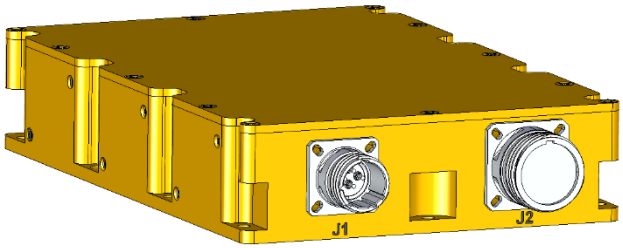
LPM 650 Series

Conduction Cooled AC/DC Power Supply



FEATURES

- Conduction cooled
- 85~245 VAC input; 50/60-400 Hz
- Parallelable up to 5 units (Droop Sharing)
- D38999 connectors
- Conformal Coated
- 20 msec holdup time
- Aluminum Enclosure-Conductive Chromate treated
- Mil-Std 461, 704, 810, 901 D, 1399 Compliant

INPUT	Voltage/ Freq	Vrms	AC 85~264/ 47~440Hz,
	Current	A(rms)	8.6A (typical at maximum output power, 115VAC in)
	Inrush Current	A	30 A max at cold start
	Power Factor	-	> .99 @ 115vac; > .97@230vac @ full load (Meets Mil-Std 1399 Sec 300)
	Leakage Current	mArms	< .5 mArms @ 115 VAC in
	No Load Consumtion	mArms	450 mA max @ 115Vac in

		Unit	LPM650-12	LPM650-28	LPM650-48
OUTPUT	Voltage	VDC	12	28	48
	Efficiency 110 VAC 220 VAC	%	 84 86	 88 89	 88 90
	Current	A	54.16	23.21	13.54
	Max Power	W	650	650	650
	Regulation	%	+5/-3	+5/-3	+5/-3
	Ripple/Noise (Max)	% Pk-Pk	1.00	1.00	1.00
	Hold-up Time	mS	>20mS @ full load, 115 VAC		
	Insulation And Dielectric	Primary-Secondary	4242 VDC (3000 VAC)		
		Primary to Ground (Mounting holes or chassis)	>1500 VDC for 30 seconds		
		Output to Ground	>100MΩ at 25°C, 40%RH & 500VDC		

Note: Full performance data information available upon request.

Protection	Overvoltage	Shutdown and latch off; AC recycle to restart
	Overload	Hiccup, Auto recovery
	Over temperature	Output shutoff until base plate temp reaches over 75°C,
	Short Circuit	Auto Recovery
Environment	Operating Temp	-40~70°C Ambient (Maximum Base plate 75°C)
	Storage Temp	-55 to +100 °C
	Operating Humidity	10~95% , non-condensing
	Operating Altitude	15,000 ft max
	Vibration	MIL-STD 810H, Method 514.8, Category 24, Figure 514.8E-1.
	Shock	MIL-STD-810H, Procedure 1, 20G 11ms MIL-S 901D
	MTBF Telecordia SR-22	 >158,000 hrs.@ 40C ambient temp.
Standards	Conducted Emissions[2] Susceptibility Radiated Emissions Immunity[3] Transient	MIL-STD-461F/G: CE 101, CE 102 (10Khz~10Mhz) MIL-STD-461F/G: CS114, CS115 MIL-STD-461F/G: RE102, RE103 8 kV (contact discharge) or 15 kV (air discharge) electrostatic discharge MIL-STD 704
Size	Inches/lbs	9.15” (10.07 w/ conn) x 6.15" x 1.8” / 4.9 lbs

1. Ripple and noise are measured at oscilloscope 20MHz bandwidth by a 10uF electrolytic capacitor and a 0.1uF ceramic capacitor in parallel at output connector.
2. Standards: Unit has been designed to meet the standards listed. It is the responsibility of vendor to test in system. Conducted emissions (CE101, C102) using shielded 3 conductor cable (L,N,G) with unit mounted to chassis ground.
3. Contact factory for test conditions.

