

GLÖTZL Baumeßtechnik

READOUT UNIT

Type: VMG 14.2

Art. No.: 74.12.11

The multimeter is used for the measurement of nearly all single sensors available on the market, but can furthermore also be applied for line-type measuring procedures (e.g. inclinometers). The measuring results are optionally displayed and stored, either as electric values or as real physical sizes with unit.

It has an external charger for the rechargeable, maintenance-free Li-Ion accumulators, and thus can be operated network-independently, and be recharged by the 230V mains.

The unit is programmable by keyboard or by USB interface.

All measured data are permanently stored and can be downloaded by the USB interface.

For the line-type measuring procedures, variable operational programs are available which can easily be operated by the user, with which measuring step length, total measuring length and type of measurement can be defined.

Additionally, the unit can be used as temporary collecting system (data logger) for the measured values. A time program is automatically recording the data and is storing them into an allocated file.

Front panel and keyboard allocation



(1) **Display**

Image diagonal 4", resolution 240x160 pixel, monochrom (standard display black on white) transfective F-STN-type, LED background illumination, dereflected inspection windows automatic luminosity and contrast control, manual adjustment possible

(2) **Keyboard**

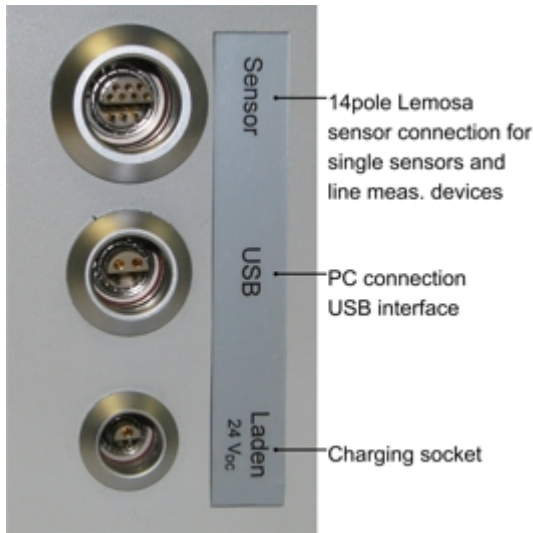
Foil keyboard with raised key areas, 18 input keys, one key each for switch-on and switch-off

(3) **Charging control display**

Charging end = green, charging = yellow

Connectable single sensors:

- Piezoresistive transducers for: Pressures: 0–2; 5; 10; 20; 50; 100; 200; 400; 600 bars
- Load cells and anchor load cells: 0–250; 500; 1000; 1400; 2000–20000 kN
- All sensors with output signal 4–20 mA and 0–20 mA
- Temperature (AD590 / PT100)
- Displacement transducer ± 20 mm, 0–50/100/200/400 mm
- Vibrating wire transducers (VW and VM)
- Resistive strain gauges (DMS)



External connections

- Sensors
- Computer (PC)
- Energy supply

Line measurement procedure

- Inclinomometer meas. probes analog, digital
- Hydrostatic settlement measuring device
- Sliding micrometer
- Free programmable programs

Options

Vibrating wire measuring board (SMM)

Meas. range: 600 up to 3500 Hz
 Measur. deviation: < 0.01 % (transducer-dependent)
 Resolution: 10^{-5} at 1 kHz
 Actuation: Impulse

Sensor supply

Two channels, individually to be switched on or off, galvanically separated

- Bipolar voltage controlled ± 2.5 ; ± 6.0 ; ± 12.0 V and non-controlled ± 15.0 V on CH0
- Unipolar voltage controlled +5; +12; +20 V and non-controlled +24 V on CH1
- Current controlled 0.2 or 1.0 mA on CH0 and CH1

Analog inputs

2 parallel channels on ADC input, self-calibrating, digitalization resolution 16 bit, with input protecting circuit, channels switchable between current ($RE \approx 61\Omega$) and voltage ($RE \approx 820k\Omega$)

Current meas. ranges: 0.5; 1.0; 2.0; 5.0; 10.0; 25.0 mA
 Voltage meas. ranges: 0.1; 0.2; 0.5; 1.0; 2.0; 5.0 V

Power supply

- External direct voltage 18–24 V_{DC}, e.g. by delivered external 230V_{AC} power pack
- Internal Li-Ion accumulator

Dimensions, weight, temperature

Weight: 2.6 kgs without power pack
 Dimens.: W=190 mm, h=120 mm, d=210 mm
 Temperature range: -5...+45°C (recommended)

Data storage capacity

- 59999 single measured values
- 156 data
- 449 sensors
- 299 types

Housing

Stable aluminium profile with carrier handle, protection type IP65 (water jet- and dust-proof);

As additional accessories, an imitation leather bag is available.

Charger

By the charging socket, 18...24V_{DC} are fed. An integrated control switch, the charging controller, is switching automatically between the two operating types, battery- or mains operation. At the same time, it is recognizing the actual status of the accumulators, is controlling the temperature and also the charging procedure in such a way that it is working best possible. A protecting circuit which is fixed integrated in the accumulator, is securing the necessary operational safety.

Accumulator and operational standby

The device is equipped with a li-ion accumulator, which is offering – on account of its low self discharge rate – a high availability of the unit, also in case of a longer non-use time.

The actual charging condition can be inquired in the menu "instrument adjustment" under „battery status“ It has to be controlled each 3 months. In case of a too low voltage, an automatic switch-off is done on account of deep discharge. A charging procedure takes approx. 6 hours.

Operational time: >8h for NMGD (cell types A and B) in standard operation

Software options

Evaluation software – special programs

- GLNP evaluation program for all line measuring procedures
- GLA evaluation program for object support service with file maintenance, parameter protection, plot and data exchange

Subject to technical alterations