FEATURES

- Soft Start
- 100% Burn In
- High Reliability
- Remote ON/OFF
- Up to 87% Efficient
- Cost Efficient Solution
- Fast Transient Response
- Fixed Switching Frequency
- Optional Heatsink Available
- *Economy Version of the LV Series*
- Short Circuit and Over Current Protected
- Remote Sense Compensation to 10% Vout
- Optional Encapsulation for Added Ruggedness

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 ELV series is an economy version of our LV series. The ELV series consists of high density, low input voltage, isolated converters with a wide input voltage range. Low input voltage converters are uncommon in the industry and the ELV series offers the flexibility of operation with both 12V and 24V busses. This state-of-the-art converter's 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. This series is available in both encapsulated and open frame designs.

SPECIFICATIONS: *ELV Series*

All specifications apply @ 25°C ambient unless otherwise noted

INPUT SPECIFICATIONS

Input Voltage Range	10 - 36VDC
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
Temperature Coefficient	±0.2% / °C

PROTECTION SPECIFICATIONS

Current Limit	110~140%
Short Circuit Protection	Continuous

GENERAL SPECIFICATIONS

Efficiency	Up to 87%
Switching Frequency	300KHz 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%
MTBF	2,563,116 hours

PHYSICAL SPECIFICATIONS

Weight	4oz (113g)
Dimensions	
Encapsulated	2.28 x 2.40 x 0.50 inches [61.0 x 57.9 x 12.7 mm]
Open Frame	2.18 x 2.30 x 0.53 inches [55.4 x 58.4 x 13.5 mm]
Case Material	aluminum alloy

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

MODEL SELECTION TABLE

Model Number for Threaded Inserts	Model Number for Thru-Hole Inserts	Input Voltage Range	Output Voltage	Output Current	Output Power
ELV12S15-50	ELV12S15-50TH	12 / 24 VDC (10 - 36 VDC)	15 VDC	3.33A	50W
ELV12S18-50	ELV12S18-50TH		18 VDC	2.78A	50W
ELV12S8-100	ELV12S8-100TH		8 VDC	12.5A	100W
ELV12S12-100	ELV12S12-100TH		12 VDC	8.3A	100W
ELV12S15-100	ELV12S15-100TH		15 VDC	6.67A	100W
ELV12S18-100	ELV12S18-100TH		18 VDC	5.56A	100W
ELV12S20-100	ELV12S20-100TH		20 VDC	5.0A	100W

NOTES

1. This series is available in both encapsulated and open frame designs. For open frame design add the suffix “O” to the part number. (Ex: ELV12S15-100O)
2. Pin to pin tolerance: ±0 .01" [± 0.3mm], pin diameter tolerance: ± 0.005" [± 0.13mm].
3. Case material: 0.040" [1.02mm] thick, aluminum alloy 3003-0, per: QQA 250/2.
4. Unit comes with either 3M x 0.5 threaded thru inserts or for 0.125 thru-hole add "TH" suffix to model part number. (Ex: ELV12S12-100TH)
5. Optional heatsink available. Please call factory for ordering details.
6. Active high enable is standard; for active low enable add the suffix “R” to the part number (Ex: ELV12S15-100R).

