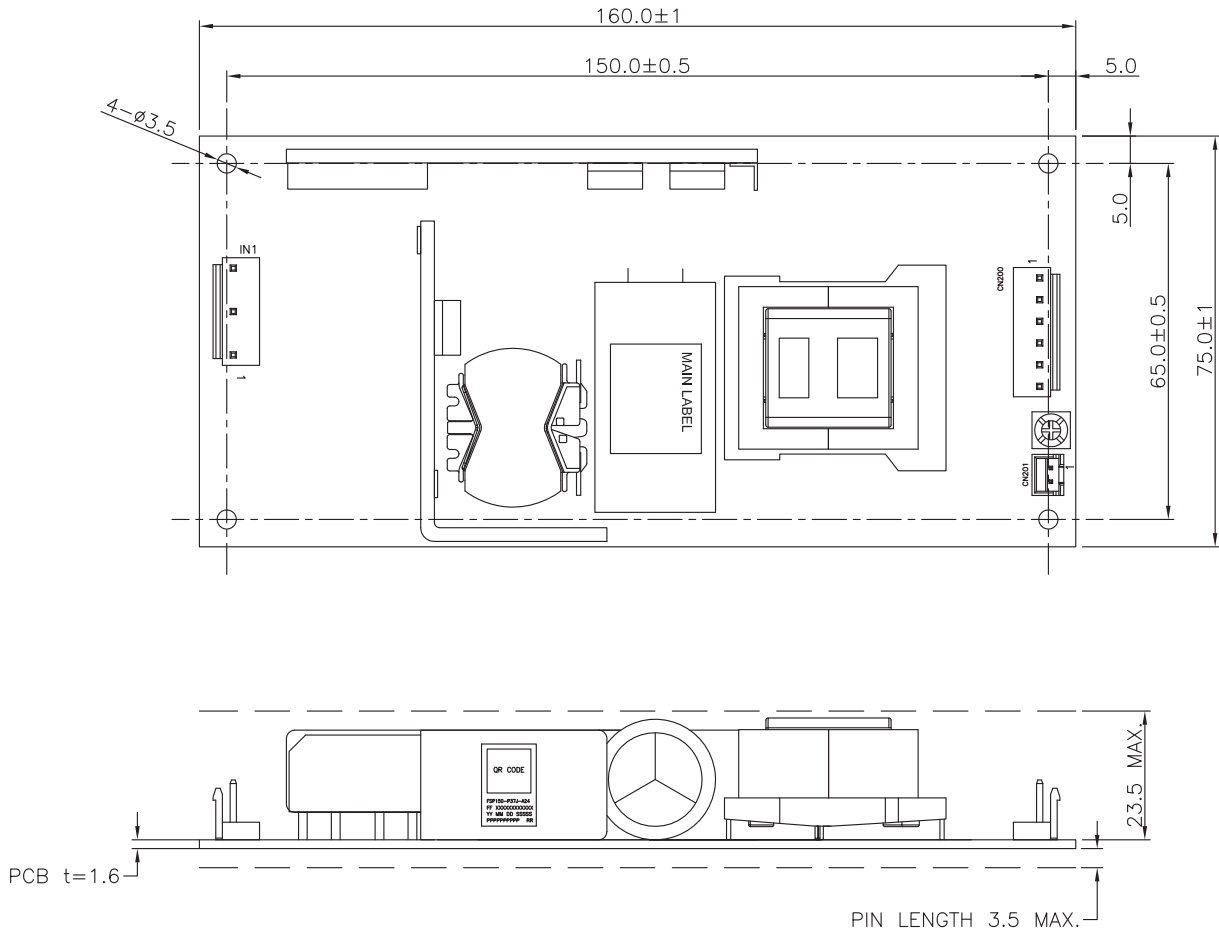
↓ Remote on / off features
↓ Enclosed chassis

EXAMPLE:

- | | |
|-------------------|--|
| FSP150-P37J-A12 | Open frame PSU |
| FSP150-P37J-A12C | Enclosed PSU |
| FSP150-P37J-A12CS | Enclosed PSU with remote on / off features |
| FSP150-P37J-A12S | Open frame PSU with remote on / off features |

