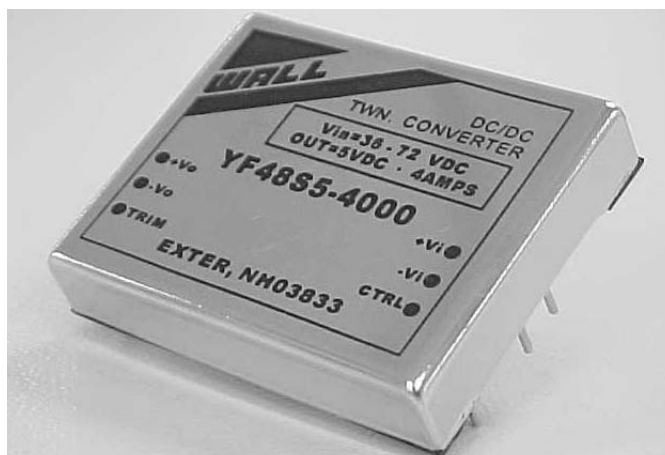


YF SERIES**WALL**
INDUSTRIES, INCORPORATED**TO 20 WATTS****UP TO 20 WATTS - YF SERIES**

ULTRA-WIDE INPUT, LOW QUIESCENT CURRENT

FEATURES

- Single, Dual and Triple Outputs
- Industry Standard Package and Pin-Out
- Pi Input Filter Integral to Converter
- 1600VDC I/O Isolation
- Regulated Output
- Continuous short circuit protection
- Remote On/Off Feature
- UL1950, cUL950, EN60950 and CE MARK

**THE YF SERIES FROM WALL INDUSTRIES**

The YF series of DC/DC converters performs over an ultra-wide input voltage range (2:1 & 4:1), providing indefinite short circuit and overvoltage protection. The series' design technology allows up to 20 watts of output power from a 1.60" x 2.0" x 0.40" case. These current mode control forward converters are designed for improved transient response and reduced stress on switching components and do not require external input filtering, making it a preferred source over industry alternatives.

SPECIFICATIONS: YF SERIES**INPUT SPECIFICATIONS**

Input Voltages9-18,18-36,36-75,9-36,20-75,18-75VDC
 Nominal Input.....12, 24, 48VDC
 Remote On/Off Control.....CMOS or TTL (see note 7)
 Input Filter.....Pi input filter

OUTPUT SPECIFICATIONS

Output Currentsee table
 Output Voltage Tolerance±2%
 (auxillary triple outputs)±5%
 Output Trim (external).....±10%
 Line Regulation: full line (single and dual)±0.5%
 (triple).....main: 1%, aux.: 5%
 Line Regulation: 20 Watt 4:1 Input.....±1%
 Load Regulation
 Singles (25-100% load).....±0.5%
 (NL-100% load)±1%
 Duals (50-100% load).....±1%
 (NL-100% load)±5%
 Short Circuit Protectioncontinuous
 Ripple/Noise (20MHz BW) (single)75mV p-p
 (dual)100mV p-p
 (triple)...5V/3.3V = 50mV p-p
±12V = 120mV p-p
±15V = 150mV p-p
 Transient Response<500µsec to within ±1% Vout

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

GENERAL SPECIFICATIONS

Efficiency83% typical
 Isolation Voltage (input to output)1600VDC min.
 Isolation Resistance (input to output).....10⁹Ohms
 Switching Frequency300kHz typical
 MTBFMIL217F 5.591x10⁵ hours

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature (case)(see note 9)
 Storage Temperature.....-55 to +105°C
 Humidity (non-condensing).....5% - 95% R.H.

PHYSICAL SPECIFICATIONS

Weight.....approx. 4.0 oz.
 Dimensions1.6 x 2.0 x 0.40"
 Case MaterialNickel coated copper,
 non-conductive baseplate
 ShieldingSix-sided

