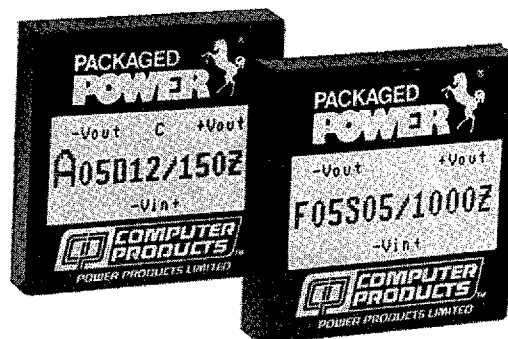


A and F SERIES

Single and dual outputs

For new design-ins see the AFC5 and PM900 Series instead

- Low noise
- Linear regulation
- Six sided shield
- Pi input filter
- Short circuit protected
- High Isolation
- Meets EN55022 and VDE0871 level B conducted noise



2 YEAR WARRANTY

The A and F Series offer high input/output isolation of 500VDC with only 1mV rms (40mV pk-pk) output ripple and noise. Other premium performance features include line and load regulation of less than $\pm 0.1\%$ and efficiencies of up to 69%. The converters are encapsulated in a 2 x 2 inch industry standard package with a 0.38 inch profile. The six sided copper case allows optimum thermal conductivity and provides shielding for EMI/RFI suppression. A Pi input filter reduces reflected ripple.

Reliable operation is assured through the use of efficient, design-derated components and by heatsinking all dissipating elements directly to the metal case. This permits operation from -25°C to $+71^{\circ}\text{C}$ with no derating or additional heatsinking required. A and F Series DC/DC converter are suitable for a wide range of general industrial applications, especially where low noise levels are required.

SPECIFICATION

ALL SPECIFICATIONS ARE TYPICAL AT NOMINAL INPUT, FULL LOAD AND 25°C UNLESS OTHERWISE STATED

OUTPUT SPECIFICATIONS			
Line regulation	HL to LL, A series FL to NL, F series	$\pm 0.07\%$, max. $\pm 0.1\%$, max	
Load regulation	A series, FL-NL, all outputs F series, FL-NL, dual output	$\pm 0.07\%$ $\pm 0.1\%$	
Cross regulation	Voltage balance, duals	$\pm 1.0\%$, max	
Ripple and noise	5Hz to 20MHz	40mV pk-pk, max. 1mV rms, max.	
Transient response	A series: FL to NL	$\pm 0.1\%$ max. dev., 50 μs recovery	
	F series: FL to NL	$\pm 0.5\%$ max. dev., 75 μs recovery	
	F series:	$\pm 0.5\%$ max. dev.,	
	FL to 50% FL	25 μs recovery	
Temperature coefficient		$\pm 0.01\%/^{\circ}\text{C}$, max.	
Overvoltage protection	F series, 5 Volt output models only	6.8VDC	
Short circuit protection	A series, output to common	150% Iout	
	F series, output to common	160% Iout	
INPUT SPECIFICATIONS			
Input voltage range	See table on facing page		
Input filter	See Note 5	Pi network	

ELECTROMAGNETIC COMPATIBILITY SPECIFICATIONS			
Conducted noise	EN55022, EN55011, FCC	Class B	
GENERAL SPECIFICATIONS			
Efficiency		63% min.	
Isolation Voltage	Input/Output	500VDC	
Switching frequency	Fixed	20kHz	
Case Material	Black coated copper with non-conductive base		
Weight		50g (1.77oz)	
MTBF	MIL-HDBK-217E	680,000 hours	
ENVIRONMENTAL SPECIFICATIONS			
Temperature	Operating ambient	-25°C to $+71^{\circ}\text{C}$	
	Non-operating	-55°C to $+85^{\circ}\text{C}$	
	Case	$+95^{\circ}\text{C}$, max.	
	Derating	None required	
	Cooling	Free-air convection	
Relative humidity	Non-condensing	5% to 95% RH	
Altitude	Operating	10,000 feet max.	
	Non-operating	40,000 feet max.	

