

LED



Industrial

### FEATURES AND BENEFITS

2.2" x 4.16" x 1.5" Package (Standard)

Universal Input 90-305Vac

Single Output

UL8750

EN55015 (EN55032) Class B Conducted EMI

0.5W Power Consumption at No-load

225 Watts (Fan Cooled, 200 LFM)

Active Inrush Current Limiter – 15A

180 Watts (Conduction Cooled)

Approved to EN/CSA/IEC/UL62368-1

150 Watts (Convection Cooled)



### MODEL SELECTION

Model Number*	Volts	Output Current		Convection	Ripple & Noise <sup>1</sup>	Total Regulation	Threshold
		w/200LFM air	Conduction				
LU225S12K	12V	17.5A	13.3A	11.67A	1%	±2%	14.1 ± 1.0V
LU225S24K	24V	9.38A	7.50A	6.25A	1%	±2%	27.6 ± 1.0V
LU225S36K	36V	6.25A	5.00A	4.16A	1%	±2%	39.8 ± 1.0V
LU225S48K	48V	4.69A	3.75A	3.125A	1%	±2%	55.2 ± 2.0V
LU225S56K	56V	4.00A	3.2A	2.68A	1%	±2%	64.3 ± 2.0V

\*Replace K in the model number with KL for top mount Version. Example: LU225S56KL.

### INPUT

AC Input	100-277Vac, ±10%, 47-63Hz, 1 $\phi$		
Input Current	Max. 115Vac: 2.8A, 277Vac: 1.3A		
Inrush Current	< 15A peak, 277Vac, cold start, turn on at AC zero crossing		
Input Fuses	provided on all models		
Earth Leakage Current	<500 $\mu$ A@277Vac, 60Hz, NC		
Efficiency	VIN (Vac)	12V & 24V	36V, 48V & 56V
	115	88%	90%
	277	90%	92%

The specification above is based on 25°C ambient and where applicable at nominal input voltage of 100 to 277VAC.

### OUTPUT

Output Voltage	See model chart
Output Power	225 Watts max. with 200 LFM
Turn On Time	Less than 1 sec. @115Vac, Full Load
Hold-up Time	12 mSec min, 115Vac/60Hz
Ripple and Noise	0.5%rms, 1% pk-pk, see chart
Total Regulation	+/- 3% combined line, load and initial setting
Switching Frequency	PFC: Variable 40 -150kHz Main Converter: Variable 35-200kHz, 65-70kHz at full load
Transient Response	For 5% to 50% or 50% to 5% load change: <20 mSec, return to 1% of nominal, $\Delta i/\Delta t$ <0.2A/uS Max voltage deviation=3% For 50% to 100% or 100% to 50% load change: <1 mSec, return to 1% of nominal, $\Delta i/\Delta t$ <0.2A/uS Max voltage deviation=3% For 5% to 100% or 100% to 5% load change: 25 mSec, return to 1% of nominal, $\Delta i/\Delta t$ <0.2A/uS Max voltage deviation=4%
Voltage Adjustability	+/- 5%
Minimum Load	Not required

The specification above is based on 25°C ambient and where applicable at nominal input voltage of 100 to 277VAC.



### SAFETY

Safety Standards	Approved to EN/CSA/IEC/UL62368-1
Drop Test	Operating: Half-sine, 20gpk, 10ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 gpk, 10 ms, 3axes, 6 shocks total

The specification above is based on 25°C ambient and where applicable at nominal input voltage of 100 to 277VAC.

