

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

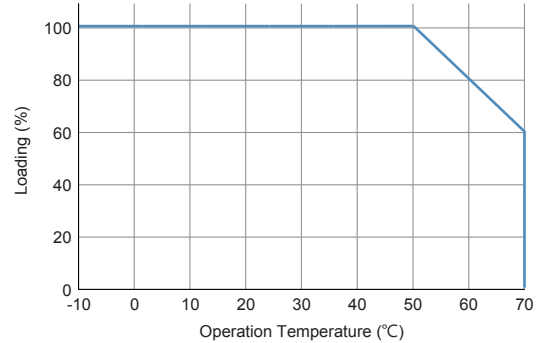
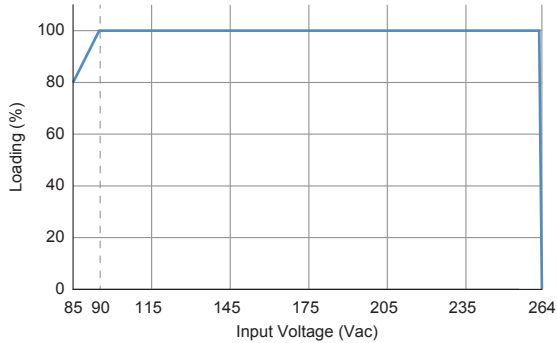
ENVIRONMENTAL SPECIFICATIONS

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 ⁽¹⁾	Tolerance	Ripple & Noise ⁽²⁾	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:

- The first value of max. power is at convection cooling. Suffix "S" is for shielding form
- 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:

	1		2			3	4	5
FSP	050	-	P25J	-	A	12	C	S

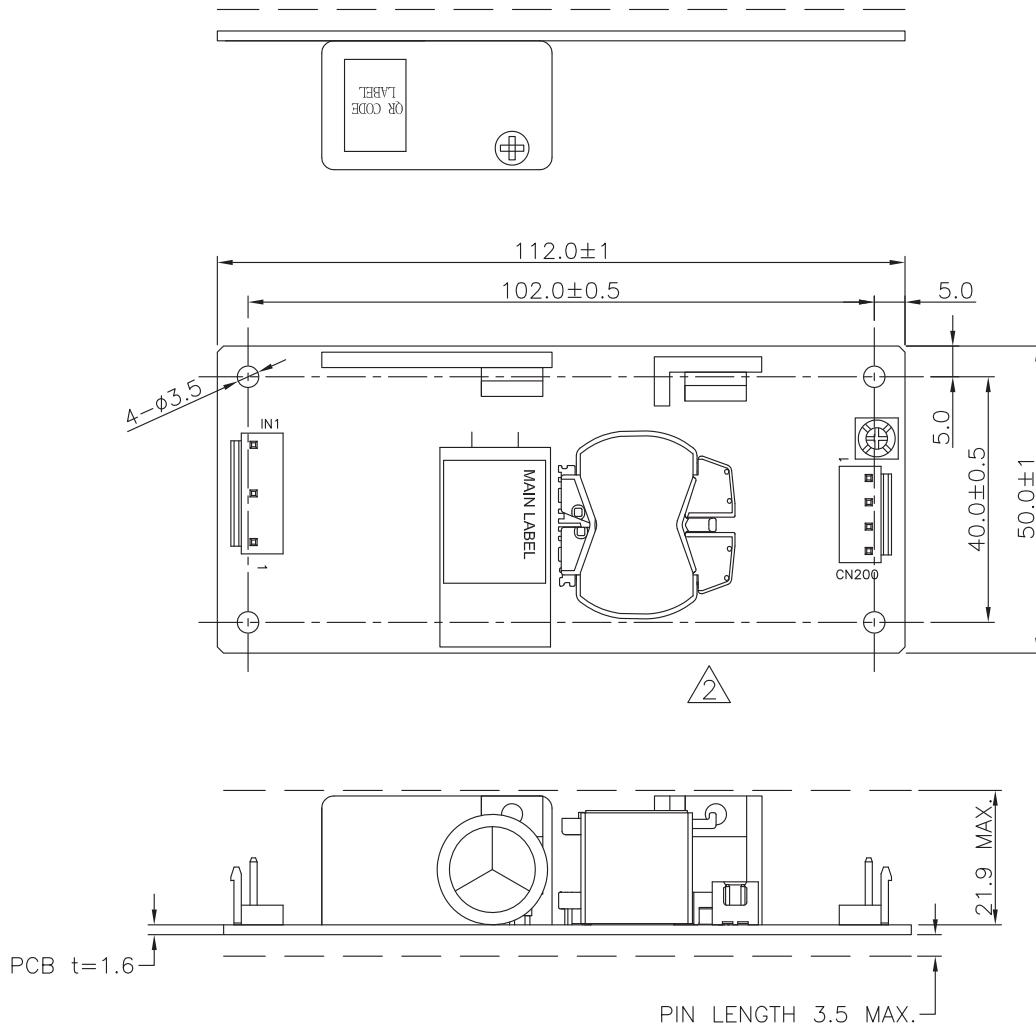
- Watts, output power.
- Product Series no.
- Output voltage
- Enclosed form factor: C
- Remote Off: S

