EMERAL TECH

EF110S28M56P Potted 110Vin 28Vout 1500W Super Brick

Description

The EF110S28M56P Super brick DC/DC converters is a high density, high reliability power converter. They are targeted specifically at the aerospace, aerocraft, portable weaponry industry and distributed power markets. With an input voltage range of 90-120V and output voltage of 28 Volts. The module feature an input filter, input undervoltage lockout, output overvoltage and overtemperature protection, output current limiting and short circuit protection. The fully enclosed, encapsulated construction with aluminum heat spreader design achieves efficient heat transfer with no hot spots. The use of Patent-pending Hybrid Planar Transformer technology and other patent-pending design concepts facilitate maximum power delivery with the highest efficiency of up to 94%. The unique open-frame construction with aluminum heat spreader design achieves efficient heat transfer with no hot spots.

Features

- Delivers up to 56A, 28V,1500W in Super Brick
- High efficiency patent pending topology
- Low profile of only 0.55 inch high
- 28V/56A output modules
- Sync function
- -55°C to +125 °C ambient operation
- Inhibit function – Input and Output
- Output trim on single output models
- Indefinite short circuit protection
- Remote sense on single output models
- Parallelable up to 8000 Watts
- N+1 Redandance
- Meets Basic Insulation requirements of EN60950
- UL 1950 recognized, TUV EN60950, and CSA C22.2 No. 950 Certified and CE marked
- Meets conducted limits of FCC Class B and CEI IEC61204-3 Class B with external filter

Specification Summary

- Input: 110V, Output: 56A/28V, 1500W.
- Tight output regulation, typical ±0.5%
- No minimum load required
- Ripple & Noise (20Mhz BW) 150 mv (pk-pk) typical
- Input operating range 90-120V
- On/Off pin and remote sense
- Output adjustment +/-10% range
- Remote sense compensation
- 1500V, 10MΩ input-to-output isolation
- Parallelable up to 8000 Watts with N+1 Redandance
- Output overvoltage protection
- Over Temperature protection
- Input Under voltage protection
- MTBF of 1,500,000 hours @ 50°C (Bellcore)

Applications

- Aerospace, Aerocraft
- Complex power system
- Portable weaponry
- Distributed Power Architecture

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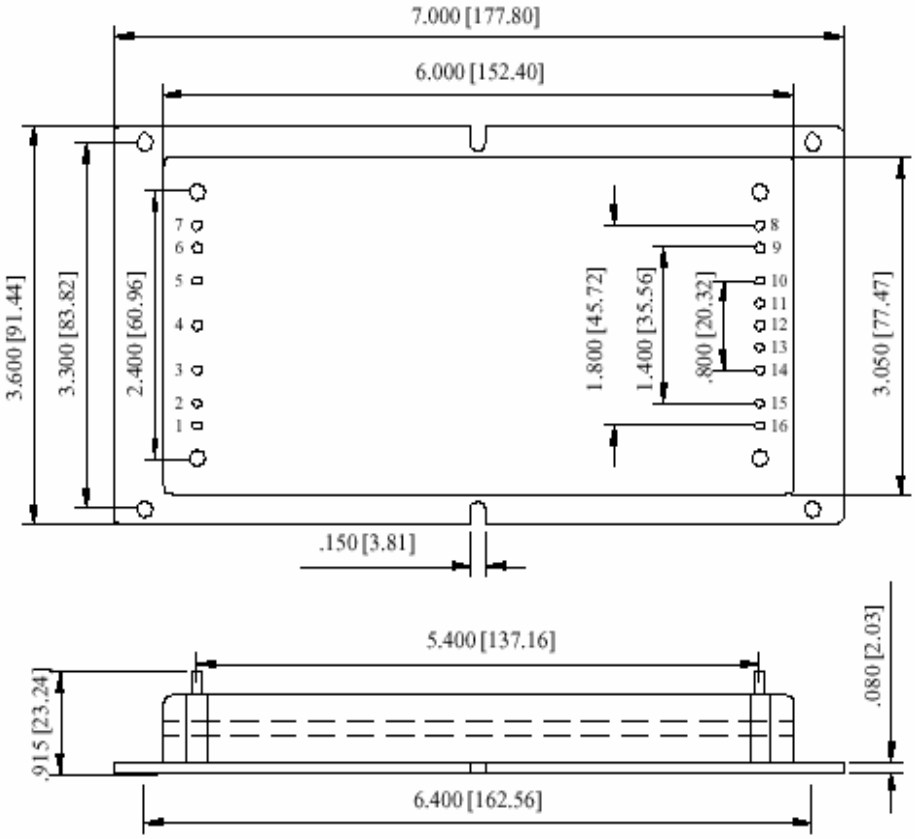
Part Number and Selection Information

Model	Input			Output		Efficiency
	Voltage (Volts)	Current (A)		Voltage	Current	75% Load
Part Number	Nominal	No load	Full load	(Volts)	(Amps)	(%)
EF110S28M56P	110	0.2	9.9	28	56	94

Consult factory for other output voltage configurations

Outline Information and Pin-out

Pin Connection		Pin Size	
Pin #	Function	Inch	mm
1	Vin +	0.08"	2.03
2	Vin +	0.08"	2.03
3			
4	EN	0.08"	2.03
5			
6	Vin -	0.08"	2.03
7	Vin -	0.08"	2.03
8	Vo -	0.08”	2.03
9	Vo -	0.08"	2.03
10	S -	0.18"	2.03
11	LSHR	0.08"	2.03
12	TRIM	0.08"	2.03
13	ILIM	0.08"	2.03
14	S +	0.08"	2.03
15	Vo +	0.08"	2.03
16	Vo +	0.08"	2.03



Notes:

1). All dimensions are in inches [mm]
0.08” [2.032mm], 0.18” [4.572mm]

2). Pin material: Brass

3). Pin finish: Tin/Lead plated

4). Baseplate material: Aluminum.

5).Outline dimension:
6”(152.4)x3”(76.2)x0.55”(14.0)

6). Max. Weight: 490g

Thermal Derating

Vin = 28V
Full load (30A) from –55 °C to 125 °C base plate temperature, Linearly derate to zero from 125 °C to 135 °C.

The information and specifications contained in this specification are believed to be accurate and reliable at the time of publication. Specifications are subject to change without notice.
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