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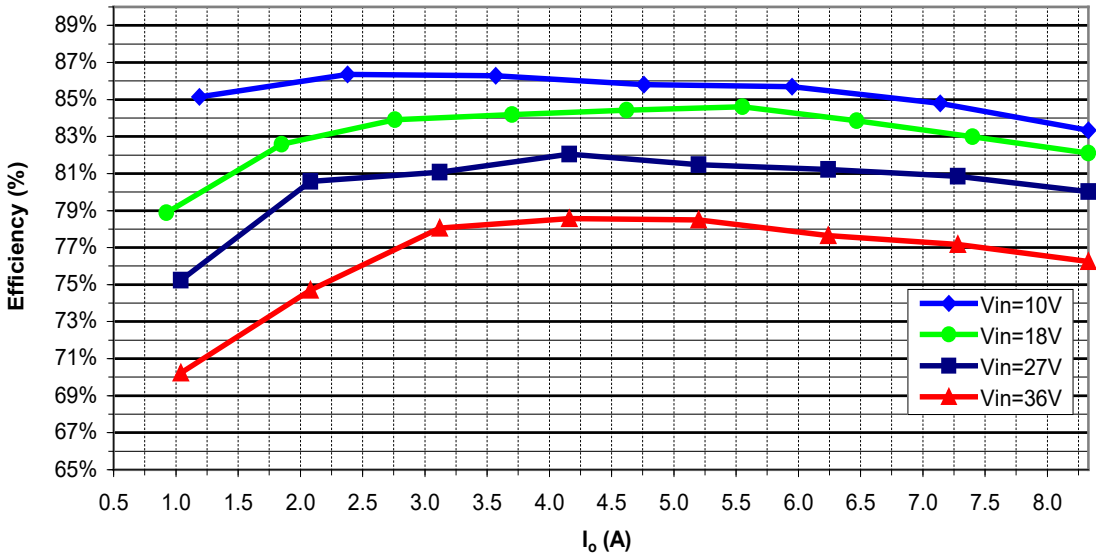
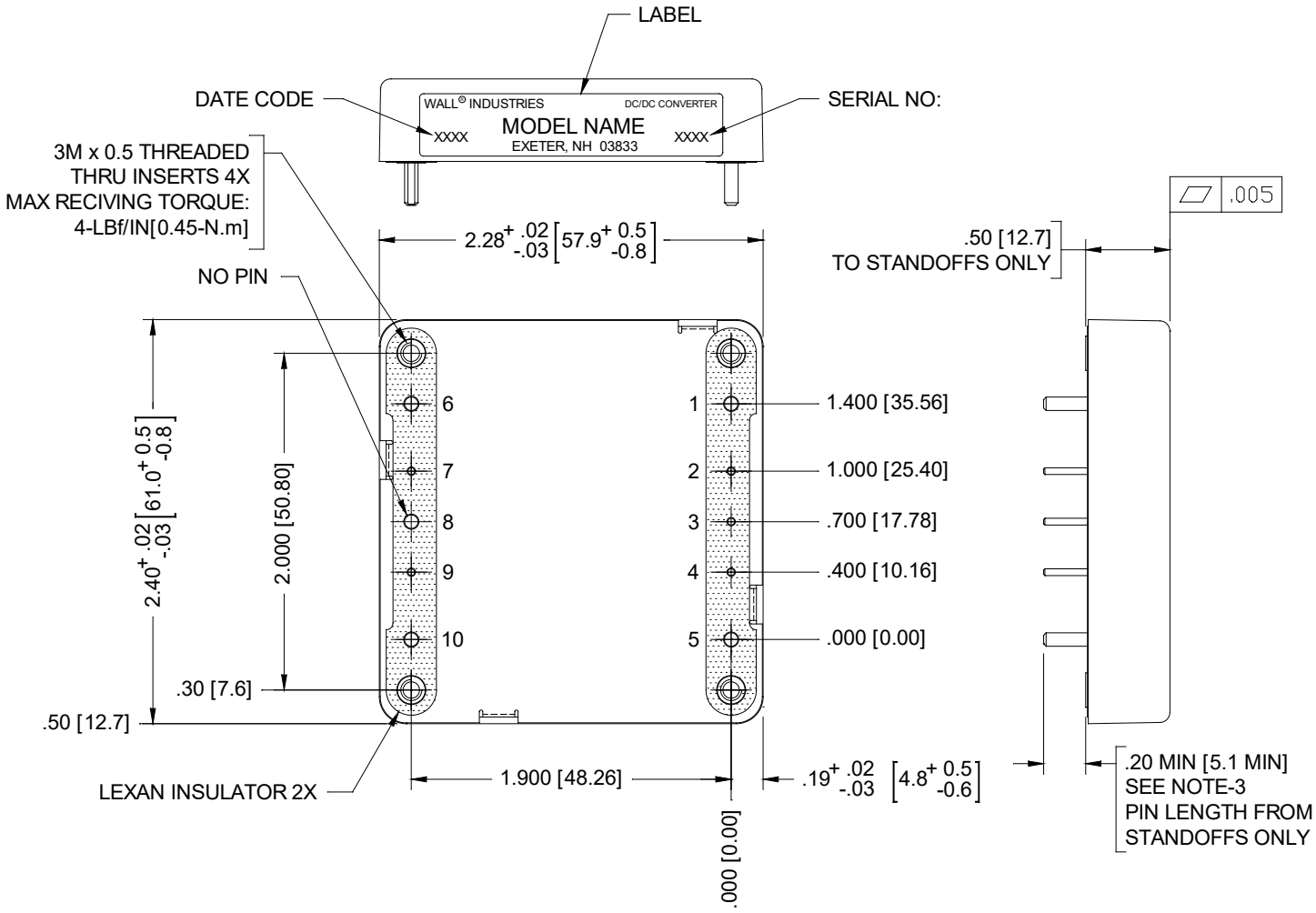
ELV12S12-100 Efficiency vs Output Current



MECHANICAL DRAWING (Standard)

Unit: inches [mm]



UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS ARE IN INCHES
[XX] ARE IN MILLIMETERS
APPLIED TOLERANCES:
ANGLES = ±1°
X.XX=±0.02 [0.5] X.XXX=±0.010 [0.25]
DO NOT SCALE DRAWING
INTERPRET DIMENSION AND TOLERACE
PER ASME Y14.5M - 1994

PIN DESIGNATION		PIN Ø
1	-OUTPUT	Ø.081
2	-SENSE	Ø.040
3	TRIM	Ø.040
4	+SENSE	Ø.040
5	+OUTPUT	Ø.081
6	-Vin	Ø.081
7	CASE GRD	Ø.040
8	NO PIN	
9	ON/OFF	Ø.040
10	+Vin	Ø.081

