

GLÖTZL Baumeßtechnik

FULLY AUTOMATIC INCLINATION MEASURING DEVICE

Type: NMK600A

Art. No.: 75.80

With the measuring device NMK600A, a new tool is available which opens completely new perspectives for measurements of deep inclination measuring levels. The previous, often arduous measuring operation, under difficult climatic conditions, can now be carried out with the new device - for a large extent - automatically under agreeable operating conditions.



The measuring device can be assembled in a trailer, transporter or another vehicle with corresponding capacity conditions.

- Automatic measuring operation, program controlled by PC
 - Standard measurement
 - Continuous measurement
 - Partial tube measurement
- Only one manpower is required for assembly and operation.
- Measuring level measurable till 600 m
- Control of positioning by monitor
- Weather-protected working place during measurement
- Auxiliary heating
- Energy supply of charging set (diesel) or batteries

Measuring Device

Guide attachment with camera for control of marking position



PC for control of measurement
Monitor for marking position



Guide attachment, consisting of:

1. Return pulleys
2. Inductive approach switch
3. Incremental revolution transmitter
4. Camera
5. Terminal switch



Control, consisting of:

1. Cable reel
2. Energy distribution
3. PC with program control
4. Motor control
5. Generator, heating
6. Cable duct
7. Heating
8. Working table

Control- and Evaluation Software GLNP

The control of measuring program is done by the software GLNP. The measuring program can freely be chosen, corresponding to the requirements. The constants, corrections and evaluation possibilities are described in the prospectus GLNP-inclination program.

In the field of program control, the parameters can be adjusted to the prevailing measuring job. For this, standard adjustments are specified in the factory which fulfil the requirements of most of the measuring jobs. Additional adaptations are possible, however, are mostly not required.

Measuring programs:

Standard measurement

At standard measurement, the measuring points are triggered according to the basic length of probe. When reaching the measuring point, the probe is stopped. After a waiting time, which has been adjusted before, the measured values are checked and accepted according to the agreed conditions (digit jump, quantity of comparisons).

Continuous measurement

At continuous measurement, the probe is moved up with a constant speed. During measuring passage, measurements are permanently carried out. The measured values are averaged between the measuring points; the measured values nearby the measuring point get a higher assessment. At measuring point, the measured value is stored and a new averaging is done till the next measuring point.

Partial tube measurement

At partial tube measurement, only the part of measuring level is measured which is actually of special interest. Beforehand, a measurement of level must be existing as reference measurement. The basic length for the partial tube measurement may be a subset of the basic length of reference measurement.



Measuring device during measurement of a 564 m deep level



During measurement, only a control of function is necessary.

Technical data:

Measuring cable	6x0.56 mm ² PUR outer casing Kevlar supporting part Length up to 600 m
Cable reel	Motor-drive with magnetic brake Hand-drive, separately shiftablegetrennt zuschaltbar 2 x 6 slip ring contacts Cable guide
Total height	approx. 1500 mm
Reel dimensions	d=30 mm, D=700 mm, b=500 mm
Heating	Diesel, 3000 W
Generator	Diesel 5000 VA Operating time approx. 5 hours with one tank filling (4.3 l) Operation without generator possible with batteries
USV	1200 VA 60 minutes at 30 % load
Energy distributor	Light switch Connection of generator plug sockets 6 pcs. plug sockets at generator Connection of USV plug sockets 4 pcs. plug sockets of USV Connection of 12 V supply Heating control Emergency stop for motor
Motor control	Frequency transformer Controller with control software Level transformer RS485/RS232 for probe Hand control for cable reel
Digital inclination meas. probe	Weight 2.4 kgs, d=30 mm Basic length 0.5 m up to 2 m Measuring range $\pm 30^\circ$, max. $\pm 60^\circ$ Linearity 0.02 % f.s. Hysteresis 0.001% f.s.

Subject to technical alternations