80-160 Watts

JPM Series

- Output Voltages from 3.3 to 48 VDC
- Power Factor Corrected
- Suitable for Battery-charging Applications
- Low Ripple & Noise
- 125% Rating at 230 VAC
- Optional Remote On/Off
- 3 Year Warranty

Specification

Input

Input Voltage	• 85-264 VAC (120-370 VDC)
Input Frequency	• 47-63 Hz
Input Current	• 0.7 A max at 230 VAC (JPM80) 1.1 A max at 230 VAC (JPM120) 1.4 A max at 230 VAC (JPM160)
Inrush Current	• 40 A at 230 VAC cold start
Power Factor	• >0.9
Earth Leakage Current	• <2 mA at 230 VAC
Input Protection	• F4 A/250 VAC (JPM80) F5 A/250 VAC (JPM120, JPM160)

Output

Output Voltage	• See tables
Output Voltage Trim	• +10%, -5%
Initial Set Accuracy	• ±2%
Start Up Delay	• 600 ms max
Start Up Rise Time	• 30 ms max
Hold Up Time	• 25 ms min
Line Regulation	• ±0.5%
Load Regulation	• See tables
Ripple & Noise	• See tables
Overvoltage Protection	• 110-135% Vnom, recycle input to reset
Overtemperature Protection	• Shuts down at +95 °C ±5 °C (measured internally) with auto recovery, (JPM120 and JPM160)
Overload Protection	• 105-150% constant current, auto recovery
Temperature Coefficient	• ±0.05%/°C
Remote On/Off	• 4-10 VDC On, <0.8 VDC Off, optional. Add suffix '-R' to model number

General

Efficiency	• See tables
Isolation	• 3000 VAC Input to Output 1500 VAC Input to Ground 500 VAC Output to Ground
MTBF	• >183 kHrs to MIL-HDBK-217F at 25 ºC, GB
Switching Frequency	• PFC 67 kHz, PWM 134 kHz typical
Signals	• DC OK Green LED Remote On/Off

Environmental

Operating Temperature	• -10 °C to +60 °C, see derating curves
Cooling	• JPM80 & JPM120 convection-cooled, JPM160 includes internal fan
Operating Humidity	• 20-90% RH, non-condensing
Storage Temperature	• -20 °C to +85 °C
Vibration	• 2 g, 10-500 Hz, 10 min/cycle for 60 minutes each axis

EMC & Safety

Emissions	• EN55022 (CISPR22), level B conducted EN55022 (CISPR22), level B radiated
Harmonic Currents	• EN61000-3-2
Voltage Flicker	• EN61000-3-3
ESD Immunity	• EN61000-4-2, level 3 Perf Criteria A
Radiated Immunity	• EN61000-4-3, 3 V/m Perf Criteria A
EFT/Burst	• EN61000-4-4, level 2 Perf Criteria A
Surge	• EN61000-4-5, level 3 Perf Criteria A
Conducted Immunity	• EN61000-4-6, level 2 Perf Criteria A
Magnetic Field	• EN61000-4-8, 3 A/m Perf Criteria A
Dips & Interruptions	• EN61000-4-11, 30% 10 ms, 60% 100 ms, >95% 5000 ms, Perf Criteria A, B, B
Safety Approvals	• EN60950-1, UL60950-1, CSA22.2 No. 60950-1, CE Mark LVD

Models and Ratings

Output Power[1,2]	Output Voltage	Output Current	Ripple & Noise[3] (pk-pk)	Load Regulation	Efficiency	Model Number
53 W	3.3 V	16.0 A	100 mV	±1.0%	70%	JPM80PS03†^
80 W	5.0 V	16.0 A	100 mV	±1.0%	76%	JPM80PS05†^
80 W	7.5 V	10.7 A	100 mV	±1.0%	78%	JPM80PS07†^
80 W	12.0 V	6.8 A	100 mV	±0.5%	80%	JPM80PS12†^
80 W	13.5 V	6.0 A	100 mV	±0.5%	80%	JPM80PS13†^
80 W	15.0 V	5.3 A	100 mV	±0.5%	82%	JPM80PS15†^
80 W	24.0 V	3.4 A	150 mV	±0.5%	84%	JPM80PS24†^
80 W	27.0 V	3.0 A	150 mV	±0.5%	83%	JPM80PS27†^
80 W	48.0 V	1.7 A	250 mV	±0.5%	82%	JPM80PS48†^

