

F3-16AD 16-Channel Analog Input

Number of Channels	16, single ended (one common)
Input Ranges	$\pm 5V$, $\pm 10V$, $0-5V^1$, $0-10V$, $0-20\text{ mA}$, $4-20\text{ mA}^2$
Channels Individually Configurable	Range is selected for all channels. Each channel can be wired for voltage or current.
Resolution	12 bit (1 in 4096)
Input Impedance	$2M\Omega$, voltage input $500\Omega \pm 1\%$, current input
Absolute Maximum Ratings	$\pm 25V$, voltage input $\pm 30\text{ mA}$, current input
Conversion Time	$35\mu s$ per channel 1 channel per CPU scan
Converter Type	Successive Approximation, AD574
Linearity Error	± 1 count maximum
Maximum Inaccuracy at 77 °F (25 °C)	0.25% of full scale, voltage input 1.25% of full scale, current input
Accuracy vs. Temperature	57 ppm / °C maximum full scale

Recommended Fuse	0.032 A, Series 217 fast-acting, current inputs
Power Budget Requirement	33 mA @ 9 VDC, 47 mA @ 24 VDC
External Power Supply	None required
Operating Temperature	32° to 140° F (0° to 60° C)
Storage Temperature	-4° to 158° F (-20° to 70° C)
Relative Humidity	5 to 95% (non-condensing)
Environmental air	No corrosive gases permitted
Vibration	MIL STD 810C 514.2
Shock	MIL STD 810C 516.2
Noise Immunity	NEMA ICS3-304

- 1 - requires gain adjustment with potentiometer.
- 2 - resolution is 3275 counts (instead of 4096). Allows easier broken transmitter detection

