

## TO 25 WATTS - EM SERIES

Single, Dual, and Triple Outputs

## FEATURES

- ◆ Output Power Up to 25 Watts
- ◆ Wide Input Voltage Range (2:1)
- ◆ Industry Standard Pin-Out and Package
- ◆ Indefinite short circuit protection
- ◆ Up to 88% Typical Efficiency
- ◆ Input Filter for Low Reflected Ripple Current
- ◆ No Derating to +85°C Case Temperature
- ◆ Five Year Warranty



## THE EM SERIES FROM WALL INDUSTRIES

The EM Series of DC/DC converters features single, dual, and triple output units of up to 25 watts in a 2.0" x 2.0" x 0.45" package. The units are PC mountable and include an input filter for low reflected ripple, continuous short circuit protection, over voltage protection, 500VDC input/output isolation and typical efficiencies of up to 88%.

## SPECIFICATIONS: EM SERIES

## INPUT SPECIFICATIONS

Input Voltages .....9-18, 18-36, 36-72VDC  
 Input Filter.....Pi-Filter  
 Remote On/Off Control .....Via TTL logic

## OUTPUT SPECIFICATIONS

Output Current .....see table  
 Voltage Accuracy  
 Single and Dual with balanced output.....± 1% max.  
 Triple Output .....Main: ± 1%, Auxiliaries: ± 5%  
 Voltage Balance (dual output w/ balanced load).....± 2% max.  
 Line Regulation: single output .....± 0.2%  
 Load Regulation: Singles (25-100% load) .....± 0.1% max.  
 Duals (25-100% load) .....± 1%  
 Ripple/Noise (20MHz BW) .....1% P-P max.  
 Transient Response:  
 50% to 100% load .....200µsec to within 1% final value  
 Short Circuit Protection .....Indefinite

All specifications apply @ +25 C ambient unless otherwise noted.

## GENERAL SPECIFICATIONS

Efficiency .....see table  
 Isolation Voltage, input to output .....500VDC min.  
 Isolation Resistance, input to output .....1000MΩ  
 Switching Frequency.....160kHz typical

## ENVIRONMENTAL SPECIFICATIONS

Operating Temperature (ambient) .....-25 to +71°C  
 Storage Temperature .....-55 to +125°C  
 Humidity (non-condensing) .....20 - 95% R.H.

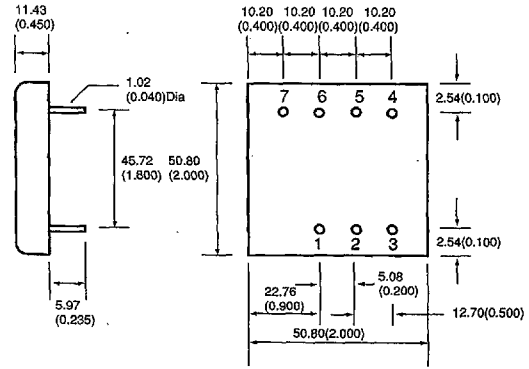
## PHYSICAL SPECIFICATIONS

Weight .....4.8 oz.  
 Case Material .....Black coated copper  
 .....with non-conductive baseplate

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

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Input Voltage (VDC)	Output Voltage (VDC)	Output Current (Amps)	Efficiency (typical %)	Model Number
9-18	5	5.00	82	EM12S5-5000
	12	2.00	86	EM12S12-2000
	15	1.50	86	EM12S15-1500
	± 5	2.50	82	EM12D5-2500
	± 12	1.00	86	EM12D12-1000
	± 15	0.75	86	EM12D15-750
	+5/± 12	3.00/± 0.40	82	EM12T12-400
	+5/± 15	3.00/± 0.30	82	EM12T15-300
	+5/+12/-5	3.00/0.60/0.50	82	EM12T5-500
18-36	5	5.00	84	EM24S5-5000
	12	2.00	88	EM24S12-2000
	15	1.50	88	EM24S15-1500
	± 5	2.50	83	EM24D5-2500
	± 12	1.00	87	EM24D12-1000
	± 15	0.75	87	EM24D15-750
	+5/± 12	3.00/± 0.40	83	EM24T12-400
	+5/± 15	3.00/± 0.30	83	EM24T15-300
	+5/+12/-5	3.00/0.60/0.50	83	EM24T5-500
36-72	5	5.00	84	EM48S5-5000
	12	2.00	88	EM48S12-2000
	15	1.50	88	EM48S15-1500
	± 5	2.5	84	EM48D5-2500
	± 12	1.0	88	EM48D12-1000
	± 15	0.75	88	EM48D15-750
	+5/± 12	3.00/± 0.40	84	EM48T12-400
	+5/± 15	3.00/± 0.30	84	EM48T15-300
	+5/+12/-5	3.00/0.60/0.50	84	EM48T5-500



PIN CONNECTIONS	EM SERIES		
	Single	Dual	Triple
1	Remote On/Off	Remote On/Off	Remote On/Off
2	- Vin	- Vin	- Vin
3	+ Vin	+ Vin	+ Vin
4	Trim	Trim	- Vout Auxiliary
5	- Vout	- Vout	Common
6	+ Vout	Common	+5Vout
7	N/C	+Vout	+Vout Auxiliary

Notes:

1. All case and pin to case dimensions reference only unless otherwise noted.
2. P.C. pins - 0.04" dia. x 0.20" long (min).
3. Pin to pin tolerance ± 0.01". Pin diameter tolerance ± 0.005"
4. 10% minimum load required on main to maintain regulation.
5. Significant capacitive load on output may inhibit start-up and operation, consult factory.
6. All DC/DC converters should be externally fused on the front end for protection.

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