



SL1100 Series

Conduction Cooled AC/DC Power Supply



FEATURES

- Conduction cooled
- 85~245 VAC input (120~350VDC); 47~63Hz
- IP64 Enclosure Design
- >20 msec holdup time
- Aluminum Enclosure-Conductive Chromate treated
- I2C status monitoring (Optional)
- 2 year warranty

		Unit	
Input	Voltage/ Freq	Vrms	AC 85~264/ 47~63Hz,
	Current	A(rms)	12.5/5.1 (typical at maximum output power, 115/220 VAC in)
	Inrush Current	A	25 A (max) at cold start/worst case
	Power Factor	-	> .99 @ full load
	Leakage Current	mArms	< 4.5 mArms @ 115 VAC in
	Start Up Time	mSec	≥550 @ Cold Start, ≥100 @ remote turn on

		Unit	SL1100-12	SL1100-24	SL1100-28	SL1100-48
Output	Voltage	VDC	12	24	28	48
	Efficiency (Typical)	% 115VAC	85	88	88	89
		% 220 VAC	87	90	90	90
	Current	A	83.5	45.9	40	23
	Max Power	W	1,002	1,101	1,120	1,104
	Regulation*	%	+/-0.5	+/-0.5	+/-0.5	+/-0.5
	Ripple/Noise**	% Pk-Pk	1.00	1.00	1.00	1.00
	Hold-up Time	mS	>20mS @ full load, 115 VAC standard (<i>Higher hold up options available</i>)			
	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				

*Regulation listed reflects maximum line and load when measured at output connector of the -15 model without sense line attached.

** 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.



Features	Power Good	LED -Green output on; non-illuminated output off
	Options	Remote Sense
Options	Remote on/off	Option 1: RC1 RC2, Open=OFF, Short=ON Option 2 (Applying external Voltage): RC1 RC2, 3.3~12V OFF, Open=ON
	Voltage Trim	External Potentiometer; +/- 10%
	Communication	I2C reporting: Vout, Iout, Internal Temp Humidity (Ask Factory for available Addresses)
	Protection	Overvoltage
Protection	Overload	Constant current to Hiccup, Auto recovery
	Over temperature	Output shutoff until base plate temp reaches 85°C, Thermal cutoff is 85~90°C (measured at baseplate). Power recycle to restart
	Short Circuit	Auto Recovery
	Environment	Operating Temp
Environment	Storage Temp	-55 to +100° C
	Operating Humidity	10~95% , non-condensing
	Operating Altitude	10,000 ft max
	Vibration	MIL-STD810H, Method 514.8, Category 24, Figure 514.8E-1.
	Shock	MIL-STD-810H, Procedure 1, 20G 11ms
	MTBF Telecordia SR-22	>250,000 hrs.@ 40C ambient temp.
	Standards	Safety ⁴
Standards	EMC Emissions ²	IEC61000-3-2 (Class A), EN55032 class A MIL-STD-461F/G: CE102, RE102, RE103
	Susceptibility Immunity ³	MIL-STD-461F/G: CS114, CS115 8 kV (contact discharge) or 15 kV (air discharge) electrostatic discharge
Size	Inches/lbs	5.00" x 12" x 2.30" / 6.6 lbs (Connector weight not calculated)

1. Operating Temperature specification is measured at baseplate. Recommended ambient temperature is -20~70 °C if not operating on temp control baseplate.

2. Standards: Unit has been designed to meet the standards listed. It is the responsibility of the 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.

