

FEATURES

- 100% Burn In
- Synchronizable
- Output Trim $\pm 10\%$
- 1500VDC Isolation
- Operation to No Load
- Very Low Output Ripple
- Fast Transient Response
- Output Current up to 60A
- Fixed Switching Frequency
- 250-300 Watts Output Power
- Remote Sense Compensation
- Remote ON/OFF (Active High/Low)
- Optional Chassis Mount Version Available
- Short Circuit and Over Temperature Protection
- 90% Efficient at Half Load, 88% Efficient at Full Load



DESCRIPTION

The FB series is a high-density full brick converter that incorporates the desired features required in today's demanding low voltage bus applications. Its unique dual interleaved phase-shifted topology minimizes both input and output noise. When performance, reliability, and low cost are needed, the FB series delivers.

SPECIFICATIONS: FB Series

(All specifications apply @ 25°C ambient unless otherwise noted)

INPUT SPECIFICATIONS

Input Voltage Range	18 - 75VDC
Input Filter	1,000 μ F low ESR capacitor recommended
Reflected Ripple Current (nominal Vin and full load)	20mA
Remote ON/OFF	active high or active low
Input Current under Remote Off	1mA

OUTPUT SPECIFICATIONS

Output Voltage	see table
Voltage Accuracy	$\pm 1\%$
Output Adjustability	$\pm 10\%$
Output Current	see table
Output Power	see table
Line Regulation (LL to HL at FL)	$\pm 0.2\%$
Load Regulation (NL to FL)	$\pm 0.2\%$
Ripple/Noise (20 MHz BW)	1% Vout max
Temperature Coefficient	$\pm 0.02\%$ / °C max.
Transient Response (50% load step)	5% total deviation

PROTECTION SPECIFICATIONS

Current Limit	130%
Short Circuit Protection	Continuous, self re-setting
Over Temperature Protection	110°C, self re-setting

GENERAL SPECIFICATIONS

Efficiency	90% typical
Switching Frequency	700KHz typ.
Isolation Voltage (Input to Output)	1500VDC min.
Isolation Resistance	1G Ω min.
Isolation Capacitance	0.01 μ F

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature (ambient)	-40°C ~ +100°C (case)
Storage Temperature	-55°C ~ +125°C
Humidity	fully potted construction
Cooling	heatsink optional (see Note 4)

PHYSICAL SPECIFICATIONS

Weight	9.88oz (218g)
Dimensions (L x W x H)	4.6 x 2.4 x 0.50 in (117.0 x 61.0 x 12.7 mm)
Case Material	Aluminum alloy
Shielding	six-sided