OPTIONS

Connectors
Customer may request connector change with MOQ, D38999 or equivalent MIL/SAE 5015 or equivalent

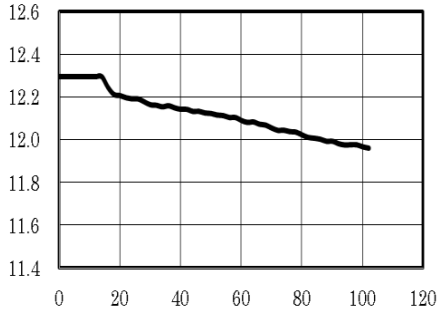
Additional Options
Anodized Enclosure Powder coat painted enclosure Base, side and rear heatsinks

Sharing Function

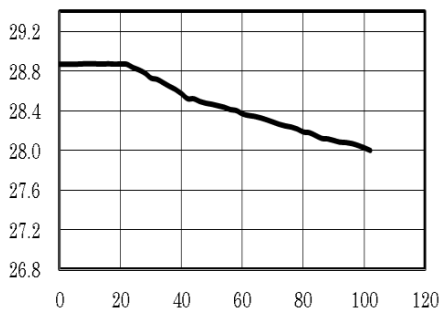
The LPM 650 utilizes a droop sharing architecture that voltage equalizes based on current draw at load.
When integrating into your system, please take the following considerations

1. Temperature of power supply base/case will affect sharing function, ensure that case temp is as close to equal among all units
2. Ensure cable length from output connector and impedance is the same among all units
3. When output current is shared among two or more units, output power should not exceed 630W per unit.

