LU225 Family

225W Single Output
LED & Industrial Grade

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[1]	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, 1ø
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	<500µA@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, Δi/Δt <0.2A/uS Max voltage deviation=3% For 50% to 100% or 100% to 50% load change: <1 mSec, return to 1% of nominal, Δi/Δt<0.2A/uS Max voltage deviation=3% For 5% to 100% or 100% to 5% load change: 25 mSec, return to 1% of nominal, Δi/Δt <0.2A/uS Max voltage deviation=4%
Voltage Adjustability	+/- 5%
Minimum Load	Not required

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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

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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: 0.003g²/Hz, 1.5grms overall, 3 axes, 1 hr/axis Non-Operating: 0.026g²/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%)

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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

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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"

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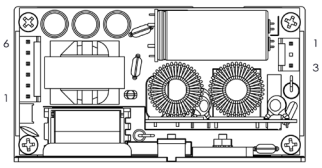
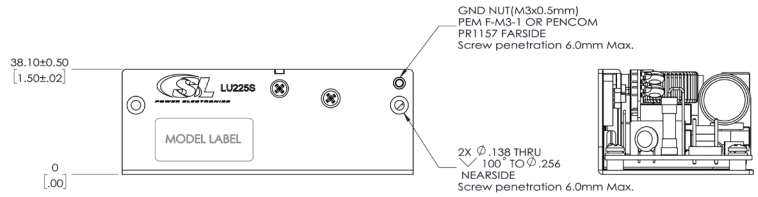
Ambient	Cooling Method	Wattage (watts Max.)
50˚C	Forced Air, 200 LFM	225
60˚C	Forced Air, 200 LFM	190
70˚C	Forced Air, 200 LFM	160
50˚C with Max. Temperature of heat-sink to be held under TBD˚C	Conduction	180
60˚C with Max. Temperature of heat-sink to be held under TBD˚C	Conduction	165
50˚C	Conduction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

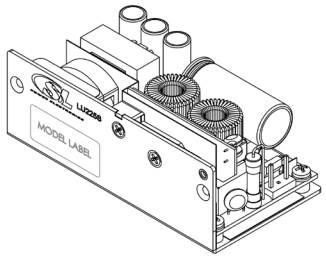
MECHANICAL DRAWING

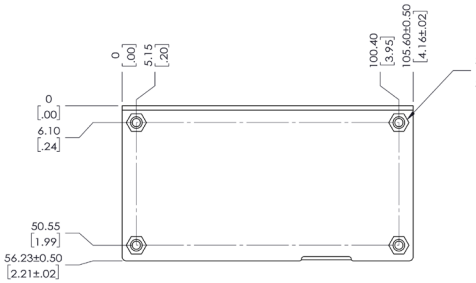
Standard



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



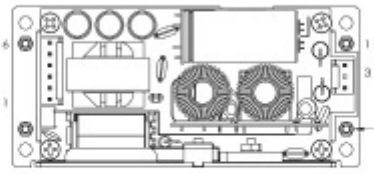




NOTES: Unless otherwise specified.

1. ASSEMBLY AND PARTS ARE RoHS COMPLIANT.
2. 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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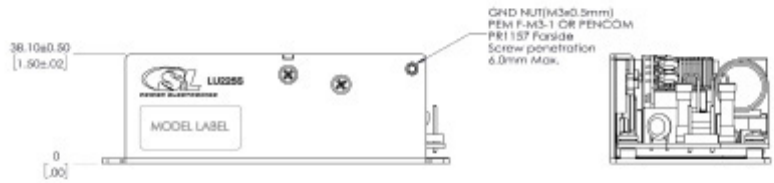

