

RTD Simulator and Resistance Decade OCM-612



- ✓ Direct Resistance selection from 16 Ω to 10 k Ω
- ✓ Resolution 0.0001 Ω
- ✓ Direct Temperature selection for Pt- and Ni- Sensors
- ✓ Accuracy ± 0.02 $^{\circ}\text{C}$
- ✓ Temperature Coefficient < 1ppm/K
- ✓ 2, 3 and 4 Terminals
- ✓ Selection with Keyboard or via Serial Port RS 232
- ✓ Low Resistance Simulation
- ✓ Calibration of Instruments, Controllers, Regulators ...

Model OCM-612 is a high accuracy and stability resistance decade. It is designed as a temperature simulator as well as a programmable low value resistance decade.

In the temperature mode the instrument simulates RTD Sensors within a range from -200 $^{\circ}\text{C}$ to $+850$ $^{\circ}\text{C}$. Thermometers Pt-100, Pt-200, Pt-500, Pt-1000, Ni-100 and Ni-1000 can be selected. The required temperature value is entered with the keyboard or via the serial data port. The corresponding resistance is available at 2, 3 or 4 output terminals.

In the variable resistance mode the instrument permits a direct selection of resistance in a range from 16 Ω to

10 k Ω . The resolution depends on the value selected. The highest resolution is 0.0001 Ω . The selected resistor is available at 2 or 4 output terminals.

A Soft Manager for Windows at a diskette is suitable for communication via RS232. It permits the selection of the sensor type, adjusting of the temperature or the resistance from a PC or from a supervising controller. An LCD display informs about the selected parameters and the control status.

OCM-612 is supplied from internal rechargeable battery. The mains charger is enclosed to the shipment.

SPECIFICATIONS

Resistance Settings:	16.0000 Ω 10 000 Ω
Resolution:	< 20 Ω 0.0001 Ω < 200 Ω 0.001 Ω < 2000 Ω 0.01 Ω < 3000 Ω 0.1 > 3000 Ω 1 Ω
Power Dissipation:	0,3 W
Max. Current:	100 mA (16 - 30 Ω) 50 mA (30 - 100 Ω) 20 mA (100 - 500 Ω) 10 mA (500 - 3 000 Ω) 5 mA (3 000 - 10 000 Ω)
Temperature Settings:	-200.000 ... 850.000 $^{\circ}\text{C}$
RTD Simulation:	Pt-100, Pt-200, Pt-500, Pt-1000, Ni-100, Ni-1000
Temperature Norms:	PTS 68, IST 90
Pt - Sensors:	DIN (1,385), US (1,392)
Ni - Sensors:	DIN 43760 (6 180)
Terminals:	2, 3 and 4 terminal outputs
Entry:	Keyboard or serial data port RS-232 with 8 bit, no parity, 1 start, 1 stop, 300-19200 bd.
Supply:	Internal rechargeable battery. Battery charger for 100-240V/50-60 Hz enclosed
Temperature Range:	Working: 23 $^{\circ}\text{C} \pm 10^{\circ}\text{C}$. Storing: 0 to 40 $^{\circ}\text{C}$ @ max. 80 % r.F.
Cabinet:	Aluminum cabinet 325 x 111 x 316 mm (W x H x D), weight 4 kg

Pt - Simulation				
Temperature	Pt-100	Pt-200	Pt-500	Pt-1000
-200 ... 200 $^{\circ}\text{C}$	0.02 $^{\circ}\text{C}$	0.02 $^{\circ}\text{C}$	0.02 $^{\circ}\text{C}$	0.1 $^{\circ}\text{C}$
200 ... 500 $^{\circ}\text{C}$	0.03 $^{\circ}\text{C}$	0.04 $^{\circ}\text{C}$	0.06 $^{\circ}\text{C}$	0.2 $^{\circ}\text{C}$
500 ... 850 $^{\circ}\text{C}$	0.04 $^{\circ}\text{C}$	0.06 $^{\circ}\text{C}$	0.15 $^{\circ}\text{C}$	---

Ni - Simulation		
Temperature	Ni-100	Ni-1000
-10 ... 120 $^{\circ}\text{C}$	0.02 $^{\circ}\text{C}$	0.1 $^{\circ}\text{C}$

Resistance	
Range	Accuracy [% of value]
16 Ω - 400 Ω	0.003 % + 3 m Ω
400 Ω - 1000 Ω	0.005 %
1000 Ω - 3000 Ω	0.015 %
3 000 Ω - 10 000 Ω	0.04%

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