

**FE SERIES** **UP TO 100 WATTS**

**FEATURES**

- Universal AC Input Range
- Power Factor Correction
- Single and Dual Outputs
- Three Different Power Levels: 30, 50, and 100 Watts
- Encapsulated for Protection
- UL, CSA, IEC & TUV Recognition (Pending)
- Fixed Frequency Operation
- Five Year Warranty

**The FE Series from Wall Industries**

The FE Series of AC/DC power supplies boasts single and dual output configurations with up to 100 watts of output power. Appropriate for industrial and or mobile applications, these ruggedized converters are fully encapsulated with six-sided shielding. Baseplates are equipped with through-holes to accommodate chassis, cold-plate, or PC board mounting.



Wall Industries' FE Series shown in the 100 and 30 watt packages.

**SPECIFICATIONS**

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

**INPUT SPECIFICATIONS**

Input Voltage Range ..... 85-265VAC (see note 12)  
 Input Frequency ..... 50-440Hz  
 Inrush Current ..... See note 10

**OUTPUT SPECIFICATIONS**

Output Current ..... see table  
 Voltage Tolerance ..... ± 1%  
 Output Trim (external) ..... ± 10% (primary only)  
 Line Regulation ..... ± 0.5% LL-HL  
 Load Regulation ..... See note 6  
 Short Circuit Protection ..... Continuous  
 Over Voltage Protection ..... via zener diode  
 Ripple/Noise (20MHz BW) ..... 1% of Vout or 50mV p-p, whichever is greater  
 Output Transient Response ..... w/in 1% steady state value in 150 µSec for 25% load change  
 Thermal Shutdown ..... via thermistor, approx. +100°C baseplate

**GENERAL SPECIFICATIONS**

Efficiency ..... 80% typical  
 Isolation Voltage, input to output ..... 4240 VDC  
 Isolation Resistance ..... 100MΩ  
 Remote Sense (singles only) ..... up to 0.3VDC drop in power leads  
 Switching Frequency ..... 100KHz 'typical'  
 Turn On Delay ..... 250mSec

**ENVIRONMENTAL SPECIFICATIONS**

Humidity ..... 20% - 95% R.H.(non-condensing)  
 Temperature Coefficient ..... 0.02% per °C  
 Operating Temperature  
 Commercial ..... -25 to +85°C baseplate  
 Industrial (see note 11) ..... -40 to +85°C baseplate  
 Storage Temperature ..... -55 to +100°C

**PHYSICAL SPECIFICATIONS**

Dimensions ..... see back  
 Case Material ..... Black epoxy coated metal, aluminum baseplate on 100 watt module

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

Wall Industries, Inc. • 5 Watson Brook Road • Exeter, NH 03833 • 603-778-2300 • FAX: 603-778-9797  
<http://www.conres.com/wtop.htm>



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# SINGLE & DUAL OUTPUT

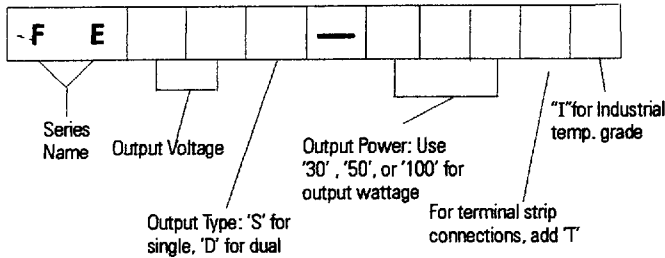
# FE SERIES

Input Voltage Range	Corresponding Outputs			
	Voltage (VDC)	30 Watt Output Current (A)	50 Watt Output Current (A)	100 Watt Output Current (A)
85-265VAC	5	6.0	10.0	20.0
	12	2.5	4.16	8.33
	15	2.0	3.33	6.67
	24	1.25	2.08	4.16
	48	0.62	1.04	2.08
	± 5	3.0	5.0	10.0
	± 12	1.25	2.08	4.16
	± 15	1.0	1.66	3.33
	± 24	0.62	1.04	2.08