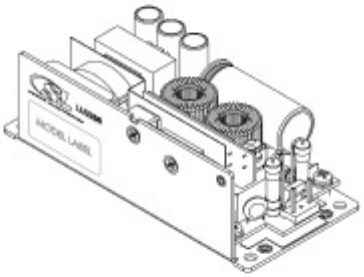

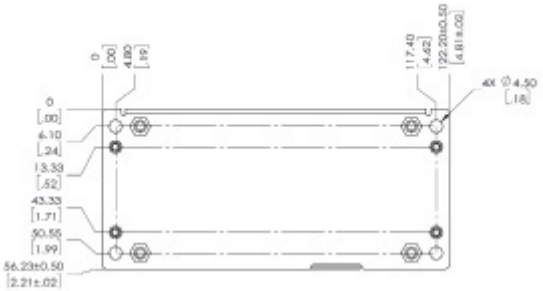

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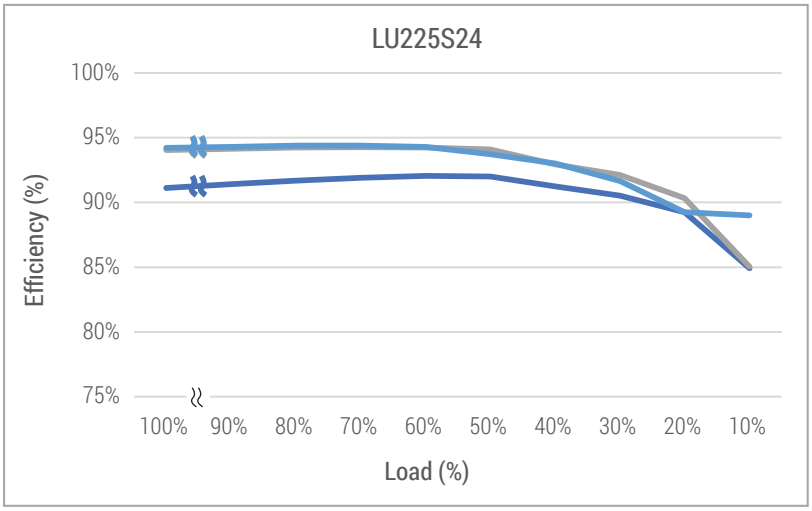
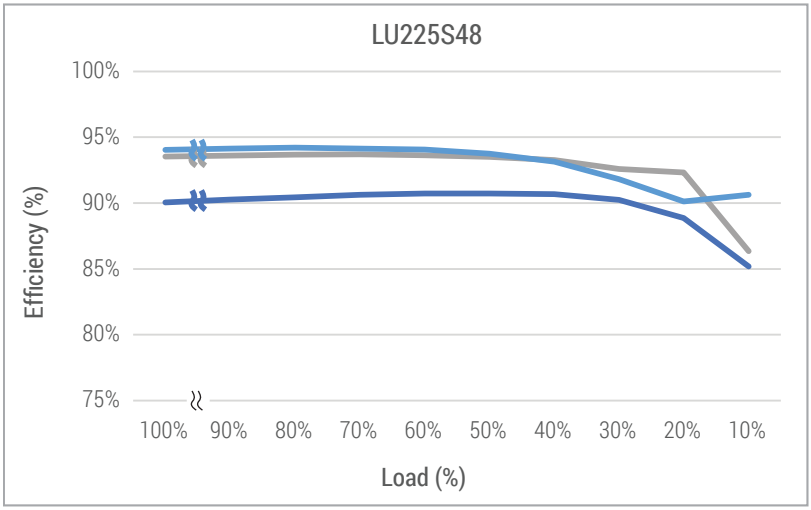
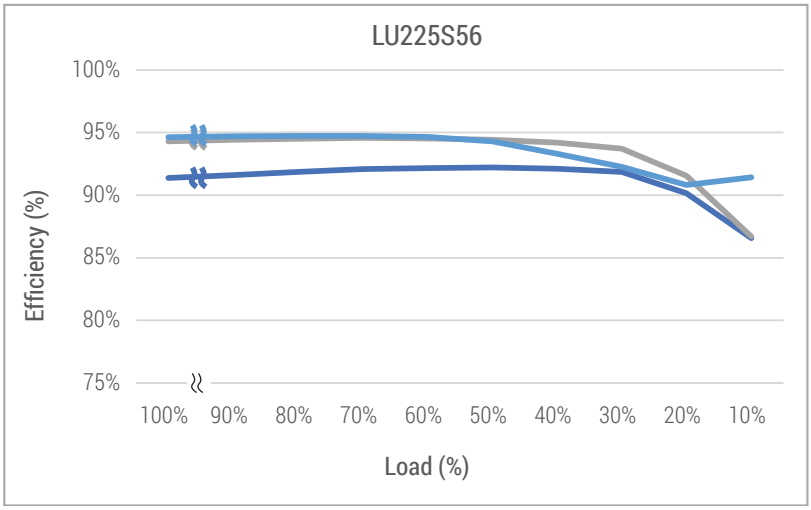
Efficiency Curve



	115Vac
	230Vac
	300Vac



	115Vac
	230Vac
	300Vac



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