



- ✓ Resistance Range 100.000 mΩ - 20.0000 MΩ
- ✓ Simulation of RTD Temperature Sensors
- ✓ Simulation Accuracy ± 0.1 °C
- ✓ Resistance Accuracy ± 200 ppm
- ✓ User free programmable Tables, Curves
- ✓ Power dissipation 5W, 200Vp-p, 0.5A
- ✓ RS 232, Options: IEEE488, USB, LAN
- ✓ Internal recalibration software procedure
- ✓ OPEN and SHORT Terminals Simulation

OCM642 is a programmable Resistance Decade with range from 0.1 Ω to 20 MΩ and a basic accuracy of 0.02 %. Best resolution at the lowest range is 1μΩ. The Simulator uses stable foil resistors with low temperature coefficient switched by low thermal voltage relays. Built-in software contains function of RTD temperature sensor simulation with parameters according to IEC (DIN) or US standards and the temperature setting in degree Celsius or Fahrenheit. The resistance or the temperature will be locally set from the front keyboard. For the remote operation are RS232, USB, LAN or GPIB available.

OCM642 is a sophisticated instrument with its own recalibration procedure which enables correction of any deviation in resistance without mechanical adjustment.

SHORT and *OPEN* simulation of the output terminals is optionally available.

OCM642 is designed for checking parameters of resistance meters, regulators and process meters that use external resistance sensors for non-electric quantity measurements.

Soft Manager for Windows is available for communication with a PC and for automated testing and calibration purposes. It permits the selection of the sensor type and the adjustment of the temperature or the resistance.

The display informs about the selected parameters, accuracy of the output value, maximum voltage and current through the selected resistance and the control status.

SPECIFICATIONS

Resistance Range: 100.000 mΩ - 20 MΩ
 Resolution: 1 μOhm
 SHORT-OPEN Terminals
 SHORT = 40 mOhm, max. 500mA, OPEN = > 10 GigaOhm, max. 200Vp-p

Temperature Settings: Pt: -200.000 ... 850.000 °C (-328 ... 1562 °F)
 Ni: -60.000 ... 300.000 °C (-76 ... 572 °F)

RTD Simulation: Pt-10 ... Pt-20000, Ni-10 ... Ni-20000

Pt Temp. Standards: IEC 751 (1,3850 for IPTS68) (A=3.90802e-3, B=-5.80195e-7, C=-4.2735e-12)
 IEC 751 (1,3851 for ITS90) (A=3.9083e-3, B=-5.775e-7, C=-4.18301e-12)
 1,3916 (A=3.9692e-3, B=-5.8495e-7, C=-4.2325e-12)
 1,3926 (A=3.9848e-3, B=-5.870e-7, C=-4.0e-12)

Ni Temp. Standards: DIN 43760 (6180)
 (A=5.485e-3, B=6.65e-6, C=2.805e-11, D=-2e-17)

Maximum Load: Max. 5W.
 Maximum Voltage: 200Vp-p
 Maximum Current: 0.5A

Reaction Time: 6ms

Switching Method: Fast / Smooth / Via Short / Via Open

Temperature Ranges: Reference Temperature: 20 ... 26 °C
 Operation Temperature: 5 ... 40 °C
 Storing Temperature: -10 ... 50 °C

Tempco: < 25 ppm/ °C

Terminals: 4mm, gold coated

Interface: RS-232. Option: IEEE488, USB, Ethernet

Supply: 115/230V / 50-60 Hz

Cabinet: Aluminum cabinet 390x128x310mm (WxHxD), weight 4.5 kg

Resistance Accuracy

Range / Resolution	Accuracy
100.000 mΩ - 200.000 mΩ	0.05 % + 15 mΩ
200.01 mΩ - 2.00000 Ω	0.05 % + 15 mΩ
2.0001 Ω - 20.0000 Ω	0.05 % + 15 mΩ
20.001 Ω - 200.000 Ω	0.05 % + 15 mΩ
200.01 Ω - 2000.00 Ω	0.02 %
2.0001 kΩ - 20.0000 kΩ	0.02 %
20.001 kΩ - 200.000 kΩ	0.02 %
0.20001 MΩ - 2.00000 MΩ	0.02 %
2.0001 MΩ - 20.0000 MΩ	0.05 %

Pt Simulation Accuracy

Temperature Range	Pt 10 - Pt 99	Pt 100 - Pt 20000
-200.00...-0.01 °C	0.5 °C	0.15 °C
0.00...850.00 °C	1.0 °C	0.2 °C

Ni Simulation Accuracy

Temperature Range	Ni 10 - Ni 99	Ni 100 - Ni 20000
-60.00...-0.01 °C	0.4 °C	0.1 °C
0.01...300.00 °C	0.4 °C	0.1 °C

Frequency Response

R	Maximum AC/DC difference		
	100 Hz	1 kHz	10 kHz
100 mΩ	0.05 %	0.20 %	5.00 %
1 Ω	0.02 %	0.10 %	0.50 %
10 Ω	0.01 %	0.02 %	0.10 %
100 Ω	0.01 %	0.10 %	0.60 %
1 kΩ	0.06 %	0.60 %	6.00 %
10 kΩ	0.60 %	6.00 %	
100 kΩ	6.00 %		

HOW TO ORDER

Bus OCM642-V1xxx - RS232
 OCM642-V2xxx - RS232, USB, LAN, GPIB

Housing OCM642-Vxx0x - Table version
 OCM642-Vxx1x - Module 19", 3HE

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