

**FEATURES**

- Soft Start
- 100% Burn In
- High Reliability
- Remote ON/OFF
- Up to 89% Efficient
- Cost Efficient Solution
- Fast Transient Response
- Fixed Switching Frequency
- Encapsulated for Added Ruggedness
- Short Circuit and Over Current Protected
- Remote Sense Compensation to 10% Vout

**APPLICATIONS**

- For use in 12V and 24V Battery Applications
- For use in Intermediate and Distributed Bus Architectures (IBA)
- Telecommunications Equipment
- Network (LANs/WANs) Equipment
- Next Generation Low Voltage, High Current Microprocessors and ICs



**DESCRIPTION**

The CMLV series consists of high density, low input voltage, isolated converters on a chassis mount with a wide input voltage range. Low input voltage converters are uncommon in the industry and the CMLV series offers the flexibility of operation with both 12V and 24V busses. These state-of-the-art converters' features include fast transient response, short circuit protection, over current protection, soft start, and many other features that are required for today's demanding applications.

**SPECIFICATIONS: CMLV Series**

*All specifications apply @ 25°C ambient unless otherwise noted*

**INPUT SPECIFICATIONS**

Input Voltage Range .....	10-36VDC
UVLO Turn On at .....	9.6VDC max
UVLO Turn off at .....	9.5VDC max
Input Filter .....	See Technical Datasheet
Remote ON/OFF .....	Logic Enable referenced to -Vin,
No suffix .....	Open/High=ON, Low=OFF
"R" suffix .....	Open/High=OFF, Low=ON
Input Reflected Ripple current.....	225mA typ.
Input Surge Voltage .....	50VDC max for 100ms

**OUTPUT SPECIFICATIONS**

Output Voltage .....	see table
Voltage Accuracy .....	±1%
Output Adjustability .....	±10%
Output Current .....	see table
Output Power .....	see table
Line Regulation (LL to HL at FL) .....	±0.2%
Load Regulation (20% to 100% load).....	±0.2%
Ripple/Noise (20 MHz BW) .....	1.5%
Remote Sense Compensation .....	10%
Transient Response (50% load step).....	250ms

**PROTECTION SPECIFICATIONS**

Current Limit .....	110-140%
Short Circuit Protection .....	Continuous

**GENERAL SPECIFICATIONS**

Efficiency .....	To 89%
Switching Frequency .....	400KHz typ.
Isolation Voltage	
Input to Output .....	1500VDC
Input to Case .....	500VDC
Output to Case.....	500VDC
Isolation Resistance.....	10MΩ min.

**ENVIRONMENTAL SPECIFICATIONS**

Operating Temperature (case).....	-40°C ~ +100°C
Storage Temperature.....	-50°C ~ +125°C
Humidity.....	To 95%
Temperature Coefficient .....	±0.2% / °C
MTBF .....	2,563,116 hours

**PHYSICAL SPECIFICATIONS**

Weight.....	7.52oz (213g)
Dimensions (L x W x H) .....	5.70 x 3.40 x 1.34 inches
	144.8 x 86.4 x 34 mm
Case Material.....	thick, aluminum alloy

