- ✓ Direct Resistance selection from 10 Ohm to 300 kOhm
- ✓ Resolution 100 µOhm
- ✓ Direct Temperature selection for Pt and Ni Sensors
- ✓ Resistor Accuracy $\pm$ 0.02 %
- ✓ Temperature Coefficient < 25ppm/K
- ✓ Power dissipation 5W, 200Vp-p, 0.5A
- ✓ Selection with Keyboard or RS 232, IEEE488, USB, LAN
- ✓ Internal recalibration software procedure
- ✓ OPEN and SHORT Terminals Simulation
- ✓ Calibration of Instruments, Controllers, Regulators...

OCM641 is a programmable RTD simulator with range from 10 Ω to 300 kΩ and a basic accuracy of 0.02 %. Best resolution at the lowest range is 100$\mu\Omega$. 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 temperature or the resistance will be locally set from the front keyboard. For the remote operation are RS232, USB, LAN or GPIB available.

OCM641 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.

OCM641 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:	10 Ω - 300 kΩ
	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-100 ... Pt-1000, Ni-100 …Ni-1000
Resolution:	100 µOhm
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 kg

Resistance Accuracy

Range / Resolution	Accuracy
10.0000 Ω - 20.0000 Ω	0.05 % + 15 mΩ
20.001 Ω - 200.000 Ω	0.05 % + 15 mΩ
200.01 Ω - 1000.00 Ω	0.02 %
1.0001 kΩ - 3.0000 kΩ	0.02 %
3.001 kΩ - 10.000 kΩ	0.02 %
10.01 kΩ - 30.00 kΩ	0.05 %
30.1 kΩ - 100.0 kΩ	0.1 %
101 kΩ - 300 kΩ	0.5 %

Pt Simulation Accuracy

Temperature range	Pt 100-Pt 1000
-200.00…-0.01 °C	0.2 °C
0.00…850.00 °C	0.2 °C

Ni Simulation Accuracy

Temperature range	Ni 100-Ni 1000
-60.00…-0.01 °C	0.1 °C
0.01…300.00 °C	0.1 °C

Frequency Response

R	Maximum AC/DC difference		
	100 Hz	1 kHz	10 kHz
10 Ω	0.01 %	0.01 %	0.05 %
100 Ω	0.01 %	0.05 %	0.5 %
1 kΩ	0.04 %	0.4 %	4 %
10 kΩ	0.40 %	4 %	
100 kΩ	4 %		