

# 531 Series

## Temperature Display for Pt100 and Ni100 RTD's

### Features

- Compact and Low-Cost Temperature Display
- Temperature Display in °C or °F
- MIN/MAX Value Retention
- EEPROM Data Backup on Power Failure
- Galvanic Isolation with Reverse Polarity Protection
- Screw Terminal Connectors: pitch 5 mm
- Display Hold Input



- Easy Programming and Operation
- 5 Measurements/second

### Specifications:

Supply voltage: 10-30 V DC, galvanically isolated with reverse polarity protection  
 Current draw: max. 40 mA  
 Display: 5-digit display, red LED's; height 8 mm  
 Measuring rate: 5 measurements/second  
 Display refresh: 1-2 times per second  
 Data backup: EEPROM  
 Housing: housing for control panel 48 x 24 mm acc. to DIN 43 700; RAL 7021, dark grey  
 Ambient temp.: -20 to +65 °C  
 EMC: according to EC EMC directive 89/36/EEC  
 Interference emissions: EN 50081-2/EN 55 011 Class B  
 Interference resistance: EN 6100-6-2  
 Protection: NEMA4 / IP65 (front)  
 Weight: app. 50 g  
 Circuit type: 2-wire, 3-wire and 4-wire connection technique, programmable  
 Input: Pt100 or Ni100 RTD with sensor breakage monitoring

Control inputs: High: 4-30 V DC, Low: 0-2 V DC  
 Supply current: 1 mA  
 Supply line: 2-wire: max 20 Ω, programmable 3-wire, 4-wire: max 20 Ω, no balancing required  
 Temp. ranges: Pt100 acc. to DIN IEC 751:  
 -199.9 °C to +850.0 °C  
 -327.8 °F to +1562.0 °F  
 Ni100 acc. to DIN 43760:  
 -60.0 °C to +250.0 °C  
 -76.0 °F ... +482.0 °F  
 Resolution: 0.1°C (0.1°F) or 1°C (1°F)  
 Linearity error: Pt100 < 0.1 % for entire measuring range at an ambient temperature of 20 °C  
 Ni100 < 0.2 % for entire measuring range at an ambient temperature of 20 °C  
 Temp. drift: 0.1 K/KAmbient

### Order #:

**531 = Temperature Display with RTD Input**

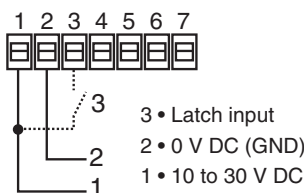
### Accessories

N7 - Explosion proof housing (see accessories section)  
 E200 - Outdoor Enclosure (see accessories section)

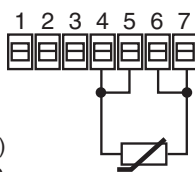
DIGITAL PANEL METERS

### Wiring:

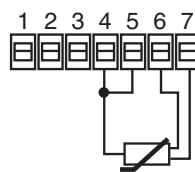
#### Power Supply



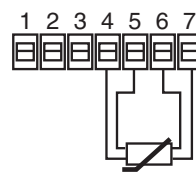
#### 2-Wire RTD



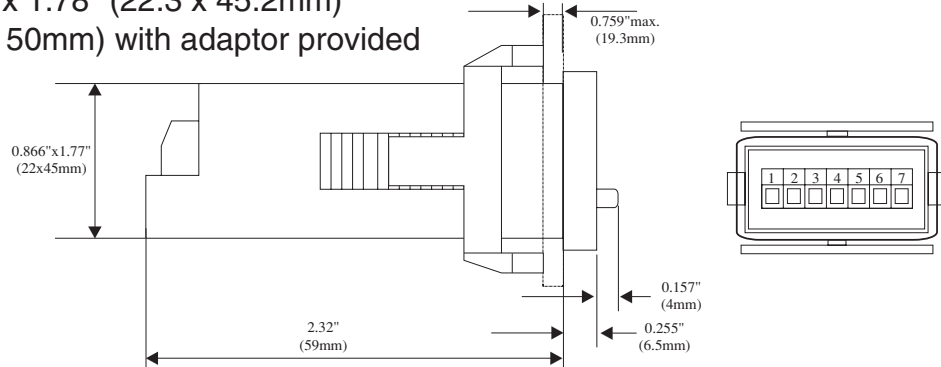
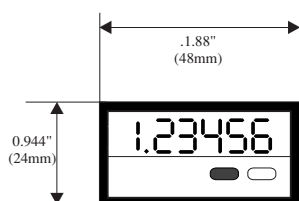
#### 3-Wire RTD



