

GLÖTZL Baumeßtechnik

FIELD MEASURING DEVICE

Type: FMG 01-2

Art. No.: 74.01.11.

The field measuring device is used for nearly all market-conventional sensor systems for indication of the measured values. The indication is done 4½-digit reversible for 2 measuring channels. Separate exchangeable measuring modules for each measuring channel are available for temperature-, pressure-, load- and displacement measurements. For indication, either the raw value of the sensor (e.g. mV or 4 - 20 mA) or the real value (mm, bar, kN, °C) can be selected. By the pluggable module construction, the instrument can be modified for special measuring requirements at any time. Furthermore, the actual storage battery voltage can be displayed. The portable instrument has an integrated charger with NC-accumulators.



Front panel and keyboard layout

- | | | |
|-----|--------------------------|---|
| (1) | Probe socket | |
| (2) | Mains connection cable | |
| (3) | <Off> | By pressing this key, the instrument is switched off. The display and also the prevailing indication lamps for "test", "channel 1" and "channel 2" are going out. |
| | <Test> | By pressing this key, the instrument is switched on for measurement of the storage battery voltage of the installed NC-accus. This is indicated in display. For control purposes, a red lamp is lighting at the top on the right of the keyboard field. |
| (4) | <Channel 1> | By pressing this key, the instrument is switched on for measurement of the measuring channel 1. For control purposes, a green lamp is lighting at the top on the right of the keyboard field. |
| | <Channel 2> | By pressing this key, the instrument is switched on for measurement of the measuring channel 2. For control purposes, a green lamp is lighting at the top on the right of the keyboard field. |
| (5) | Charge | In this field, there is a red lamp for indication of the charging function.
Lamp off: No mains or 12 V are existing
Lamp on: Charging procedure is running
Lamp flashes: Charging procedure is terminated – conservation charge |
| (6) | LC-display | 4 ½-digit indication |

Functions of LC-display

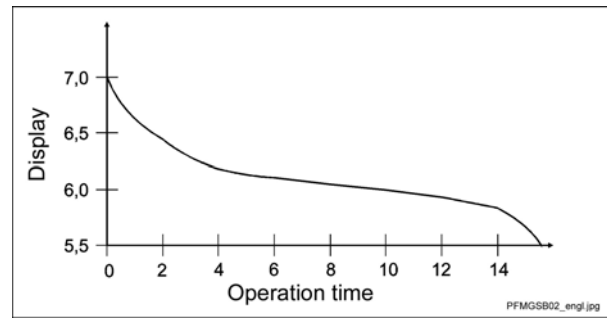
- 1) The measured values are displayed with a max. resolution of 4½-digit. The allocation of the measured values can be taken from the adhesive labels.
- 2) Low-bat-indication is realized by a vertical bar at the left outer side of the display. Low-bat is signaled from 5.9 V on. In this case, the measurement should be terminated within the next 10 minutes. In spite of the low-bat-indication, the measured values are valid up to approx. 5.7 V.
- 3) An overflow of the measured values is shown by two vertical bars at the left outer side of the display. The figures are all indicating average values.

Charger and accu

The installed charger is a delta-U sensitive charging processor with charging condition control. The charging condition is controlled by a charging processor thus avoiding an overcharge. Therefore the accu are charged by 100 % after the charger is switched off. Dependent on requirement, the accu consist of NiCd as standard or of NiMH according to availability. The shape of the accu has been selected with 5 baby cells as in case of a failure of the charging unit simple baby cells can be inserted if a continuous measurement is urgently required. In case of non-use, the unit should be completely charged before storage and then be recharged each six up to eight weeks. When charging procedure is done by the mains socket, the charging control diode is lighting. After termination of the charging procedure, this lamp is flushing and is signaling at the same time the conservation charging mode. The charging time of the accu is dependent on their discharge condition. In case of completely discharged accu (charging voltage ≤ 5.8 V) the charging time is approx. 6 hours.

The average operating time is approx. 14 hours with completely charged accu.

Temporal course of discharge at 20 °C
Indication: Position „test“



The instrument should not be switched on during the charging procedure. The voltage drop by switching on corresponds to the switch-off condition of the charging processor after complete charge. So, the charging processor is responding to the switching-on by a cut off of the charging procedure.

However, a long-term operation of the readout unit is possible with network buffering.

If the charger is in the operating mode „conservation charge“ (J = 25 mA), a new charging procedure is automatically started when falling below of approx. 5.9 V.

Technical data

- Mains: 230 V; 50 Hz; 0.038 A
- Accu: Approx. 6.5 V/120 mA
- Accu type: 5 x NC-accu; type C
- Battery type: 5 x baby cells; type C (Please remove the locking device in the charger.)
- Operating time: Approx. 14 hours for completely charged accu
- Charging time: Approx. 6 hours for empty accu
- Indication: 4 ½-digit LCD-display
- Weight: 2.2 kgs without mains line
- Dimensions:
W = 190 mm, H = 120 mm, D = 140 mm
- Housing: Aluminium profile protection type IP67 (splash-proof)

List of available measuring modules

Module No.	Phys. size	Sensor	Supply	Measured value	Display
010	Temperature	AD590	12 V	1 μ A/K	-50.0 up to +150.0 °C
011	Temperature	PT100	1 mA	0.35 Ω /°C	-50.0 up to +180.0 °C
020	Pressure	piezoresist.	4 mA	1000 mV F.S.	0.0 – 1000.0 mV or real value
021	Pressure	Thin film	10 V	100 mV F.S.	0.0 – 100.0 mV or real value
022	Pressure	DMS	10 V	10...40 mV F.S.	0.00 – 40.00 mV or real value
030	div.	4 - 20 mA	12 V	4 - 20 mA	4.000 – 20.000 mA or real value
040	Displacement	GWW	24 V	± 2 V	± 2.0000 V or real value
041	Displacement	GWR	± 2 V	± 2 V	± 2.0000 V

Subject to technical alternations