

# FSP050-P25J Series

### FEATURES

- Class-I construction
- IEC 62368-1 safety standard
- EN 55032 Class B emission
- Remote ON/OFF input (optional)
- Standby power less than 0.5W
- Low profile 112 x 50 x 22 mm

### SAFETY STANDARD APPROVAL



### DESCRIPTION

This AC-DC switching power supplies in a package of 1.968 x 4.4 inches is a Class-I (with Protection Earth) safety construction. This PSU is capable of delivering 50 watts continuous power at 50°C operation temperature. Product is suitable for information, audio & video and industry control.

### INPUT SPECIFICATIONS

Input voltage:	85 to 264 VAC
Input frequency:	47-63 Hz
Input current:	1.05 A (rms) for 100 VAC 0.57 A (rms) for 230 VAC
Earth leakage current:	650 µA max. @ 264 VAC, 63 Hz
Remote Off (optional)	PSU is normally off and has no output voltage until a HIGH-level signal is input.

Vout 

Remote Off 

### OUTPUT SPECIFICATIONS

Output voltage/current:	See rating chart.
Total output power:	50 watts maximum
Ripple and noise:	1% peak to peak maximum
Protection:	Latch off
OVP	Auto recovery
OCP & Shorted	Auto recovery
Temperature coefficient:	All outputs ±0.04% /°C maximum
Transient response:	Maximum excursion of 4% or better on all models, recovering to 1% of final value within 500 us after a 25% step load change

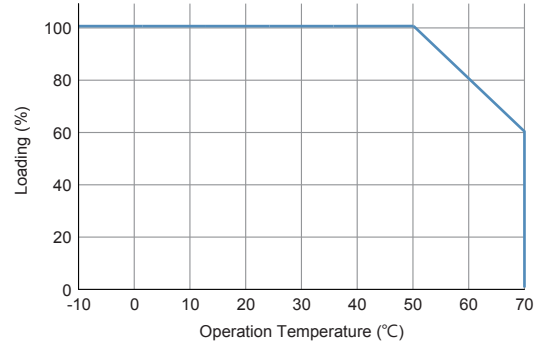
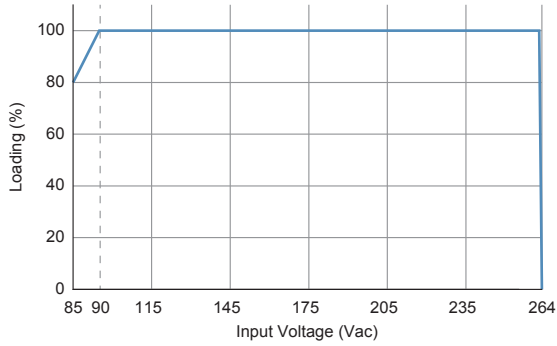
### ENVIRONMENTAL SPECIFICATIONS

Operating temperature:	-20°C to +70°C
Storage temperature:	-40°C to +85°C
Relative humidity:	5% to 95% non-condensing
Derating:	Derate from 100% at +50°C linearly to 60% at +70°C, applicable to convection and forced-air cooling conditions.

### GENERAL SPECIFICATIONS

Efficiency:	Refer to rating table
Turn-On Delay Time	≤ 1 sec at 100 VAC
Hold-up time:	30 mS minimum @ 230 VAC & 100% load
Line regulation:	±1% maximum at full load
Inrush current:	15A @ 100 VAC / 60 Hz, at 25°C cold start 35A @ 230 VAC / 50 Hz, at 25°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°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 A
EN61000-3-3:	Line flicker
EN61000-4-2:	ESD, ±8 KV air and ±4 KV contact
EN61000-4-3:	Radiated immunity, 3 V/m
EN61000-4-4:	Fast transient/burst, ±1 KV
EN61000-4-5:	Surge, ±1 KV diff., ±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 500 mS >95% reduction for 10 mS 100% reduction for 5000 mS

### DERATING CURVE



### OUTPUT VOLTAGE/CURRENT RATING CHART

Model	Output						Efficiency (typical) @ 100 / 230 Vac
	V1	Min. Current	Max. Current <sup>(1)</sup>	Tolerance	Ripple & Noise <sup>(2)</sup>	Max. Power	
FSP050-P25J-A05	5 V	0 A	8 A	±3 %	70 mV	40W	85.5 / 87%
FSP050-P25J-A12	12 V	0 A	4.3A	±3 %	120 mV	50W	89.5 / 92%
FSP050-P25J-A15	15 V	0 A	3.5A	±3 %	150 mV	50W	89.5 / 92%
FSP050-P25J-A24	24 V	0A	2.1A	±3 %	240 mV	50W	89.5 / 92%