4. CE Safety Pending



ORDER INFORMATION

SL1100-xx-(Connector)-(Remote Sense)-(Remote On/Off)-(Trim)-(Reporting)

xx= Output Voltage (12, 24, 28, 48)

Connectors:15=SAE 5015 MIL Derived connectors; 33= Cord Grip with 3 ft flying lead cables

Remote Sense: S for + & - Sense Wires, Blank for standard

Remote On/Off: R1 for Option 1, R2 for Option 2

Trim: T=External Potentiometer, Blank for factory set Voltage (+0.25~0.50V above rated voltage)

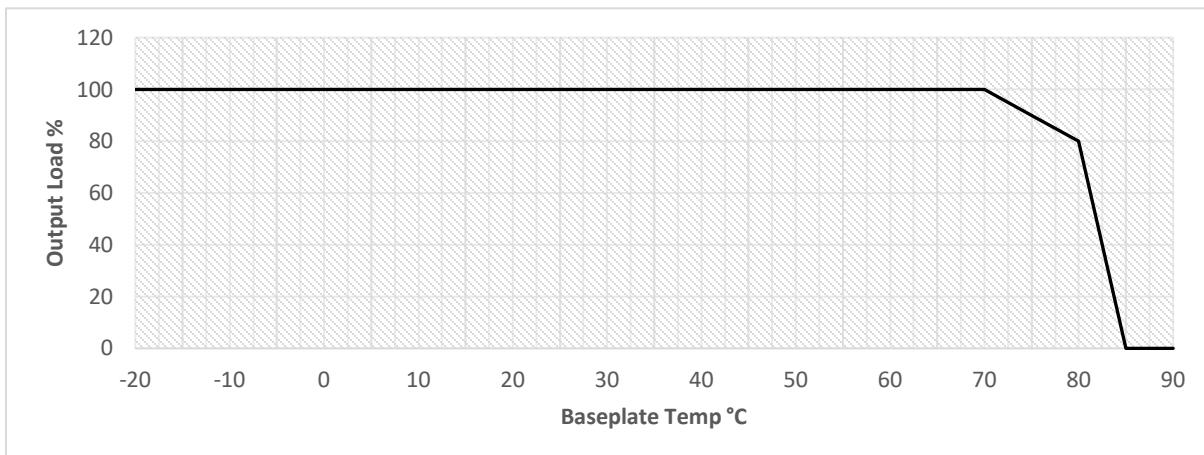
Reporting: Ix =I2C status reporting. Power Supply will provide status on Vout, Iout, Temp, and Alarm . contact factory for Address Selection which will be denotes by a character alpha-numeric character ta "x."

CUSTOMIZABLE OPTIONS

Connectors
Custom Cable Length for Input/Output Cables on -33 option Customer may request connector change with MOQ

Additional Options
Low temp (-40°C) 400Hz input Higher Voltage Remote on/off Increase holdup time (may affect enclosure size) Increased Voltage Trim range Selectable I2C address Factory Designed Heatsink Anodized Enclosure Powder coat painted Customer Logo
Non-Standard Voltages (Power Supply May deliver less than 1000W for certain voltages)

