



## TEL-TRU MANUFACTURING COMPANY

# MODEL 512 RTD CALIBRATOR

### ► FEATURES:

#### Simulate/Read RTD sensors

- Calibrate/Read directly in temperature for your RTD curve
- Adjustable output for full temperature range
- Several Manufacturers' RTD Curves Available
- Platinum, Copper & Nickel

#### Accurate to $\pm 0.25^{\circ}\text{C}$ ( $\pm 0.45^{\circ}\text{F}$ ) with $0.1^{\circ}$ Resolution

- Resistance accuracy of  $\pm(0.015\% + 0.05)\ \Omega$

#### Guaranteed to Work with All Pulsed Instruments

- Works with a wide variety of transmitters including popular Rosemount and Honeywell Models
- Compatible with devices using pulsed excitation currents including PLCs, DCS, Recorders, and all others

#### Automatic Detection of 2, 3, or 4 Wire Connections

- No buttons or switches required, 2W, 3W, or 4W indicator is automatic
- A valuable troubleshooting tool

#### EZ-Dial™ Knob

- Easily adjust output by  $0.1^{\circ}$
- Pressing down and turning will select a faster dialing speed

#### EZ-Check™ Switch

- User settable EZ-Check for 0% and 100% span adjustments
- Store new EZ-Check values by pressing the EZ-Dial Knob

#### Uses a standard 9V Alkaline Battery

- Superior battery life of 45 hours under typical continuous usage
- Easy access to battery compartment

#### Lightweight, Rugged and Reliable

- Small, tough and protected to 60V

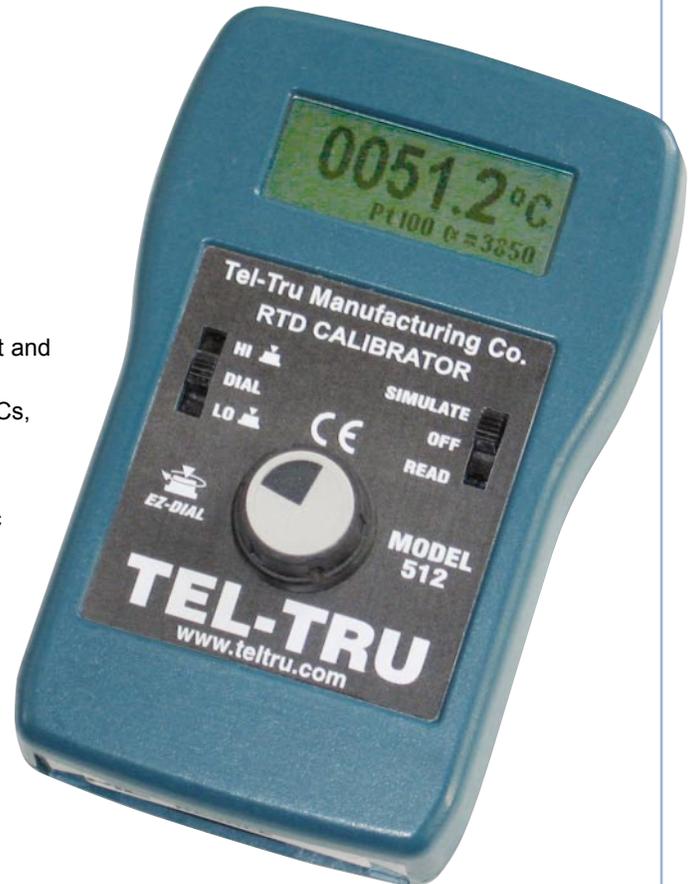
### ► DESCRIPTION:

The Tel-Tru Model 512 RTD Calibrator provides direct temperature calibration to all types of instruments such as transmitters, recorders, controllers, alarms, data acquisition, and computer systems. Also, the Model 512 reads RTD outputs and displays in temperature. It is compatible with pulsed systems and transmitters (like the Rosemount 3144) 2, 3, or 4 wire connections are detected automatically. The Model 512 is a superior replacement for decade boxes, eliminating the need for lugging around large equipment and the possibility of misreading RTD tables.

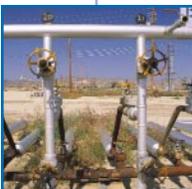
Select from 8 RTD types to source/read in  $^{\circ}\text{C}$  or  $^{\circ}\text{F}$  with  $0.1^{\circ}$  resolution. Or, select  $\Omega$  for direct resistance source/read capability.

Use the EZ-Check Switch to quickly switch between three stored temperature/ $\Omega$  outputs. It's easy to customize these values to your application. In read mode, the EZ-Check Switch recalls minimum and maximum readings. Store/Clear memory with a press of the EZ-Dial Knob.

The Tel-Tru Model 512 offers the highest performance and functions in its class by exceeding the accuracy and functions of many higher priced RTD calibrators. It is a low cost solution for checkout and calibration of all RTD instruments in the field, shop or control room. Contact Tel-Tru for custom RTD curves, ranges, or special requirements not provided by the Model 512.



CE APPROVED!



