

JPM Series



- Low Cost
- High Reliability
- Power Factor Corrected
- Suitable for Battery-charging Applications
- Low Ripple & Noise
- 125% Rating at 230 VAC
- Optional Remote On/Off

Specification

Input

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

Output

Output Voltage	• See tables
Output Voltage Trim	• +10%, -5%
Initial Set Accuracy	• $\pm 2\%$
Start Up Delay	• 600 ms max
Start Up Rise Time	• 30 ms max
Hold Up Time	• 25 ms min
Line Regulation	• $\pm 0.5\%$
Load Regulation	• See tables
Ripple & Noise	• See tables
Overvoltage Protection	• 110-135% V_{nom} , recycle input to reset
Overtemperature Protection	• Shuts down at $+95\text{ }^{\circ}\text{C} \pm 5\text{ }^{\circ}\text{C}$ (measured internally) with auto recovery, only on JPM120 & JPM160
Overload Protection	• 105-150% constant current, auto recovery
Temperature Coefficient	• $\pm 0.05\%/^{\circ}\text{C}$
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 per MIL-HDBK-217F (+25 $^{\circ}\text{C}$)

Environmental

Operating Temperature	• $-10\text{ }^{\circ}\text{C}$ to $+60\text{ }^{\circ}\text{C}$, see derating curves
Cooling	• JPM80 & JPM120 convection-cooled, JPM160 includes internal fan
Operating Humidity	• 20-90% RH, non-condensing
Storage Temperature	• $-20\text{ }^{\circ}\text{C}$ to $+85\text{ }^{\circ}\text{C}$
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	• EN60950-1-1:2001, UL60950-1, CSA22.2 No. 60950-1, CE Mark LVD

Models and Ratings

JPM80 XP

Output Power ^(1,2)	Output Voltage	Output Current	Ripple & Noise (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.

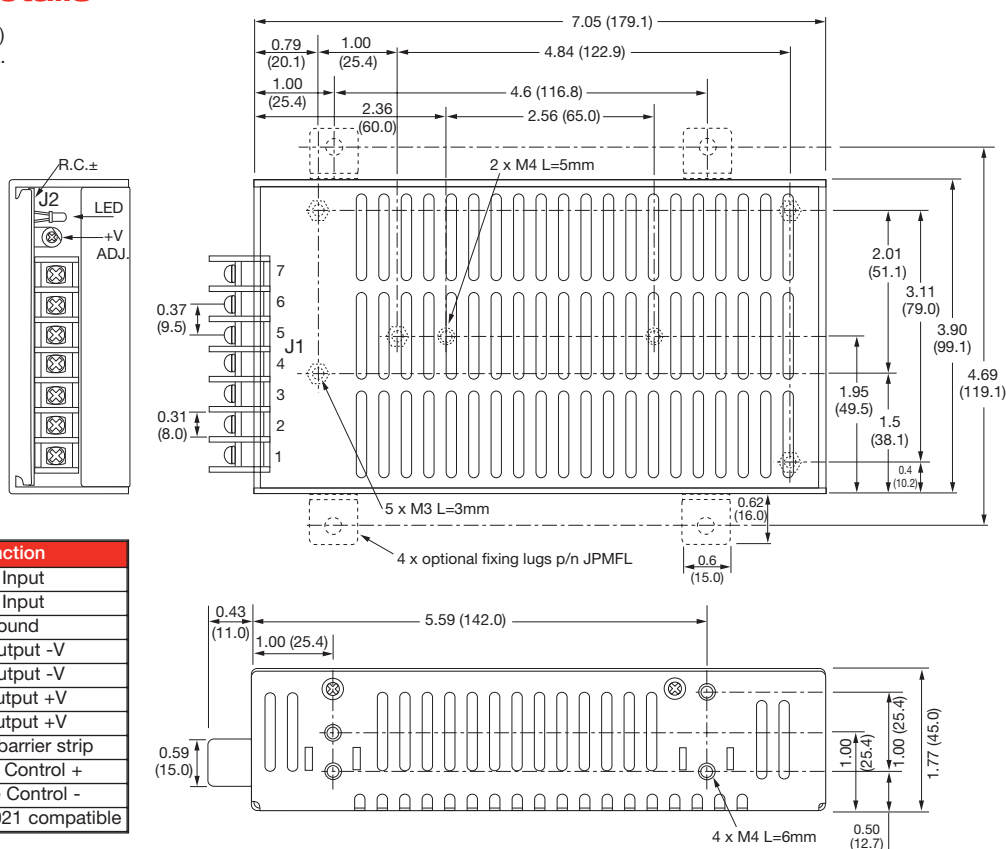
3. To attach the power supply to a DIN rail, order 2 x DIN CLIP.

† Available from Farnell. See pages 204-206.