DERATING CURVE

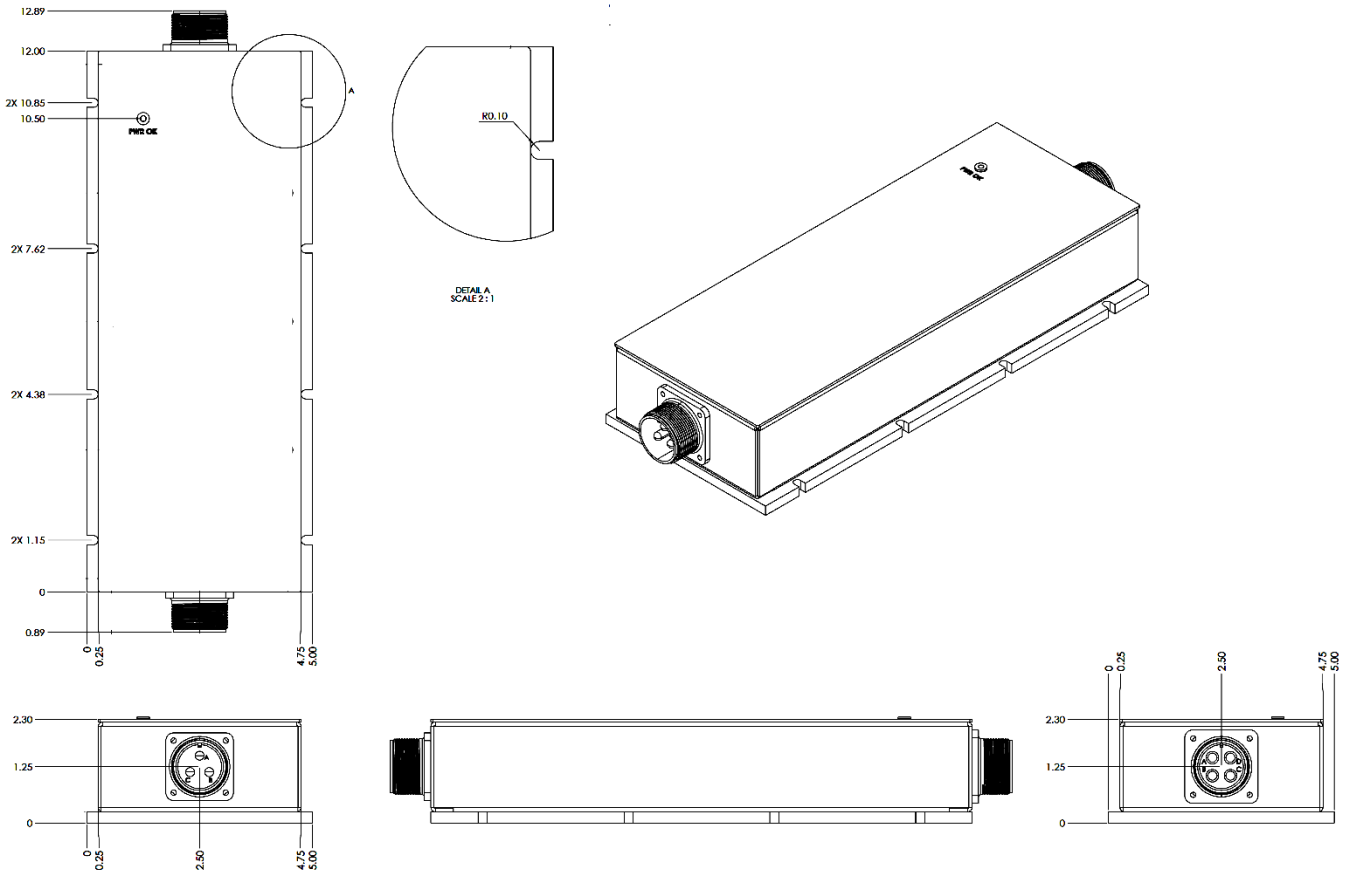


Note: At input voltages of 85~100 VAC, it is recommended not to operate power supply with an output load of 80% of rated power or more.

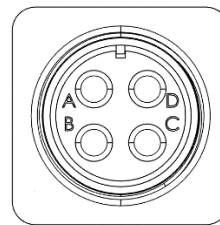
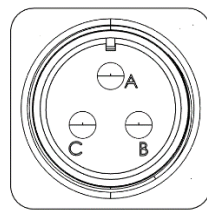