### ISOLATION

Isolation	Input-Output: 3,000Vac Input-Ground: 1,800Vac Output-Ground: 500Vac
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### ENVIRONMENT

Operating Temperature	-10°C to +70°C (See Below Chart) Start Up at -40°C
Heat - Sink Temperature	To maintain Safety approval & life expectancy, heat-sink temperature should not exceed 85°C
Storage Temperature	-40°C to +85°C
Relative Humidity	5% to 95%, non-condensing
Weight	370g "H" option: TBD
Dimensions	Standard W:2.2 x L: 4.1" x H:1.5" "L" option: W:2.2"x L:4.81" x H:1.5"
Altitude	Operating: -457 to 3000 m Non-operating: -457 to 12,192m
Vibration	Operating: 0.003g <sup>2</sup> /Hz, 1.5grms overall, 3 axes, 1 hr/axis Non-Operating: 0.026g <sup>2</sup> /Hz, 5.0grms overall, 3 axes, 10 min/axis

### EMI/EMC COMPLIANCE

Conducted Emissions	EN55015 (EN55032) Class B, FCC Part 15, Subpart B, Class B
Radiated Emissions	EN55022 (EN55032) Class A, FCC Part 15, Subpart B, Class A with 8dB Margin. Addition of cores on external wiring will help the system pass class B (Application notes are available)
EMI for Lighting Equipment	
Static Discharge Immunity	EN61000-4-2, 6kV Contact Discharge, 8kV air discharge
Radiated RF Immunity	EN61000-4-3, 3V/m
EFT/Burst Immunity	EN61000-4-4, 2kV/5kHz
Line Surge Immunity	EN61000-4-5, 1kV differential, 2kV common-mode
Conducted RF Immunity	EN61000-4-6, 3Vrms
Power Frequency Magnetic Field Immunity	EN61000-4-8, 3A/m
Voltage Dip Immunity	EN61000-4-11, 100%, 10ms; 30%, 500ms; 60%, 100ms; Performance Criteria A, A, & A at 58% load
Line Harmonic Emissions	EN61000-3-2, Class A, D For Class C from 1W input power to full load by 10% increment
Flicker Test	EN61000-3-3, Complies (dmax<6%)

The specification above is based on 25°C ambient and where applicable at nominal input voltage of 100 to 277VAC.



### PROTECTION

Overvoltage Protection	OVP latch, remove AC input to reset
Short Circuit Protection	Hiccup Mode, auto recovery. A direct hard short may latch off the converter; remove AC input to reset
Overtemperature Protection	Sensing transformer temperature, 165°C, Auto recover
Overload Protection	Hiccup Mode

The specification above is based on 25°C ambient and where applicable at nominal input voltage of 100 to 277VAC.

### RELIABILITY

MTBF	438,540 hours. Conditions: Standard: Telcordia SR-332 issue 3 Ambient temp: 25c Voltage: 110v Level: 0/1 Environment: Ground, fixed, controlled
Lifetime	Standard W:2.2 x L: 4.1" x H:1.5" "L" option: W:2.2"x L:4.81" xH:1.5"

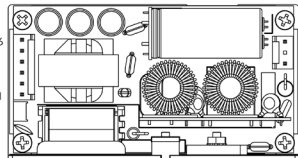
The specification above is based on 25°C ambient and where applicable at nominal input voltage of 100 to 277VAC.

Ambient	Cooling Method	Wattage (watts Max.)
50°C	Forced Air, 200 LFM	225
60°C	Forced Air, 200 LFM	190
70°C	Forced Air, 200 LFM	160
50°C with Max. Temperature of heat-sink to be held under TBD°C	Conduction	180
60°C with Max. Temperature of heat-sink to be held under TBD°C	Conduction	165
50°C	Conduction	140