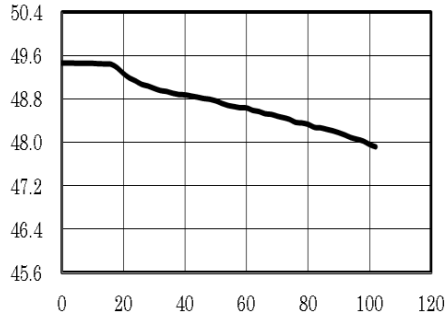
LPM650-12



LPM650-28

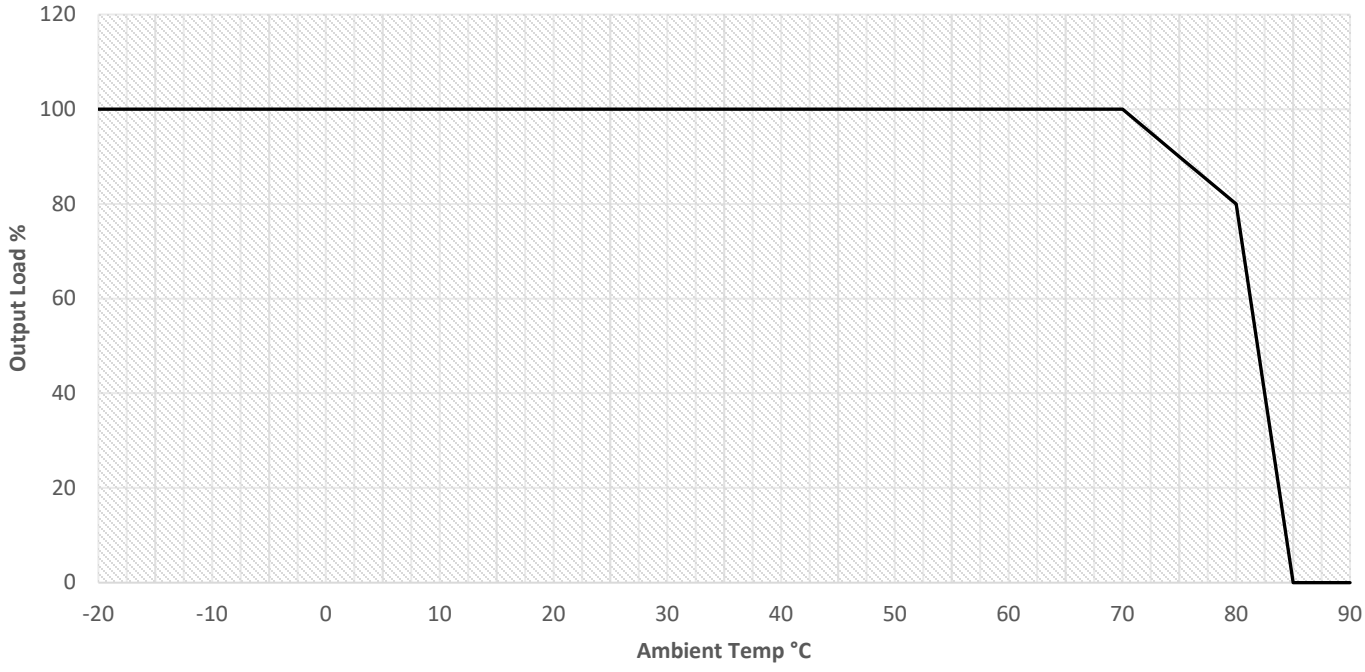


LPM650-48



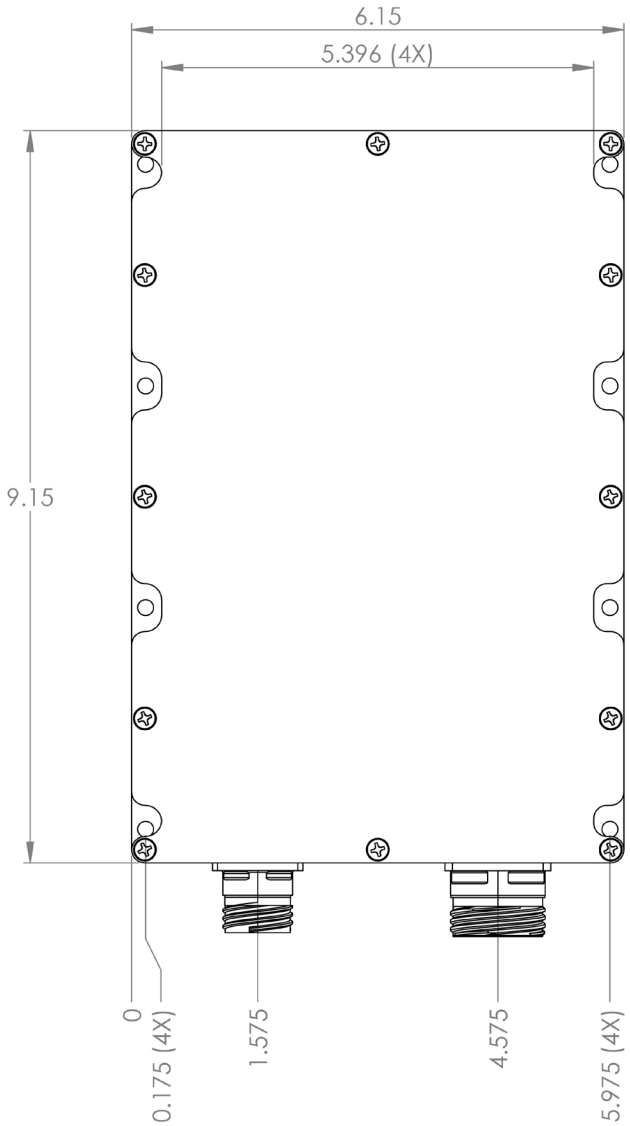
Output Current (%)