Mechanical Details

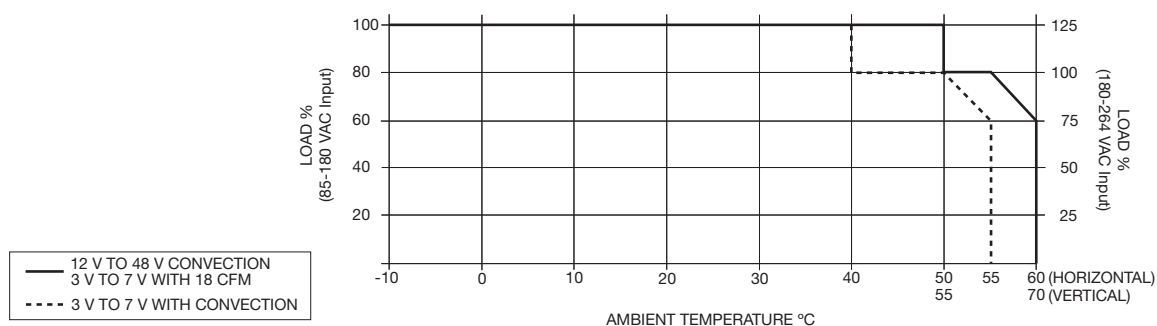
All dimensions in inches (mm)

Weight: 1.3 lb (600 g) approx.



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 Control +
	2	Remote Control -
Molex type 22-23-2021 compatible		

Derating Curve



Models and Ratings

JPM120 XP

Output Power ^{1,2}	Output Voltage	Output Current	Ripple & Noise (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†

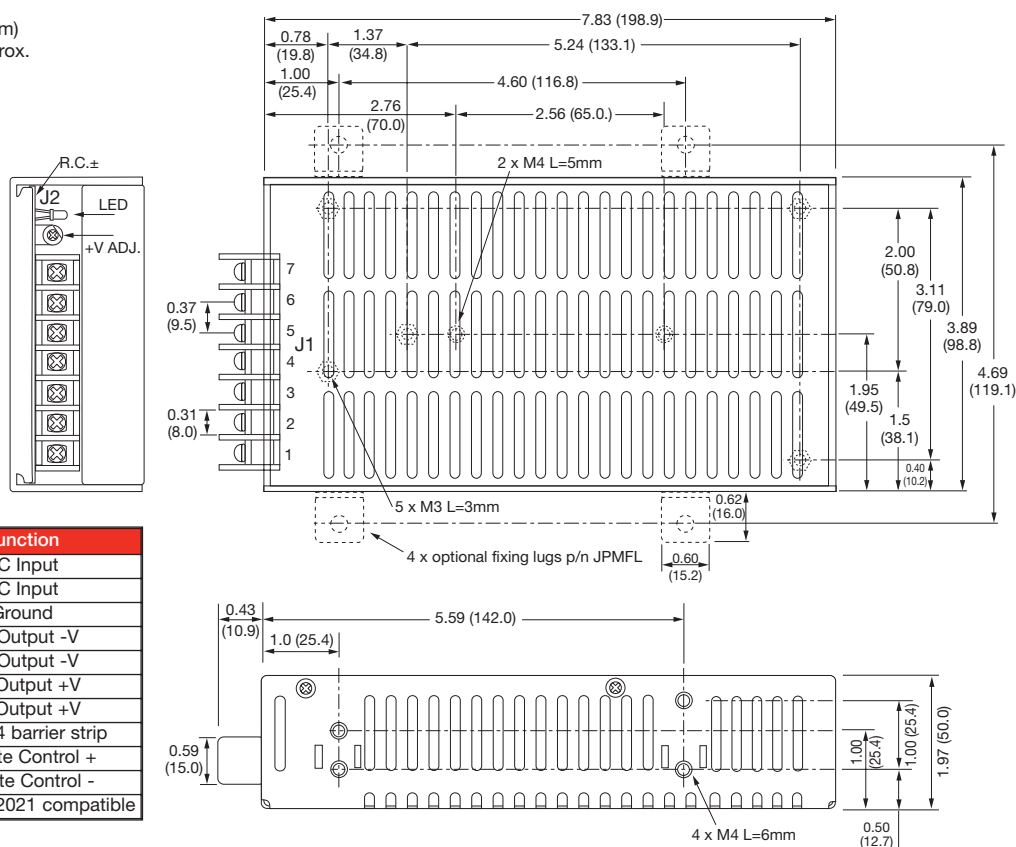
Notes

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. To attach the power supply to a DIN rail, order 2 x DIN CLIP

† Available from Farnell. See pages 204-206.