*Due to advances in technology, specifications subject to change without notice*

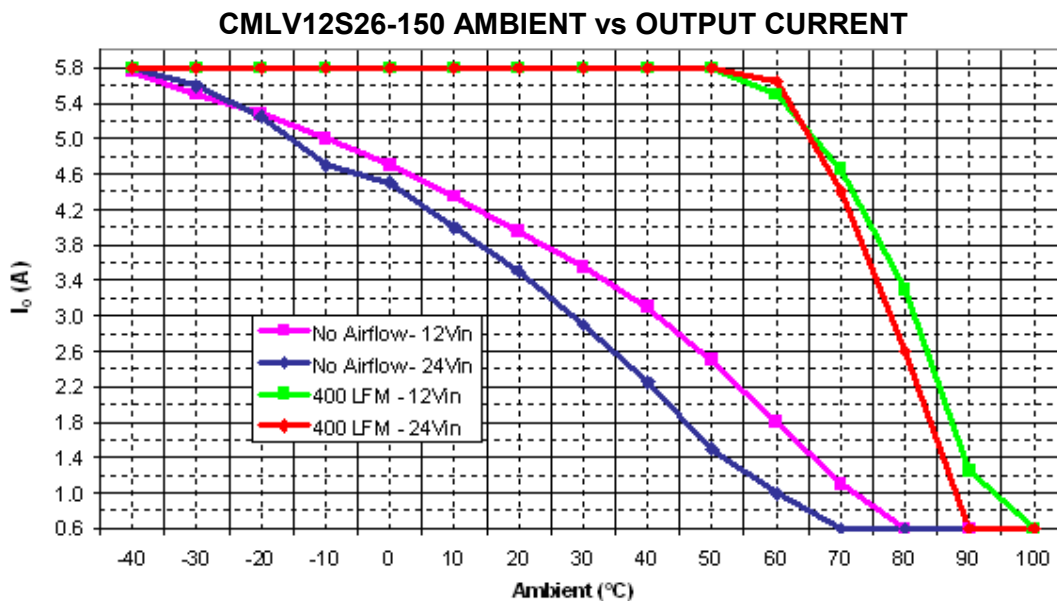
**MODEL SELECTION GUIDE**

Model Number for Threaded Inserts	Model Number for Thru-Hole Inserts	Input Voltage Range	Output Voltage	Output Current	Output Power
CMLV12S8-100	CMLV12S8-100TH	12/24 VDC (10 - 36 VDC)	8 VDC	12.5A	100W
CMLV12S12-100	CMLV12S12-100TH		12 VDC	8.3A	100W
CMLV12S12-120	CMLV12S12-120TH		12 VDC	10.0A	120W
CMLV12S12-150	CMLV12S12-150TH		12 VDC	12.5A	150W
CMLV12S15-50	CMLV12S15-50TH		15 VDC	3.3A	50W
CMLV12S15-100	CMLV12S15-100TH		15 VDC	6.6A	100W
CMLV12S15-125	CMLV12S15-125TH		15 VDC	8.3A	125W
CMLV12S15-150	CMLV12S15-150TH		15 VDC	10.0A	150W
CMLV12S18-150	CMLV12S18-150TH		18 VDC	8.33A	150W
CMLV12S20-100	CMLV12S20-100TH		20 VDC	5.0A	100W
CMLV12S24-150	CMLV12S24-150TH		24 VDC	6.25A	150W
CMLV12S26-150	CMLV12S26-150TH		26 VDC	5.76A	150W
CMLV12S28-150	CMLV12S28-150TH		28 VDC	5.35A	150W
CMLV12S48-150	CMLV12S48-150TH		48VDC	3.125A	150W