NOTES:

1. The first value of max. power is at convection cooling. Suffix "S" is for shielding form
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
FSP	050	-	P25J	-	A	12	C	S

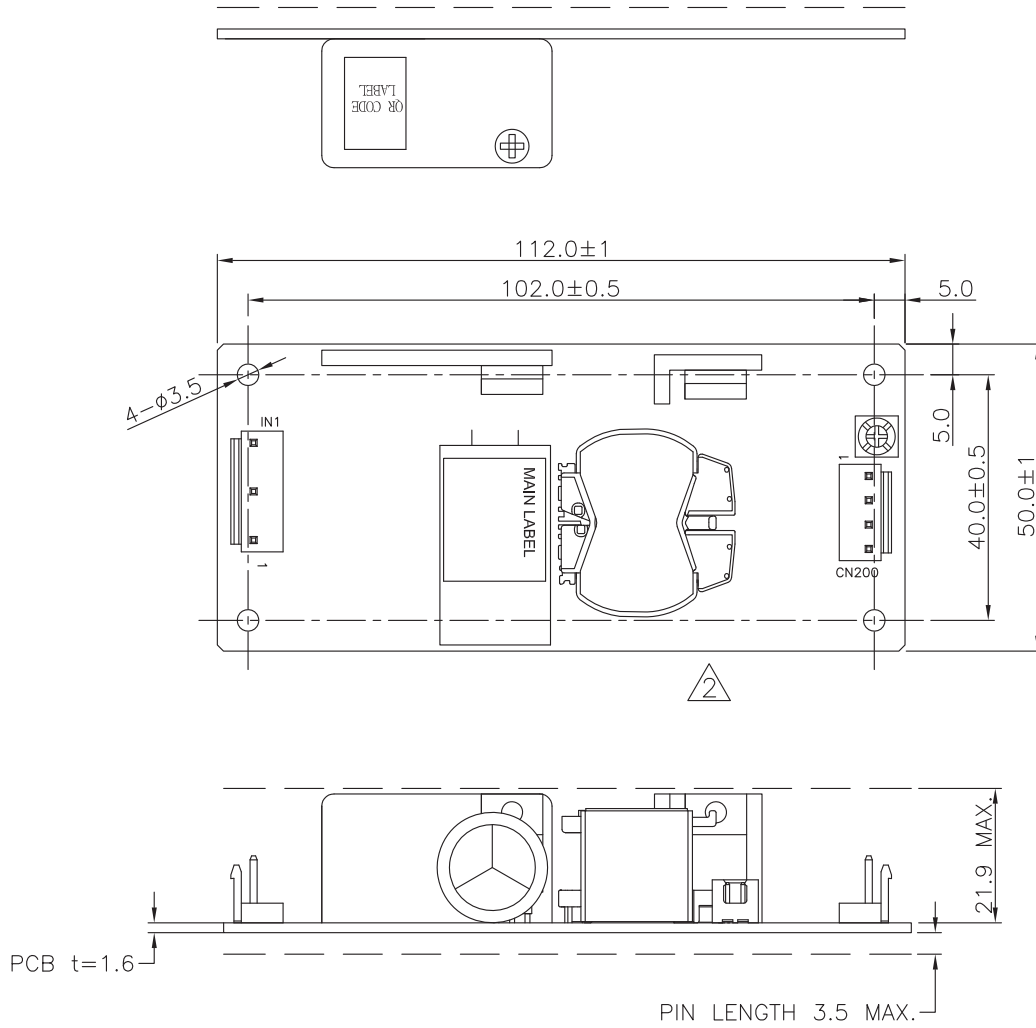
1. Watts, output power.
2. Product Series no.
3. Output voltage
4. Enclosed form factor: C
5. Remote Off: S

EXAMPLE:

FSP050-P25J-A12	Open frame PSU
FSP050-P25J-A12C	PSU with enclosure
FSP050-P25J-A12CS	PSU with enclosure & remote on/off features
FSP050-P25J-A12S	Open frame PSU with remote on/off features

### MECHANICAL SPECIFICATIONS

PCB form factor open frame



Pin assignment:

