

ELECTRICAL SPECIFICATIONS

Input		
Input range	90 - 264 Vac (Operating) 115/230 Vac (Nominal)	
Frequency	47 - 63 Hz	
Input fusing	Internal fuse on both L and N lines	
Inrush current	50 A	
Power factor	> 0.92 Full load	
Harmonics	Meets EN61000-3-2; MIL-STD-461E(6); CE101; CE102; CS101; CS104	
Input current	3.4 A @ 90 Vac full load	
Hold up time	16 ms minimum at 115 Vac; 100% load	
Efficiency	230 Vac; 100% load 12 V - 89% typical 24 V - 91% typical 48 V - 91.5% typical	
Leakage current	< 275 μ A at 230 Vac	
Output		
Output rating	12 V @ 20.8 A 24 V @ 10.4 A 48 V @ 5.2 A	
Set point	\pm 0.2%	Factory set point
Total regulation range	\pm 2%	Line/Load/Temperature
Rated load	250 W maximum	
Minimum load	0 A Load	No loss of regulation
Capacitive load	0 - 330 μ F/Amp	
Output voltage overshoot		No overshoot/undershoot outside the regulation band during on or off cycle
Constant output voltage adjustment range	12 V: +10 / -10% 24 V: +14.6 / -15% 48 V: +15% / -15%	Adjust via VR2
Constant output current adjustment range	+0 / -50%	Adjust via VR1 CC mode supported from Vo nominal down to 80% Vo
Output ripple and noise	1%	0 to 330 μ F/Amp
Transient response	\pm 5% Vo max transient; recovery < 500 μ s max	50% Load Step @ 1 A/ μ s Step Load verified at: 50% to 100% Load; 90 - 264 Vac input; Capacitive load from 0 to 330 μ F/Amp
Remote sense	Capable of Stable Offset of \pm 0.5 Vdc at output cable termination	+SENSE (Red Wire); -SENSE (Black Wire)
Output On/Off	Remote On/Off referenced to secondary side. Positive or Negative logic user selectable via CN2. Factory default is Positive logic	On/Off (Orange Wire); On/Off Return (White Wire)
Overcurrent protection (OCP)	\leq 150% Io	Auto-recovery
Overvoltage protection (OVP)	110% to 135% Vo	Latching mode; Requires input AC recycle
Overtemperature protection (OTP)		Auto-recovery; hiccup mode
Output isolation	3000 Vac Input to Output 1500 Vac Input to Ground 500 Vac Output to Ground	

ENVIRONMENTAL SPECIFICATIONS

Operating temperature	Suffix 4P (Conduction): -40 °C to +85 °C Baseplate Temperature Suffix 7P (Convection): -40 °C to +85 °C Ambient Temperature
Storage temperature	-40 °C to +85 °C
Humidity	10% to 100% (Condensing & Non-Condensing)
Altitude	Operating: 13,000 feet Non-Operating: 50,000 feet
Shock	IEC68-2-27
Vibration	IEC68-2-6 / IEC721-3-2
Ingress protection	IP64 Rated
MTBF (calculated)	> 780,000 hours at 100% load; Low line; Telcordia SR-332

ORDERING INFORMATION

Model Number	Output	Adjustment Range	Output Current		Output Ripple P/P ¹	Line/ Load Regulation
			Min	Max		
LCC250-12U-4P	12 V	±10%	0 A	20.8 A	1% 2	±2%
LCC250-12U-4PE	12 V	±10%	0 A	20.8 A	1% 2	±2%
LCC250-12U-7P	12 V	±10%	0 A	20.8 A	1% 2	±2%
LCC250-12U-7PE	12 V	±10%	0 A	20.8 A	1% 2	±2%
LCC250-24U-4P	24 V	+14.6 / -15%	0 A	10.4 A	1% 3	±2%
LCC250-24U-4PE	24 V	+14.6 / -15%	0 A	10.4 A	1% 3	±2%
LCC250-24U-7P	24 V	+14.6 / -15%	0 A	10.4 A	1% 3	±2%
LCC250-24U-7PE	24 V	+14.6 / -15%	0 A	10.4 A	1% 3	±2%
LCC250-48U-4P	48 V	±15%	0 A	5.2 A	1% 4	±2%
LCC250-48U-4PE	48 V	±15%	0 A	5.2 A	1% 4	±2%
LCC250-48U-7P	48 V	±15%	0 A	5.2 A	1% 4	±2%

ORDERING INFORMATION (CONTINUED)

