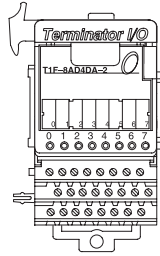


Analog Voltage Combination Module

T1F-8AD4DA-2

8-channel analog voltage input
4-channel analog voltage output

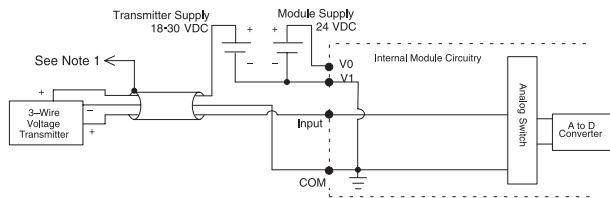
The combination 8-in and 4-out voltage module uses a T1K-8B or T1K-8B-1 base, which is purchased separately.



T1F-8AD4DA-2 Analog Input Specification	
Channels Per Module	8 single-ended (1 common)
Input Ranges	0-5V, 0-10 V, $\pm 5V$, $\pm 10 V$
Resolution	14 bit (13 bit plus sign bit)
Frequency Response	-3db @ 500 Hz, -20 db/decade
Input Resistance	200 K Ω min.
Absolute Max. Ratings	Fault Protected Input 130V(rms) or 100 VDC
Conversion Time	5.5ms per channel
Linearity Error	± 2 count max.
Input Stability	± 1 count
Calibration Full Scale Error	8 counts max.
Calibration Offset Error	2 counts max.
Max. Full Scale Inaccuracy (% of full scale), all errors included	0.08% @ 25°C 0.26% @ 60°C
Master Update Rate	8 channels per scan max.
Input Points Required	256 discrete pts. or 8 dwords (32-bit words) (Network Interface Dependent)
Base Power Required	75 mA @ 5 VDC
External Power Supply	21.6-26.4 VDC, 70 mA, class 2
Weight	136 g

T1F-8AD4DA-2 Analog Output Specification	
Number of Channels	4
Output Ranges	0-5V, 0-10 V, $\pm 5V$, $\pm 10V$
Output Type	single ended, 1 common
Resolution	12 bit (1 in 4096)
Peak Output Voltage	15 VDC
Load Impedance	4 K Ω min.
Load Capacitance	0.01 μ F max.
Linearity Error (End to End)	± 2 counts max. $\pm 0.05\%$ of full scale max.
Conversion Settling Time	300 μ s max. full scale change
Full Scale Calibration Error	± 12 counts max.
Offset Calibration Error	10 V ranges: ± 5 counts max. 5V ranges: ± 9 counts max.
Accuracy vs. Temperature	± 50 ppm/°C full scale calibration change
Max. Full Scale Inaccuracy (% of full scale) All errors and temp drift included	10V ranges: $\pm 0.2\%$ @ 25°C $\pm 0.4\%$ @ 60°C 5V ranges: $\pm 0.3\%$ @ 25°C $\pm 0.5\%$ @ 60°C
Master Update Rate	4 channels per scan max.
Output Points Required	128 discrete pts. or 4 Dwords (32-bit words) (Network Interface Dependent)

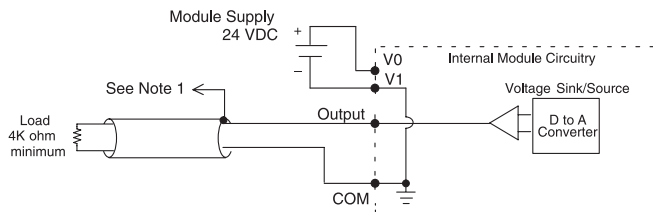
Equivalent Input Circuit



NOTES:

- 1: Shields should be grounded at the signal source.
- 2: Unused inputs should be connected to common (0 VDC).
- 3: More than one external power supply can be used, provided all the power supply commons are connected.

Equivalent Output Circuit



NOTES:

- 1: Shields should be connected to the 0V terminal of the module or the 0V of the power supply.
- 2: Unused current outputs should remain open (no connections) for minimum power consumption.