RTD Simulator and Resistance Decade
OCM-622

- ✓ **Direct Resistance selection from 1.00000 Ω to 1.200000 MΩ**
- ✓ **Resolution 0.00001 Ω**
- ✓ **Direct Temperature selection for Pt and Ni Sensors**
- ✓ **Resistor Accuracy ± 0.005 °C**
- ✓ **Temperature Coefficient < 1ppm/K**
- ✓ **2, 3 and 4 Terminals**
- ✓ **Selection with Keyboard or RS 232 or IEEE488**
- ✓ **Low Resistance Simulation**
- ✓ **Calibration of Instruments, Controllers, Regulators...**

Model OCM-622 is a high accuracy and high stability resistance decade. It is designed as a temperature simulator as well as a programmable resistance decade.
In the temperature mode the instrument simulates RTD Sensors within a range from -200 °C to +850 °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 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 1 Ω to 1.2 MΩ. The resolution depends on the resistance value selected. The highest resolution is 0.00001Ω. 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 or IEEE488 Data Bus. 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-622 is supplied from internal rechargeable battery. The mains charger is enclosed to the shipment.

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SPECIFICATIONS

Resistance Settings:	1.000 00 Ω - 1 200 000 Ω	
Resolution:	1 Ω	0.00001 Ω
	10 Ω	0.00001 Ω
	100 Ω	0.0001 Ω
	1000 Ω	0.01 Ω
	10 000 Ω	1 Ω
	100 000 Ω	1 Ω
	1 000 000 Ω	1 Ω
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:	Pt: -200.000 … 850.000 °C (-327 … 1562 °F)	
	Ni: -60.000 … 300.000 °C (-76 … 572 °F)	
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)	
Temperature Ranges:	Reference Temperature:	18 … 28 °C
	Operation Temperature:	5 … 40 °C
	Storing Temperature:	-10 … 50 °C
Tempco:	< 1 ppm/ °C (1 Ω - 2000 Ω) terminals R4W	
	< 1 ppm/ °C (100 Ω - 1200 kΩ) terminals R2W	
	< 5 ppm/ °C (2 kΩ - 10 kΩ) terminals R4W	
Max. Dissipation:	0.3W	
Max. Excitation:	120VDC or 50V RMS	
Switching definition:	< 6 ms	
Terminals:	2, 3 and 4 terminal outputs, gold coated	
Entry:	Keyboard, RS-232 or IEEE488	
Supply:	Internal rechargeable battery, 6h operation. Uninterrupted mains operation with a Battery charger 100-240V/50-60 Hz enclosed	
Cabinet:	Aluminum cabinet 325 x 111 x 316 mm (W x H x D), weight 6,5 kg	

Resistor Accuracy – 4 terminal connection R4W

Range	Accuracy
1 Ω - 400 Ω	0.003 % + 3 mΩ
400 Ω - 2000 Ω	0.005 %
2000 Ω - 10000 Ω	0.015 %

Max. thermal voltage at R4W is < 1µV

Resistor Accuracy – 2 terminal connection R2W

Range	Accuracy
1 Ω - 2000 Ω	0.005 % + 10 mΩ
2 kΩ - 200 kΩ	0.005 %
200 kΩ - 1200 kΩ	0.01 %

Max. thermal voltage at R2W is < 5µV (1Ω-2kΩ), and < 15µV (2kΩ-1.2 MΩ).

Simulation Accuracy Pt

Temp.Range	Pt100 4 terminal R4W	Pt200 4 terminal R4W	Pt500 4 terminal R4W	Pt1000 4 terminal R4W	Pt10000 2 terminal R2W
-200 … 200 °C	0.02 °C	0.02 °C	0.02 °C	0.04 °C	0.04 °C
200 … 500 °C	0.03 °C	0.04 °C	0.06 °C	0.1 °C	0.06 °C
500 … 850 °C	0.04 °C	0.06 °C	0.15 °C	0.2 °C	0.1 °C

Simulation Accuracy Ni

Temperature	Ni-100	Ni-1000
-10 … 120 °C	0.02 °C	0.1 °C