- Output ripple measured at the end of the output cable terminated with 10 μF tantalum cap in parallel with 0.1 μF ceramic capacitor.
- 12 V: 1% limit is achieved with 2X 820 μF /16 V external cap (e.g. PLG1C821MDO1 from Nichicon or equivalent). Otherwise, maximum limits are 1.5% at $T_a \geq 0^\circ\text{C}$ and 2.0% max at $T_a < 0^\circ\text{C}$.
- 24 V: 1% limit is achieved with 2X 820 μF /35 V external cap (e.g. UPM1V821MHD1TO from Nichicon or equivalent). Otherwise, maximum limits are 1.5% at $T_a \geq -10^\circ\text{C}$. 2.0% max ripple at $T_a < -10^\circ\text{C}$ is met with below external capacitance:

Ambient Temperature ($^\circ\text{C}$)	-20	-25	-30	-35	-40
Recommended External Capacitors (μF)	1000	2200	3300	12000	22000

- 48 V: 1% limit is achieved with 3X 470 μF /63 V external cap. Otherwise, maximum limits are 1.5% max at $T_a \geq 0^\circ\text{C}$ and 2% max at $T_a < 0^\circ\text{C}$.
- Two (2) LCC250 model numbers exist with same electrical performance except for safety approvals as shown below:
 - LCC250-XXu-xPE version = Europe/USA/China safety approved & carries CE/TUV, cUL, & CCC logos
 - LCC250-XXu-xP version = Europe/USA safety approved & carries CE/TÜV & cUL logos
- 12 V unit requires external filtering for MIL-STD-461E compliance. Consult Artesyn Technical Support.
- Warranty: 2 years

ORDERING INFORMATION (CONTINUED)