MECHANICAL SPECIFICATIONS

PCB form factor



Pin assignment:

1. IN1: JST B3P5-VH or EQU

Pin No.	Function
1	L
2	
3	N
4	
5	FG

2. CN200: JST B6P-VH or EQU

Pin No.	Function
1, 2, 3	V-
4, 5, 6	V+

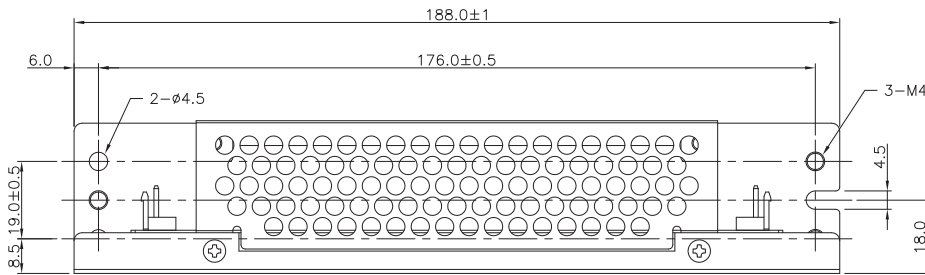
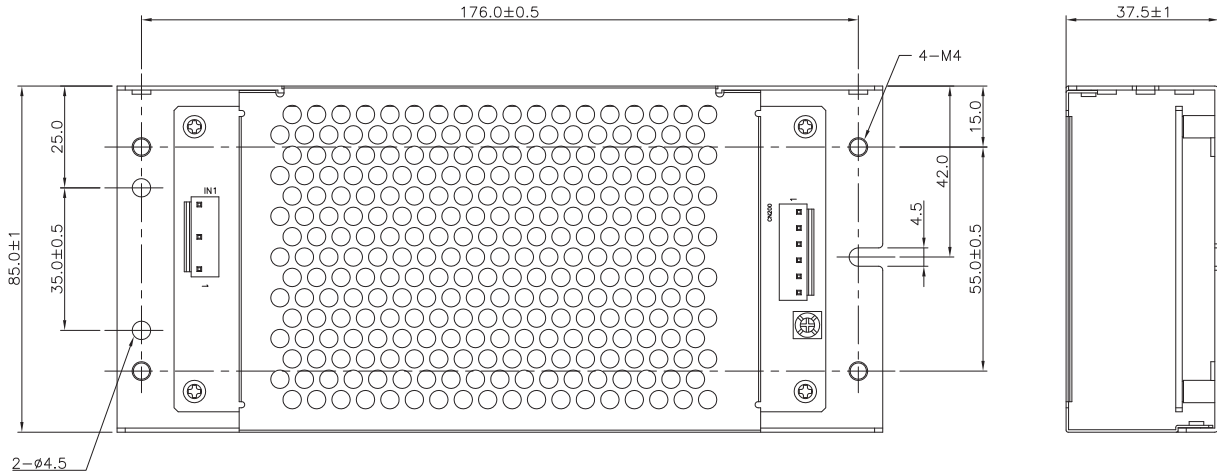
3. CN201: JST B2B-XH-A or EQU

Pin No.	Function
1	R / C+
2	R / C-

*Optional function

MECHANICAL SPECIFICATIONS

Enclosed form factor



Pin assignment:

1. IN1: JST B3P5-VH or EQU

2. CN200: JST B6P-VH or EQU

3. CN201: JST B2B-XH-A or EQU

Pin No.	Function
1	L
2	
3	N
4	
5	FG

Pin No.	Function
1, 2, 3	V-
4, 5, 6	V+

Pin No.	Function
1	R / C+
2	R / C-

*Optional function

NOTES:

- Dimensions shown in mm
- Connector IN1: JST B3P5-VH or equivalent.
- Connector CN200: JST B6P-VH or equivalent.
- Connector CN201: JST B2B-XH-A
- Weight: PCB form factor 255 grams (0.56 lbs.), with 490 grams (1.079 lbs.) approx.