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

8/9/2005

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TO 20 WATTS**YF SERIES**

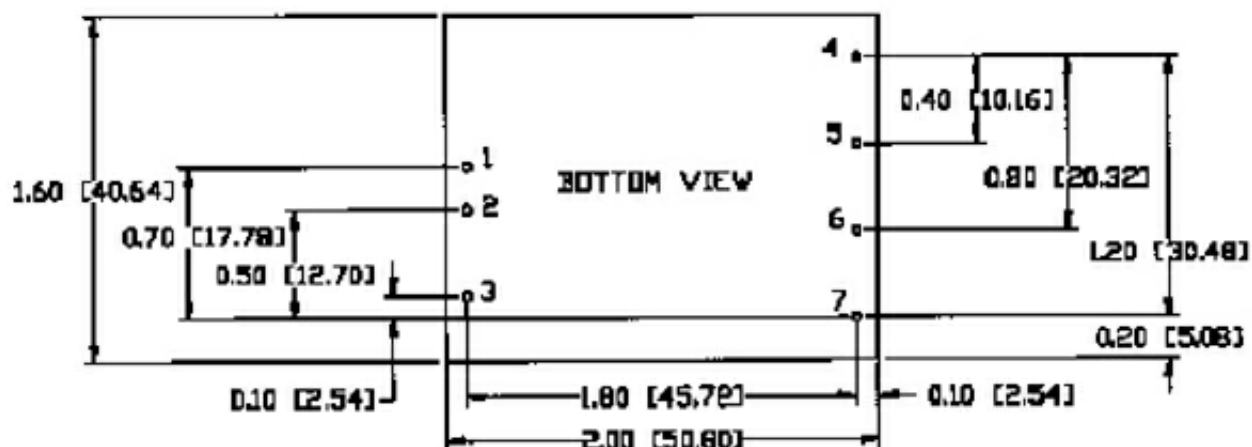
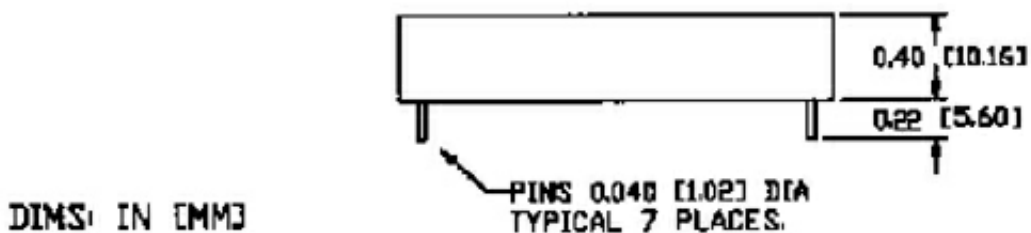
Input Voltage (VDC)	Output Voltage (VDC)	Output Current (Amps)	Over Voltage (VDC)	Model Number
9-18	3.3	4.0	3.9	YF12S33-4000
	5	4.0	6.2	YF12S5-4000
	12	1.67	15	YF12S12-1600
	15	1.33	18	YF12S15-1330
	±12	0.83	15	YF12D12-830
	±15	0.66	18	YF12D15-660
18-36	3.3	4.0	3.9	YF24S33-4000
	5	4.0	6.2	YF24S5-4000
	12	1.67	15	YF24S12-1600
	15	1.33	18	YF24S15-1330
	±12	0.83	15	YF24D12-830
	±15	0.66	18	YF24D15-660
36-75	3.3	4.0	3.9	YF48S33-4000
	5	4.0	6.2	YF48S5-4000
	12	1.67	15	YF48S12-1600
	15	1.33	18	YF48S15-1330
9-36	5	3.0	6.2	YFW24S5-3000
	12	1.25	15	YFW24S12-1250
	15	1.0	18	YFW24S15-1000
	±5	1.50	6.2	YFW24D5-1500
	±12	0.83	15	YFW24D12-830
	±15	0.66	18	YFW24D15-660
20-75	5	3.0	6.2	YFW48S5-3000
	12	1.25	15	YFW48S12-1250
	15	1.0	18	YFW48S15-1000
	±5	1.50	6.2	YFW48D5-1500
9-36	3.3	4.0	3.9	YFW24S3.3-4000
	5	4.0	6.2	YFW24S5-4000
	12	1.66	15	YFW24S12-1600
	15	1.33	18	YFW24S15-1330
	±12	0.83	15	YFW24D12-830
	±15	0.66	18	YFW24D15-660
18-75	3.3	4.0	3.9	YFW48S3.3-4000
	5	4.0	6.2	YFW48S5-4000
	12	1.66	15	YFW48S12-1600
	15	1.33	18	YFW48S15-1330
	±12	0.83	15	YFW48D12-830
	±15	0.66	18	YFW48D15-660

Input Voltage (VDC)	Output Voltage (VDC)	Output Current (Amps)	Over Voltage Protection	Model Number
9-18	3.3/±12	3/.300	10%	YF12T3.312-17
	3.3/±15	3/.250	10%	YF12T3.315-17
	5/±12	2/.300	10%	YF12T512-17
	5/±15	2/.250	10%	YF12T515-17
18-36	3.3/±12	3/.300	10%	YF24T3.312-17
	3.3/±15	3/.250	10%	YF24T3.315-17
	5/±12	2/.300	10%	YF24T512-17
36-75	5/±15	2/.250	10%	YF24T515-17
	3.3/±12	3/.300	10%	YF48T3.312-17
	3.3/±15	3/.250	10%	YF48T3.315-17
	5/±12	2/.300	10%	YF48T512-17
	5/±15	2/.250	10%	YF48T515-17

PIN CONNECTIONS

	Single	Dual	Triple
1	+Vin	+Vin	+Vin
2	-Vin	-Vin	-Vin
3	Remote	Remote	Remote
4	No Pin	+Vout	+ Aux. Out
5	+Vout	Output Common	+5V/+3.3V
6	-Vout	-Vout	Common
7	Trim	Trim	- Aux. Out

8/9/2005

**NOTES:**

1. All case and pin to case dimensions reference only unless otherwise noted.
2. All DC/DC converters should be externally fused on the front end for protection.
3. P.C. pins - 0.04" dia. x 0.18" long (min); typical seven places.
4. Pin to pin tolerance ± 0.01 ". Pin diameter tolerance ± 0.005 ".
5. Duals: 1/4 load to full load: $\pm 1\%$, no load to full load: $\pm 5\%$.
6. Significant capacitive load on output may inhibit start-up and operation, consult factory.
7. On-Control: 5.5V min. or Open. Off-Control: 0.4V max. or short. Control voltage referenced to -Vin.
8. Input pi-filter without external capacitor filter.
9. Standard operating temperature -40°C to $+85^{\circ}\text{C}$, derating is specific to model type, consult factory for further information.
10. Maximum case temperature is 100°C .