

GT-INC-M Inclinometer System



Advantages

- **Excellent Accuracy**
- **Repeatable Tracking**
- **Reliable Control Cable**
- **Consistent Depth Control**
- **Datamate is easy to operate**
- **Come with Software for Data storage and Management**

Geotech GT-INC-M Inclinometer System consists of: Inclinometer Probe, Control cable, Datamate with Bluetooth, a Reader, and a carrying case (cable reel is optional). For measurement software we offer two packages: Measuring APP (ASUS Tablet) for package A and Measuring Software (Microsoft Surface Pro) for package B. Besides for inclinometer system, the Datamate can also be used for tiltmeter measurement. The inclinometer probe equipped with waterproof and durable steel casings, completed with wheel assembly and sealed wheel bearings to allow the probe move smoothly inside inclinometer casing. The control cable has a great resistance to tension force, scratch and cut. Its depth marked is fixed to the cable jacket, and cannot slip, which is suitable for long-term applications.

Applications

GT-INC-MEMS is used for monitoring slope stability of a landslide, displacement on a retaining wall due to deep excavations, embankment, tunneling and DAM monitoring, etc. Inclinometer casing is installed vertically to a stable rock used as reference point. Surveyor use inclinometer probe and control cable to survey Inclinometer casing. The first survey establishes the initial profile of the casing. Subsequent surveys show changes in the profile if ground movement occurs. The magnitude, direction, and rate of ground movement can be estimated and predicted by the plot of inclinometer readings along inclinometer casing.

Operation (Using Measurement APP)

- To begin the measurement, connect control cable to the datamate. When datamate is turned on the Bluetooth can be linked to the tablet or phone APP.
- The surveyor input the inclinometer measurement parameter to the APP, and put the inclinometer probe to the bottom of the borehole, as the APP will display an indicator that indicating the reading signal is stable, and record the reading in that position.
- Next, the surveyor repositions the probe to the next depth, while watching until the reading signal is stable, record the readings. Repeating these steps until the survey is completed (in both zero and 180 degrees modes)
- The readings can be repeated in case misreading is occurred. When all inclinometer readings have been taken by the surveyor. Surveyor can display check sum statistics to validate the survey.
- Measurement data is saved and can be seen directly inside the APP and can be sent or transferred by using email or cloud platform. The data can also be opened on PC using Geotech MRT Software

Mechanical and Technical Specifications

Model	GT-INC-M Digital Inclinometer System
Sensor Type	MEMS
Axes	Biaxial
Measuring range	$\pm 30^\circ$
Resolution	0.005 mm
Repeatability	$\pm 0.003^\circ$
Operating temperature	-20 to +70 °C
Diameter	25.4 mm
Wheel carriage	Pair of wheels mounted on long-life sealed ball bearing race
Wheel diameter	32 mm
Distance between wheel axis	500 mm
Weight	1.8 kg
Cable Length	60m, 100m
Readout	Geotech GT-MR
Software	Geotech Measuring APP (Package A), Measuring Software Microsoft Surface Pro (Package B)

Package A. Measuring APP (ASUS Tablet)



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Package B. Measuring Software (Microsoft Surface Pro)

