Digitilt AT Inclinometer System

Digitilt AT System

Slope Indicator's Digitilt AT system provides a modern alternative to the classic Digitilt inclinometer system.

The system includes a digital probe, lightweight control cable, Bluetooth reel, cable gate, Digitilt Reader app, and DigiPro2 software for the PC.

Application

Inclinometers are used to monitor subsurface deformations of the ground in landslides, embankments, and dams and around deep excavations and tunnels.

Inclinometer casing is installed in a vertical borehole that passes through suspected zones of movement into stable ground.

The Digitilt AT system is used to survey the casing. The first survey establishes the initial profile of the casing. Changes in the profile, revealed by comparing subsequent surveys to the initial, indicate that ground movement has occurred.

Plots of inclinometer data show the magnitude, direction, and rate of ground movement.

Survey Operations:

The Digitilt AT system leverages advances in sensor technology and mobile computing to bring simplicity to survey operations.

To start a survey, tap an inclinometer from the list displayed by the Reader, or scan a QR code.

At each survey depth, the Reader prompts when the reading is stable and ready to record. To record the reading, just pull the cable upwards to the next depth. The reading is stored in non-volatile memory.

If the survey is interrupted for any reason, simply tap to resume at the same depth, with no loss of data.

Validate the completed survey by plotting checksums, profiles, or changes on the high-resolution display.

Afterwards, send surveys to the office via the internet, using email with automatic file attachments or Dropbox for full synchronization. If the internet is not available, use a USB cable for data transfers.

Advantages

Classic Performance: Survey times match or better start-to-finish times of the classic Digitilt system.

Lightweight Cable: Easy to carry and easy to handle, the lightweight AT control cable is also easy to read, with large labels at every other graduation.

Excellent Tracking: Its short length and top quality wheels allow the AT probe to track casing grooves through tight curves.

Compact Cable Gate: The unique cable gate aligns cable graduations precisely at the top of the casing, eliminating the potential for depth errors if the cable gate is forgotten.

Digitilt Reader App: The Reader app is central to the simplicity and power of the AT system. Running on a certified Android tablet, the Reader app supports high resolution displays, touch interfaces, and full internet connectivity.

DigiPro2 Software: This software for the PC creates inclinometer databases, manages inclinometer data, generates plots and reports, and provides advanced routines for identifying and correcting errors.

Optional Backpack:

Easily take the AT system anywhere with our custom backpack

Extension Cables: Extension cables can be utilized to extend the length of a Digitilt AT System. Please note that extension cables are only compatible with detachable probes.

AT PROBE

|	Metric	English
Tilt Sensors	MEMS x 2	MEMS x 2
Wheel Base	500 mm	24"
Range	±30°	±30°
Resolution	0.005 mm	0.0002"
Repeatability	±0.003°	±0.003°
Temp Rating	-20 to +70°C	-4 to +158°F
Material	Stainless	Stainless

CONTROL CABLE
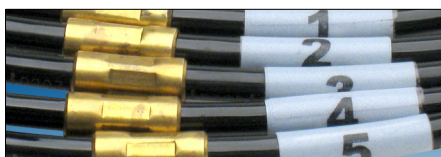
Metric cables have 0.5m graduations with numeric depth labels every meter. English cables have 2 foot graduations with depth labels every 4 feet. Graduations are measured from top wheels of probe. The four-conductor cable has a Kevlar strain member, and polyurethane jacket.

BLUETOOTH REEL

Bluetooth reel provides 40 hours of operation on one charge. Charge time is 5 hours. Controls include on/off switch with auto-off timer and LEDs for power, charge state, and Bluetooth connection.

CABLE GATE
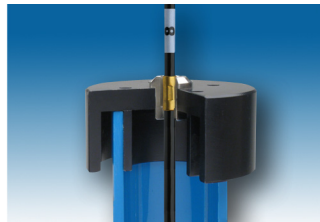
Cable gate aligns graduations with top of casing. Fits 48, 70, and 85mm (1.9, 2.75, 3.34" casing. Outside diameter is 102mm (4").

AT SYSTEM PART NUMBERS

Digitilt AT Probe - Metric 50332510
Reel with 30m cable. 50334303
Reel with 50m cable. 50334305
Reel with 75m cable. 50334307
Reel with 100m cable. 50334310
Digitilt AT Probe - English 50332500
Reel with 100' cable. 50334100
Reel with 150' cable. 50334150
Reel with 200' cable. 50334200
Reel with 300' cable. 50334300
7" RT-V7000 Tablet. 50330980
Backpack for Digitilt AT System. . 50330900
25m Digitilt AT Extension Cable. . 50331225
50' Digitilt AT Extension Cable. . . 50331250

The Digitilt AT Probe ships in a padded, plastic case and includes the cable gate.The Digitilt AT Cable and Reel ships in a padded, vinyl case and includes an international AC adapter. To order, please select a probe, a cable and reel, and a reader. Longer cables are available on special order. Please contact the factory.

DIGITILT READER APP

Hands-Free: Simply pull the cable to record a reading.
(7" Panasonic Toughpad [part no. 50330940] shown)

Plot checksums or changes with a single tap. Use the high resolution plots to validate the survey before you leave the site. Plots can be shared by email.

Digitilt Reader App . . . . Download
Using the Android device, visit play.google.com and search for "Digitilt Reader."

Requirements: Certified Android device, as listed on the Slope Indicator website.

Capacity: Number of inclinometers and surveys is limited only by device memory. Maximum depth 300m or 1000 ft. Depth intervals are multiples of 0.5m or 2 ft.

Scan: Scans a QR code to start survey. Use Digi-Pro2 to generate the QR code then fix the code to a convenient surface, such as the casing, cap, or a page in a logbook.

Survey: Displays list of inclinometers. Tap to start a survey. Tap and hold to edit inclinometer parameters.

Survey Screen: Large, readable characters. Shows active depth, depth last recorded, A and B readings in mm, inches, or sine units, checksums, and progress bar. Record button prompts user to wait, tap, or pull. Other features include easy depth changes and automatic bookmarks.

Plots & Data: Plots checksums, profiles, change-from-initial, and change-from-last in high resolution. Displays data table for inspection and survey-time corrections.

Send: Sends inclinometer data to PC as email attachments or syncs via Dropbox. If internet is not available, data files are transferred via USB cable and Windows file manager.