POWER

LPS360-M Series

360 Watt AC-DC Power Supply

Low Power Data Sheet

Total Power: 200 - 360 W
Input Voltage: 90 - 264 Vac
120 - 300 Vdc
Outputs: Single

PMBus
Power Management. Defined.

SPECIAL FEATURES

- Medical and ITE safeties
- Active power factor correction
- 3” x 5” footprint
- Less than 1U high
- EN61000-3-2 compliant
- Remote sense
- Power fail
- Adjustable main output
- Level B Conducted EMI - Class I or Class II inputs
- Overvoltage protection
- Overload protection
- Thermal overload protection
- 12 V fan output
- LPX200 enclosure kit available
- 5 V Standby output
- Remote Inhibit
- PMBus commands
- RoHS compliant
- Digital I²C interface
- Designed to meet Class I and Class II
- Dual AC fuses
- Suitable for BF Type applications

SAFETY

- TUV 60950, 60601-1
- UL 60950, 60601-1
- cULus 60950, 60601-1
- CB Certificate & report
- CE Mark (LVD & EMC)
- CCC Approval

** LPS360-M tested according to the medical standard IEC 60601-1-2 4th Edition.

Electrical Specifications

Input	
Input range	90 - 264 Vac; 120 - 300 Vdc
Frequency	47 - 63 Hz
Inrush current	50 A max., cold start @ 25 °C
Efficiency	Up to 93% at full load
EMI/RFI	FCC Class B conducted; CISPR22 Class B conducted; EN55022 Class B conducted; VDE0878PT3 Class B conducted
Power factor	0.99 typical
Safety ground leakage current	150 µA @ 132 Vac, 60 Hz for class I, 300 µA @ 264 Vac, 60 Hz for class II
Output	
Maximum power	200 - 240 W (see de-rating) for convection, 360 W with 400 LFM of forced air
Adjustment range	12 V and 24 V models, -0%, +15%; 15 V and 48 V models, -5%, +10%; 36 V model, -15%, +0%
Standby output	5 V @ 1A convection, 2 A with forced air
Fan output	12 V @ 0.5 A convection, 1 A forced air
Hold-up time	20 ms @240 W, 220 Vac input; 12 ms @ 360 W
Overload protection	Short circuit protection on all outputs. Case overload protected @ 110 - 160% above rating
Overvoltage protection	30 - 50% above nominal output
Logical Control	
Power failure	Open collector logic signal goes high 100 - 500 msec after main output; it goes low at least 6 msec before loss of regulation
Remote sense	Compensates for 0.5 V lead drop min. Will operate without remote sense connected. Reverse connection protected.

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Environmental Specifications

Operating temperature	-20 °C to 50 °C ambient, derate each output as 2.5% per degree from 50 °C to 70 °C; -40 °C startup if Standby output ≤ 1A (any valid load on main output); -30 °C startup if Standby output > 1A (any valid load on main output)
Storage temperature	-40 °C to +85 °C
Electromagnetic susceptibility	Designed to meet EN61000-4; -2, -3, -4, -5, -6, -8, -11 Level 3
Humidity	Operating; non-condensing 10% to 95% RH
Vibration	IEC68-2-6 to the levels of IEC721-3-2
MTBF calculated	>2 million hours at full load and 25 °C ambient conditions. 230 Vac input, Bellcore

Ordering Information

Model Number	Output Voltage	Minimum Load	Maximum Load with Convection Cooling	Maximum Load with Forced Air	Peak Load	Regulation[2]	Ripple P/P (PARD)[3]
LPS363-M	12 V	0 A	20 A	30 A	39 A	±2%	120 mV
LPS364-M	15 V	0 A	16 A	24 A	31 A	±2%	150 mV
LPS365-M	24 V	0 A	10 A	15 A	19.5 A	±2%	240 mV
LPS366-M	36 V	0 A	6.25 A[4]	11.25 A[4]	14.62 A	±2%	360 mV
LPS368-M	48 V	0 A	5 A	7.5 A	9.75 A	±2%	480 mV

1. Peak current lasting <3 seconds.
2. At 25 °C including initial tolerance, line voltage, load currents and output voltages adjusted to factory settings.
3. Peak-to-peak with 20 mHz bandwidth and 10 µF (tantalum capacitor) in parallel with a 0.1 µF capacitor at rated line voltage and load ranges.
4. LPS366-M is limited to the lower of the applicable power rating or current rating, whichever results in lowest power.
5. This product is a Component Power Supply and is only for inclusion by professional installers within other equipment and must not be operated as a standalone product. EMC compliance to appropriate standards must be verified at the system level. This product is for sale to OEMs and System Integrators, including through Distribution Channels. It is not intended for sale to End Users.

Pin Assignments

Connector	LPS360-M	
J4	Pin 1	Line
	Pin 3	Neutral
Barr	Barr-1	Main output +
	Barr-2	Main output common
J5	Pin 1	+V1 Remote sense
	Pin 2	-V1 Remote sense
	Pin 3	+5 V Standby
	Pin 4	5 V Standby return
	Pin 5	+Power fail
	Pin 6**	Forced air operation
	Pin 7	Inhibit
	Pin 8	GND
	Pin 9	SDA
	Pin 10	SCL
J3	Pin 1	+12 V Fan
	Pin 2	12 V fan Return (isolated)

** For forced air operation, connect pin 6 to pin 8 of J5.

Mating Connectors

J4 AC Input	Molex 09-50-3031 (connector) PINS: 08-52-0072
J6 AC Ground	Molex 01-90020001
DC Output (Barr)	Molex 19141-0058/0063 or 19099/0048 Spade lug based on Cable Ampacity/AWG
J5 Control Signals	Molex 90142-0010 (USA) PINS: 90119-2110
J3 Fan Output	Molex 51065-0200 Pins: 50212-8100
The Artesyn Connector Kit #70-841-029, includes all of the above.	