Notes

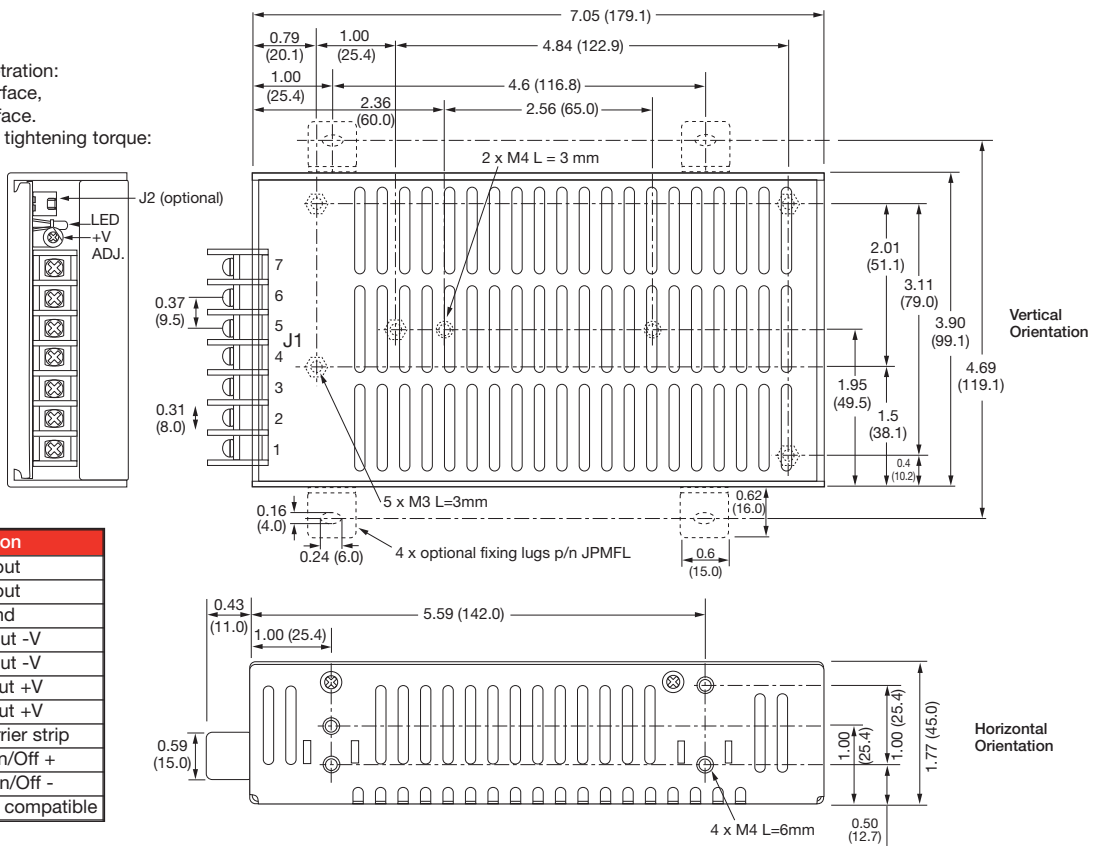
1. Max output increases to 125% of rated power when input voltage is between 180 VAC and 264 VAC - see derating curve below.
2. Mounting vertically increases max ambient temperature. See derating curve.
3. Ripple and noise measured at 20 MHz bandwidth using a 12 inch twisted wire pair, terminated with a 0.1 µF and a 47 µF capacitor connected in parallel.
4. To attach the power supply to a DIN rail, order 2 x DIN CLIP.

† Available from Farnell. See pages 266-269.

^ Available from Newark. See pages 270-272.

