



Technical data - MICROHM 400/0

Measurement system: The MICROHM device operates in the ratio mode and employs the **four-wire measurement method by Kelvin** to compensate for any lead resistance errors. The ratio measurement mode is the best way to ensure high accuracy and long-term stability. The measurement value it is only dependent on internal reference resistors.

Device type	Range	Resolution	Current	Voltage	Load voltage
-----/ M4000	0 – 99.99 $\mu\Omega$	0,1 $\mu\Omega$	ca. 3 A	3mV	ca. 5V
M400 / M4000	0 – 9.999 m Ω	1 $\mu\Omega$	ca. 1 A	10mV	ca. 5V
M400 / M4000	0 – 99.99 m Ω	10 $\mu\Omega$	ca. 0,5 A	50mV	ca. 5V
M400 / M4000	0 – 999.9 m Ω	0,1 m Ω	ca. 50 mA	50mV	ca. 9V
M400 / M4000	0 – 9.999 Ω	1 m Ω	ca. 10 mA	100mV	ca. 9V
M400 / M4000	0 – 99.99 Ω	10 m Ω	ca. 10 mA	1,0 V	ca. 9V
M400 / -----	0 – 999.9 Ω	100 m Ω	ca. 1 mA	1,0 V	ca. 9V
M400 / M4000	AUTORANGE				

Autorange option (can be turned off)

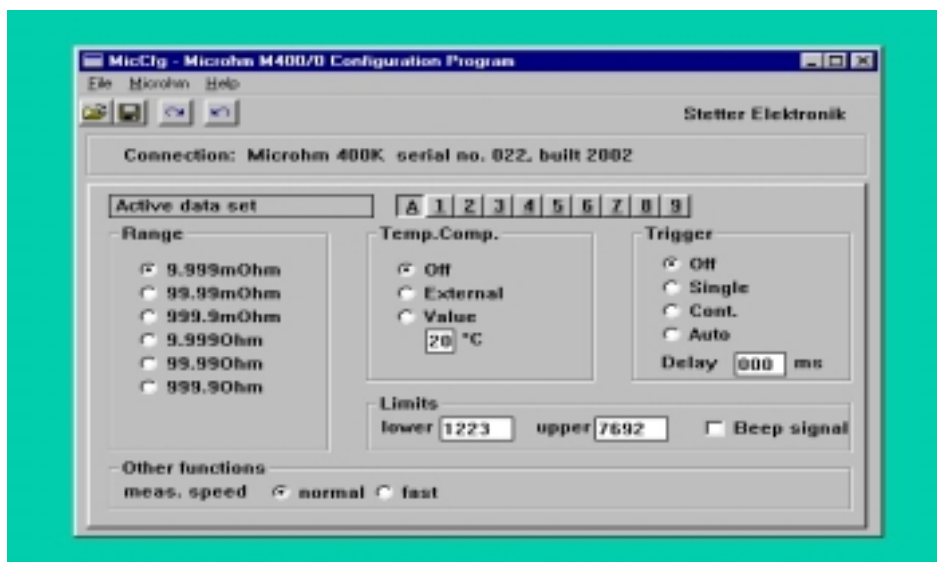
for easy handling in laboratory use (without comparator)

max. resolution: M400: 0.000 001 Ω (1 $\mu\Omega$) - M4000: 0.000 000 1 Ω (0.1 $\mu\Omega$)

Error limit: **0.05%** of the displayed value +/- 0.08% FS +/- 1 digit
(internal A/D converter 16 bit / 65000 digits)

- * **Automatic zero** cancelling before every measurement
- * Large, double-row **LCD text display** (10mm characters) with background illumination for simultaneous display of measurement result, upper and lower limits and different status messages (trigger etc.)
- * Different **speeds of measurement** can be selected: 0.15 ... 0.6 sec/cycle due to multiple internal measurements and averaging
- * **9 complete configuration datasets in memory**
For saving your specific product data
(measurement range, limits, trigger mode, temperature compensation etc.)

