



Feel the Heat!

The Fluke 724 Temperature Calibrator is a powerful yet easy-to-use calibrator. Use the measure and source functions to test and calibrate almost any temperature instrument.

- Easy to read dual display lets you view input and output simultaneously
- Measure RTDs, thermocouples, ohms, and volts to test sensors and transmitters
- Source/simulate thermocouples, RTDs, volts, and ohms to calibrate transmitters

- Perform fast linearity tests with 25 % and 100 % steps
- Execute remote tests with auto step and auto ramp
- Power transmitters during test using loop power supply with simultaneous mA measurement
- Store frequently-used test setups for later use
- Compact, streamlined shape makes it easy to carry
- Rugged, reliable design stands up to field use
- Backlight lets you work in poor light
- Large battery capacity of four AA cells
- Battery door for easy changes

Simultaneous Function Capability	Channel A	Channel B
24.000 mA DC	M	
24.000 mA DC with 24 V loop supply	M	
100.00 mV DC		M or S
30.000 V DC Measure	M	
20.000 V DC Measure 10.000V DC Source		M or S
0 to 3200 Ohms		M or S
Thermocouple J, K, T, E, R, S, B, L, U, N		M or S
RTD Ni120; Pt100 (3926); Pt100 (JIS); Pt100, 200, 500, 1000 (385)		M or S

M = Measure S = Source/Simulate

For 724 Performance and General Specifications, refer to the 24 V loop, mA measure, thermocouple, RTD, voltage dc and General Specifications on page 7.

Ordering information

Fluke 724 Temperature Calibrator

Each calibrator includes: TL75 Test Leads, AC70A Test Clips, one pair of stackable test leads, Product Overview Manuals in English, French, German, Spanish, Italian, Dutch, Norwegian, Danish, Swedish, Finnish, Portuguese, Korean, Chinese, and Japanese, Users Manuals on CD-ROM; NIST-traceable certificate of calibration; CE and CSA markings.

Summary specifications (18 °C to 28 °C for one year)

Function Measure or Source	Range	Resolution	Accuracy	Notes
Voltage	0 to 100 mV 0 to 10 V (source) 0 to 30 V (measure)	0.01 mV 0.001 V 0.001 V	.02 % Rdg + 2 LSD	Max load, 1 mA
mA (on 724, measure only)	0 to 24	0.001 mA	.02 % Rdg + 2 LSD	Max load, 1000 Ω
mV (TC terminals)	-10.00 mV to +75.00 mV	.01 mV	.025 % of range + 1 LSD	
Resistance	0 Ω to 3200 Ω (measure) 15 Ω to 3200 Ω (source)	0.01 Ω to 0.1 Ω	0.10 Ω to 1.0 Ω	
Frequency (source) (725 only)	2.0 to 1000.0 CPM 1 to 1000 Hz 1.0 to 10.0 kHz	0.1 CPM 1 Hz 0.1 kHz	±.05 % of setting ±.05 % of setting ±.25 % of setting	For frequency source, waveform is 5 V p-p squarewave, -0.1 V offset
Frequency (measure) (725 only)	1 CPM to 10 kHz	5 digits	0.05 % Rdg + 1 count	1 V p-p min.
Loop Supply	24 V dc	N/A	10 %	

Temperature coefficient, -10 °C to 18 °C, 28 °C to 55 °C, ±.005 % of range per °C.

Thermocouple accuracy specifications (Fluke 724/725)

Thermocouple	Measure or Source	
J	-200 to 0 °C 0 to 1200 °C	1.0 °C 0.7 °C
K	-200 to 0 °C 0 to 1370 °C	1.2 °C 0.8 °C
T	-200 to 0 °C 0 to 400 °C	1.0 °C 0.8 °C
E	-200 to 0 °C 0 to 950 °C	0.9 °C 0.7 °C
R	-20 to 0 °C 0 to 500 °C 500 to 1750 °C	2.5 °C 1.8 °C 1.4 °C
S	-20 to 0 °C 0 to 500 °C 500 to 1750 °C	2.5 °C 1.8 °C 1.5 °C
B	600 to 800 °C 800 to 1000 °C 1000 to 1800 °C	2.2 °C 1.8 °C 1.4 °C
L	-200 to 0 °C 0 to 900 °C	0.85 °C 0.7 °C
U	-200 to 0 °C 0 to 400 °C	1.1 °C 0.75 °C
N	-200 to 0 °C 0 to 1300 °C	1.5 °C 0.9 °C
Resolution		
J, K, T, E, L, N, U	0.1 °C, 0.1 °F	
B, R, S	1 °C, 1 °F	
Notes		
Accuracy specifications include 0.2 °C cold junction uncertainty.		

RTD ranges and accuracy specifications (Fluke 724/725)

RTD Types, Ranges and Accuracies			
		Measure (4 wire)	Source
Ni 120	-80 °C to 260 °C	0.2 °C	0.2 °C
Pt 100 - 385	-200 °C to 800 °C	0.33 °C	0.33 °C
Pt 100 - 3926	-200 °C to 630 °C	0.3 °C	0.3 °C
Pt 100 - 3916 (JIS)	-200 °C to 630 °C	0.3 °C	0.3 °C
Pt 200 - 385	-200 °C to 250 °C 250 °C to 630 °C	0.2 °C 0.8 °C	0.2 °C 0.8 °C
Pt 500 - 385	-200 °C to 500 °C 500 °C to 630 °C	0.3 °C 0.4 °C	0.3 °C 0.4 °C
Pt 1000 - 385	-200 °C to 100 °C 100 °C to 630 °C	0.2 °C 0.2 °C	0.2 °C 0.2 °C
Resolution			
RTD	0.1 °C, 0.1 °F		

General specifications for Fluke 724 and 725 calibrators

Maximum voltage: 30 V
Storage temperature: -20 °C to 71 °C
Operating temperature: -10 °C to 55 °C
Relative humidity: 90 % (10 °C to 30 °C); 75 % (30 °C to 40 °C); 45 % (40 °C to 50 °C); 35 % (50 °C to 55 °C)
Shock: 30 g, 11ms, half-sine shock
Vibration: Random, 2 g, 5-500 Hz
Safety: CSA C22.2 No. 1010.1:1992
EMC: EN50082-1:1992 and EN55022:1994 Class B
Size/weight: 96 x 200 x 47 mm (3.8 x 7.9 x 1.9 inches) 650 g (23 oz)
Battery: Four AA alkaline batteries. Battery life: 25 hours typical
Warranty: Three years