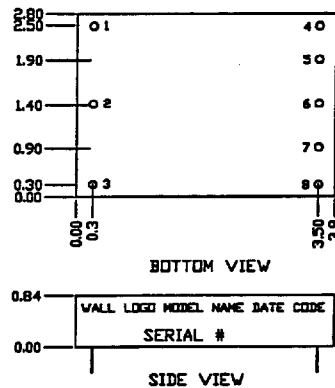
Pin	Pin Functions			
	30 Watt Module		50 & 100 Watt Module	
	Single	Dual	Single	Dual
1	AC Hot	AC Hot	AC Hot	AC Hot
2	N/C	N/C	N/C	N/C
3	AC Neutral	AC Neutral	Chassis GND	Chassis GND
4	Trim	-V out	AC Neutral	AC Neutral
5	- Sense	N/C	+ V out	+ Vout
6	- V out	Common	+ Sense	Common
7	+ Sense	Trim	Trim	No Pin
8	+ Vout	+ Vout	- Sense	Common
9			-V out	- V out

Important: Sense pins must be connected for operation.

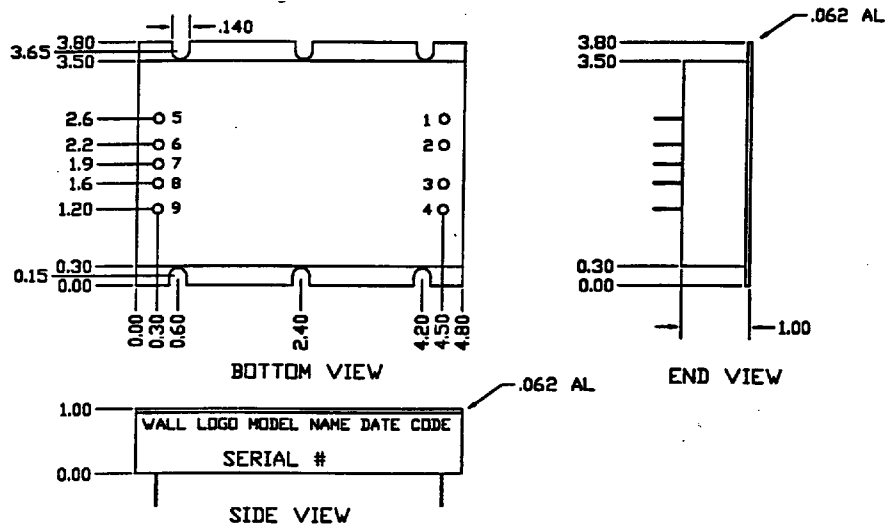
## How to Structure a Part Number



### 30 Watt Module



### 50 and 100 Watt Module



#### Notes

1. All case, pin-to-case and pin-to-header dimensions reference only unless otherwise noted
2. Pin diameters are 0.04" except on 50 and 100 watt modules, those used for +Vout and -Vout are 0.08". Pin length is 0.18" min.
3. Tolerance: Pin spacing  $\pm 0.01$ "; pin diameter  $\pm 0.005$ "
4. Through holes with clearance to accommodate #4 screw.
5. 10% Minimum load required to maintain regulation, consult factory for details.
6. Load regulation: Singles:  $\pm 1.0\%$ , Duals:  $\pm 1\%$  for 25-100% load, and  $\pm 5\%$  for min. load to 100% load.
7. Significant capacitive load may inhibit start-up and operation, consult factory.
8. All AC/DC power supplies should be externally fused on the front end for protection.
9. Standard heatsink for 100W module has crosswise fins.
10. External thermistor required for protection, consult factory.
11. Industrial temperature grade allows for operation down to  $-40^{\circ}\text{C}$ .
12. Standard product also operates off 100-300VDC input voltage range.

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Wall on the Web: [www.conres.com/wtop.htm](http://www.conres.com/wtop.htm)



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