

Analog Voltage Input Modules

| F2-08AD-2 8-Channel Voltage Analog In <---> | |
|---|--|
| Number of Channels | 8, single ended (1 common) |
| Input Ranges | 0 to 5V, 0 to 10 V, $\pm 5V$, ± 10 VDC |
| Resolution | 12 bit (1 in 4095) uni-polar 13 bit (-4095 to 4095) bi-polar |
| Active Low-pass Filtering | -3dB at 200 Hz, (-6dB per octave) |
| Input Impedance | >20 M Ω |
| Absolute Maximum Ratings | -75 to +75 VDC |
| Converter Type | Successive approximation |
| Conversion Time (PLC Update Rate) | 1 channel per scan maximum (D2-230 CPU) 8 channels per scan maximum (D2-240, D2-250(-1) and D2-260 CPUs) |
| 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) | ± 3 counts maximum |
| Offset Calibration Error | ± 1 count maximum (0V input) |
| Step Response | 4ms to 95% of F.S. change |

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| Maximum Inaccuracy | $\pm 1\%$ @ 77°F (25°C) $\pm 3\%$ 32° to 140°F (0° to 60°C) |
| Accuracy vs. Temperature | ± 50 ppm/°C maximum full scale (including max. offset change of 2 counts) |
| Digital Input Points Required | 16 (X) input points, (12 binary data bits, 3 channel ID bits, 1 sign bit, 1 diagnostic bit) |
| Base Power Required 5VDC | 60 mA |
| External Power Supply | 80 mA maximum, +18 to +26.4 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; D2-8IOCON |

One count in the specification table is equal to one least significant bit of the analog data value (1 in 4096). Includes circuitry to automatically detect broken or open transmitters.

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

Note 2: Connect all external power supply commons.

Note 3: Connect unused channels (CH5+, CH6+, CH7+, CH8+ in this example) to 0VDC.