#### 4-Wire RTD



Panel Cutout: 0.876" x 1.78" (22.3 x 45.2mm)  
 or 0.99" x 1.97" (25 x 50mm) with adaptor provided



# 532 Series

## Temperature Display for J, K and N Thermocouples

### Features

- Compact and Low-Cost Temperature Display
- Temperature Display in °C or °F
- MIN/MAX Value Retention
- EEPROM Data Backup on Power Failure
- Galvanic Isolation with Reverse Polarity Protection
- Screw Terminal Connectors: pitch 5 mm
- Display Hold Input
- 5 Measurements/second



- J, K, N Thermocouples with External or Internal Cold Junction Compensation
- Easy Programming and Operation

### Specifications:

Supply voltage: 10-30 V DC, galvanically isolated with reverse polarity protection

Current draw: max. 40 mA

Display: 5-digit display, red 7-segment LED's; height 8 mm

Measuring rate: 5 measurements/second

Display refresh: 1-2 times per second

Data backup: EEPROM

Housing: housing for control panel 48 x 24 mm acc. to DIN 43 700; RAL 7021, dark grey

Ambient temp.: -20 to +65 °C

EMC: according to EC EMC directive 89/36/EEC

Interference emissions: EN 50081-2/EN 55 011 Class B

Interference resistance: EN 6100-6-2

Protection: NEMA4 / IP65 (front)

Weight: app. 50 g

Input: Thermocouple Sensor  
J (Fe-CuNi)  
K (Ni-CrNi)  
N (NiCrSi-NiSi)  
with sensor breakage monitoring

Control inputs: High: 4-30 V DC, Low: 0-2 V DC

Supply current: 1 mA

Supply line: 2-wire: max 20 Ω, programmable 3-wire, 4-wire: max 20 Ω, no balancing required

Temp. ranges: according to DIN IEC 584

J (Fe-CuNi)	-210.0 °C to +1200.0 °C
	-346.0 °F ... +2192.0 °F
K (Ni-CrNi)	-200.0 °C ... +1372.0 °C
	-328.0 °F ... +2501.6 °F
N (NiCrSi-NiSi)	-200.0 °C ... +1300.0 °C
	-328.0 °F ... +2370.0 °F

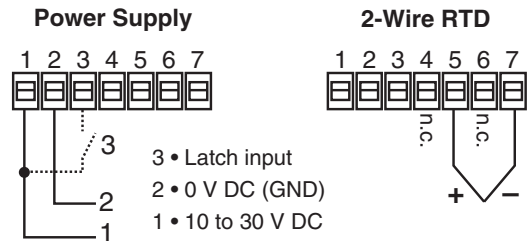
Resolution: 0.1°C (0.1°F) or 1°C (1°F)

Linearity error: < 0.4 % for entire measuring range at an ambient temperature of 20 °C

Cold junction error: ±1.0 °C typ. ±3.0 °C

Temp. drift: 0.1 K/Kambient

### Wiring:



### Order #:

**532 = Temperature Display with thermocouple Input**

**Accessories**

N7 - Explosion proof housing (see accessories section)

E200 - Outdoor Enclosure (see accessories section)

Panel Cutout: 0.876" x 1.78" (22.3 x 45.2mm)  
or 0.99" x 1.97" (25 x 50mm) with adaptor provided