- * The active setup remains in memory even during a power failure
- * **Easy menu-controlled operation via text display**
Other languages (german, french, spanish) available on request
- * **Limit comparators with relay outputs**
With two adjustable limit values bad probes can automatically be rejected in production processes
Relays load: 48V / 2A
Option : ' PLC'- Outputs : - - - - -
4 optically decoupled comparator outputs especially PLC-Applications
/ < / 'good' / > / end of measurement / load: max. 36V / max. 0,15A
- * **Acoustic alarm signal** when result outside limit values
Can be turned off
- * New **trigger modes** to simplify the construction of connectors
 - OFF** Measurement operation always running
 - Single** Triggered single shot measurement
 - Cont.** As long as the trigger signal is present, the measurement is continuously running
- NEW: **AUTO** Automatic triggering, if a current is detected
- * Potential-free **trigger input** (load: 15V / 12mA)
- * **Automatic temperature compensation**
A temperature sensor corrects automatically the errors caused by the temperature coefficient (about 4% per 10K).
Choices: Temperature compensation OFF
External Pt100 sensor connected
Compensation with fixed adjustable temperature
- * Easy **calibration by software** (no hardware adjustment necessary)
- * **RS232 serial port included**
(on request even RS485 to connect several M400 devices - 'M400-Network')
With the serial data output the measurement data can be read by the MICDAT V4 computer programs. Considering ISO9000 standards this offers an inexpensive way of supervising production processes.
- * **SOFTWARE** (included !)
For an easy setting of all device parameters **via PC-program 'MicCfg'** and **remote control** via RS232 for all device settings and functions !



* Mechanically strong construction with **metal case** for industrial applications,
A plastic front cover foil prevents the front panel and keys from being damaged
by dust and dirt

* Supply voltage 230V AC / power consumption about 20VA

* Physical dimensions: 325 x 115 x 210, weight about 3 kg

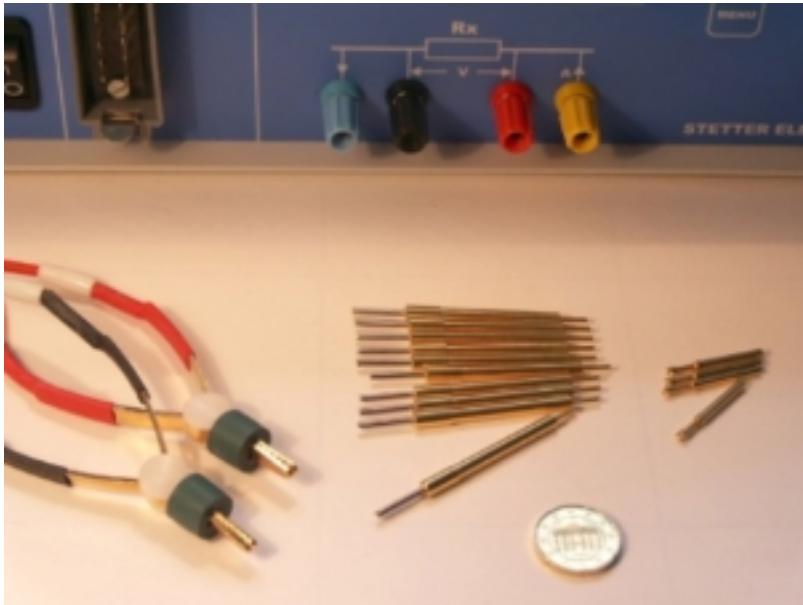
Standard accessories :

The MICROHM-400 measurement equipment includes :

- 1) The MICROHM-400 measurement device
- 2) Power cable
- 3) Comparator connector
- 4) Manual and working sheets

Special accessories :

Pt100 temperature sensor
Special Kelvin 4-wire clip set
or special spring test probes



4-wire Clip-Set

Spring Test Probes (ST-504)
Receptacle (STH-504)