

# 2559-RTD

## 8-Channel RTD Input Module



### Description

The 2559-RTD is a high-speed 8-channel RTD input module designed to be compatible with the SIMATIC® 505 I/O base. The Model 2559-RTD translates RTD input signals into scaled temperature values.

### Features

- CTI 2500 Series™ or Simatic® 505 base format
- 1500V channel-PLC backplane isolation
- Fast 25ms update time for all channels
- Detects open in RTD or field wiring
- Compensates for lead resistance

### Specifications

**Input Channels:**  
8 RTD input channels

**Supported RTD Types:**  
Platinum 0.003850 (European DIN)  
Platinum 0.003916 (American)  
Platinum 0.003902  
Platinum 0.003920  
Copper 0.004274  
Nickel 0.006720  
Nickel 0.006178 (European DIN)

**Supported Ohm Values @ 0°C:**  
100Ω, 120Ω, 130Ω, 200Ω, 500Ω, 1000Ω, 10Ω, 9.03Ω

**Supported Probe Types:** 2,3, 4 wire  
**RTD Excitation Current:** 250μA  
**Lead Compensation:** 1000Ω per lead wire (max)

### Input Overrange Protection:

30VDC or VAC continuous

### Measurement Ranges:

10Ω Cu: -100°C to 260°C (-148°F to 500°F)  
100Ω Pt: -200°C to 850°C (-328°F to 1562°F)  
120Ω Pt: -80°C to 260°C (-112°F to 500°F)

**Output Units:** °C, °F, ohms (selectable)

**Repeatability:** ±0.1°C, ±0.2°F

**Resolution:** 0.1°

### Accuracy:

100Ω Pt            0.9°C (1.6°F) from 0-60°C  
Ωx100            0.36Ω from 0-60°C

**Update Time:** 25 mSec (all channels, no filtering)

### Common Mode Rejection:

>130db @ 60Hz

### Normal Mode Rejection:

>80db @ 60Hz

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

### Standard Shipping Configuration:

3 wire 100Ω platinum  
Digital filtering enabled  
Degrees C

**Connector:** standard CTI 2500-40F 40-position removeable connector, 14-22 AWG

**Backplane Power:** 2.8W @ 5 VDC

**Module Size:** Single-wide

**Operating Temperature:** 0° to 60°C (32° to 140°F)

**Storage Temperature:** -40° to 85°C (-40° to 185°F)

**Relative Humidity:** 5% to 95% (non-condensing)

**Agency Approvals Pending:** UL, ULC, CE, FM (Class 1, Div.2)

**Shipping Weight:** 1.5 lb. (0.68 Kg)



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