

2551-A 8-Channel Isolated Thermocouple Input Module

Classic



Description

The 2551-A is a high-speed 8-channel isolated thermocouple input module designed to be compatible with the CTI 2500 Series[®] and Simatic[®] 505 I/O base in local, remote I/O, and Profibus configurations. The 2551-A translates thermocouple and millivolt input signals into a scaled temperature value.

Features

- Simatic[®] 505 I/O base format
- 1500 V channel-to-channel isolation
- 1500 V channel-to-PLC backplane isolation
- Fast 2 mSec update time per channel
- On-board cold junction compensation for each thermocouple input
- Microprocessor self-diagnostics

Specifications

Input Channels: 8 isolated input channels, individually configurable for thermocouple or millivolt input

Thermocouple Types: J or K, jumper selectable for each channel

Millivolt Input: 0 - 55 mV

Digital Filtering Time Constant: 0.3 Sec

Output Units: Degrees C or F, (jumper selectable for all outputs)

Repeatability: 0.05%

Accuracy: Type J: $\pm 1^\circ$ from 0° to 760°C

Type K: $\pm 1^\circ$ from 0° to 1372°C Millivolt: .06 Millivolt

Resolution: 0.3 $^\circ\text{C}$, 0.6 $^\circ\text{F}$ thermocouple input
.020 millivolt input

Common Mode Rejection:

>110db @ 60Hz (digital filtering disabled)

Normal Mode Rejection:

>45db @ 60Hz (digital filtering enabled)

Input ESD Protection: 20,000 V

Overrange Protection: 20 VAC for 1 minute (all input terminals)

Isolation: 1500 VDC channel-to-channel 1500 VDC channel-to-PLC

Connector: Fixed

Wire Gauge: 18-24 AWG

Backplane Power: 2.4 Watts

Module Size: Single-wide

Shipping Weight: 1.5 lb (0.68 Kg)

Additional Product Information:

On CTI's Website you will find links to the 2500 Series Standard Environmental Specifications and the UL Agency Certificates of Compliance.

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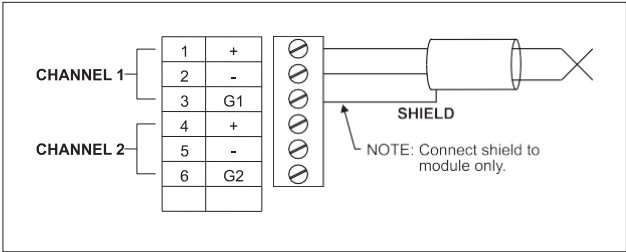
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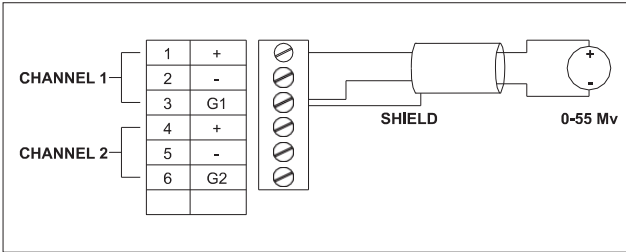
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NOTE:
 Custom (R, S, T, E, and other) thermocouple configurations available by special request.

Note: Connect the shield wire for each channel to the G terminal only.



Thermocouple Wiring Application



Millivolt Wiring Application

NOTE:
 Use 16 gauge wire or smaller for millivolt applications.

Channel 1	1	+
	2	-
	3	G1
Channel 2	4	+
	5	-
	6	G2
Channel 3	7	+
	8	-
	9	G3
Channel 4	10	+
	11	-
	12	G4
Channel 5	13	+
	14	-
	15	G5
Channel 6	16	+
	17	-
	18	G6
Channel 7	19	+
	20	-
	21	G7
Channel 8	22	+
	23	-
	24	G8

2551-A Input Connector

NOTE:
 The following equations describe the digital word transferred to the PLC. Thermocouple Mode WX = Degrees x 10 Millivolt
 Mode WX = Millivolts x 100
 Digital WX value to PLC

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