

FEATURES

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



DESCRIPTION

The FA 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 FA series delivers.

SPECIFICATIONS: FA Series

All specifications apply @ 25°C ambient unless otherwise noted

INPUT SPECIFICATIONS

Input Voltage Range	10-36VDC
UVLO Turn On at	10VDC max
UVLO Turn off at	9.5VDC max
Input Filter	1,000 μ F low ESR capacitor recommended
Input Surge Voltage (100ms)	50VDC
Reflected Ripple Current (nominal Vin and full load)	20mA
Remote ON/OFF	See Technical Datasheet
Input Current under Remote Off	1mA
Maximum Input Current (Low Line)	35A
No Load Input Current	0.1A

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)
MTBF	2,212,456 hours

PHYSICAL SPECIFICATIONS

Weight	11.22oz (318g)
Dimensions	4.6 x 2.4 x 0.50 inches
Case Material	Aluminum alloy
Shielding	six-sided

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

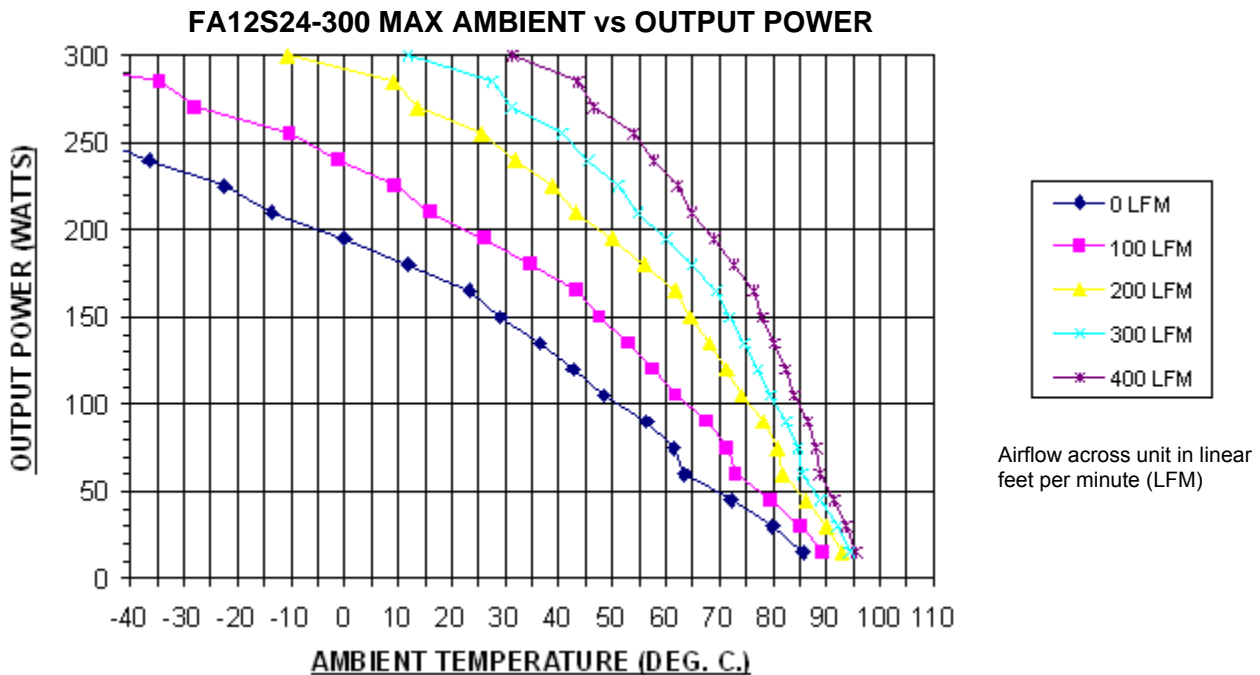
MODEL SELECTION TABLE

Model Number for Threaded Inserts	Model Number for Thru-Hole Inserts	Input Voltage Range	Output Voltage	Output Current	Output Power
FA12S43-250	FA12S43-250TH	12 VDC (10 - 36 VDC)	43 VDC	5.814A	250W
FA12S48-250	FA12S48-250TH		48 VDC	5.208A	250W
FA12S5-300	FA12S5-300TH		5 VDC	60A	300W
FA12S12-300	FA12S12-300TH		12 VDC	25A	300W
FA12S15-300	FA12S15-300TH		15 VDC	20A	300W
FA12S20-300	FA12S20-300TH		20 VDC	15A	300W
FA12S24-300	FA12S24-300TH		24 VDC	12.5A	300W
FA12S26-300	FA12S26-300TH		26 VDC	11.538A	300W
FA12S28-300	FA12S28-300TH		28 VDC	10.714A	300W