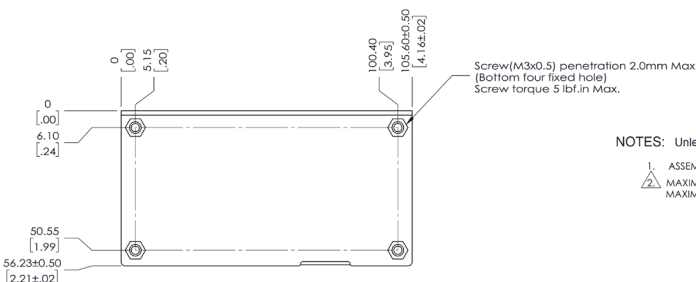
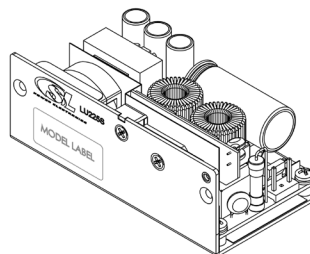
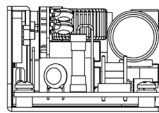
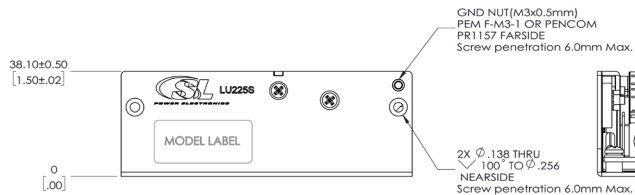


### MECHANICAL DRAWING

#### Standard



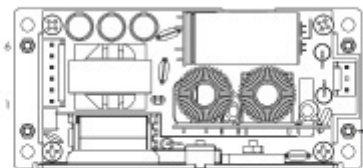
CONNECTOR INFORMATION			
INPUT (J1)		MATING CONNECTOR Tyco/AMP 640250-3 Terminals: 3-640252-1	CONFIGURATION #1 AC NEUTRA #2 EMPTY #3 AC LINE
OUTPUT (J3)		MATING CONNECTOR AMP 640250-6 Terminals: 3-640252-1	CONFIGURATION Pin 1 -Vout Pin 2 -Vout Pin 3 -Vout Pin 4 +Vout Pin 5 +Vout Pin 6 +Vout



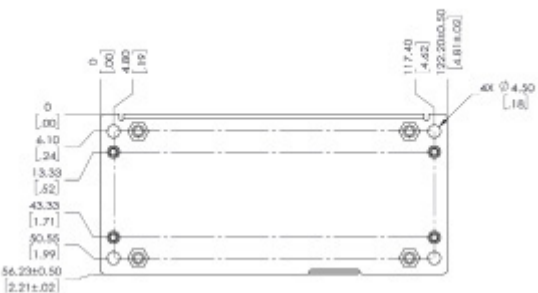
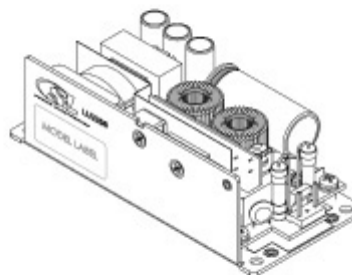
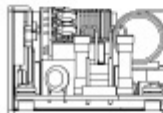
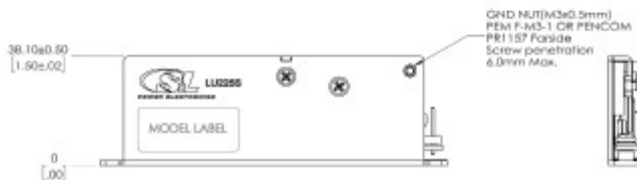
NOTES: Unless otherwise specified.

- ASSEMBLY AND PARTS ARE RoHS COMPLIANT.
- MAXIMUM GND SCREW (M3.0x0.5MM) PROTRUSION FROM OUTSIDE SURFACE IS 6.0mm [ 236 INCH].  
MAXIMUM TORQUE IS 0.55 N.m (5 IN.LB).