DERATING

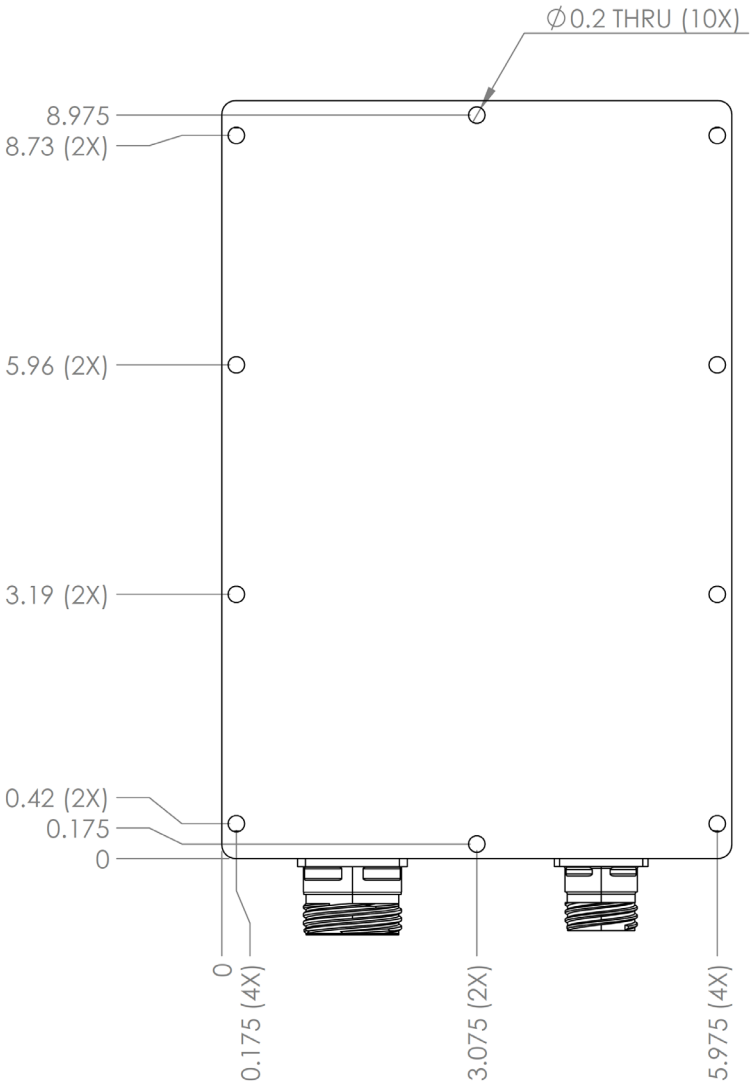


DIMENSIONAL DRAWING

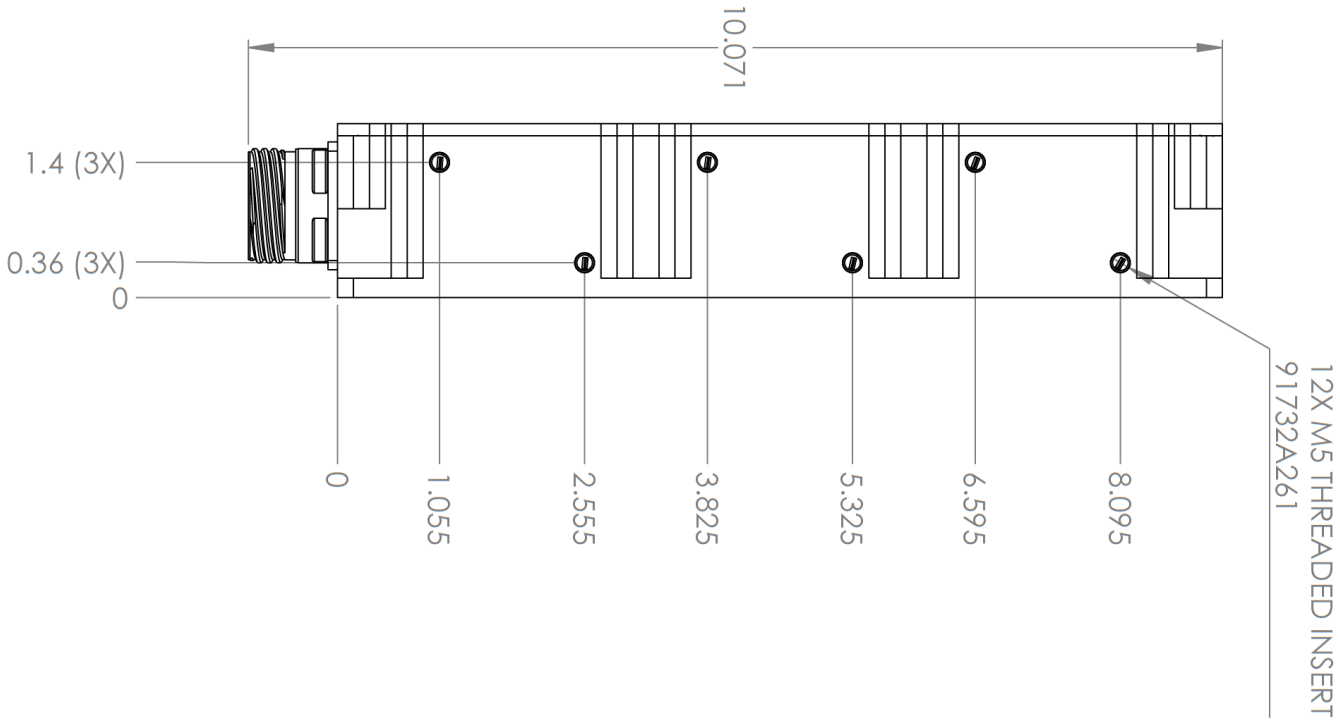
Top



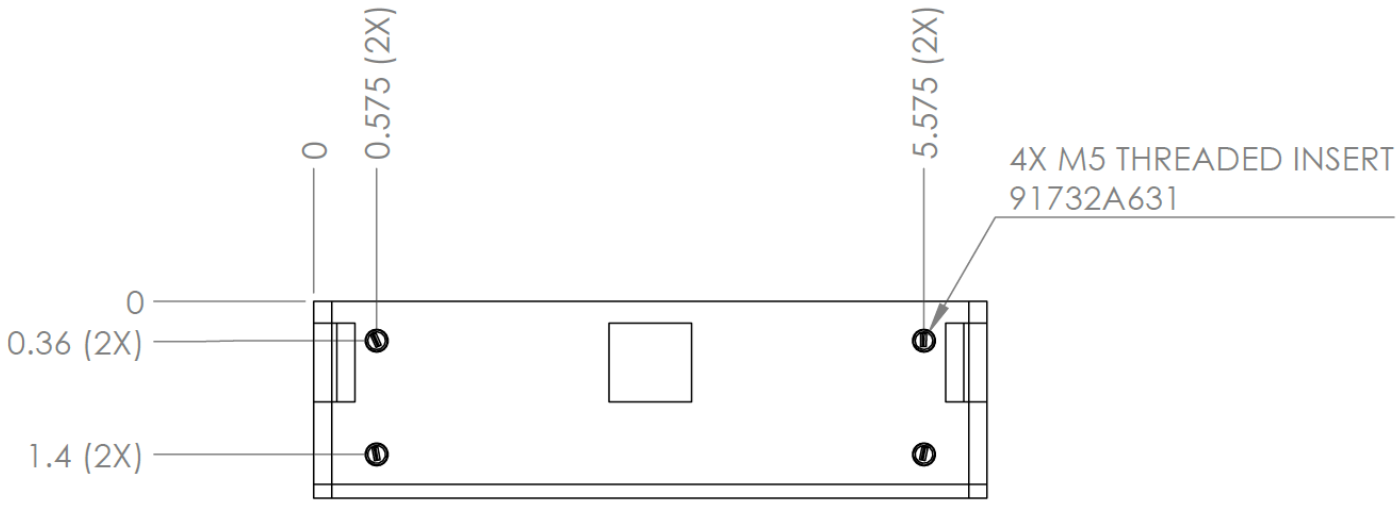
Bottom



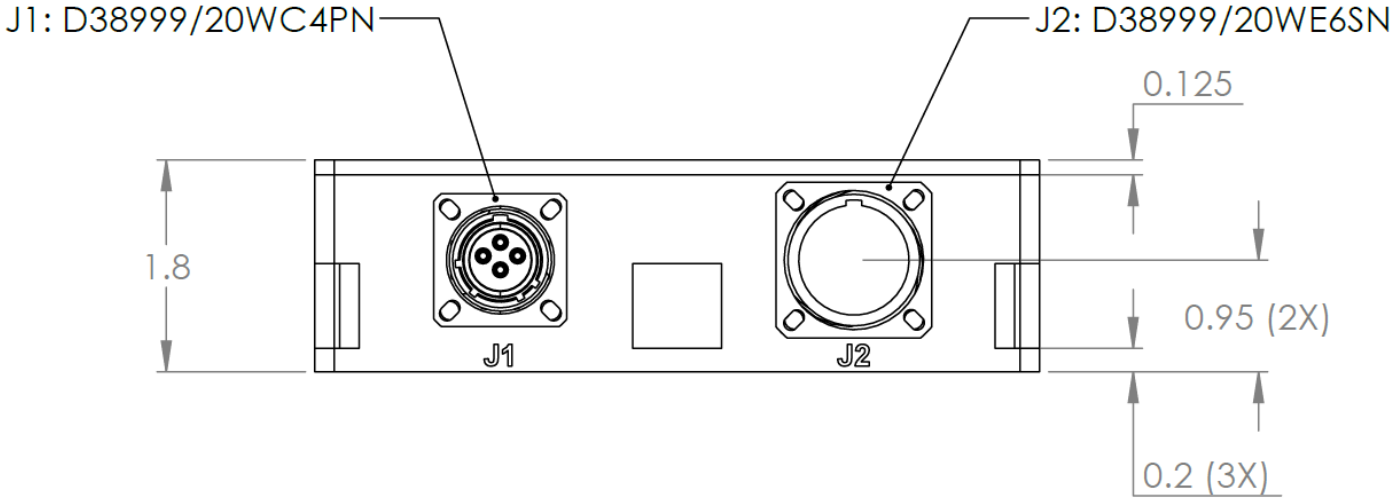
Side (Both Sides)


10.071
1.4 (3X)
0.36 (3X)
0
0
1.055
2.555
3.825
5.325
6.595
8.095
12X M5 THREADED INSERT
91732A261

Rear

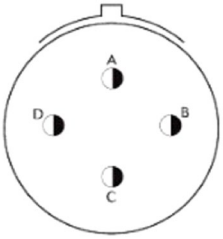

0
0.575 (2X)
5.575 (2X)
4X M5 THREADED INSERT
91732A631
0
0.36 (2X)
1.4 (2X)

Front

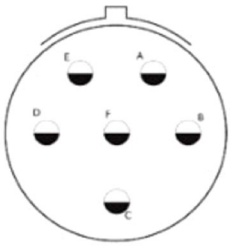


Pinout (Standard)

J1: D38999/20WC04PN



J2: D38999/20WE6SN



Standard Connector

J1: D38999/20WC04PN (16 Awg)
J1-A: Line
J1-B: Neutral
J1-C: Ground
J1-D: N/C

J2: D38999/20WE6SN (12 Awg)
J2-A: +Vout
J2-B: +Vout
J2-C: +Vout
J2-D: Vout RTN
J2-E: Vout RTN
J2-F: Vout RTN

Specification subject to change without notification