1. Specifications subject to change without notice.
2. All dimensions in inches (mm), tolerance is ±0.02"(±0.5 mm)
3. Mounting holes MH1 and MH2 should be grounded for EMI purposes.
4. Mounting hole MH1 is safety ground connection.
5. Specifications are for convection rating at factory settings at 115 VAC input, 25 °C unless otherwise stated.
6. This power supply requires mounting on metal standoffs 0.20" (5m) in height.
7. Warranty: 3 Years
8. Weight: 0.4kg / 0.88 lb (LPS363-M)

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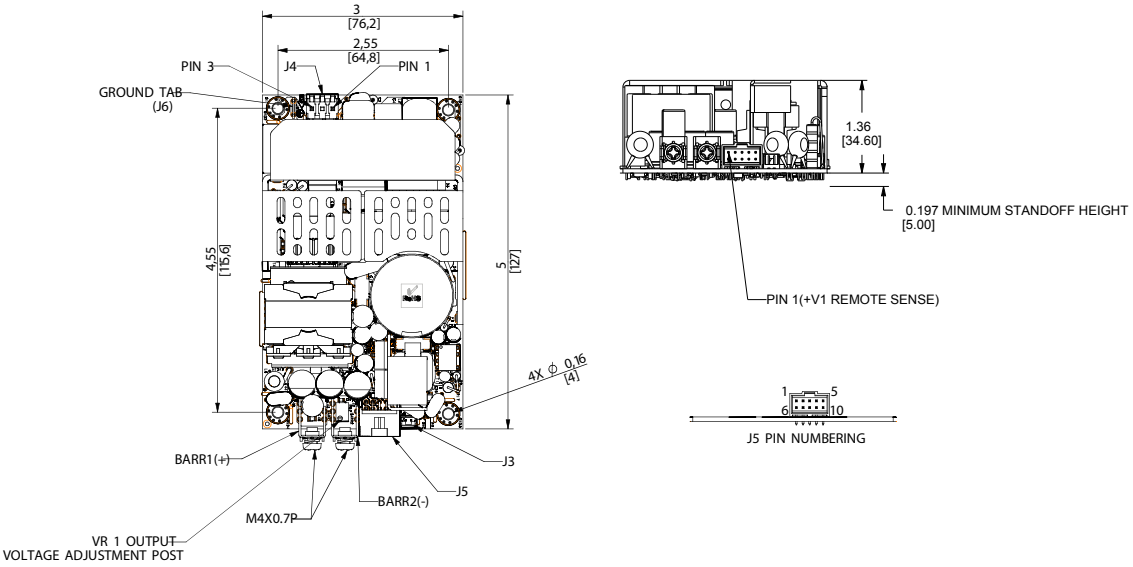
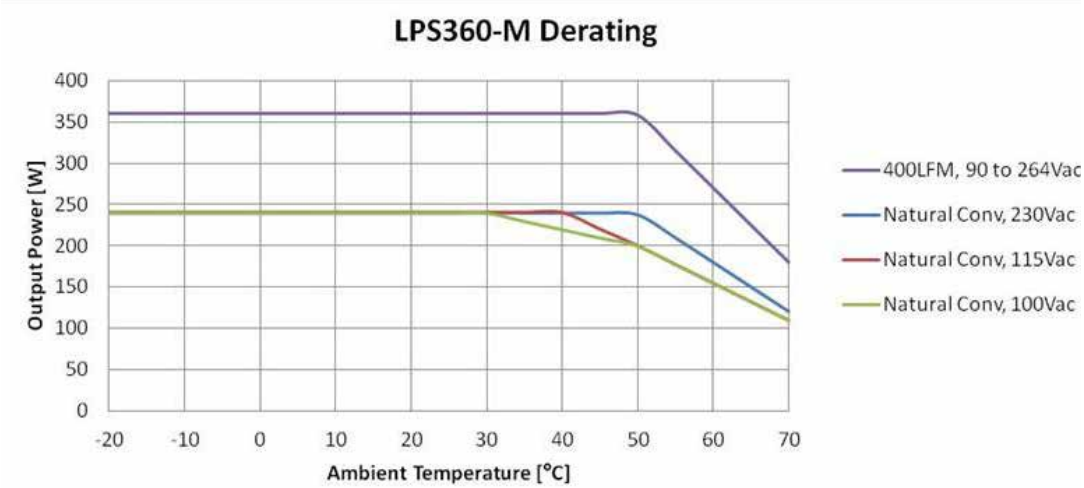
Digital I²C Interface Accessories

73-769-001	USB to I²C Adapter with USB Cable
73-841-030	LPS360-M I²C Mating Connector
Artesyn Connector Kit #73-769-005 includes both of the above	

Mechanical Drawings



Performance Data



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