#### Long Version KL



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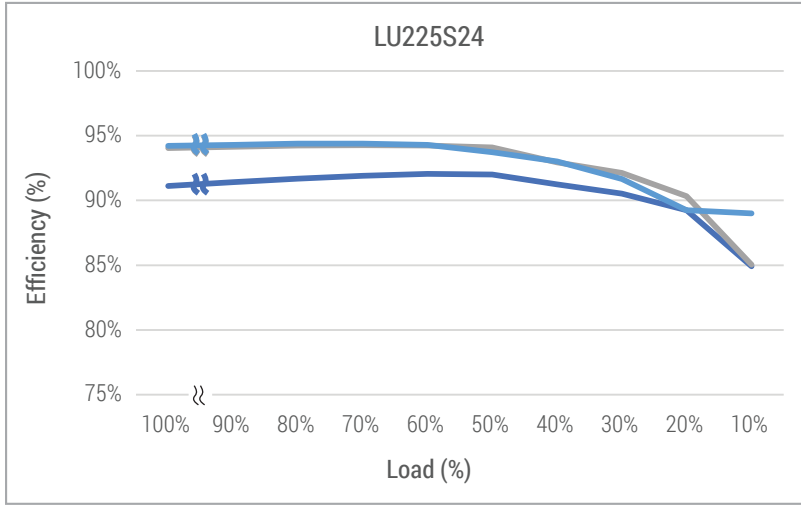


NOTES: Unless otherwise specified.

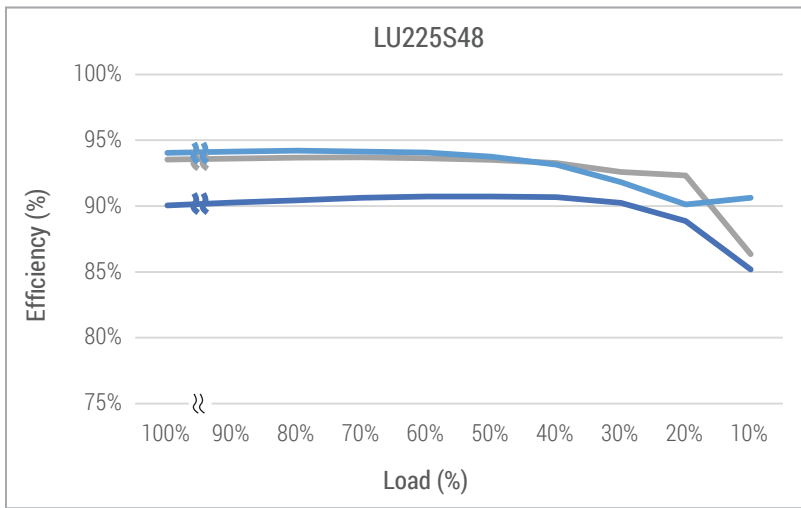
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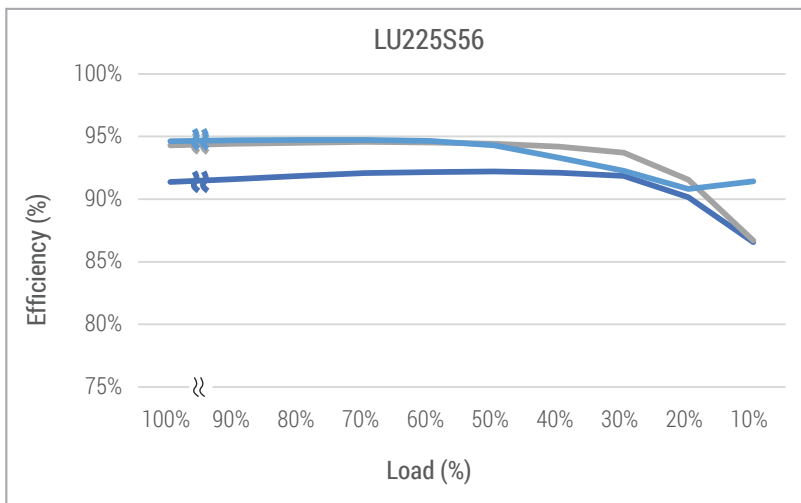
## Efficiency Curve



