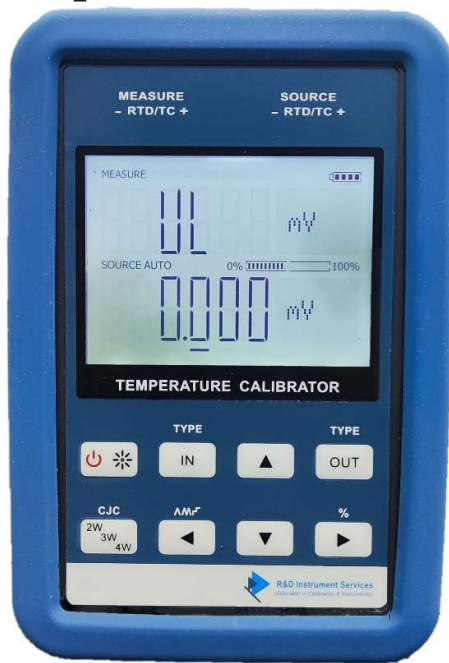




## Temperature Calibrator

## TEMPCAL-02

## Data Sheet



\*This image is for marketing purposes; the actual instrument may vary slightly\*

## FEATURES

- High precision and combination of RTD and Thermocouple (TC) calibration.
- Source and measure 14 types of RTD and resistance.
- Source and measure 8 types of thermocouples (TC).
- 4W, 3W, and 2W connections for RTD simulation and measurement.
- A split-screen display. The upper display allows you to measure. The lower display allows you to source.
- Thermocouple (TC) input/output terminal with automatic reference junction temperature compensation
- Manual stepping and automatic stepping and ramping.

## DESCRIPTION

The TEMPAL is a portable electronic device designed to accurately measure and simulate temperature signals for various applications. This specific calibrator is capable of sourcing and measuring temperature signals for Resistance Temperature Detectors (RTDs) and Thermocouples (TCs). TEMPAL device offers a universal high-accuracy temperature calibration tool for thermocouples and RTDs. Provides a convenient and versatile solution for temperature calibration, verification, and troubleshooting in various industries, including manufacturing, laboratory, HVAC, and process control applications.

The information given in this document is subject to change due to continuous improvement without notice. All Rights Reserved by R&D Instrument

## Technical Specifications

## Source/Measure:

Output	Range	Output range	Resolution	Accuracy	Illustration
DCV	100mV	-15 ~ 100mV	0.001mV	0.02%+20μV	Max. output current ±2mA
TC	R	-20 ~ 1768°C	0.1°C	0.05%+2.5°C (less than or equals to 100°C) 0.05%+2°C (more than 100°C)	Employs ITS-90 temperature standard Note 3
	S	-20 ~ 1768°C	0.1°C		
	B	600 ~ 1820°C	0.1°C	0.05%+2.5°C	
	E	-200 ~ 1000°C	0.1°C		
	K	-200 ~ 1372°C	0.1°C	0.05%+1.5°C (less than or equals to -100°C) 0.05%+1°C (more than -100°C)	
	J	-210 ~ 1200°C	0.1°C		
	T	-200 ~ 400°C	0.1°C		
	N	-200 ~ 1300°C	0.1°C		
OHM	4000Ω	5 ~ 4000Ω	Source: upto 400 Ω - 0.01Ω/ above 400 Ω - 0.1Ω Measure: 0.01 Ω	Upto 400Ω: 0.02%+0.2Ω Above 400Ω: 0.02%+0.5Ω	
RTD	Cu10 @25°C	-100 ~ 260°C	0.1°C	0.05%+0.5°C	±0.01~±2mA Note1, Note2
	Cu50 @25°C	-200 ~ 260°C	0.1°C	0.05%+0.5°C	
	Cu100 @25°C	-200 ~ 260°C	0.1°C	0.05%+0.5°C	
	Pt10 385	-125 ~ 850°C	0.1°C	0.05%+0.5°C	
	Pt25 385	-200 ~ 850°C	0.1°C	0.05%+0.5°C	
	Pt50 385	-200 ~ 850°C	0.1°C	0.05%+0.5°C	
	Pt100 385	-200 ~ 850°C	0.1°C	0.05%+0.5°C	
	Pt200 385	-200 ~ 850°C	0.1°C	0.05%+0.5°C	
	Pt500 385	-200 ~ 850°C	0.1°C	0.05%+0.5°C	
	Pt1000 385	-200 ~ 850°C	0.1°C	0.05%+0.5°C	
	Pt100 3916	-200 ~ 620°C	0.1°C	0.05%+0.5°C	
	Pt100 3926	-200 ~ 600°C	0.1°C	0.05%+0.5°C	
Ni120 @0°C	-70 ~ 320°C	0.1°C	0.05%+0.5°C		
YSI400 2252ohm	15 ~ 50°C	0.1°C	0.05%+0.5°C		

Note 1: Affiliated resistance of test lead is excluded

Note 2: The range of incentive current is from 0.01 to 2mA, and the maximum output is less than or equals to 2V

Note 3: The accuracy does not include the error of interior temperature compensation sensor, the range of the interior temperature compensation sensor is from +10 to 50°C.



## R&D Instrument Services

Special Function: Auto CJC (enable/disable)  
 Auto ramping/stepping  
 Terminal connections: 4mm banana female connector  
 Operating temperature: 0 °C to 60°C  
 Operating Humidity range: ≤80%RH  
 Storage temperature range: -20 °C to 70°C  
 Display: Dual LCD graphical display  
 Power supply: 6 X AAA size 1.5V alkaline batteries (LR03)  
 Maximum allowed voltage: 1V (within terminals or between terminals and earth ground)  
 Physical Dimension: 100 x 30 x 150 (LBH) in mm  
 Casing material: ABS Plastic  
 Power Consumption: 20 hours  
 Progress Bar: 0 to 100% (for measure alone)  
 Warranty: 1 year (battery not included)

### standard delivery

Each Instrument is supplied with  
 -Rubber boot  
 - Test Lead (2 wire) : 2 nos.  
 -AAA alkaline batteries x 6nos  
 -Transit Carrying Pouch  
 - Warranty certificate  
 - User manual  
 -Traceable Calibration Certificate

### Optional

-Accredited (NABL) Calibration Certificate as per ISO/IEC 17025 Standard

## CONTACT



## R&D Instrument Services

5, Natesan Nagar, Alapakkam,  
 Chennai 600116. Tamilnadu, INDIA.  
 Tel.: +91-44-4283 9039 / 4284 1119  
 Mobile Nos.: +91-7358393981 / 7358393984  
 email: sales@rndinstruments.com  
[quote@rndinstruments.com](mailto:quote@rndinstruments.com)  
 Website: [www.rndinstruments.com](http://www.rndinstruments.com)  
 For Calibration: [www.calibrationlab.in](http://www.calibrationlab.in)

**Manufacturer of Test benches  
 Calibration Instruments**