DIMENSIONAL DRAWING

-15 Option



Units shown in inches



-15 Connector Pinout

J1: MS3102A28-6P

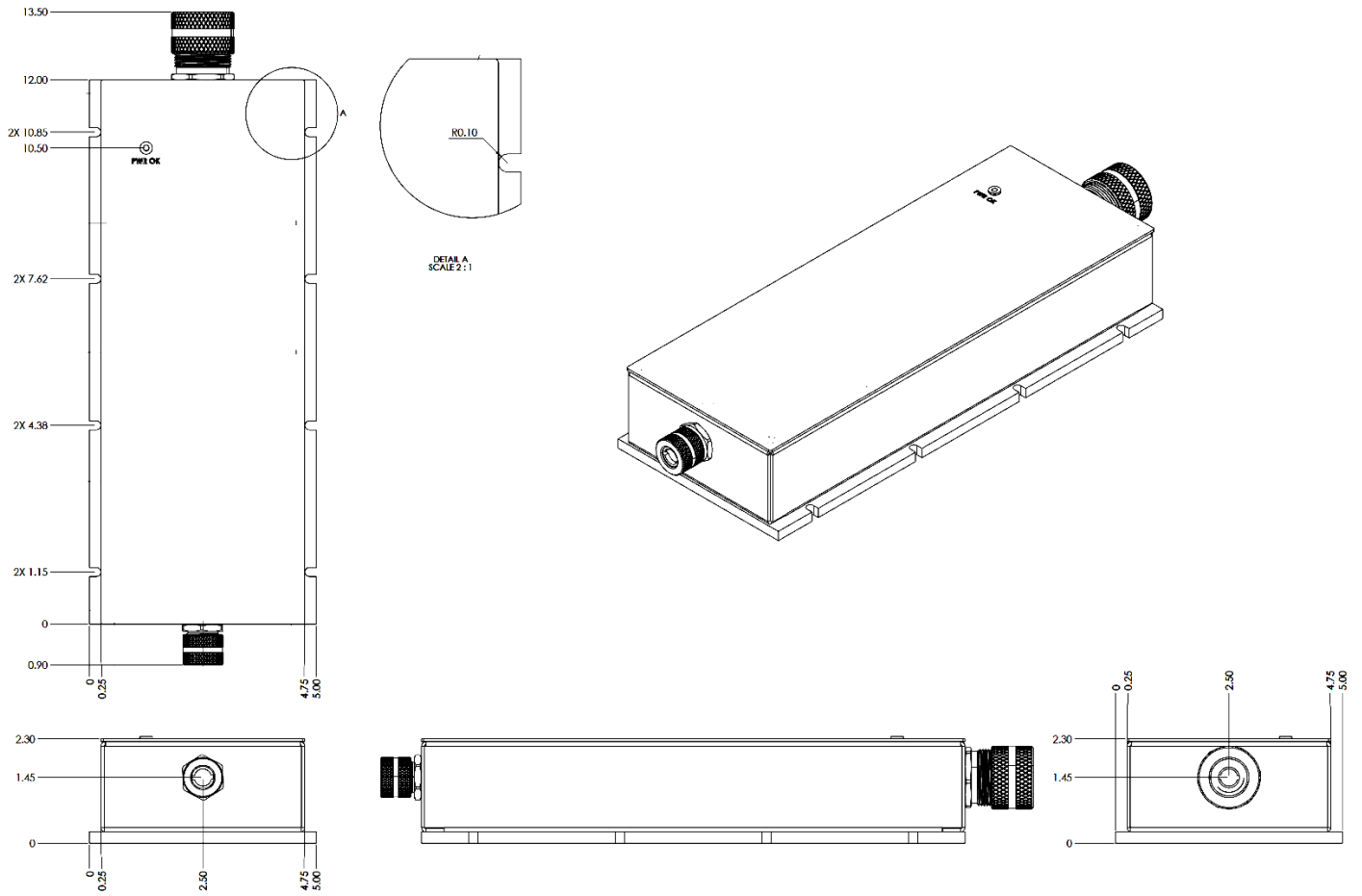
- J1-A: GND
- J1-B: Neutral
- J1-C: Line

J2: MS3102A22-22S

- J2-A: +Vout
- J2-B: +Vout
- J2-C: RTN
- J2-D: RTN

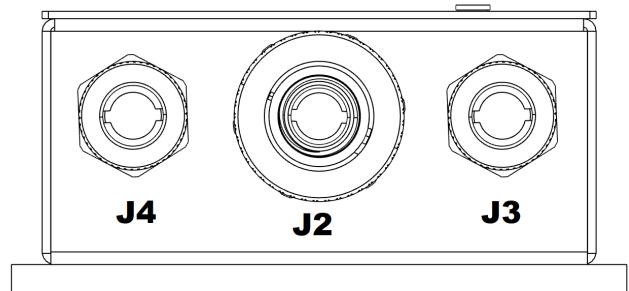


-33 OPTION



Units shown in inches

- (J1) AC Input. Accepts cable diameter 0.38~0.44 inches
- (J2) DC-Output. Accepts cable diameter 0.75~0.88 inches
- (J3) Remote Sense/Remote On-Off (Optional). Accepts cable diameter 0.38~0.44 inches
- (J4) Status Reporting(Optional). Accepts cable diameter 0.38~0.44 inches