	115Vac
	230Vac
	300Vac



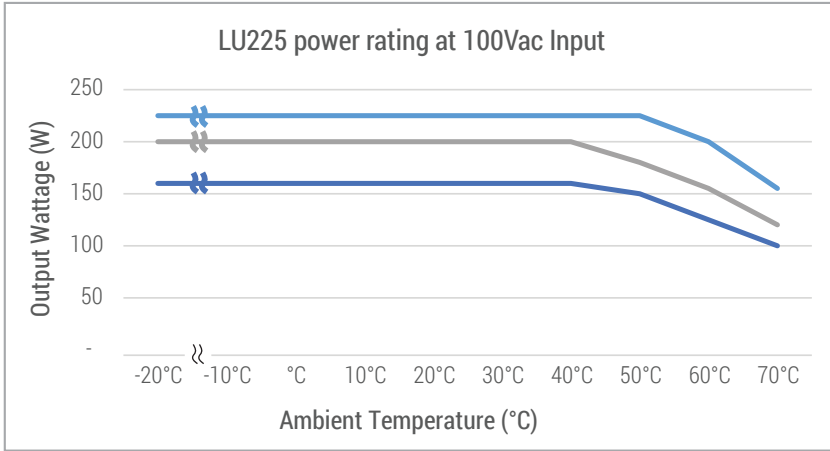
	115Vac
	230Vac
	300Vac






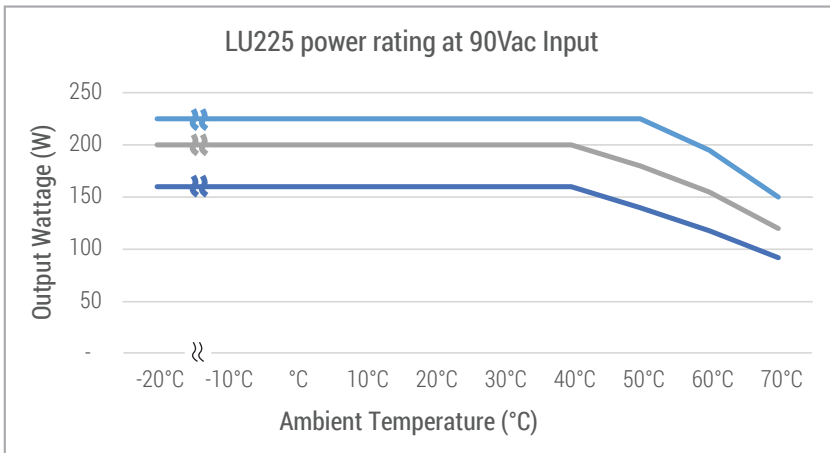
	115Vac
	230Vac
	300Vac






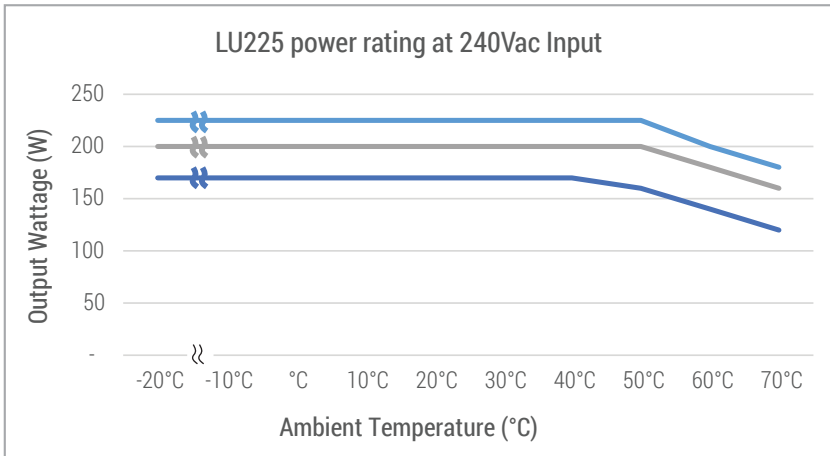
### Power Rating Curve






	Convection
	Conduction
	Air Cooling



	Convection
	Conduction
	Air Cooling



	Convection
	Conduction
	Air Cooling

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