

# Temperature Input Modules

F4-08THM-n 8-Channel Thermocouple Input <---->																																		
When you order the module, replace the "n" with the type of Thermocouple needed. For example, to order a Type J thermocouple module, order part number F4-08THM-J or part number F4-08THM-K for a Type K module.																																		
<b>Number of channels</b>	8, differential inputs																																	
<b>Input Ranges</b>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td>Type B</td> <td>529/1820°C</td> <td>984/3308°F</td> </tr> <tr> <td>Type C</td> <td>65/2320°C,</td> <td>149/4208°F</td> </tr> <tr> <td>Type E</td> <td>270/1000°C,</td> <td>-450/1832°F</td> </tr> <tr> <td>Type J</td> <td>-210/760°C,</td> <td>-350/1390°F</td> </tr> <tr> <td>Type K</td> <td>-270/1372°C,</td> <td>-450/2502°F</td> </tr> <tr> <td>Type R</td> <td>0/1768°C,</td> <td>32/3214°F</td> </tr> <tr> <td>Type S</td> <td>0/1768°C,</td> <td>32/3214°F</td> </tr> <tr> <td>Type T</td> <td>-270/400°C,</td> <td>-450/752°F</td> </tr> <tr> <td></td> <td>-1: 0-50 mV</td> <td></td> </tr> <tr> <td></td> <td>-2: 0-100 mV</td> <td></td> </tr> <tr> <td></td> <td>-3: 0-25mV</td> <td></td> </tr> </table>	Type B	529/1820°C	984/3308°F	Type C	65/2320°C,	149/4208°F	Type E	270/1000°C,	-450/1832°F	Type J	-210/760°C,	-350/1390°F	Type K	-270/1372°C,	-450/2502°F	Type R	0/1768°C,	32/3214°F	Type S	0/1768°C,	32/3214°F	Type T	-270/400°C,	-450/752°F		-1: 0-50 mV			-2: 0-100 mV			-3: 0-25mV	
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<b>Resolution</b>	12 bit (1 in 4,096)																																	
<b>Input Impedance</b>	27KΩ																																	
<b>Absolute Maximum Ratings</b>	Fault protected input, 130 Vrms or 100VDC																																	
<b>Cold Junction Compensation</b>	Automatic																																	
<b>Conversion Time</b>	15ms per channel, minimum 1 channel per CPU scan																																	
<b>Converter Type</b>	Successive Approximation, 574																																	

<b>Linearity Error</b>	± 1 count (0.03% of full scale) maximum
<b>Full Scale Calibration Error</b>	± 0.35% of full scale
<b>Maximum Inaccuracy*</b>	± 1°C for type E, J, K, and T ± 3°C for type B, C, R, and S
<b>PLC Update Rate</b>	1 ch. per scan min., 8 per scan max.
<b>Digital Input Points Required</b>	16 (X) input points (12 binary data bits, 3 channel ID bits, 1 sign bit)
<b>Base Power Required 5V</b>	120mA
<b>Terminal Type (included)</b>	Non-removable
<b>External Power Supply</b>	24VDC ±10%, 50mA current
<b>Operating Temperature</b>	32 to 140°F (0 to 60°C)
<b>Storage Temperature</b>	-4 to 158°F (-20 to 70° C)
<b>Accuracy vs Temperature*</b>	57 ppm/°C maximum full scale
<b>Relative Humidity</b>	5 to 95% (non-condensing)
<b>Environmental Air</b>	No corrosive gases permitted
<b>Vibration</b>	MIL STD 810C 514.2
<b>Shock</b>	MIL STD 810C 516.2
<b>Noise Immunity</b>	NEMA ICS3-304

Note 1: Terminate shields at the respective signal source  
Note 2: Leave unused channels open (no connection)

\*Max. inaccuracy is not guaranteed for temperatures lower than:  
 -220°C for types E & T  
 -200°C for types J & K  
 +100°C for types R & S

