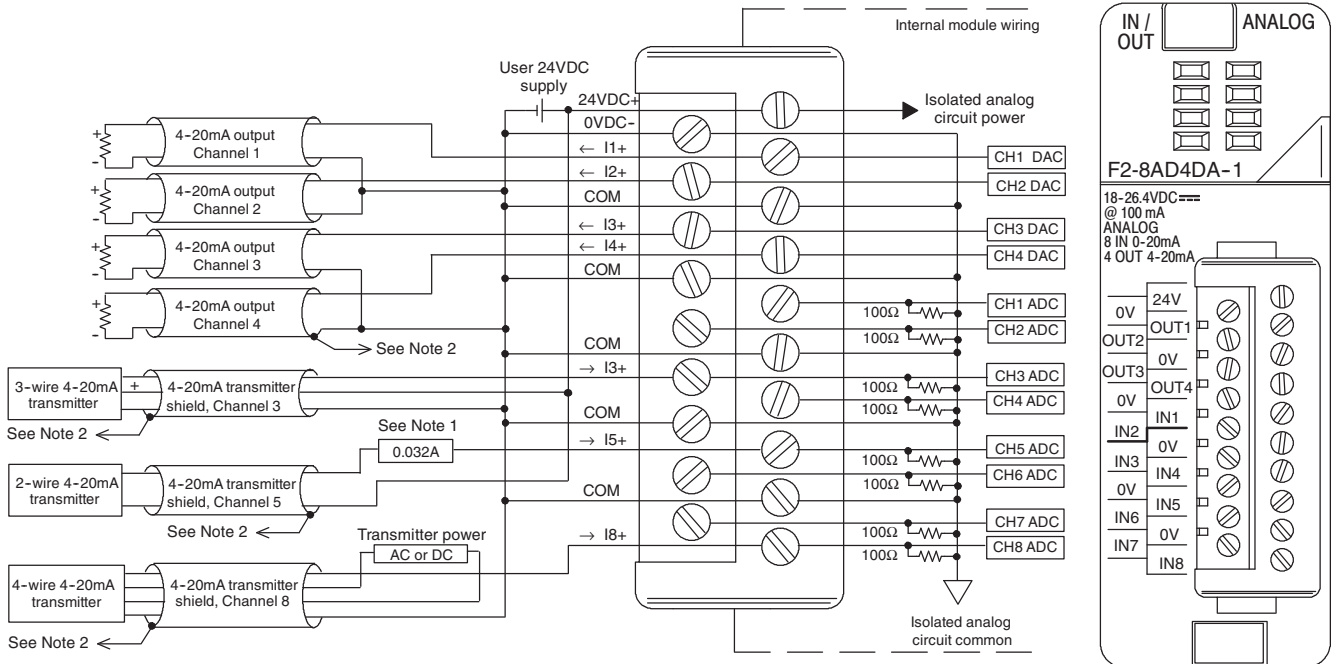


Analog In/Output Combination Module

NOT SUPPORTED IN D2-230 AND D2-240 CPUs.

| F2-8AD4DA-1 8-Channel Analog Current Input / 4-Channel Analog Current Output <----> | |
|---|---|
| Input Channels per Module | 8, single ended (one common) |
| Input Range | 0 to 20 mA |
| Resolution | 12, 14, 16-bit selectable |
| External DC Power Required | 100 mA @ 18-26.4 VDC |
| Max. Continuous Overload | ±45 mA |
| Input Impedance | 100 Ω 0.1% 1/4W |
| Filter Characteristics | Active low pass, -3dB @ 80 Hz |
| Conversion Time | 12-bit = 1.5 ms per channel 14-bit = 6 ms per channel 16-bit = 25 ms per channel |
| Conversion Method | Over sampling successive approximation |
| Accuracy vs. Temperature | ±25 ppm / °C Max. |
| Maximum Inaccuracy | 0.1% of range |
| Linearity Error (End to End) | 12-bit = ±2 count max. (±0.06% of range) 14-bit = ±10 count max. (±0.06% of range) 16-bit = ±20 count max. (±0.06% of range) Monotonic with no missing codes |
| Full Scale Calibration Error (not including offset error) | ±0.07% of range max. |
| Offset Calibration Error | ±0.03% of range max. |
| Rec. Fuse (external) | 0.032A, Littelfuse Series 217 fast-acting |
| Base Power Required 5VDC | 35 mA |

| | |
|---|--|
| Output Channels per Module | 4 |
| Output Range | 4 to 20 mA |
| Resolution | 16-bit, 0.244 mA/bit |
| Output Type | Current sourcing at 20 mA max. |
| Load Impedance | 0-750 Ω |
| Max. Inaccuracy | 0.25% of range |
| Max. Full Scale Calibration Error (not incl. offset error) | ±0.075% of range max. |
| Max. Offset Calibration Error | ±0.1% of range max. |
| Accuracy vs. Temperature | ±25 ppm/°C max. full scale calibration change (± 0.0025% of range / °C) |
| Max. Crosstalk at DC, 50/60Hz | -70 dB, 1 LSB |
| Linearity Error (End to End) | ±1 count max. (±0.025% of full scale) Monotonic with no missing codes |
| Output Stability and Repeatability | ±1 LSB after 10 min. warm-up typical |
| Output Ripple | 0.005% of full scale |
| Output Settling Time | 0.5 ms max., 5 μs min. (full scale change) |
| Max. Continuous Overload | Outputs open circuit protected |
| Type of Output Protection | Electronically current limited to 20 mA or less |
| Output Signal at Power-up and Power-down | 4 mA |
| Terminal Type (included) | Removable; D2-16IOCON |



Note 1: A Littelfuse Series 217, 0.032A fast-acting fuse is recommended for all 4-20mA current loop inputs.

Note 2: Connect shields to the 0V of the module; do not connect both ends of shield.