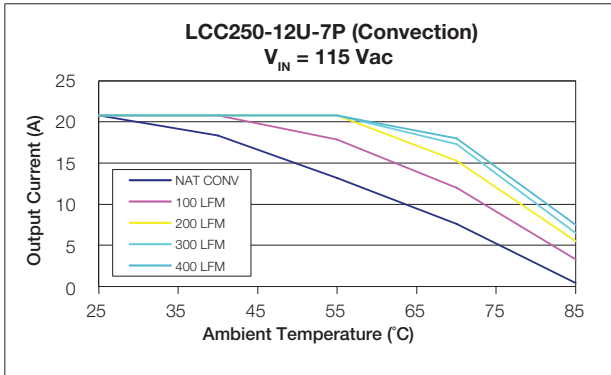


Fig 1. 12 V "4P" Suffix (Conduction) Output Current Derating

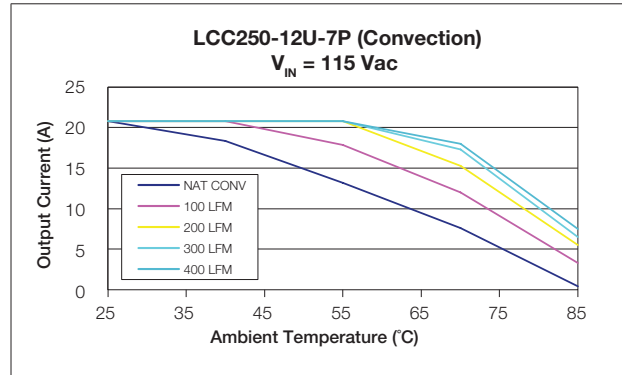


Fig 2. 12 V "7P" Suffix (Convection) Output Current Derating at 115 Vac

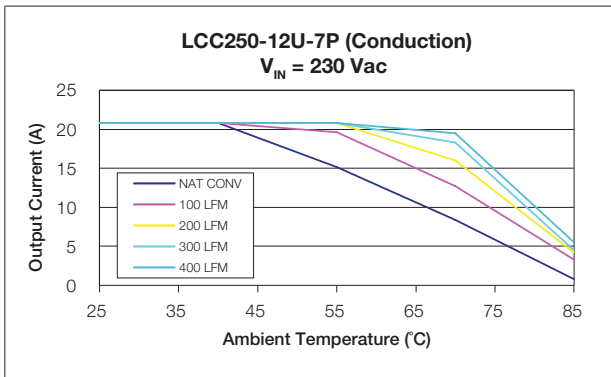


Fig 3. 12 V "7P" Suffix (Convection) Output Current Derating at 230 Vac

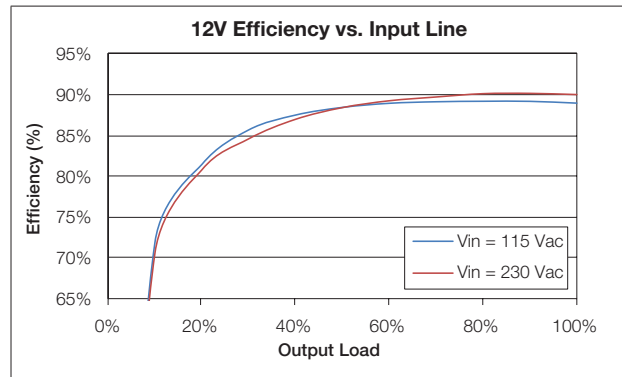


Fig 4. 12 V Efficiency Curve

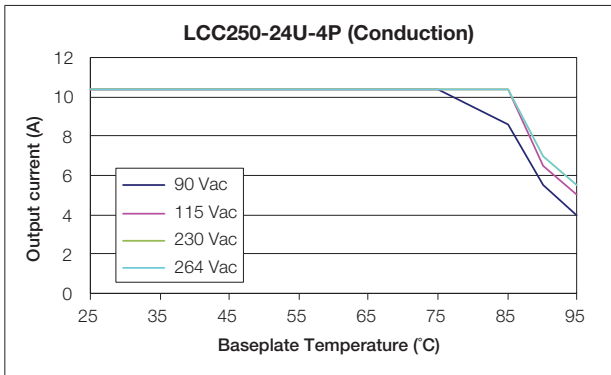


Fig 5. 24 V "4P" Suffix (Conduction) Output Current Derating

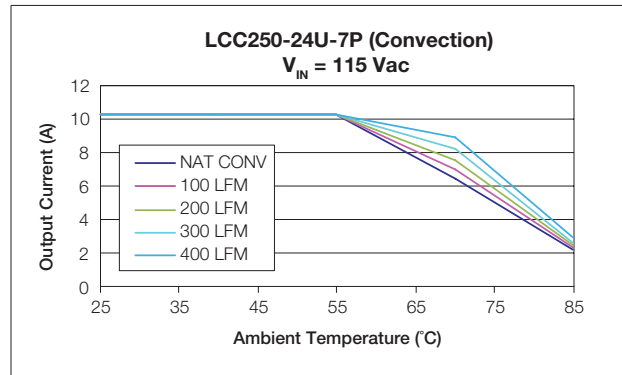


Fig 6. 24 V "7P" Suffix (Convection) Output Current Derating at 115 Vac

ORDERING INFORMATION (CONTINUED)

