

Focus-Information

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Geotechnology >> read-out device for manual measurements

MRD – Manual read-out device

A read-out device for the manual measurement of a wide range of sensors and for the measurement and data storage for the sliding deformer and sliding micrometer

Area of application

The MRD is a multifunctional, battery-powered hand-held read-out device which can be used to measure and record a range of different analogue and digital sensors.

The sensor is connected via connection terminals or connection sockets. A menu configures the kind of sensor used, displays the connection assignment and triggers the measurement. By entering offset and factor, sensor measurements can be output in physical units such as mm or mWs.

These parameters can be configured individually and are assigned to a specialist sensor and saved for subsequent measurement of this sensor.



Various measurement modes

Measurement menu	Description	Special features
Distance recorder	Potentiometric distance recorder	Pre-configured measurement ranges 50 mm/100 mm/250 mm
Power output	Current sensors: 0–20 mA active or passive	Input voltage options: 12 V/24 V
Output voltage	Sensors with output voltage	Input voltage options: 12 V/24 V
Temperature	PT 100 or PT 1000 temperature sensors	PT 100 without compensation, PT 1000 with automatic cable compensation
DMS	Strain gauge	Measurement signal can be amplified selectively
Vibrating wire	Geokon-style vibrating wire instruments	Vibrating wire recorder temperature measurement (NTC)

Information on different measurement modes

Measurement using sliding micrometer and sliding deformer

The MRD displays and stores the measurements from the digital sliding micrometer and the analogue and digital sliding deformer. After the measurement, the measurements taken are transferred to the Trical data analysis program and analysed. An MRD holder which fits to the cable reel is supplied for this application.



Display during measurement



Sliding Deformer and Sliding Micrometer measurement with the MRD



MRD connection board

MRD technical specifications

Sensor connection:	<ul style="list-style-type: none"> - 4-way terminal connection for analogue sensors - Connector socket A for analogue and digital sensors - Connector socket D for data transfer
Measurement resolution:	24 bits (screen display limited to 16 bits)
Display:	4 lines of 16 characters per line with backlight
Keypad:	12 keys
Casing:	ABS/dimensions: 21 × 10 × 4 cm/weight: 0.5 kg
Power supply:	4 × 1.5 V batteries (AA), autonomous continuous operation typically 100 hours
Communication:	USB 2.0 to PC (for data transfer), RS485 to sensors

Subject to technical changes



MRD carrying bag

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