

## SPJ450 Series, 450W Open Frame



### Features

- 4 x 6.5 x 1.61 inches
- Universal Input
- Low Standby Power
- Current Sharing Option
- Cover and Fan Options
- Peak Power Capability
- Class B EMI

### Electrical Specifications

Input Voltage	90-264 VAC/120-390 VDC, Universal	
Input Frequency	47-63 Hz	
Input Current	120 VAC: 4.5 A max.	230 VAC: 2.3 A max.
Input Protection	Dual Fusing, T8A/250 V in Live & Neutral	
No Load Power	120 VAC: 0.4	230 VAC: 0.8
Inrush Current	120 VAC: 40 A max.	230 VAC: 75 A max.
Efficiency	120 VAC: 88% (24 V, 48 V, 30 V) 86% (12 V) 83% (5 V) Typical 230 VAC: 90% (24 V, 48 V, 30 V)	
Hold-up Time	120 VAC: 10 ms	230 VAC: 10 ms
Power Factor	120 VAC: 0.98 230 VAC: 0.95	
Output Power	155 to 450 W (475 W for 24 V, 30 V & 500 W for 48 V model only for 5 seconds max.)	
Line Regulation	+/-0.5%	
Load Regulation	+/-3%	
Transient Response	< 10%, 50% to 100% load change, 50 Hz, 50% duty cycle, 0.1 A/ $\mu$ s, recovery time < 5 ms	
Rise Time	< 100 ms	
Set Point Tolerance	+/-1%	
Output Adjustability	+/-3%	
Over Current Protection	120 to 150%, Hic-Up Type	
Over Voltage Protection	> 114%, Latch Type	
Short Circuit Protection	Short term, autorecovery	
Over Temperature Protection	130°C primary heat sink, autorecovery	
Current Share	Up to 2 supplies connected in parallel (optional)	
Switching Frequency	PFC converter: Variable, 45-160 kHz typical Resonant converter: Variable, 35-250 kHz; 90 kHz typical	
Operating Temperature	0 to +70°C, refer derating curve; -20 to 0°C, start-up is guaranteed	
Storage Temperature	-40 to +85°C	
Relative Humidity	95% Rh, noncondensing	
Altitude	Operating: 10,000 ft.; Nonoperating: 40,000 ft.	
MTBF	1.28m Hours, Telcordia -SR332-issue 3	
Isolation Voltage	4242 VDC between input to output, 2121 VDC input to Earth	
Cooling	Convection: 300 W; 420 LFM: 450 W (24 V, 30 V & 48 V model) Convection: 250 W; 420 LFM: 450 W (12 V & 15 V model) Convection: 155 W; 420 LFM: 275 W (5 V model)	



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Available outputs:

Model	Output Voltage	Max. Load	Min. Load	Ripple
SPJ450-050-XY	5V	31A / 55A AIR	0.0A	2%
SPJ450-120-XY	12V	20.80A / 37.5A AIR	0.0A	2%
SPJ450-150-XY	15V	16.66A / 30A AIR	0.0A	2%
SPJ450-240-XY	24V	12.3A / 18.75A	0.0A	2%
SPJ450-300-XY	30V	10A / 15A AIR	0.0A	2%
SPJ450-480-XY	48V	6.25A / 9.40A AIR	0.0A	2%

Available with current sharing, in U-channel or Enclosed type, convection cooled, and forced air

XY = connector type

Typical call out example: SPJ450-050-XY-U (U-Channel type)

SPJ450-050-XY-U (U-Channel type)

SPJ450-050-XY- I (U-Channel type with current sharing)

SPJ450-050-XY-T (Enclosed type with top fan)

SPJ450-050-XY-I-T (Enclosed type with top fan, current sharing)

SPJ450-050-XY-S (Enclosed type with side fan)

SPJ450-050-XY-I-S (Enclosed type with side fan, current sharing)

Connectors		
J1	Pin 1	AC LINE
	Pin 3	AC NEUTRAL
	Pin 5	EARTH
Spade Connector (J5)		
J2	Pin 1	V1
	Pin 2	RTN
J3	Pin 1	NC
	Pin 2	PF OK
	Pin 3	POWER GOOD
	Pin 4	DC RETURN
	Pin 5	+5 VSTBY
	Pin 6	+VE REMOTE SENSE
	Pin 7	-VE REMOTE SENSE
	Pin 8	CS
	Pin 9	DC RETURN
	Pin 10	REMOTE ON/OFF
J4 (FAN OUTPUT)	Pin 1	+VE
	Pin 2	-VE



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Mechanical Specifications	
AC Input Connector (J1)	Tyco: 1-1123724-3 Mating: 1-1123722-5
EARTH (J5)	Molex: 19705-4301 Mating: 190030001
DC Output Connector (J2)	6-32 inches Screw Pan HD Mating: Designed to accept Ring Tongue Terminal AMP : 8-31886-1, wherein one 16 AWG(max) wire can be crimped. Note : One Ring Tongue Terminal with 16 AWG is recommended for current upto 11A only. Use multiple tongue terminals with wire for more current.
Signal Connector (J3)	Molex: 22-23-2101 Mating : 22-01-2107; Pins 08-50-0113
Dimensions	4.0 x 6.5 x 1.61 inches (101.6 x 165.01x 41.0 mm)
Weight	900 g
EMC	
CE Mark	Complies with LVD Directive
Conducted Emissions	EN55022-B, CISPR22-B, FCC PART15-B
Static Discharge	EN61000-4-2, Level-3
RF Field Susceptibility	EN61000-4-3, Level-3
Fast Transients/Bursts	EN61000-4-4, Level-3
Radiated Emissions	EN55022-B, CISPR22-B, FCC PART15-B To be controlled in end system
Surge Susceptibility	EN61000-4-5, Level-3
Harmonic Current	EN61000-3-2, Class D
Safety	
Safety Standard(s)	EN60950-1, IEC60950-1 (ed.2), UL 60950 (ed.2), CSA C22.2 No. 60950-1 (ed.2), Class1 SELV
Approval Agency	Nemko, UL, C-UL
Signal(s)	
Power Good Signal	TTL signal goes high after main output is within regulation band, delay is 0.1 to 0.3 s
Remote Sense	Compensates for 200 mV drop
Remote on/off	To turn on PSU short remote pin to ground