Operation

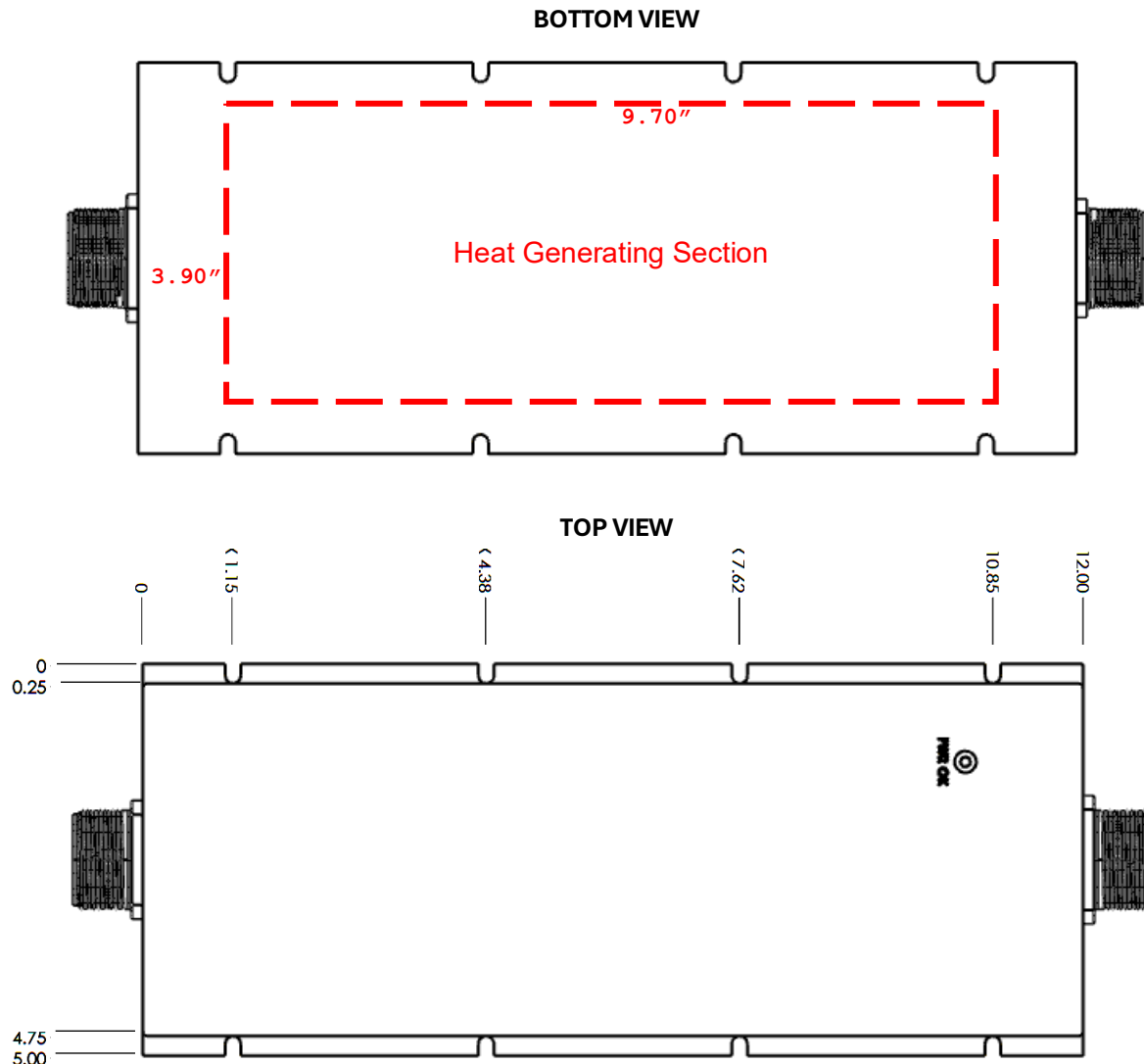
Mounting Instruction

It is recommended that the power supply base is mounted to a coldplate, heatsink or other thermal mass to assist in heat dissipation. It is recommended that baseplate is kept at 60°C or less to maintain warranty condition, with 40°C or less being ideal.