NOTES:

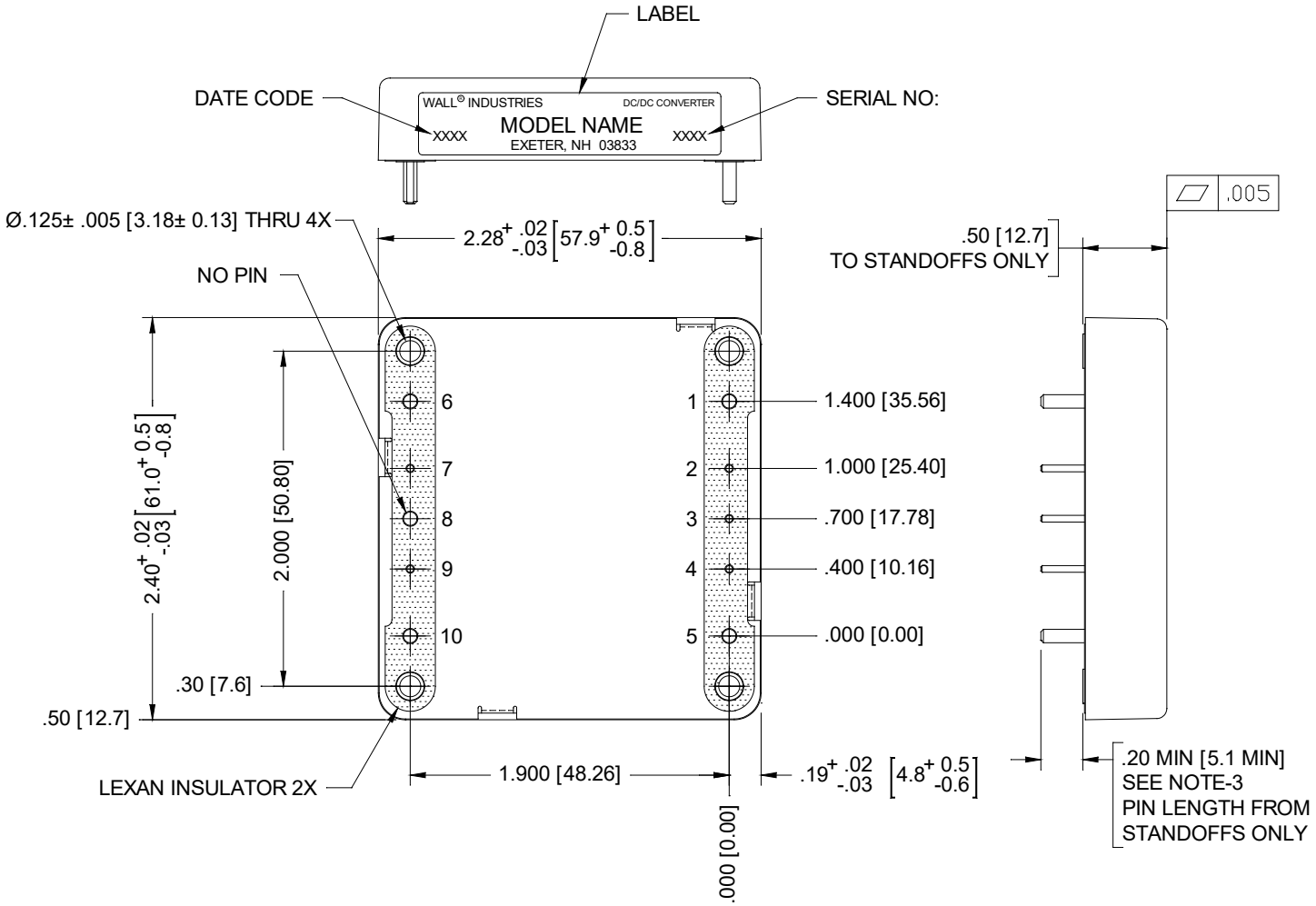
1. PIN TO PIN TOLERANCE ± .01 [±0.3],
   PIN DIAMETER TOLERANCE: ±.005 [±0.13].
2. CASE MATERIAL: .040 [1.02] THICK, ALUMINUM ALLOY 3003-0,
   PER: QQA 250/2.
3. UNLESS OTHERWISE SPECIFIED.

TO ORDER:

4. UNIT COMES WITH EITHER 3M x 0.5 THREADED THRU INSERTS OR FOR Ø.125 THRU-HOLE ADD: “TH” SUFFIX TO MODEL PART NUMBER. EXAMPLE: ELV12S15-100TH
5. CONSULT FACTORY FOR OPTIONAL HEAT SINK.

MECHANICAL DRAWING (Thru-Hole Version)

Unit: inches [mm]



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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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