**NOTES**

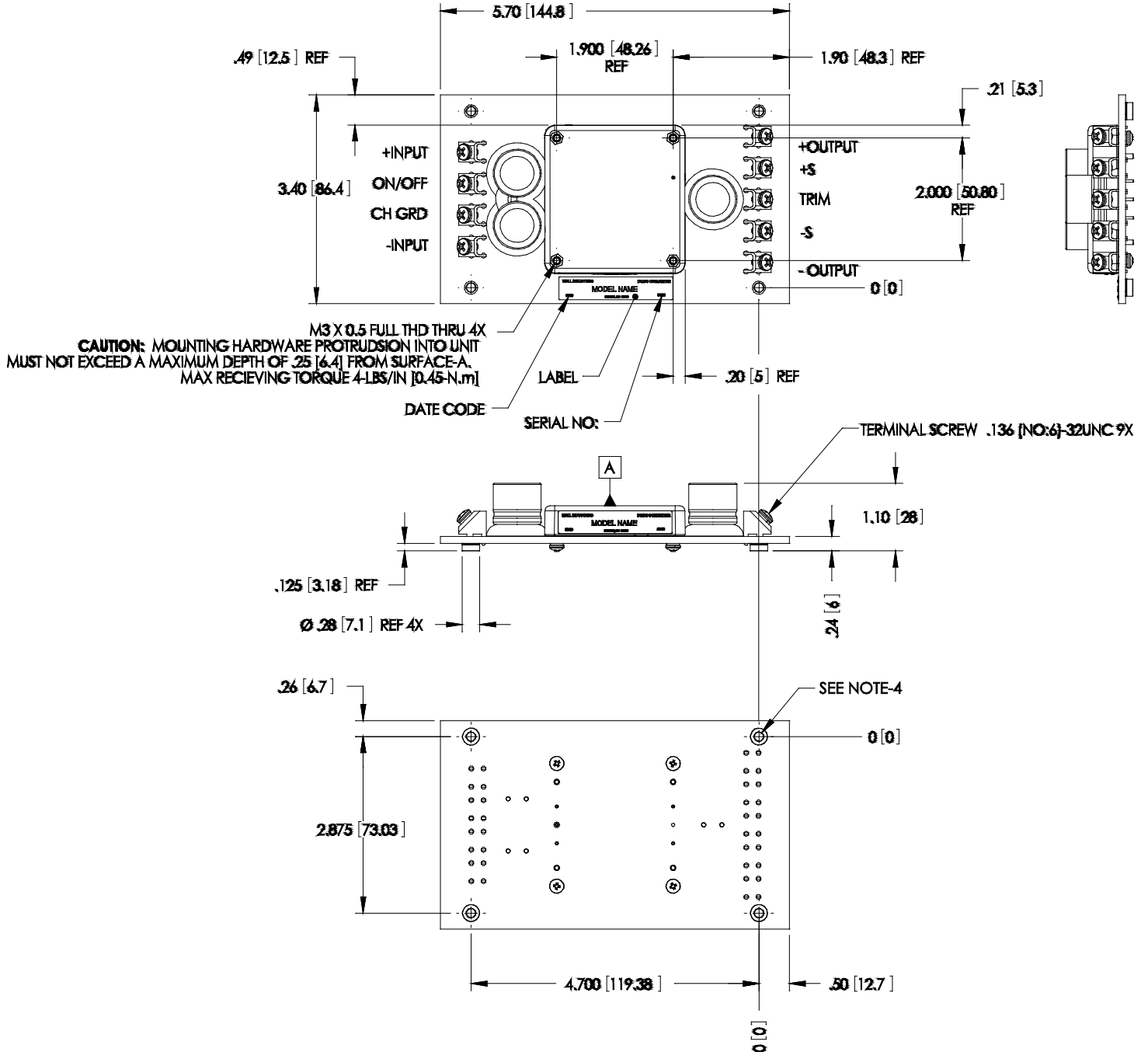
1. Pin to pin tolerance:  $\pm 0.01"$  [ $\pm 0.3\text{mm}$ ], pin diameter tolerance:  $\pm 0.005"$  [ $\pm 0.13\text{mm}$ ].
2. Case material of the DC/DC converter: 0.040" [1.02mm] thick, aluminum alloy 3003-0, per: QQA 250/2.
3. Unit comes with either 3M x 0.5 threaded thru inserts or for  $\varnothing.125$  thru-hole for the chassis mount board add "TH" suffix to model part number (Ex: CMLV12S15-100TH).
4. Active high enable is standard; for active low enable add the suffix "R" to the part number (Ex: CMLV12S15-100R).

**DERATING CURVE**



## MECHANICAL DRAWING

Unit: inches [mm]



### NOTES:

- PIN TO PIN TOLERANCE  $\pm 0.01$  [ $\pm 0.3$ ], PIN DIAMETER TOLERANCE:  $\pm 0.005$  [ $\pm 0.13$ ].
- CASE MATERIAL OF THE CONVERTER:  $\varnothing.040$  [1.02] THICK, ALUMINUM ALLOY 3003-0, PER: QQA 250/2.
- UNLESS OTHERWISE SPECIFIED.

### TO ORDER:

- UNIT COMES WITH EITHER .112 (NO.4)-40UNC-2B THREADED THRU INSERTS OR FOR  $\varnothing.125$  THRU-HOLE FOR THE CHASSIS MOUNT BOARD ADD: "TH" SUFFIX TO MODEL PART NUMBER. EXAMPLE: CMLV12S15-100TH

## COMPANY INFORMATION

Wall Industries, Inc. has created custom and modified units for over 50 years. Our in-house research and development engineers will provide a solution that exceeds your performance requirements on-time and on budget. Our ISO9001: 2015 certification is just one example of our commitment to producing a high quality, well-documented product for our customers.

Our past projects demonstrate our commitment to you, our customer. Wall Industries, Inc. has a reputation for working closely with its customers to ensure each solution meets or exceeds form, fit and function requirements. We will continue to provide ongoing support for your project above and beyond the design and production phases. Give us a call today to discuss your future projects.

Contact **Wall Industries** for further information:

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