It is recommended that thermal interface material is used between the bottom of the baseplate and interfacing thermal mass to provide consistent thermal transfer. Power Supply can generate up to 165W of heat when operating at maximum output.

Mounting flange is a D-shaped through-hole 0.20" in diameter, allowing operator to install from either top or bottom side of the power supply.

See below on recommended mounting instruction.



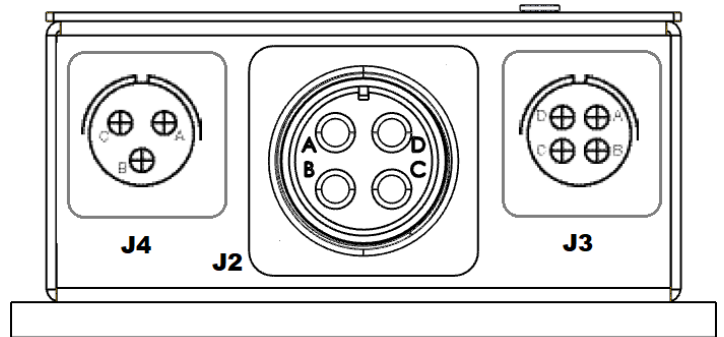
All units in inches. Mounting holes are 0.20" dia across and 0.25" from edge.



Remote Sense (Optional)

If -S option is requested with the -15 connector option, the power supply will have MS3102A14S2-S at J3, where position D is +S and position A is -S.

Sense wires should be in a shielded, twisted pair cable or heavily insulated jacket to protect it if used outdoors. If the distance between the J2 output cables to the load would result in a voltage drop of 0.5V or more, it is recommended not to use this function as it may cause the unit to malfunction. Customers are recommended to consult with ETA-USA technical staff if clarification is needed.



Customer may request Remote Sense wires for -33 option, in which case please communicate with ETA-USA staff on wire type and assignment.

Remote On/Off (Optional)

If R1 or R2 option is selected with the -15 connector option, the power supply will have MS3102A14S2-S installed at J3 where RC1 is assigned to position C and RC2 is assigned to position B.

R1 option controls the output by connecting/disconnecting J3-C and J3-B. Contacts must be shorted (connected together) in order for the regulated output to be on.

R2 option controls the output by applying a DC voltage between 3.2~12.8 DC across J3-C(+) and J3-B(-) to shut off the regulated output of J2. It is recommended that the operator use an insulated cable

WARNING: Remote on/off option R2 DOES NOT have reverse voltage protection and improper connection may damage the unit.

Customer may request Remote Sense wires for -33 option, in which case please communicate with ETA-USA staff on wire type and assignment.

In the event the unit enters into over-voltage or over-temperature protection mode, toggling the remote on/off function will restart the unit.

Voltage Trim (Optional)

If -T option is selected, potentiometer control shall be installed on top of the supply adjacent to the PWR OK LED indicator. Voltage Trim can be controlled with the use of Phillips head screwdriver.

Status Reporting (Optional- available November of 2024)

If -Ix option is selected, the power supply will have a MS3102A14S1-P connector installed at J4. The pinout can be found below.

A: SDA

B: SCL

C: GND

GND of J4 is isolated from the ground of the power supply, so it is recommended to verify the ground of your status reporting receiving unit before installation.

Additional options for communications board (additional temperature sensing, multiple I2C address selection may result in a different connector used for J4).

DISCLAIMER

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