

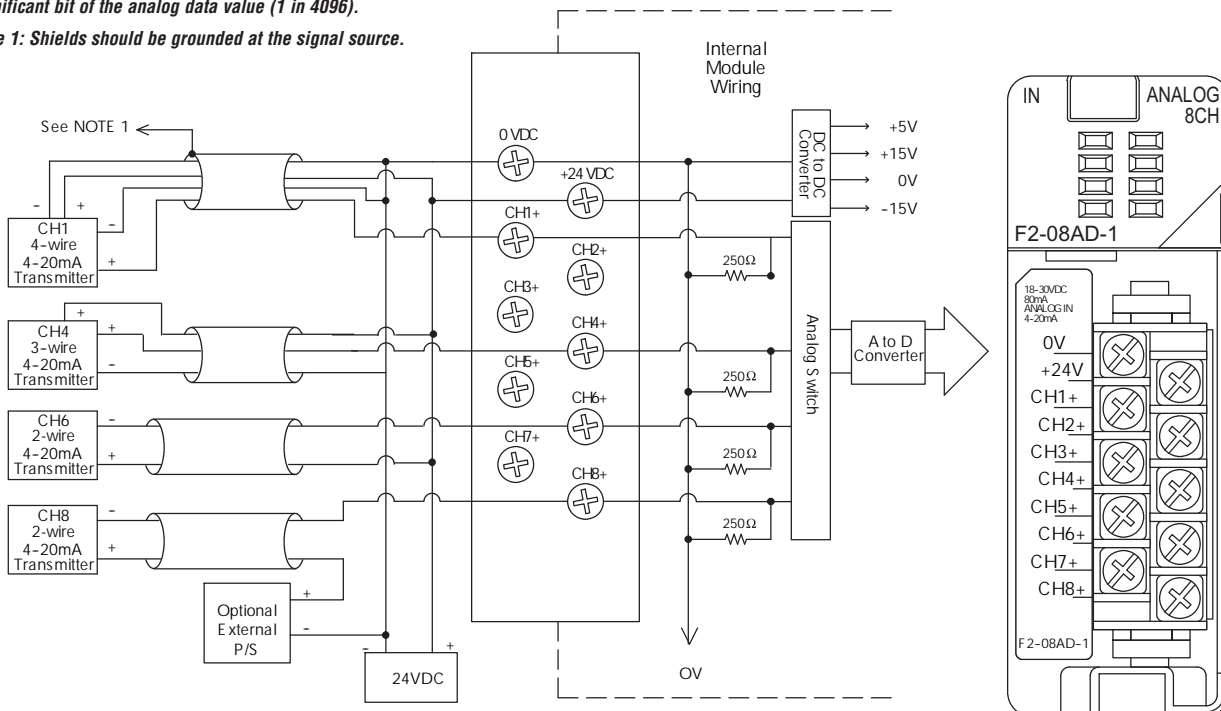
Analog Current Input Modules

F2-08AD-1 8-Channel 4-20mA Analog In	
Number of Channels	8, single ended (1 common)
Input Ranges	4 to 20 mA current
Resolution	12 bit (1 in 4096)
Low-pass Filtering	-3dB at 200 Hz, (-6dB per octave)
Input Impedance	250Ω ±0.1%, 1/2W current input
Absolute Maximum Ratings	-45 mA to +45 mA
Converter Type	Successive approximation
Conversion Time (PLC Update Rate)	(D2-230 CPU) 1 channel per scan maximum (D2-240, D2-250(-1) and D2-260 CPUs) 8 channels per scan maximum
Linearity Error (End to End)	±1 count (0.025% of full scale) maximum
Input Stability	±1 count
Full Scale Calibration Error (offset error not included)	±5 counts max., @ 20 mA current input
Offset Calibration Error	±2 counts max., @ 4mA current input
Step Response	7ms to 95% of F.S. change

Maximum Inaccuracy	±1% @ 77°F (25°C) ±25% 32° to 140°F (0° to 60°C)
Accuracy vs. Temperature	±50 ppm/°C maximum full scale (including max. offset change of two counts)
Recommended Fuse	0.032A, Series 217 fast-acting, current inputs
Digital Input Points Required	16 (X) input points (12 binary data bits, 3 channel ID bits, 1 broken transmitter bit)
Base Power Required 5VDC	50 mA
External Power Supply	80 mA maximum, +18 to +30 VDC
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
Terminal Type (included)	Removable; D2-810CON

One count in the specification table is equal to one least significant bit of the analog data value (1 in 4096).

Note 1: Shields should be grounded at the signal source.



More than one external power supply can be used provided all the power supply commons are connected. A Series 217, 0.032A, fast-acting fuse is recommended for 4-20 mA current loops. If the power supply common of an external power supply is not connected to 0 VDC on the module, then the output of the external transmitter must be isolated. To avoid "ground loop" errors, recommended 4-20 mA transmitter types are:

- 2 or 3 wire: Isolation between input signal and power supply.
- 4 wire: Isolation between input signal, power supply, and 4-20 mA output

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