NOTES

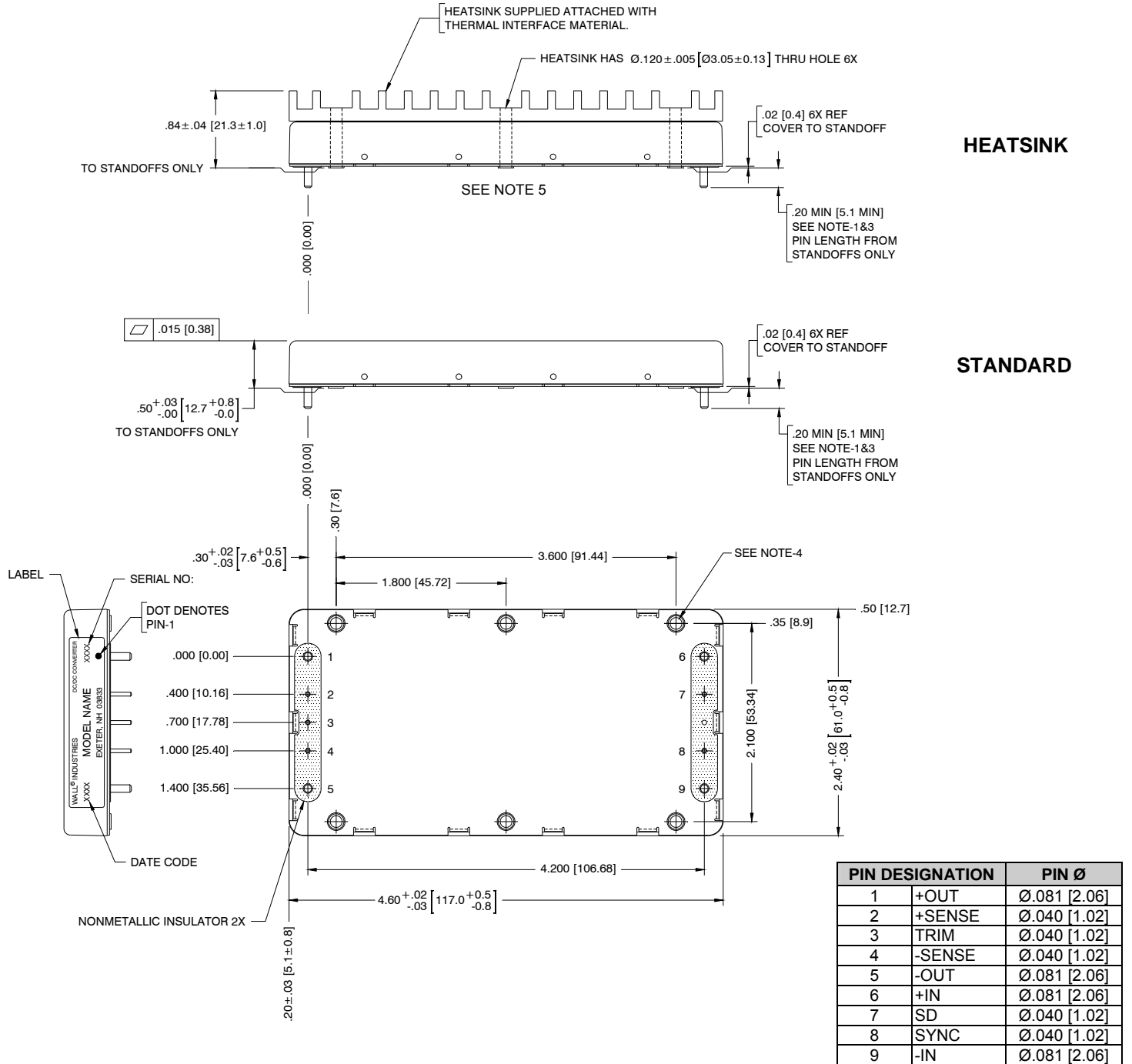
1. Pin to pin tolerance $\pm 0.01"$ [$\pm 0.3\text{mm}$]. Pin diameter tolerance $\pm 0.005"$ [$\pm 0.13\text{mm}$].
2. Case material: 0.040" [1.02mm] thick, aluminum alloy 3003-0, Per: QQA 250/2.
3. Unit comes with either 3M x 0.5 threaded thru inserts or for 0.125 thru-hole add "TH" suffix to the model part number. Ex: FA12S24-300TH.
4. For Heat sink add "HS" suffix to the model part number. Ex: FA12S24-300HS.
5. Active High Enable is standard; for Active Low Enable add "R" suffix to the model number. Ex: FA12S24-300R.
6. See CMFA Series for chassis mount version.

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 Ø.125 THRU-HOLE ADD:
 "TH" SUFFIX TO MODEL PART NUMBER.
 EXAMPLE: FA12S24-300TH
- FOR HEAT SINK ADD: "HS" SUFFIX TO MODEL
 PART NUMBER. EXAMPLE: FA12S24-300HS.
- OPTIONAL CHASSIS MOUNT VERSION
 AVAILABLE (SEE CMFA SERIES).

OPTIONAL CHASSIS MOUNT VERSION (SEE CMFA SERIES)

Unit: inches [mm]