EXAMPLE:

FSP050-P26J-A12	Open frame PSU
FSP050-P26J-A12C	PSU with enclosure
FSP050-P26J-A12CS	PSU with enclosure & remote on/off features
FSP050-P26J-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

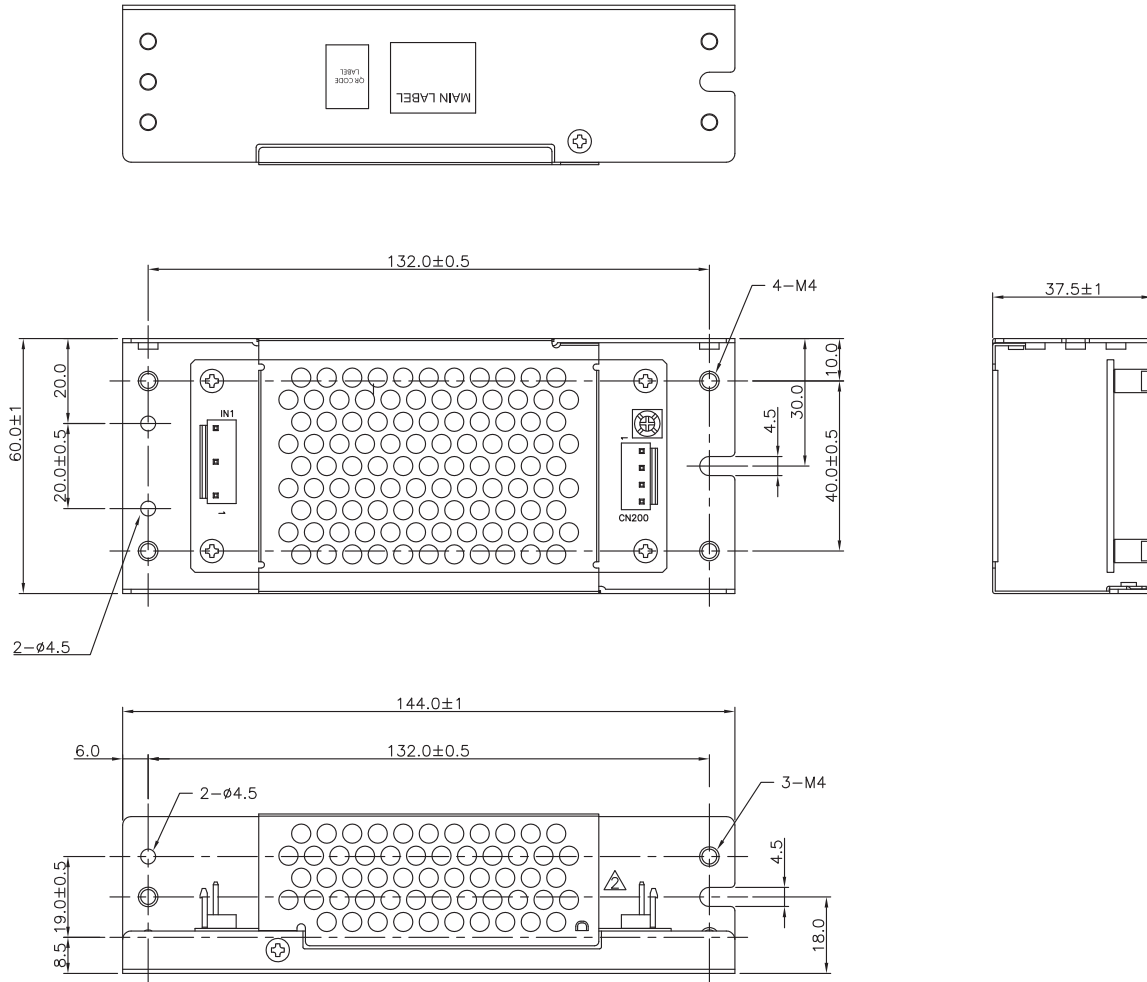
Pin No.	Function
1, 2	V-
3, 4	V+

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.