



# Signal Calibrator - Panel Mount USC-PM

## Application

Ideal for calibrating thermocouples, RTD, indicators, controllers, transmitters, receivers and mA, mV, V, ohms measuring instruments

## Features

- Graphical Display
- Microcontroller Based
- Loop Power Supply for Transmitters
- Simulation and Measurement of RTD, thermocouple, mA, mV or V,  $\Omega$
- Sink facility in mA mode
- Internal Cold Junction Compensation
- Feather Touch Key Pad



## Specification - Measurement Mode

Parameter	Range	Resolution	Accuracy <sup>1</sup>
mA	0 to 25	0.001 (mA)	$\pm 0.025\%$ of Reading + 10 $\mu$ A
mV	-10 to 200	0.001 (mV)	$\pm 0.025\%$ of Reading + 10 $\mu$ V
V	0 to 10	0.001 (V)	$\pm 0.025\%$ of Reading + 3 mV
Ohms <sup>2</sup>	0 to 400	0.01 (Ohm)	$\pm 0.025\%$ of Reading + 0.1 Ohm
RTD (Pt 100) <sup>2</sup>	-200 to 850	0.1 ( $^{\circ}$ C)	$\pm 0.025\%$ of Reading + 0.3 $^{\circ}$ C

### Thermocouple<sup>3</sup> $^{\circ}$ C

	Range	Resolution	Accuracy <sup>1</sup>
J	-200 to 1200	0.1 $^{\circ}$ C	$\pm 0.025\%$ of Reading + 1 $^{\circ}$ C
K	-200 to 1370	0.1 $^{\circ}$ C	$\pm 0.025\%$ of Reading + 1 $^{\circ}$ C
T	-200 to 400	0.1 $^{\circ}$ C	$\pm 0.025\%$ of Reading + 1 $^{\circ}$ C
E	-200 to 1000	0.1 $^{\circ}$ C	$\pm 0.025\%$ of Reading + 1 $^{\circ}$ C
N	-200 to 1300	0.1 $^{\circ}$ C	$\pm 0.025\%$ of Reading + 1 $^{\circ}$ C
R	300 to 1750	1 $^{\circ}$ C	$\pm 0.025\%$ of Reading + 2 $^{\circ}$ C
S	300 to 1750	1 $^{\circ}$ C	$\pm 0.025\%$ of Reading + 2 $^{\circ}$ C

Note 1: Accuracy specifications include effect of non-linearity, hysteresis and repeatability at 23 $\pm$ 5 $^{\circ}$ C

Note 2: Measurement by 3 wire at an excitation current of 1mA

Note 3: Thermocouple measurement accuracy does not include CJC sensor accuracy (CJC error  $\pm$ 1.0 $^{\circ}$ C).

Note 4: Maximum load 1000 ohms

Note 5: Source excitation current 0.1 to 2mA

## Specification - Source Mode

Parameter	Range	Resolution	Accuracy <sup>1</sup>
mA <sup>4</sup>	0 to 25	0.001 (mA)	$\pm 0.025\%$ of Reading + 10 $\mu$ A
mV	-10 to 200	0.01 (mV)	$\pm 0.025\%$ of Reading + 10 $\mu$ V
V	0 to 10	0.001 (V)	$\pm 0.025\%$ of Reading + 3 mV
Ohms <sup>5</sup>	0 to 400	0.01 (Ohm)	$\pm 0.025\%$ of Reading + 0.1 Ohm
RTD (Pt 100) <sup>5</sup>	-200 to 850	0.1 ( $^{\circ}$ C)	$\pm 0.025\%$ of Reading + 0.3 $^{\circ}$ C

### Thermocouple<sup>3</sup> $^{\circ}$ C

	Range	Resolution	Accuracy <sup>1</sup>
J	-200 to 1200	0.2 $^{\circ}$ C	$\pm 0.025\%$ of Reading + 2 $^{\circ}$ C
K	-200 to 1370	0.2 $^{\circ}$ C	$\pm 0.025\%$ of Reading + 2 $^{\circ}$ C
T	-200 to 400	0.2 $^{\circ}$ C	$\pm 0.025\%$ of Reading + 2 $^{\circ}$ C
E	-200 to 1000	0.2 $^{\circ}$ C	$\pm 0.025\%$ of Reading + 2 $^{\circ}$ C
N	-200 to 1300	0.2 $^{\circ}$ C	$\pm 0.025\%$ of Reading + 2 $^{\circ}$ C
R	300 to 1750	1 $^{\circ}$ C	$\pm 0.025\%$ of Reading + 3 $^{\circ}$ C
S	300 to 1750	1 $^{\circ}$ C	$\pm 0.025\%$ of Reading + 3 $^{\circ}$ C

### Current Terminal Input

Protection	: Fuse: 100 mA / 250 V
Memory Function	: 9 set of values for each parameter in generation
Power supply	: 230 VAC, 50 Hz
Loop Power Supply	: 24V $\pm$ 10%
Operating Temperature	: 10 to 50 $^{\circ}$ C
Instrument Casing	: ABS Plastic
Instrument Dimensions	: 300 mm x 260 mm x 120 mm (LxWxD)
Instrument Weight	: 2 kg.

### Standard Delivery

1. Instrument : 1 no.
2. Test Lead (2 wire) : 2 nos.
3. Test Lead (3 wire) : 1 no.
4. User Manual : 1 no.
5. Traceable Calibration Certificate

### Optional

Accredited (NABL) Calibration Certificate as per ISO/IEC 17025:2005 Standard

Manufacturer of  
**TEST BENCHES  
CALIBRATION INSTRUMENTS**

**ISO 9001:2008  
Certified Company**

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

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**ACCREDITED CALIBRATION LABORATORY**

As per ISO / IEC 17025

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MECHANICAL  
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