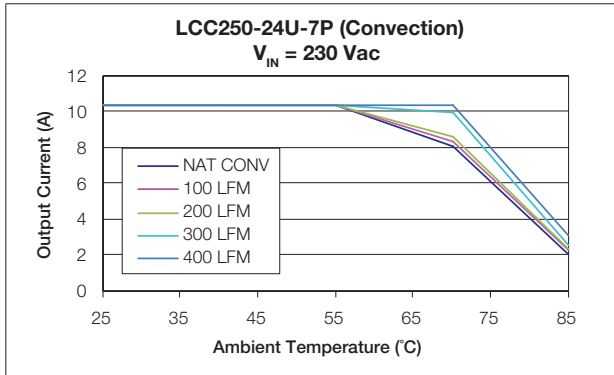


Fig 7. 24 V "7P" Suffix (Convection) Output Current Derating at 230 Vac

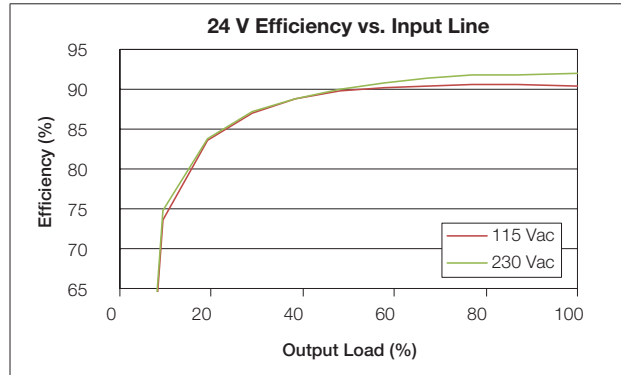


Fig 8. 24 V Efficiency Curve

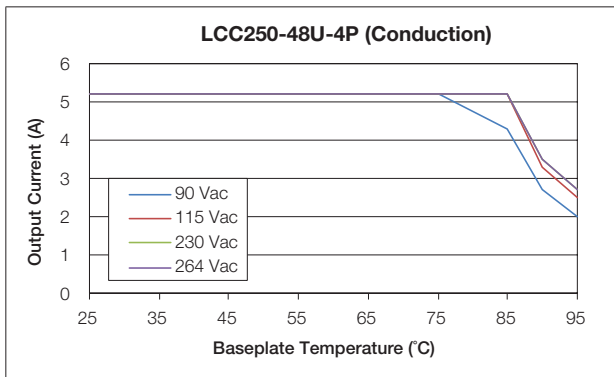


Fig 9. 48 V "4P" Suffix (Conduction) Output Current Derating

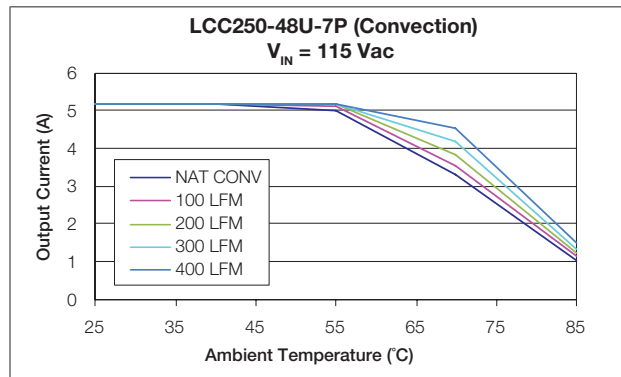


Fig 10. 48 V "7P" Suffix (Convection) Output

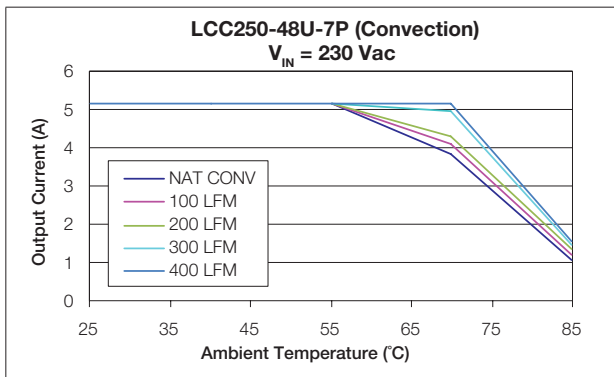


Fig 11. 48 V "7P" Suffix (Convection) Output Current Derating at 230 Vac

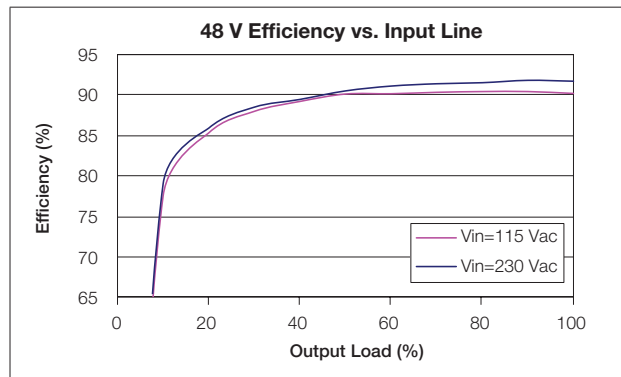
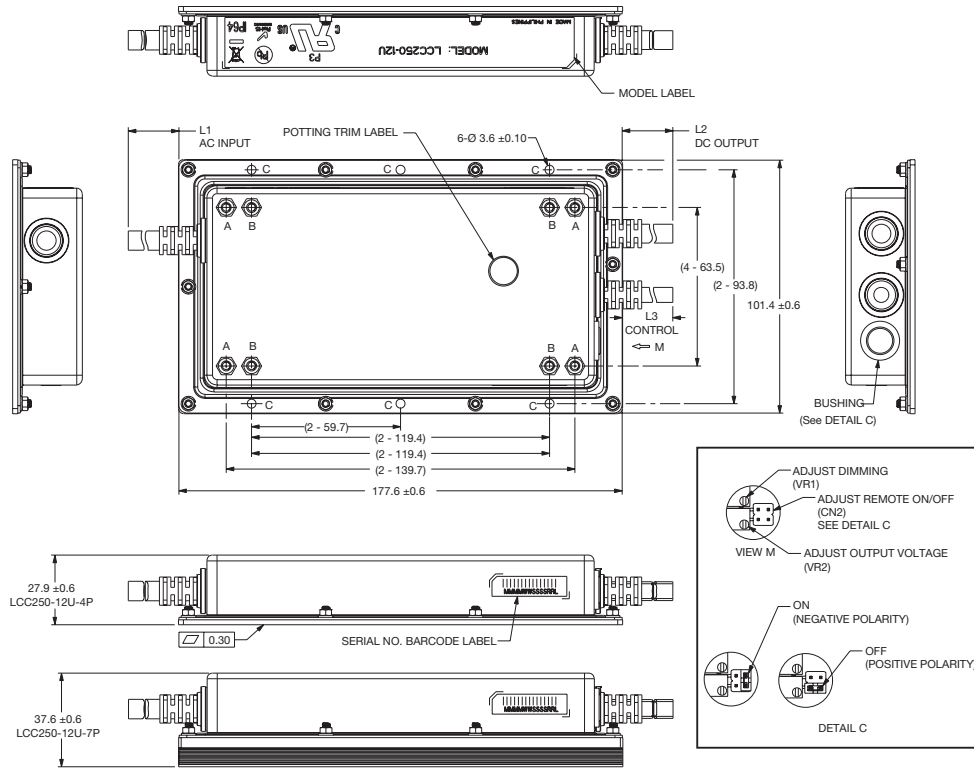