*World-Class Instruments*

*Since  
1916*

*EZ-Dial and EZ-Check are trademarks  
of Practical Instrument Electronics, Inc.*

[www.teltru.com](http://www.teltru.com)

## ► GENERAL SPECIFICATIONS:

(Unless otherwise indicated all specifications are rated from a nominal 23 °C, 70 % RH for 1 year from calibration)

<b>Operating Temperature</b>	-25 to 60 °C (-10 to 140 °F)
<b>Relative Humidity Range</b>	10 % =RH =90 % (0 to 35 °C), 10 % =RH= 70 % (35 to 60 °C), Non-condensing
<b>Size</b>	4.9 X 3.15 X 1.82 inches (125.5 X 80 X 46.2 mm)
<b>Weight</b>	9.1 oz (258 grams)
<b>Battery</b>	9V Alkaline provides 45 hours of continuous use
<b>Miscellaneous</b>	Low battery indication with nominal 1 hour of operation left Protection to 60V for up to 30 seconds in duration High contrast graphic liquid crystal display with 0.357" (9.07 mm) high digits
<b>Resolution</b>	°C or °F / 0.01 Ω
<b>Span</b>	0.00-400.00 Ω
<b>Accuracy</b>	±(0.015 % of Ω + 0.05) Ω (see accuracy tables for temperature error)
<b>Temperature Coefficient</b>	±0.01 % of span in Ω/°C ambient

## ► RTD SIMULATION SPECIFICATIONS:

<b>Allowable Excitation Current</b>	100 μA to 10.2 mA, steady or pulsed/intermittent/smart
<b>For accuracies below 100μA add</b>	±10μV/Excitation Current (units are in Ω)
<b>Pulsed Excitation Current Compatibility</b>	DC to 0.01 second pulse widths

## ► RTD READ SPECIFICATIONS:

<b>Excitation Current</b>	1 mA nominal
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## ► AVAILABLE OPTIONS:

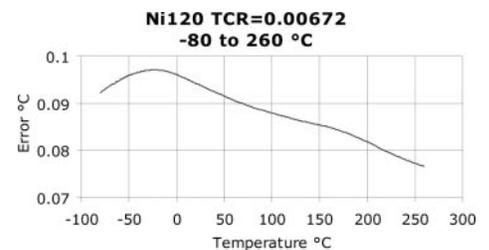
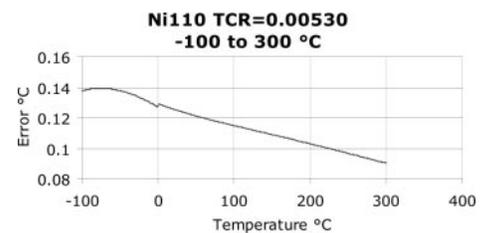
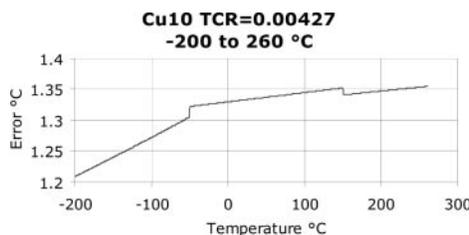
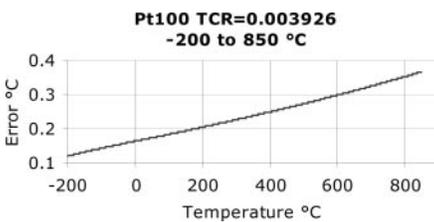
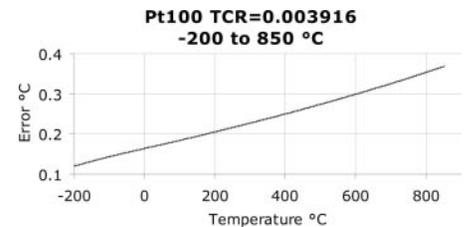
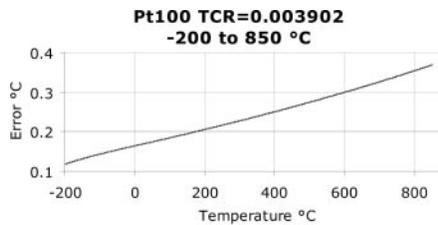
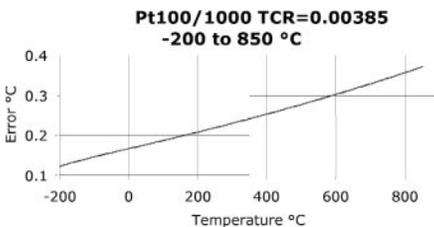
<b>Carrying Case</b>	Part Number: 020-0201
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## ► ORDERING INFORMATION:

<b>MODEL 512 - RTD Source (8 Types, Ω/0.1° resolution)</b>	
<b>Order Code:</b>	Model 512

## ► TEMPERATURE ACCURACY:

The following charts give worst-case temperature accuracy based on stated resistance accuracy of ±(0.015 % + 0.05) Ω.



## ► WARRANTY:

Our equipment is guaranteed against defective material and workmanship (excluding batteries) for a period of three years from the date of shipment. Claims under guarantee can be made by returning the equipment prepaid to our factory. The equipment will be repaired, replaced or adjusted at our option. The liability of Tel-Tru Manufacturing Co. is restricted to that given under our guarantee. No responsibility is accepted for damage, loss or other expense incurred through sale or use of our equipment. Under no condition shall Tel-Tru Manufacturing Co. be liable for any special, incidental or consequential damage.



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