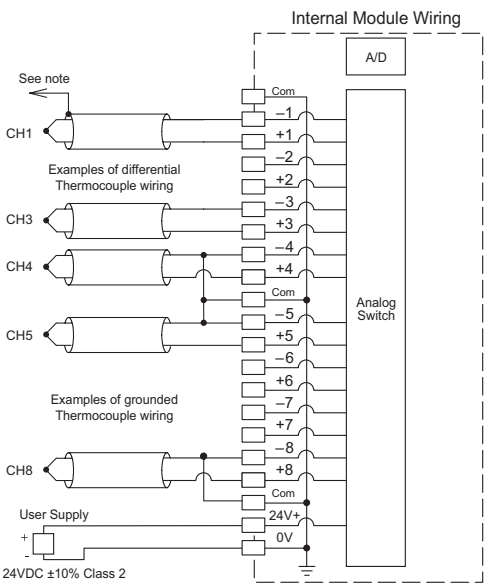
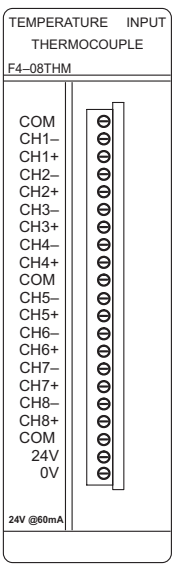
Temperature Input Modules

F4-08THM 8-Channel Thermocouple Input					
General Specifications		**Thermocouple Specifications**			
Number of Channels	8, differential	Input Ranges*	Type J	-190 to 760°C	-310 to 1400°F
Common Mode Range	± 5VDC		Type E	-210 to 1000°C	-346 to 1832°F
Common Mode Rejection	90dB min. @ DC, 150dB min. @ 50/60Hz.		Type K	-150 to 1372°C	-238 to 2502°F
Input Impedance	1M Ω		Type R	65 to 1768°C	149 to 3214°F
			Type S	65 to 1768°C	149 to 3214°F
			Type T	-230 to 400°C	-382 to 752°F
			Type B	529 to 1820°C	984 to 3308°F
			Type N	-70 to 1300°C	-94 to 2372°F
			Type C	65 to 2320°C	149 to 4208°F
Absolute Maximum Ratings	Fault-protected inputs to ± 50VDC	Display Resolution	± 0.1°C or ± 0.1°F		
Accuracy vs. Temperature	± 5ppm/°C maximum full scale calibration (including maximum offset change)	Cold Junction Compensation	Automatic		
PLC Update Rate	8 channels per scan max	Conversion Time	100ms per channel		
Digital Inputs	16 binary data bits, 2 channel ID bits, 4 diagnostic bits	Warm-Up Time	30 minutes typically ± 1°C repeatability		
Input Points Required	32 points (X) input module	Linearity Error (End to End)	± .05°C maximum, ± .01°C typical		
Terminal Type (included)	Removable				
External Power Supply	60mA maximum, 18 to 26.4VDC	Maximum Inaccuracy	± 3°C (excluding thermocouple error)		
Power Budget Requirements	110mA max., 5VDC (supplied to base)	**Voltage Input Specifications**			
Operating Temperature	0° to 60°C (32° to 140°F)	Voltage Ranges	0–5 V, ± 5V, 0–156.25 mV, ± 156.25 mVDC		
Storage Temperature	-20° to 70°C (-4° to 158°F)	Resolution	16 bit (1 in 65535)		
Relative Humidity	5 to 95% (non-condensing)	Full Scale Calibration Error (Offset error Included)	± 13 counts typical, ± 33 maximum		
Environmental Air	No corrosive gases permitted	Offset Calibration Error	± 1 count maximum, @ 0V input		
Vibration	MIL STD 810C 514.2	Linearity Error (End to End)	± 1 count maximum		
Shock	MIL STD 810C 516.2	Maximum Inaccuracy	± 02% @ 25°C (77°F)		
Noise Immunity	NEMA ICS3-304	NOTE 1: Terminate shields at the respective signal source NOTE 2: Leave unused channels open (no connection) *Thermocouple type is selected by setting internal jumpers NOTE 3: This module is not compatible with the *ZIP*Link wiring system.			

Thermocouple Input Wiring Diagram





Voltage Input Wiring Diagram

Note 3: When using 0-156mV and 5V ranges, connect CH- terminal to Com or 0V terminal to ensure common mode range acceptance. Also, connect any unused channels to Com or 0V terminal.