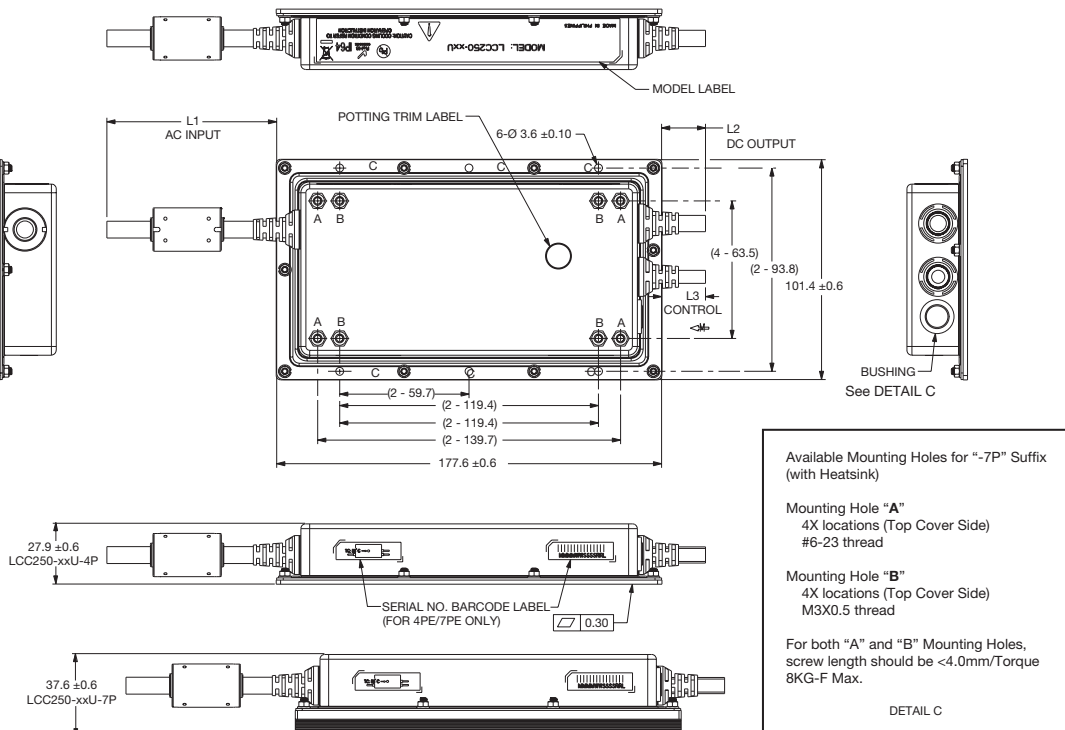
Fig 12. 48 V Efficiency Curve

MECHANICAL DRAWINGS

12V



24V / 48V



MECHANICAL DRAWINGS (CONTINUED)

Cable	Length	Designation	Wire Color	Wire Gauge
AC Input Cable	L1 = 300 ±10 mm	L = Live	Brown	AWG#18
		N = Neutral	Blue	AWG#18
		PE = Primary Earth	Green/Yellow	AWG#18
DC Output Cable	L2 = 300 ±10 mm	+Output	Blue	AWG#14
		-Output	Gray	AWG#14
Control Cable	L3 = 300 ±10 mm	Dimming	Brown	AWG#26
		Dimming Return	Yellow	AWG#26
		ON/OFF	Orange	AWG#26
		ON/OFF Return	White	AWG#26
		Sense	Red	AWG#26
		Sense Return	Black	AWG#26



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