

RTD SIMULATOR SERIES 11

- **DIRECT TEMPERATURE OUTPUT**
11 Switched Steps
- **0.1°C ACCURACY**
25, 50, or 100 Degree Resolution
- **“QUIK-CHEK®” SWITCH**
Replaces Decade Box
- **ALL MANUFACTURERS RTD CURVES**
Platinum, Nickel, Copper & Nickel-Iron



GENERAL DESCRIPTION

ALTEK SERIES 11 Resistance Bulb (RTD) Simulators provide 11 precise temperatures for inputs to transmitters, recorders, controllers, alarms, data acquisition and computer systems. Model 11 allows 2, 3 or 4 wire connections. Factory calibration includes compensation for the resistance of the built-in lead wires. Conformity to the particular RTD curve is in accordance with the latest standards for exact temperature simulation. Platinum, nickel and copper calibrations are available in both degrees F and C. The table lists the standard ranges, other ranges and curves are available options. Resolution is 25, 50 or 100 degrees, corresponding to full scale output of 250, 500 and 1000 degrees respectively. Positive switch selection allows quick, easy settings for any output. Calibrated accuracy for most models is $\pm 0.1^\circ\text{C}$.

The low cost ALTEK MODEL 11 is a complete compact simulator for checkout and calibration of all RTD instruments in the field, shop or control room.

OPERATING INSTRUCTIONS

Select the ALTEK MODEL 11 for correct RTD type and curve, the desired temperature scale (F or C), and range. Connect the ALTEK RTD SIMULATOR leads tightly to the input terminals of the instrument to be tested, the field mounted head or the junction box terminals. Set the temperature selection switch to the desired temperature. End point calibration temperatures of the instrument are then selected on the MODEL 11 and any required adjustments are made. Intermediate points may be selected to verify instrument linearity or check critical points.

SPECIFICATIONS

Accuracy:

Pt	100 Ohm $\pm 0.1^\circ\text{C}$ ($\pm 0.2^\circ\text{F}$)
Ni	120 Ohm $\pm 0.1^\circ\text{C}$ ($\pm 0.2^\circ\text{F}$)
NiFe	604 Ohm $\pm 0.1^\circ\text{C}$ ($\pm 0.2^\circ\text{F}$)
Cu	10 Ohm $\pm 1.0^\circ\text{C}$ ($\pm 2.0^\circ\text{F}$)

Temperature Drift: $\pm 0.01\%/^\circ\text{C}$

Allowable Excitation Current: 0 to 15 milliamps, steady or intermittent

Operating Temperature Range: -25 to 55°C (-10 to $+130^\circ\text{F}$)

Storage Temperature Range: -40 to 70°C (-40 to 180°F)

Relative Humidity: 10 to 90%, non-condensing

Size: 2 1/8 x 4 x 2 1/4 inches (54 x 102 x 55 mm)

Weight: 3 ounces (0.12 kg)

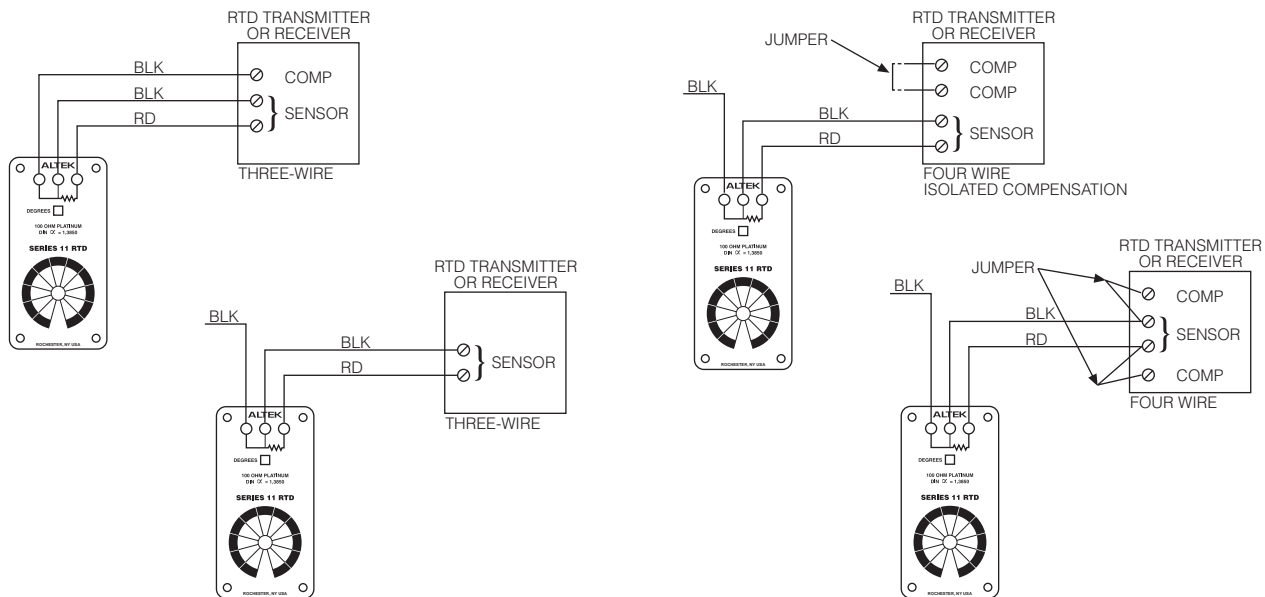
Optional Carrying Case: Zippered with belt loop