5 Watt Nominal input DC/DC converters

INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		REGULATION ⁽¹⁾		% EFF	CASE	MODEL NUMBER
			NO LOAD	FULL LOAD	LINE (MAX.) ⁽²⁾	LOAD (MAX.) ⁽³⁾			
5VDC	15VDC	350mA	157mA	1520mA	±0.1%	±0.1%	69	Z	F05S15/350Z
48VDC	6VDC	1000mA	15mA	200mA	±0.1%	±0.1%	63	Z	F48S06/1000Z
48VDC	12VDC	500mA	15mA	205mA	±0.1%	±0.1%	61	Z	F48S12/500Z
5VDC	±15VDC	±150mA	150mA	1350mA	±0.07%	±0.07%	67	Z	A05D15/150Z
12VDC	±12VDC	±150mA	50mA	460mA	±0.07%	±0.07%	65	Z	A12D12/150Z
12VDC	±15VDC	±150mA	50mA	540mA	±0.07%	±0.07%	69	Z	A12D15/150Z

Notes

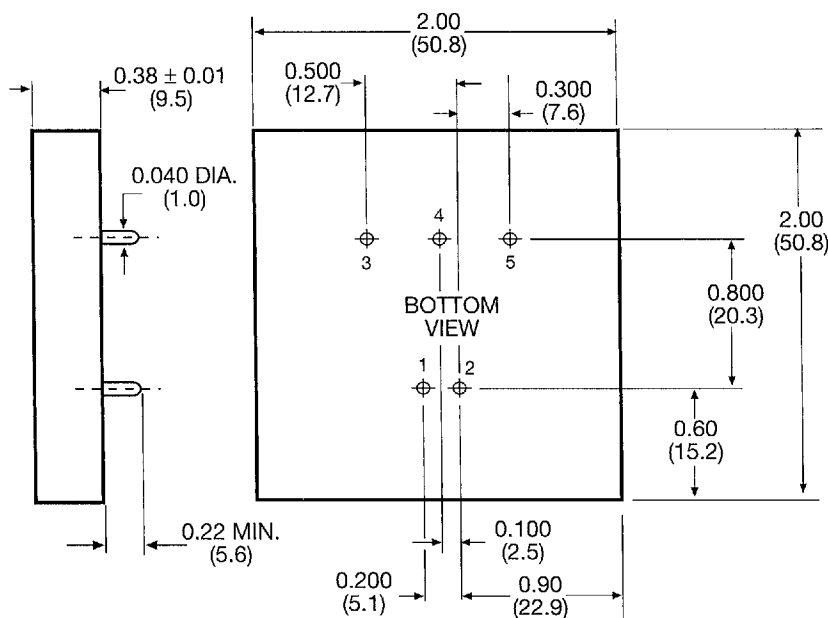
- 1 Maximum.
- 2 Measured from high line to low line.
- 3 Measured from full load to no load.
- 4 The A series case is connected to output common for all input voltages except 48V when it is connected to + input.
- 5 Fixed frequency design provides for easier input filtering and better noise performance.
- 6 The input voltage range can be increased to 10% under reduced loads. Please contact the factory for details.

INPUT VOLTAGE RANGES ⁽⁶⁾		
NOMINAL INPUT	A SERIES	F SERIES
5VDC	4.75 to 5.25V	4.75 to 5.5V
48VDC		42.0 to 56.0V
12VDC	11.0 to 13.0V	

PIN CONNECTIONS		
PIN	A SERIES ⁽⁴⁾	F SERIES
1	+ Input	+ Input
2	- Input	- Input
3	+ Output	+ Output
4	Common	No Pin
5	- Output	- Output

Tolerance .xx = ±0.04
.xxx = ±0.005

CASE Z



ALL DIMENSIONS IN INCHES (mm)