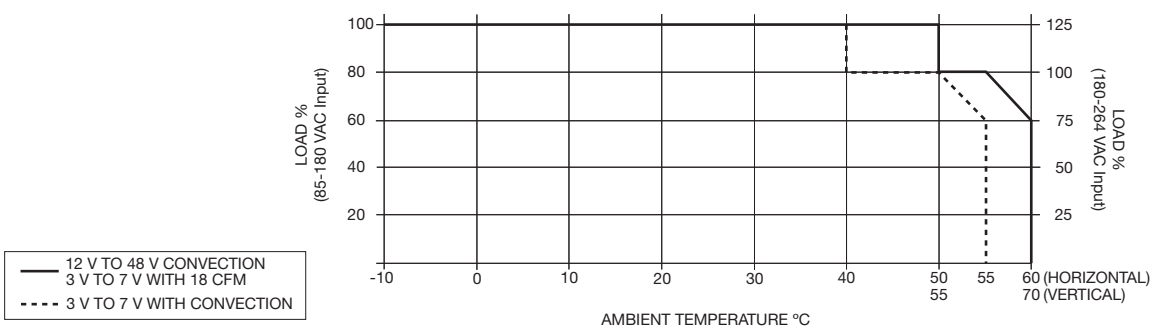
Mechanical Details

All dimensions in inches (mm)
Tolerance: ±0.03 (0.8 max)
Weight: 1.3 lb (600 g) approx.
Maximum mounting screw penetration:
0.12 (3 mm) from base outer surface,
0.24 (6 mm) from side outer surface.
Input and output terminal screw tightening torque:
9 lbs-in (1.0 Nm) maximum.



Conn	Pin	Function
J1	1	AC Input
	2	AC Input
	3	Ground
	4	DC Output -V
	5	DC Output -V
	6	DC Output +V
	7	DC Output +V
	9.5mm pitch M4 barrier strip	
Opt J2	1	Remote On/Off +
	2	Remote On/Off -
	Molex type 22-23-2021 compatible	

Derating Curve



Models and Ratings

JPM120

Output Power[1,2]	Output Voltage	Output Current	Ripple & Noise[3] (pk-pk)	Load Regulation	Efficiency	Model Number
79 W	3.3 V	24.0 A	100 mV	±1.0%	67%	JPM120PS03†^
120 W	5.0 V	24.0 A	100 mV	±1.0%	75%	JPM120PS05†^
120 W	7.5 V	16.0 A	100 mV	±1.0%	79%	JPM120PS07†^
120 W	12.0 V	10.0 A	100 mV	±0.5%	80%	JPM120PS12†^
120 W	13.5 V	8.9 A	100 mV	±0.5%	80%	JPM120PS13†^
120 W	15.0 V	8.0 A	100 mV	±0.5%	81%	JPM120PS15†^
120 W	24.0 V	5.0 A	150 mV	±0.5%	83%	JPM120PS24†^
120 W	27.0 V	4.4 A	150 mV	±0.5%	84%	JPM120PS27†^
120 W	48.0 V	2.5 A	250 mV	±0.5%	84%	JPM120PS48†^

Notes

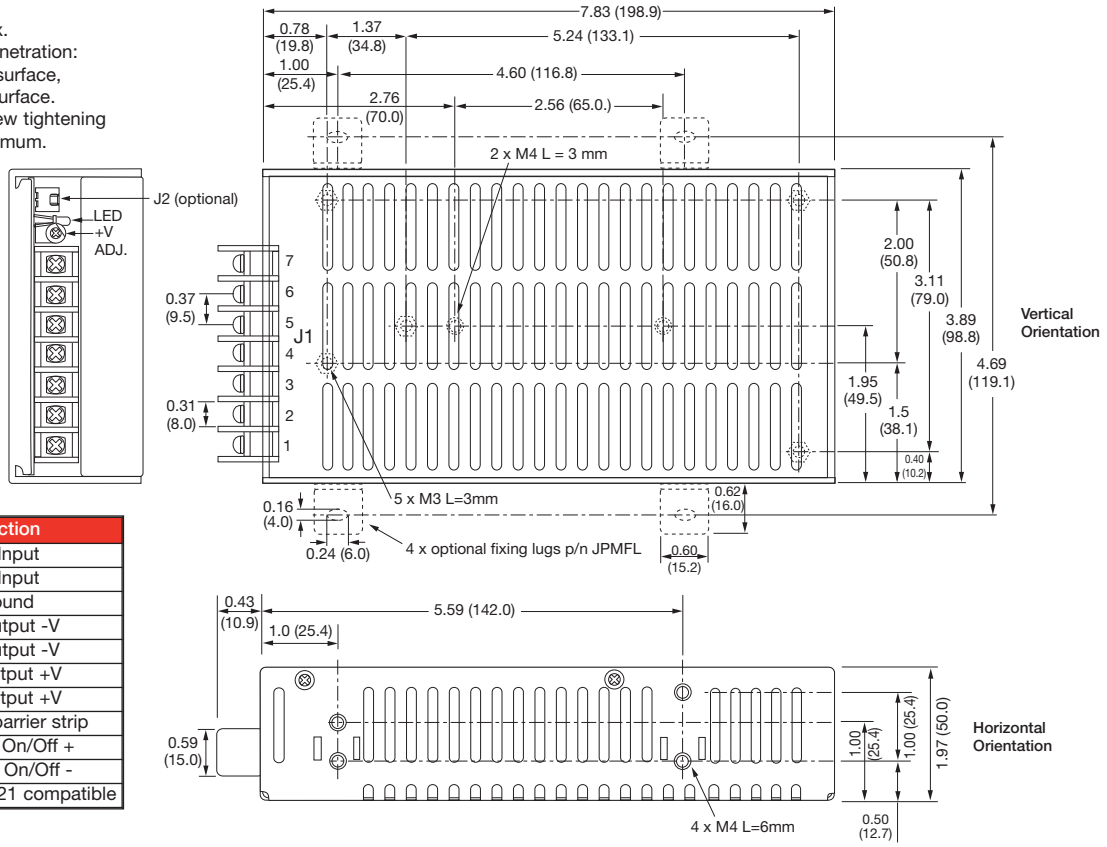
1. Max output increases to 125% of rated power when input voltage is between 180 VAC and 264 VAC - see derating curve below.
2. Mounting vertically increases max ambient temperature. See derating curve.
3. Ripple and noise measured at 20 MHz bandwidth using a 12 inch twisted wire pair, terminated with a 0.1 µF and a 47 µF capacitor connected in parallel.
4. To attach the power supply to a DIN rail, order 2 x DIN CLIP

