2557-A 16-Channel Isolated RTD Input Module





DESCRIPTION

The 2557-A is a high-speed 16-channel RTD input module designed to be compatible with the 2500 Series I/O base. The 2557-A translates millivolt level signals from the RTD element into a scaled temperature value. Multiple RTD types are supported as well as millivolt inputs. Scaling, alarm detection, filtering, peak and valley hold, and averaging are supported on a channel by channel basis. All parameters may be loaded into the module directly with relay ladder logic. The standard Classic Mode logs in as a 16 WX input module. The advanced Classic Plus Mode logs in as 16 X, 16 Y, 32 WX, and 32 WY registers in the PLC.

FEATURES

- CTI 2500 Series® and Simatic® 505 I/O base format
- 505 Series I/O base format
- 1500 V isolation channel-to-PLC backplane
- 1500 V isolation channel-to-channel
- 16 bit ADC for each channel
 - Supports 10 Ω Cu, 100 Ω Pt, and 120 Ω Ni RTDs and millivoltinputs
- Fast 20 mSec update time
- Support for 2, 3, or 4 wire RTD elements
- 8 Removable Connectors

SPECIFICATIONS

Input Channels: 16 RTD or Millivolt inputs

Module Login:

Classic Mode: 16 WX

Classic Plus: 16X, 16Y, 32WX, and 32WY

RTD Types:

 $10\,\Omega\,Cu\,(TCR=0.00427\,\Omega/\Omega/^\circ\text{C})$ $100\,\Omega\,Pt\,(TCR=0.003850\,\Omega/\Omega/^\circ\text{C})$

European DIN 43760

120 Ω Ni (TCR= 0.00672 $\Omega/\Omega/^{\circ}$ C)

2, 3, and 4 wire modes

RTD Excitation Current: 250 micro amp Millivolt Input Range: 0 to 100 mV

Millivolt Input Impedance: >1000MΩ@ DC

> 10KΩ@ 16 Hz

Absolute Millivolt Accuracy:

 \pm 1.0% full scale or \pm 1.0 mV

Lead Compensation: 20 Ω per lead wire

Input Overrange Protection:

30 VDC or VAC continuous

Measurement Ranges:

10ΩCu -100°C to 260°C (-148°F to 500°F) 100ΩPt -200°C to 850°C (-328°F to 1562°F) 120ΩNi -80°C to 260°C (-112°F to 500°F)

ADC Resolution: 16 Bits

Connector: 8 Removable plug-in connectors

(Included with the module)
Wire Gauge: 18 to 30 AWG
Module Size: Single wide

Backplane Power Consumption: 4.75 Watts

Shipping Weight: 1.5lbs. (0.68kg)

Additional Product Information:

Environmental Specifications and UL Agency Certificates of Compliance are available on our website.

Standard Shipping Configuration:

3 wire 100 Ω Pt RTD Digital Filtering Enabled

Digital Filtering Enabled
Degrees Centigrade
Classic Mode 16 WX

ROCK SOLID PERFORMANCE. TIMELESS COMPATIBILITY.



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FRONT PANEL WIRING CONNECTORS Removable Block 1 ٧+ G Channel 1 Channels 1 & 2 0-100 mV 12 V+ G I2 SHIELD Removable Block 2 for Channels 3 & 4 Channel 2 11 Millivolt Input V+ 2557 Millivolt Wiring Application G I2 Removable Block 3 The same inputs are for Channels 5 & 6 G repeated on each of the each of the 8 wiring blocks SHIELD Removable Block 4 for 2 WIRE Channels 7 & 8 11 G Removable Block 5 Channels 9 & 10 \$HIELD Removable Block 6 3 WIRE Channels 11 & 12 11 V+ G Removable Block 7 12 Channels 13 & 14 SHIELD Removable Block 8 4 WIRE Channels 15 & 16 2557 RTD Wiring Applications

ROCK SOLID PERFORMANCE. TIMELESS COMPATIBILITY.