Portable RTD PT100 Simulator Box

BRT ZY7-1/2

BRT ZY7-1(2) RTD Thermal resistance simulator is a temperature sensor pt100 platinum resistor simulator box. It has 11 high precision resistance in parallel connection embedded inside, and it also can be used as a precision resistor box. It's 11 points of temperature value is simulated by the precision resistance. By adjusting the knob to change it contacting points, user can get 11 types of temperature value in four output wire.

That PT100 simulator is small size, easy to carry. The external box is all sealed and dust-proof to avoid the dust pollution and keep it in high accuracy performance. Its external box shell design ensures its low error, high stability and long life-span. The ABS external shell has high performance in insulation to avoid the ambient static electricity influence. Alloy panel with clear dial scale, user can get 11 temperature value simulation easily and conveniently. The resistance components used are all coiled by high quality enamel manganin copper wire and processed through special technique, so it has high stability performance, and can be used in various types of applications.

Applications

- Factory product quality inspection and temperature signal calibration.
- Monitor the moving-coil temperature meter and digital temperature meter in industrial site.
- Platinum PT100 temperature signal simulation.

11 Temperature simulation points of the RTD PT1OO Simulator

Model Code	Measuring Range	Dial Scale Panel Points
BRT ZY7-1	-100℃- +100℃	-100℃, -80℃, -50℃, -30℃, -20℃, -10℃, 0℃, 10℃, 30℃, 50℃, 100℃
BRT ZY7-2	0℃- +500℃	0℃, 50℃, 70℃, 100℃, 130℃, 150℃, 200℃, 250℃, 300℃, 400℃, 500℃

Model No	Temperature Range ℃	Corresponding resistance adjusting range Ω
BRT ZY7-1	-100 to +100	60.25 to 138.5
BRT ZY7-2	0-500	100.00 to 280.90

Main Technical Parameters

PT100 simulation range:	BRT ZY7-1: -100℃- +100℃； BRT ZY7-2:0℃- +500℃
Accuracy:	0.05% F. S
Simulator basic error range:	$\triangle=\pm(0.05\%|Tx|+0.25)℃$
Ambient temperature range:	0-40℃, recommended 20℃
Relative humidity:	65%, ±15%
PT100 simulation output type:	Platinum Thermal Resistance PT100
Output cable:	1 meter with two clips
Insulation resistance between output wire and external shell:	50MΩ
Max, current passed through:	10mA
Dimension:	54x105x41mm
Weight:	0.16kg

Operation guides

Connect any 3 wires of PT100 simulator to the thermal resistance terminals of the temperature meter to be inspected. Then rotate the knob to one temperature value point. Next check the value displayed in the temperature meter is right or not. If the value displayed is right, the temperature meter inspected is normal, otherwise, it is not normal.

1. Basic error limit

▷=± (0.05%|Tx|=0.25)℃   * Tx is the temperature value simulated

In calculation, it can be treat as resistance value: ▷=±(0.05%|Tx|=0.25)℃.   RTx Ω/℃

*If RTx is temperature Tx, please refer to table (the resistance value in corresponding to the temperature value) printed in the bottom cover of the PT100 simulator.

*Additional error: If ambient temperature changes 10℃, the allowed error is 1/2▷.

2. The ideal recommended operation conditions

•Ambient temperature: 20℃±5℃

•Relative humidity: 65% ±15%

3. Nominal operation conditions

•Ambient temperature: 0℃- 40℃

•Relative humidity: 65% ±15%

Notes:

1. Before use that PT100 simulator to do calibration, please rotate the knob firstly to make sure it in good contact status.

2. Recommend user keeps it in 0-40℃ ambient temperature conditions, humidity is 65% ±15% in indoor. DO NOT use it in the fields have erosion gas or acid dust, or under the sun directly.

*Please visit https://www.brightwinelectronics.com to get details. The specification is subject to change without notice.