

- ✓ Current Output 0-22mA, Source/Sink
- ✓ Voltage Output 0-25V
- ✓ mV Outputs 0-27mV and 0-540 mV
- ✓ DIN Thermocouples J, K, N, R, S, T, B, E
- ✓ RTD Simulator -200 ... 850°C
- ✓ Resistance Range up to 3kOhm
- ✓ Multimeter  $\pm 2V$  to  $\pm 200V$  DC and  $\pm 100mA$
- ✓ Measurements of fast Transients
- ✓ Datalogger Function (Option)
- ✓ 8 Tables with each 50 free Output Points



**Model IOC505** is a hand-held Calibrator-Multimeter for the generation of currents 0-22mA in Source or Sink Mode and voltages 0-25VDC. External voltages  $\pm 2V$ ,  $\pm 20V$  and  $\pm 200VDC$  (selected ranges or auto range) and currents of up to  $\pm 100mA$  can be measured simultaneously with the generated calibrating signals.

Further functions are the generation of mV-Signals, the simulation of DIN-Thermocouples, the generation of Resistances and RTD Temperature Sensors. Up to eight fast input signals -Transients- can be measured, memorized and shown on the display as graphics or uploaded to a PC.

Datalogger function for the calibrator output and the multimeter input signals can be activated. Both signals are stored as tables and shown as graphics at the LCD display. By using the supporting program the data can be transferred to the PC and shown as tables and graphics.

For fast checking or calibration of Process Transmitters the calibrator output can be used for the input, whereas the output from the Transmitter will be measured by the Multimeter. The results are shown on the display immediately.

mV Voltages 0-27mV or 0-540mV for calibration of strain gauges amplifiers, transmitters and small signal instruments. The output voltage can be resolved up to 0.001mV.

Thermocouples J, K, N, R, S, T, B, and E are simulated across the entire DIN ranges. The output is via T/C plug with automatic compensation of the junction. The compensation can be switched-off.

RTD Thermometers Pt-100 ... 1000 and Ni-1000 are simulated across the entire DIN range.

Resistance Source is a generator of resistance values from 45 to 3000 Ohm with 0.50Ohm resolution.

Datalogger: The generated calibrator signal and the measured signal at the multimeter input will be stored as tables with date and time added. The interval is selectable from 2 sec. to 24h. The data can be transferred to a PC, shown as tables and graphics and handled under Windows and Excel.

Transients: Eight memory slots are available for storing of fast signals at the multimeter input. Each transient can individually be shown at the LCD display, transferred to a PC, shown as tables and graphics and handled under Windows and Excel.

Up to 8 Tables with 50 points each could be entered from a PC and stored in IOC505 internal memory. With UP or DOWN arrows the stored values can be recalled at the output terminals. This simplifies testing of connected units with individual steps.

IOC505 is powered from an internal rechargeable battery which permits operation of up to 8 hours. All ranges and functions can be calibrated individually from the keypad. The Terminals are 4mm gold plated plugs. A T/C connector is used for Thermocouple outputs.

## SPECIFIFCATIONS - CALIBRATOR

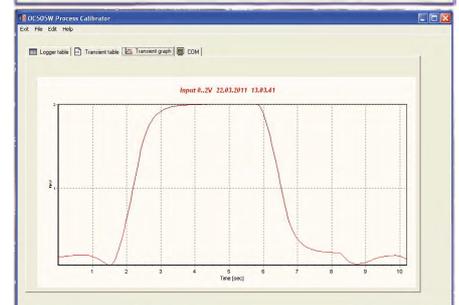
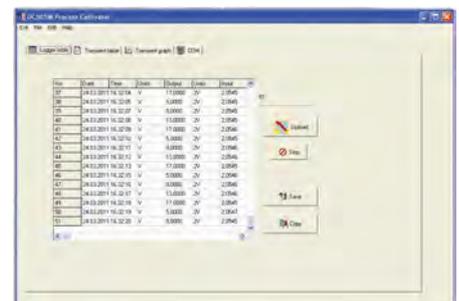
<b>DC-A</b>	0 - 22 mA	Source or Sink, Resolution 0.001mA.
<b>DC-V</b>	0 - 25 V	Resolution 0.001V.
<b>mV Outputs</b>	0-27 mV 0-540mV	Resolution 0.001mV. Resolution 0.01mV.
<b>Value Selection</b>	Direct entry: Steps: Ramps:	From the keypad, 5-Digit resolution. Freely selectable, rising or falling. Raising or falling ramps with selectable steps
<b>Thermocouples</b>	-270 °C up to max. (°C): According to ITS 90	J (1200 °C), K (1370 °C), N (1300 °C), R (1760 °C), S (1760 °C), T (400 °C), B (1820 °C), E (1000 °C).
<b>RTD Thermometer</b>	Pt-100, 200, 500, Pt-1000 Ni-1000	-200 °C to 850 °C -60 °C to 170 °C
<b>Resistors</b>	45 Ohm to 3000 Ohm	Resolution 0.5 Ohm
<b>Accuracy</b>	DC-V, DC-I Thermocouples RTD Ohm Source	± (0.05% from value + 0.1% from range) ± (0.3 to 2.5 °C) ± (0.1% from value + 0.5 °C) ± (0.1% from value + 0.5 Ohm)
<b>Temp. Coefficient:</b>	± 25ppm / K	

## SPECIFIFCATIONS - MULTIMETER

<b>2 V DC</b>	Impedance: 1.38 M Ohm
<b>20 V DC</b>	Impedance: 593 k Ohm
<b>200 V DC</b>	Impedance: 563 k Ohm
<b>100 mA DC</b>	Impedance: 10 Ohm
<b>Accuracy</b>	± (0.1% from Range + 1 Digit)
<b>Sampling time</b>	2 samples / sec.

### DATALOGGER

The generated signals at the calibrator input and the signals at the Multimeter input are stored as tables, with date and time added from internal RTC. A measuring Window and two Time Intervals can be set. When the input signal is within the window, the data are stored with one interval. Outside the window they are stored with the second interval. The data can be uploaded to a PC and shown as tables and graphics. The Soft Manager supports the communication under Windows.  
Example: Calibrator output Pt-100 is applied to a Process Transmitter with 0-10V output connected to the Multimeter input.



### TRANSIENTS

Fast signals at the Multimeter input can be stored in up to 8 memory slots with a sampling rate of 1ms. Each Transient contains 256 points and can be assigned to a time period selectable from 0.25s to 300s. The trigger level is programmable



IOC505 with all accessories

### ACCESSORIES

- Mains Charger 95 - 240VAC
- Two Signal Cables red and black
- „K“ and „U“ Thermocouple Connector
- Calibration Sheet, Owner's Manual
- Carrying Case.