M505 Process Calibrator

HIGHLIGHTS

- **Current output 0 – 22 mA, Source/Sink**
- **Voltage output 0 – 25 V**
- **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 3 kΩ**
- **Multimeter ±2 V to ±200 VDC and ±100 mA**
- **Measurements of fast transients**
- **Datalogger function in model M505D**

DESCRIPTION

M505D is handheld calibrator-multimeter and its main functions are the sourcing of mV or mA signals, resistance and simulation of DIN-thermocouples and RTD temperature sensors. Up to eight fast input signals -Transients- can be measured, memorized and shown at the display as graphs or uploaded to a PC via USB. For fast checking or calibration of process transmitters the M505D output and input can be cross connected to the transmitter, whereas both sourced and measured signals will be displayed online. Low voltage ranges are useful for calibration of strain gauges, amplifiers, transmitters and small signal instruments, where the output voltage can be resolved down to 1 uV.

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. (datalogger function is only in M505D model)

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

SPECIFICATION

Specifications below describe 1-year absolute accuracy, including long-term stability, linearity, load and line regulation and reference standard measurement uncertainty as well as ambient conditions within specified limits.

GENERAL DATA

Warm-up time	10 minutes
Reference temperature	23 °C ±5°C
Operating temperature	-10 °C – +35 °C
Storage temperature	0 °C – +60 °C
Power supply	90/240 V_{AC}
Dimensions (W x H x D)	200 x 90 x 40 mm
Weight	320 g
Interfaces	USB

Calibrator source

DC voltage	0 - 25 V (± 0.1 %)
DC mV voltage	0 – 27 mA and 0 – 540 mV
DC current	0 – 22 mA (± 0.1 %)
Resistance	45 Ω - 3 kΩ, resolution 10 mΩ (± 0.1 %)
Temperature	TC BEJKNRST with cold junction compensation RTD (± 0.5°C)

Process multimeter

DC voltage	0 – 200 V (± 0.1 %)
DC current	0 – 100 mA (± 0.1 %)