Specifications subject to change without notice. Unless otherwise indicated, all specifications are referred to an ambient temperature of $23^\circ\text{C} \pm 1^\circ\text{C}$ ($72^\circ\text{F} \pm 2^\circ\text{F}$).

WARRANTY

Our equipment is guaranteed against defective material and workmanship (excluding batteries) for a period of three years from date of shipment. Claims under guarantee can be made by returning the equipment prepaid to our factory. The equipment will be replaced, repaired or adjusted at our option. The liability of Altek 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 Altek be liable for any special, incidental or consequential damage.

CONNECTION INFORMATION



ORDERING INFORMATION

STANDARD RANGES - 11 equal temperature steps

Platinum (Pt)

Order Model

- 11-Pt 100-(*)-250F
- 11-Pt 100-(*)-250C
- 11-Pt 100-(*)-500F
- 11-Pt 100-(*)-500C
- 11-Pt 100-(*)-1000F

***Insert Curve or Alpha (α) Value**

- *1.3850 DIN/IEC 751, DIN 43760, JIS 1604-1989
- *1.3902 US Industrial, Burns
- *1.3916 JIS 1604-1981
- *1.3926 US Laboratory
- *1.375 HVAC, Hy-Cal for Pt 1000 Ohm

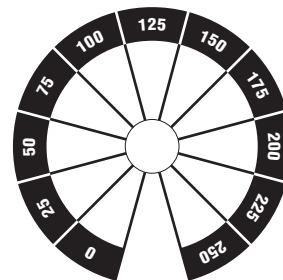
Curve or Alpha (α) Value

*Insert Curve or Alpha (α) Value

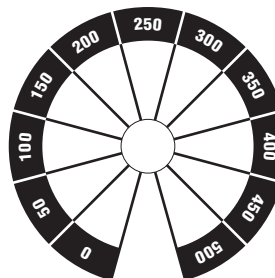
If not specified, Alpha = 1.3850

Example: 11-Pt 100-1.3850-500F

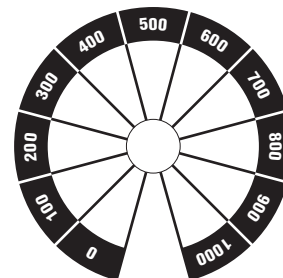
Contact ALTEK for Pt 200, 500 & 1000 Ohm Ranges



25° steps



50° steps



100° steps

Copper (Cu), Nickel (Ni), Nickel-Iron (NiFe)

Order Model

- 11-(*)-250F
- 11-(*)-250C
- 11-(*)-500F

Material

- *Cu 10 Ohm Minco 16-9
- *Ni120 Ohm US Industrial
- *NiFe 604 Ohm

*Insert material

OTHER PRODUCTS

Altek designs and manufactures fast, accurate instruments for measurement, generation and simulation of virtually every process control signal. Consult our factory directly or contact your local stocking representative to order precise, low cost Milliamp Calibrators, Voltage Sources, Direct Thermocouple Sources, RTD Simulators and Frequency Sources. Altek also produces calibrators for custom ranges and unique applications. Additional models and ranges are frequently added to the Altek instrument family to meet all of your critical calibration requirements. Altek products are made in the USA.

[Back to the Altek 11 Product Info Page](#)

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