1. IN1: JST B3P5-VH or EQU

2. CN200: JST B6P-VH or EQU

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

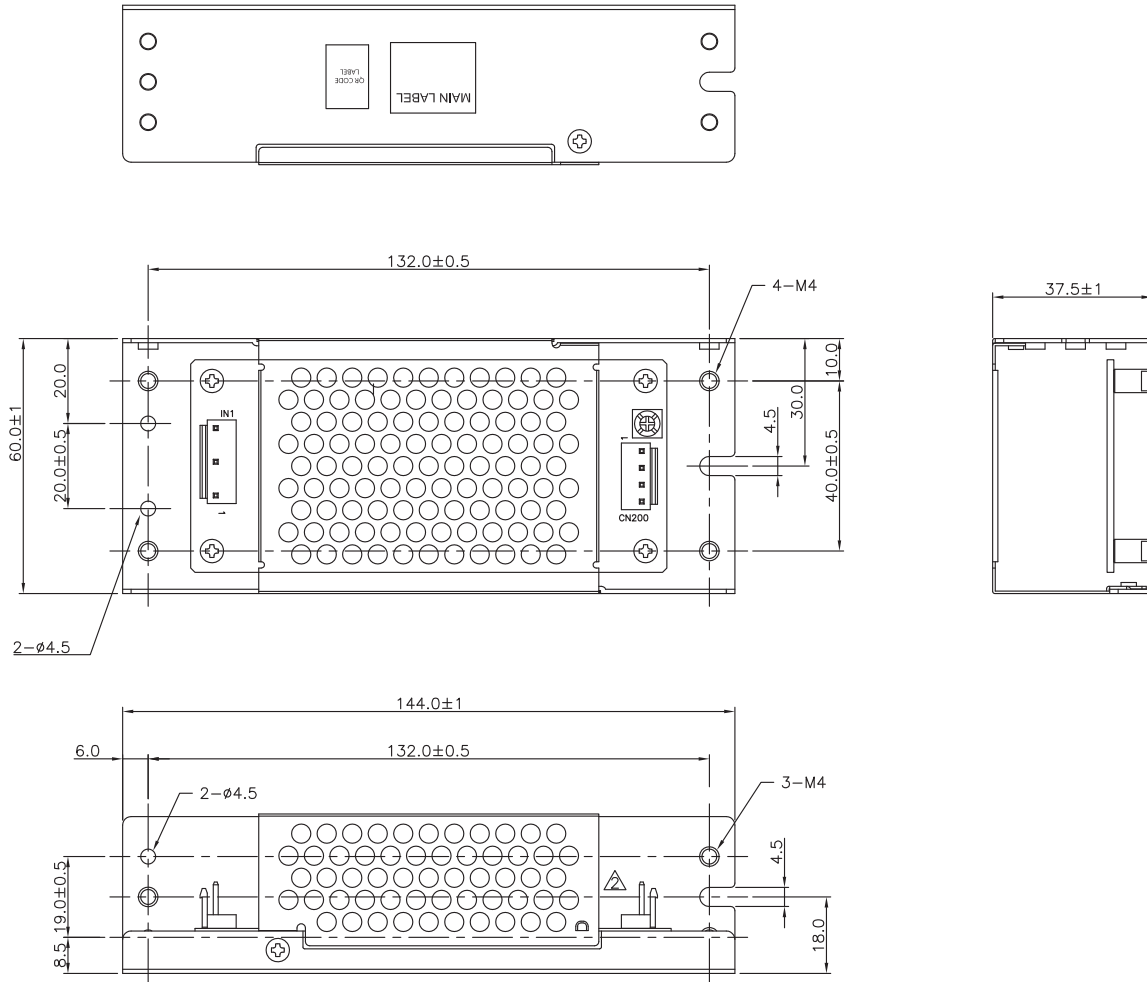
Pin No.	Function
1, 2	V-
3, 4	V+

NOTES:

- Dimensions shown in mm
- Weight: PCB form factor 148 grams (0.326 lbs.) approx.

### MECHANICAL SPECIFICATIONS

Enclosed form factor



Pin assignment:

1. IN1: JST B3P5-VH or EQU

2. CN200: JST B6P-VH or EQU

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

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

NOTES:

1. Dimension showed in mm.
2. Weight: Enclosed form factor 258 grams (0.568 lbs.) approx.