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

MODEL SELECTION TABLE

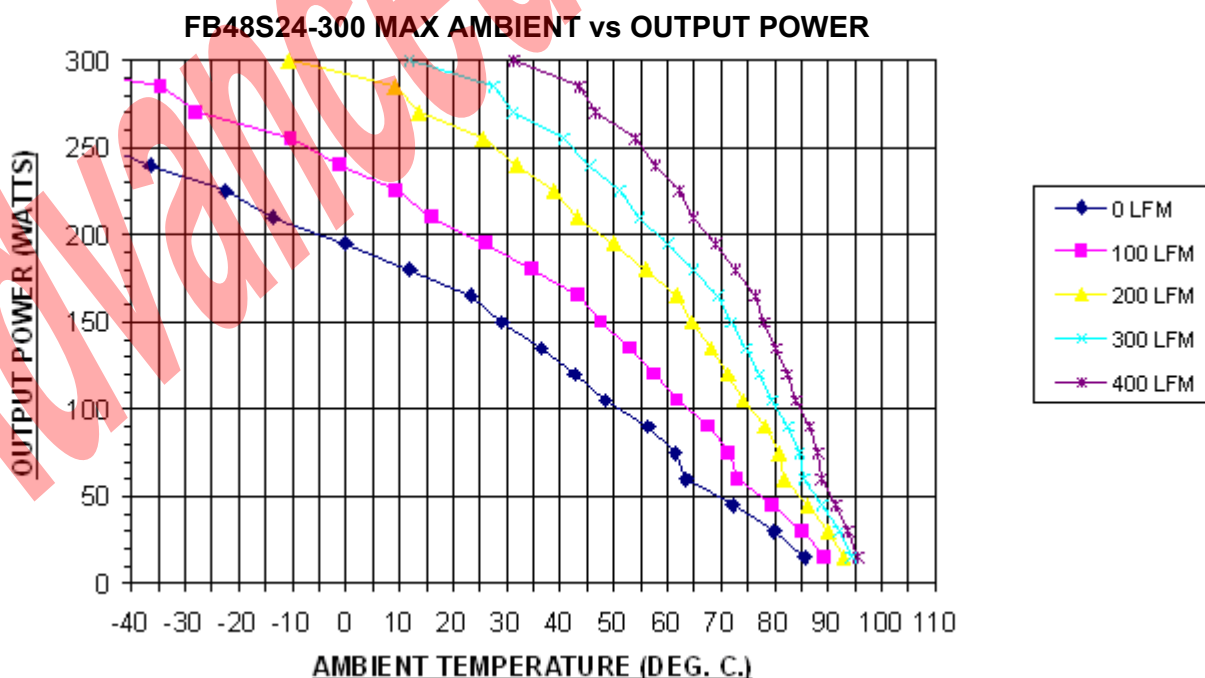
Model Number for Threaded Inserts	Model Number for Thru-Hole Inserts	Input Voltage Range	Output Voltage	Output Current	Output Power
FB48S5-300	FB48S5-300TH	48 VDC (18 - 75 VDC)	5 VDC	60A	300W
FB48S12-300	FB48S12-300TH		12 VDC	25A	300W
FB48S15-300	FB48S15-300TH		15 VDC	20A	300W
FB48S20-300	FB48S20-300TH		20 VDC	15A	300W
FB48S24-300	FB48S24-300TH		24 VDC	12.5A	300W
FB48S26-300	FB48S26-300TH		26 VDC	11.538A	300W
FB48S28-300	FB48S28-300TH		28 VDC	10.714A	300W
FB48S43-250	FB48S43-250TH		43 VDC	5.814A	250W
FB48S48-300	FB48S48-300TH		48VDC	6.25A	300W

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: 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 0.125 thru-hole add "TH" suffix to the model part number. Ex: FB48S48-300TH.
4. For Heat sink add "HS" suffix to the model part number. Ex: FB48S48-300HS.
5. Active High Enable is standard; for Active Low Enable add "R" suffix to the model number. Ex: FB48S48-300R.
6. Chassis mount version also available. Please call factory for ordering details.

