



PIE Model 525B

Automated Thermocouple & RTD Calibrator

Advantages of the PIE Model 525B over the Fluke 724

- **Greater accuracy, higher resolution & more ranges**
Better specifications for Thermocouples & RTDs as well as millivolts & Ohms with greater resolution for compatibility with more field instruments.
- **Thermocouple is calibration lab accurate & stable**
The internal cold junction thermistor is accurate to $\pm 0.05^{\circ}\text{C}$ and is traceable to NIST. The sensor is thermally bonded to an isothermal mass which includes brass blocks with screw terminals for connection of bare thermocouple wires along with a miniature thermocouple connector for fast connections. The circuitry uses an extremely stable voltage reference and low drift components which make the PIE 525B more accurate than the Fluke 724.
- **Easier RTD hookups**
All connections are indicated on the display. Connections for 2, 3 and 4 wire RTDs without jumper wires. Trouble shoot sensor connections and find broken wires with patented technology. Connect your two, three or four wire RTDs and the PIE 525B automatically detects the connections.
- **Compatible with more instruments**
Operates across a wider range of fixed and pulsed excitation currents for compatibility with old and new instruments. Guaranteed to work with Rosemount & Honeywell smart transmitters, all brands of PLCs and multichannel devices. For RTDs the fixed or pulsed sensor current is measured by the calibrator.
- **More RTD & T/C types and wider temperature ranges**
0 to 4000 Ohms - includes full range of Cu 10 Ohm through Pt 1000 Ohm RTDs (No 10 Ohm Copper on 724). All thermocouple & RTD ranges have 0.1° & 0.01° resolution in $^{\circ}\text{F}$ & $^{\circ}\text{C}$.
- **Easier to use** - Just pick it up, flip the switches and turn the knob - *no baffling buttons*. One handed operation to switch output between span & zero. Includes a deluxe carrying case for hands free operation.
- **Configurable automatic stepping**
Choose 2, 3, 5 or 11 steps vs. only 5 steps and 5, 6, 7, 8, 10, 15, 25, 30 & 60 seconds vs. only slow & fast on the 724.
- **Protected against mis-connection to AC voltage**
Warranted fuse-less protection against mis-connection up to 60V. Fluke 724 rated only to 30V. Fluke requires non-standard fuse replacement and possible expensive recalibration or repair if exceeded.



Smaller & half the weight

But wait...there's more!
Check out the advanced features on page two and see what you can do only with a PIE Calibrator!

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PIE Model 525B Automated Thermocouple & RTD Calibrator

Unique features of the PIE 525B

Universal Connections

Accepts bare T/C Wire & miniature connectors



Automatic detection of 2, 3 & 4 wire RTDs



Compatible with Modern Instrumentation



Guaranteed compatible with smart transmitters, multichannel recorders as well as PLC and DCS input cards. Pictured is a Rosemount 644 smart transmitter with 4 wire RTD input.

Troubleshoot RTD Instruments

When you are having an issue where an instrument won't read an RTD sensor or you don't know if the calibrator is connected properly the PIE 525B has a function to measure and display the fixed or pulsed sensor (excitation) current that the instrument uses to measure the resistance of the RTD sensor.

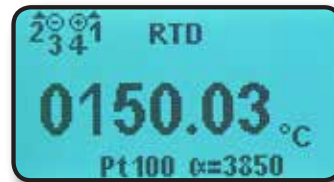
Connect the PIE 525B to the inputs of the device using 2, 3 or 4 wires. The sensor current generated by the instrument will be indicated on the display followed by the word FIXED or PULSE. Older single channel RTD instruments used a constant (fixed) current source to measure an RTD sensor. Smart transmitters, multichannel recorders and PLC or DCS input cards switch the current source sequentially through the channels which is seen as an intermittent (pulsed) current.

00.21mA FIXED
289.27 Ω
525.00 °C

01.15mA PULSE
289.27 Ω
525.00 °C

Troubleshoot RTD Sensors

When measuring an RTD sensor the PIE 525B uses patented circuitry to automatically detect 2, 3 & 4 wire connections. This may also be used as a troubleshooting tool to determine if any wires from the sensor are broken. Here is an example of the 525B reading a sensor with all 4 wires connected.



Here is an example where connections are made to a 4 wire sensor and the PIE 525B indicates that only Wires 1, 2 & 4 are connected. There may be a loose connection or a break in wire 3 somewhere between the sensor and the 525B.

