# RTD Simulator (DigiSim 38505)



The RTD Simulator (DigiSim 38505) is a portable, battery-operated, precision instrument designed for sourcing as well as measuring RTD signals. A 4½ digit LCD provides excellent resolution with high contrast ratio. It is designed to calibrate instruments taking RTD as an input and retain its precision & repeatability over long periods in worst environmental conditions. An exceptionally stable resistance source provides continuously variable precision output signals with two ten-turn potentiometers.



#### **Features**

- Simulates & measures one RTD
- High precision, accuracy, reliability & longevity
- 4½ digit (8mm) LCD for high resolution
- Automatic lead compensation for 3-wire RTDs
- Eliminates the need of decade resistance boxes
- Compact in size and built for toughest environments
- Unique self-check facility ensures reliable operations
- Powered by AC/DC adapter or 9V Ni-Mh battery

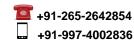
### **Applications**

- Simulates & measures one RTD (2-wire/3-wire)
- Calibrates temperature indicators with RTD input
- Works as ohms source
- Calibrates temperature controllers and transmitters

Code	Function, Range & Resolution				
		RTDs <sup>[1]</sup>		Self-Check	
P0	Pt46		-200 to 850°C	555.5 ± 2 digits	
P1	Pt100		-200 to 850°C	555.5 ± 2 digits	
P2	Pt200		-200 to 850°C	555.5 ± 2 digits	
С	Cu53		-50 to 180°C	177.7 ± 1 digit	
N	Ni100		-60 to 180°C	177.7 ± 1 digit	
		0.1 °C			
G		User specified	l requirements <sup>[2]</sup>		

[1] RTDs conform to IEC751/DIN43760 standard .

[2] Contact us with your specific requirements.



## **Technical Specifications** 22 ≤ T<sub>A</sub> ≤ 32°C; V<sub>S</sub>=V<sub>LOBAT</sub>; 1yr of calibration validity unless otherwise noted

Display Specifications	Display	4½ digit (8mm) 7-segment LCD with high contrast ratio		
	Function	RTDs		
	Resolution	0.1 °C		
	Accuracy	± 0.05% rdg ± 0.05% FS ± 1 dgt		
	Self-check	As specified in the table		
Bridge Current		0.1 to 1 mA depending on range		
Effect of leads		1°C for 10% of nominal resistance per lead for 3-wire RTDs.		
	Туре	9V Ni-Mh battery with longer life for field use		
Battery	Life <sup>[1]</sup>	10 - 12 hours in continuous use		
	Status	Displays battery status using "Low Battery"		
Mains Operation		Power jack for AC/DC adapter/charger (230V <sub>AC</sub> ,50Hz to 10.5V <sub>DC</sub> ,100mA)		
Input Protection		I/O terminals are protected up to 24 V <sub>DC</sub>		
Storage Temperature		0 to 70°C w/o batteries and accessories		
Humidity		Less than 90% Rh (Non-condensing)		
Operating Temperature		5 to 55°C		
Zero Drift		< 1dgt per 10°C outside the range of 22 ≤ T <sub>A</sub> ≤ 32°C		
Span Drift		< 0.0015% of rdg per °C		
Enclosure Dimension		75(W) x 150(H) x 55(D) mm		
Enclosure Finish		Powder coated		
Weight		600g w/o batteries		

### **Standard Accessories**

Acceptation	Included	BS-5(4mm) probes, crocodile clips, screw driver, leather case, AC/DC adapter	
Accessories	Optional	9V Ni-Mh battery, external battery charger, wooden case	
Documentation	Included	Warranty certificate <sup>[1]</sup> , Calibration certificate <sup>[2]</sup> , User manual, RTD temperature tables	JYN - S
	Optional	NABL Calibration certificate	



## **Ordering Information**

Model No.	Code	
38515	X (As specified in the table)	
Example	Specify 38505P1 to order the RTD Simulator using 4½ digit LCD for Pt100 with a range of -200 to 850 °C.	