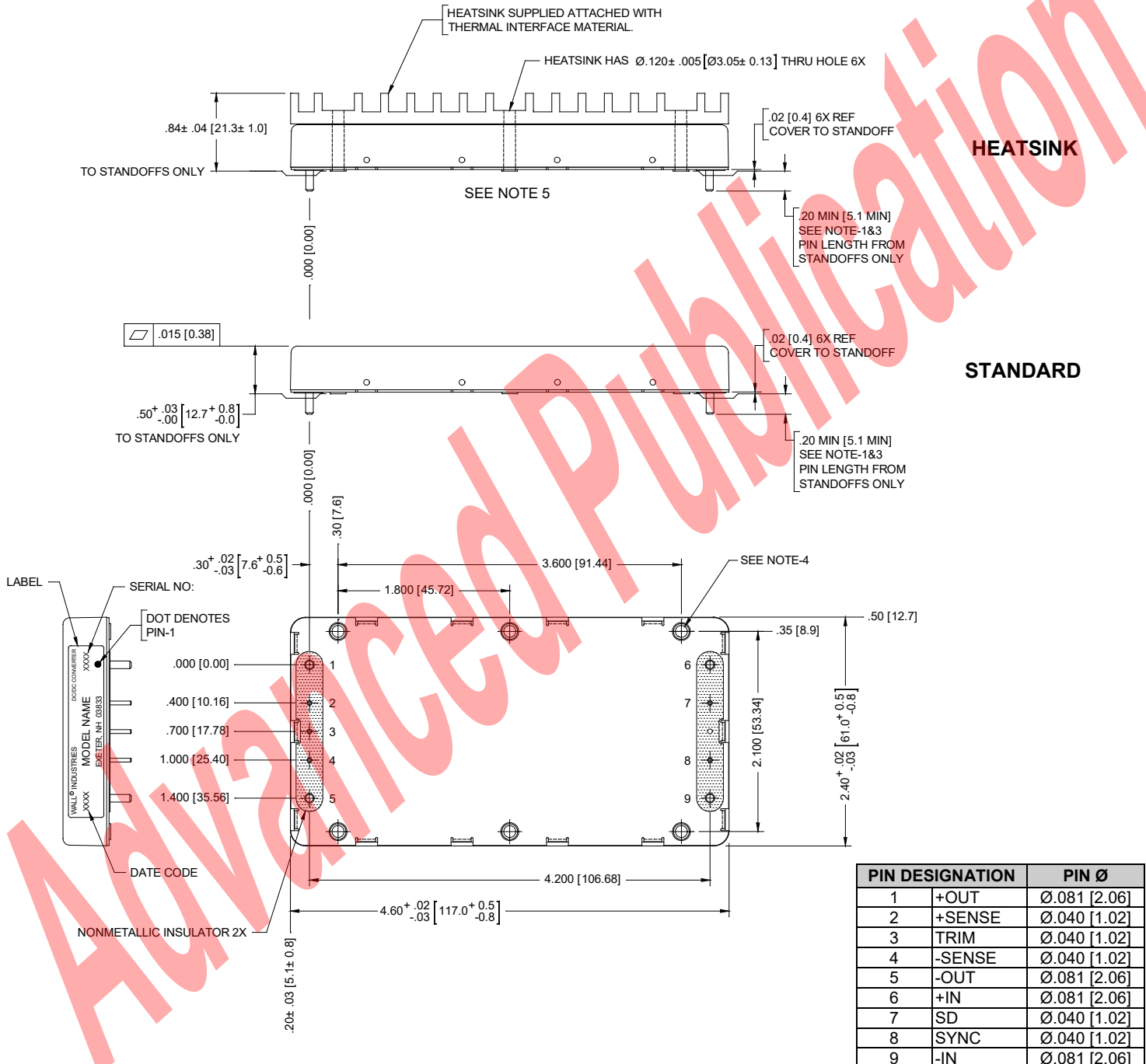
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DERATING CURVE



MECHANICAL DRAWING

Unit: inches [mm]



NOTES:

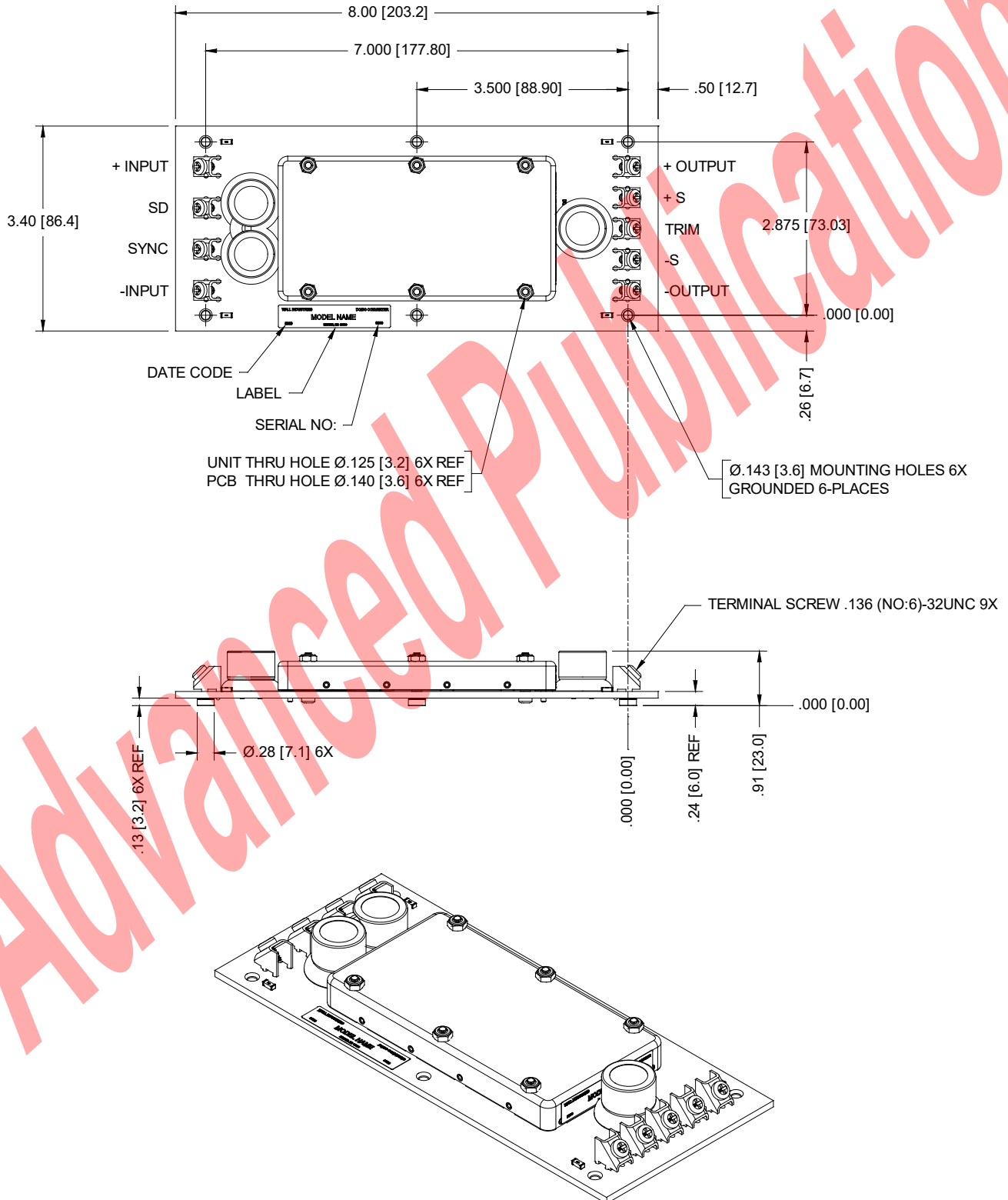
- PIN TO PIN TOLERANCE $\pm .01$ [± 0.3], PIN DIAMETER TOLERANCE: $\pm .005$ [± 0.13].
- CASE MATERIAL: .040 [1.02] THICK, ALUMINUM ALLOY 3003-0, PER: QQA 250/2.
- UNLESS OTHERWISE SPECIFIED.

TO ORDER:

- UNIT COMES WITH EITHER 3M x 0.5 THREADED THRU INSERTS OR FOR $\varnothing.125$ THRU-HOLE ADD: "TH" SUFFIX TO MODEL PART NUMBER. EXAMPLE: FB48S48-300TH
- FOR HEAT SINK ADD: "HS" SUFFIX TO MODEL PART NUMBER. EXAMPLE: FB48S48-300HS.
- OPTIONAL CHASSIS MOUNT VERSION AVAILABLE.

OPTIONAL CHASSIS MOUNT VERSION *(Call factory for ordering details)*

Unit: inches [mm]





Wall Industries, Inc.

In Development

FB Series
250~300 Watt
Single Output
Full Brick DC/DC Converter

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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