† Available from Farnell. See pages 266-269.

^ Available from Newark. See pages 270-272.

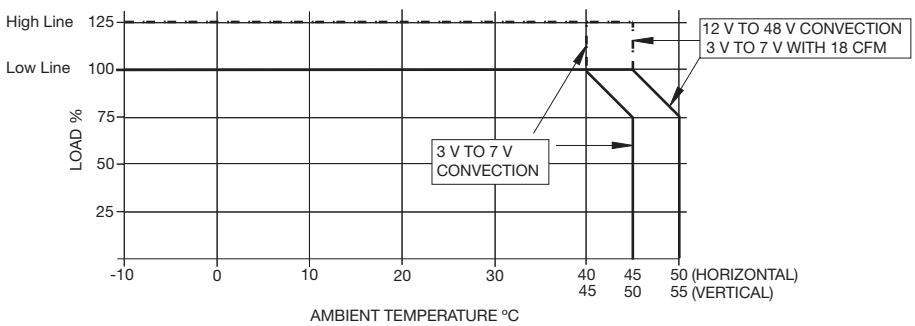
Mechanical Details

All dimensions in inches (mm)
Tolerance: ±0.03 (0.8 max)
Weight: 1.54 lb (700 g) approx.
Maximum mounting screw penetration:
0.12 (3 mm) from base outer surface,
0.24 (6 mm) from side outer surface.
Input and output terminal screw tightening torque: 9 lbs-in (1.0 Nm) maximum.



Conn	Pin	Function
J1	1	AC Input
	2	AC Input
	3	Ground
	4	DC Output -V
	5	DC Output -V
	6	DC Output +V
	7	DC Output +V
	9.5mm pitch M4 barrier strip	
Opt J2	1	Remote On/Off +
	2	Remote On/Off -
	Molex type 22-23-2021 compatible	

Derating Curve



Models and Ratings

JPM160

Output Power[1,2]	Output Voltage	Output Current	Ripple & Noise[2] (pk-pk)	Load Regulation	Efficiency	Model Number
105 W	3.3 V	32.0 A	100 mV	±1.0%	65%	JPM160PS03†^
160 W	5.0 V	32.0 A	100 mV	±1.0%	71%	JPM160PS05†^
160 W	7.5 V	21.0 A	100 mV	±1.0%	76%	JPM160PS07†^
160 W	12.0 V	13.4 A	100 mV	±0.5%	79%	JPM160PS12†^
160 W	13.5 V	11.8 A	100 mV	±0.5%	80%	JPM160PS13†^
160 W	15.0 V	10.6 A	100 mV	±0.5%	81%	JPM160PS15†^
160 W	24.0 V	6.7 A	150 mV	±0.5%	83%	JPM160PS24†^
160 W	27.0 V	6.0 A	150 mV	±0.5%	83%	JPM160PS27†^
160 W	48.0 V	3.3 A	250 mV	±0.5%	84%	JPM160PS48†^

