

Thermocouple Amplifier

Model MICROTc

- Thermocouple connector and amplifier in one small unit
- Nonlinear thermocouple input signal is converted to linear output voltage
- Input signal is amplified to 5mV/ °C
- Cold junction compensation
- Units available in K-type
- Signal bandwidth 2.35 kHz
- Dual supply or single supply options available

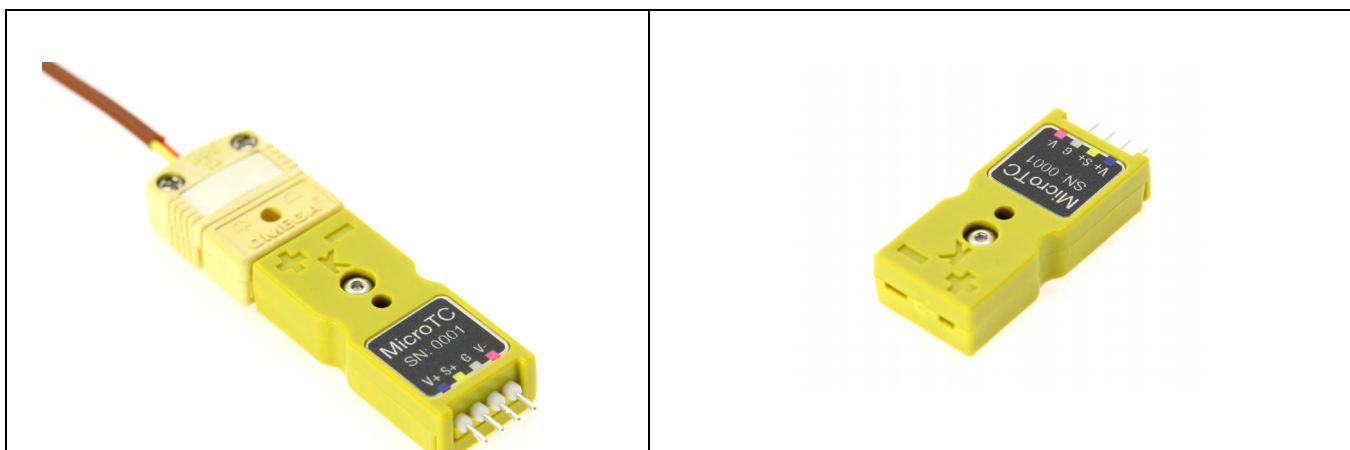


MODEL MICROTc(Thermocouple Amplifier)

Description

The *MicroTC Linear Thermocouple Amplifier* is Michigan Scientific's smallest thermocouple amplifier package. A standard miniature male thermocouple connector plugs directly into the unit, and solder terminals on the back allow easy connection for power and signal. A thru-hole in the center of the unit allows it to be mounted to a surface or tied to the mating connector.

The amplifier provides cold junction compensation and amplifies the thermocouple signal to a linear 5mV/°C over a measurable range of -50 to +400°C. The measurable range expands to -200 to 1360°C with the use of post-processing polynomials. The amplifier accepts a wide power supply range, and separate configurations are available for dual or single power supplies.



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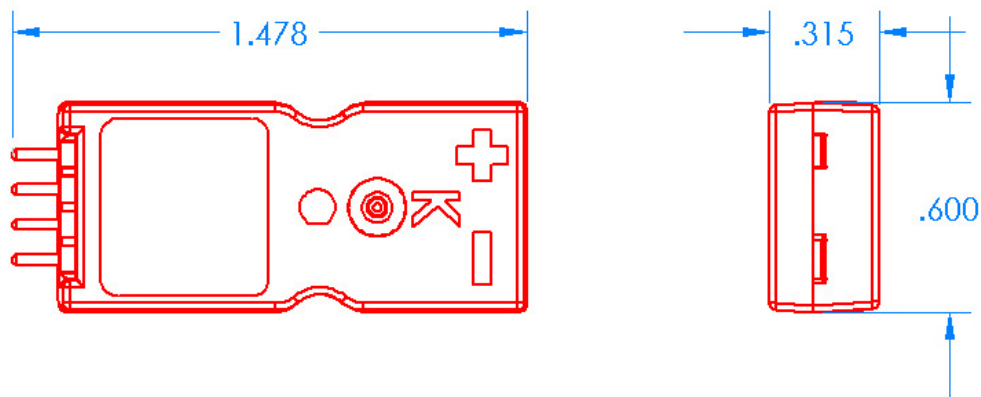
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Thermocouple Amplifier

Specifications

PARAMETER	SPECIFICATION	
	Dual Supply	Single Supply
INPUT		
Range (5mV/°C linear output)	-50 to +400°C	5 to 400°C
Range (w/ polynomial equation)	-200 to 1360°C	5 to 1360°C
OUTPUT		
Range	Min = -Vs + 0.025V; Max = +Vs - 0.1V	Min = 0.025V; Max = +Vs - 0.1V
TEMPERATURE ERROR		
0°C to +50°C Case Temperature	± 2°C Max	
-40°C to +100°C Case Temperature	± 3°C Max	
NOISE		
0.01 - 10 Hz	0.8 µV p-p	
DYNAMIC RESPONSE		
Frequency Response	-3dB	2.35 kHz
Settling Time 0.1%	36 µs	
POWER REQUIREMENTS		
Voltage (Vs)	±7 to ± 16 VDC	+7 to +16 VDC
Quiescent Current	±2.55 mA max	3.25 mA max
ENVIRONMENT		
Specification	0 to +50°C (+32 to +122°F)	
Operation	-40 to +100°C (-40 to +212°F)	
MECHANICAL		
Weight	5g (0.18 oz)	
Overall Length	37.5 mm (1.478 in)	
Overall Height	8 mm (0.315 in)	
Overall Width	15.2 mm (0.6 in)	

Configuration



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