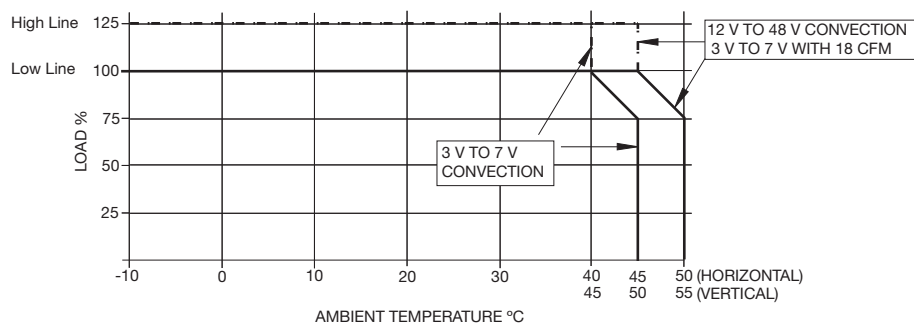
Mechanical Details

All dimensions in inches (mm)
Weight: 1.54 lb (700 g) approx.



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 Control +
	2	Remote Control -
Molex type 22-23-2021 compatible		

Derating Curve



Models and Ratings

JPM160 **XP**

Output Power ^{1,2}	Output Voltage	Output Current	Ripple & Noise (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†

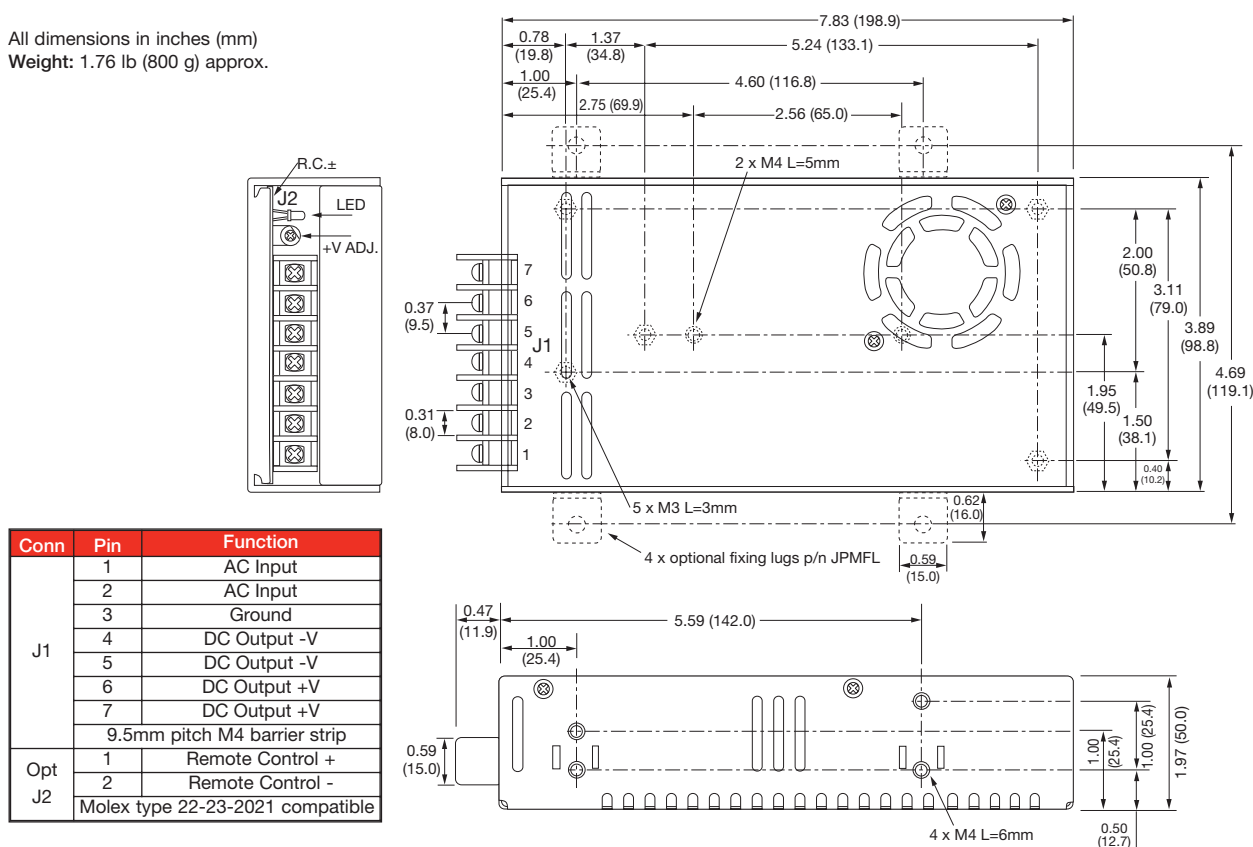
Notes

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 °C.
2. To attach the power supply to a DIN rail, order 2 x DIN CLIP.

† Available from Farnell. See pages 204-206.

Mechanical Details

All dimensions in inches (mm)
Weight: 1.76 lb (800 g) approx.



Derating Curve