Notes

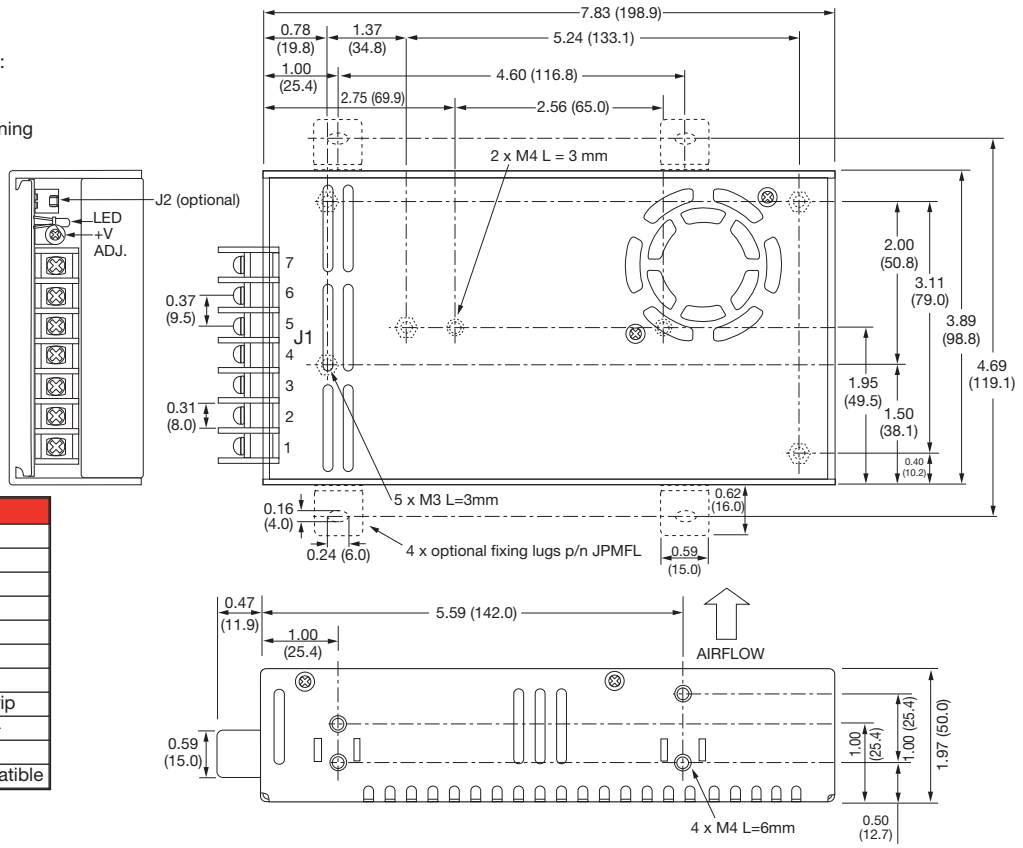
1. Max output increases to 125% of rated power when input voltage is between 180 VAC and 264 VAC and ambient temperature is less than +50 ℃.
2. Ripple and noise measured at 20 MHz bandwidth using a 12 inch twisted wire pair, terminated with a 0.1 µF and a 47 µF capacitor connected in parallel.
3. To attach the power supply to a DIN rail, order 2 x DIN CLIP.

† Available from Farnell. See pages 266-269.

^ Available from Newark. See pages 270-272.

Mechanical Details

All dimensions in inches (mm)
Tolerance: ±0.03 (0.8 max)
Weight: 1.76 lb (800 g) approx.
Maximum mounting screw penetration:
0.12 (3 mm) from base outer surface,
0.24 (6 mm) from side outer surface.
Input and output terminal screw tightening torque: 9 lbs-in (1.0 Nm) maximum.



Conn	Pin	Function
J1	1	AC Input
	2	AC Input
	3	Ground
	4	DC Output -V
	5	DC Output -V
	6	DC Output +V
	7	DC Output +V
	9.5mm pitch M4 barrier strip	
Opt J2	1	Remote On/Off +
	2	Remote On/Off -
	Molex type 22-23-2021 compatible	

Derating Curve