

# DIGITAL INCLINOMETER SYSTEM

Model DIS-500

ROCTEST  
TELEMAC

## APPLICATIONS

The DIS-500 inclinometer probe is used to locate the depth and measure the lateral displacement and deformation of soil, rock and retaining structures to determine:

- Stability of natural and man-made slopes
- Stability of embankments and dams
- Deformation of sheet piles and diaphragm walls
- Ground deformation due to tunneling
- Movement of bridge piers and abutments
- Deflection of laterally loaded piles

## DESCRIPTION

The RocTest Telemac biaxial inclinometer system comprises a probe, cable reel and PDA. The probe is fitted with guide wheels and contains two MEMS accelerometers measuring in A and B planes. It is connected by a graduated cable to the cable reel. The "read" button on the PDA or a remote handheld activator allow for the saving of readings from the accelerometers. These are transmitted cable-free to the PDA and saved via Bluetooth transmission.

Completely redesigned to incorporate modern technology and materials, the DIS-500 Digital Bluetooth Inclinometer enables highly accurate reading of lateral deflections. The Kevlar reinforced cable provides strength while enabling significant weight reductions. Wireless connection between the instrument and the PDA makes taking readings fast, simple and has none of the issues associated with field connections. Strong but extremely light the instrument can be easily carried and used by one person. The modern answer to inclinometer data gathering.



## FEATURES

- Digital from probe to PDA overcoming cable electrical resistance and noise issues.
- No field connections required, avoids water ingress and connection failures.
- Solid state electronics ensure long, trouble free use in a site environment
- Light, easily portable by one person
- Metal Marker/Cable Gate system ensures a high degree of accuracy and repeatability
- PDA allows easy interface with most office systems and applications.
- Enhanced PDA Software provides a range of presentations with built in "current borehole" back up facility.

## SPECIFICATIONS

### PROBE

Calibrated range	±30° (standard) or ±90° (optional)
Sensor accuracy	±0.02% F.S.
System accuracy <sup>1</sup>	±2 mm (0.07") over 25 m (82.02')
Resolution	0.01 mm (0.00039")
Repeatability	±0.008% F.S.
Operating temperature	-20°C to +50°C
Wheel base	500 mm (metric) or 24 inches (imperial)
Watertightness	Up to 400 m of $\text{H}_2\text{O}$
Probe diameter	28 mm (1 $\frac{1}{8}$ " )
Inclinometer casing internal diameters	From 48 mm (1.89") to 83 mm (3.27")

### CABLE

Length	30, 50, 75, 100, 125, 150, 175, 200 m (100, 200, 300 ft)
Cable marker	Hard anodized colour coded
Type	Kevlar re-enforced Polyurethane coated 4 core cable
Weight	Approx 42 g per meter (0.028 lbs/ft)

### CABLE REEL

Dimensions	483 × 383 × 315 mm
Battery life	12 hrs continuous use
Weight (complete with probe)	8.5 kg (30 m), 9.5 kg (50 m), 11.5 kg (100 m)

### PDA (DIGITAL READOUT)

Display	QVGA, VGA TFT Color 16-bit, touch-sensitive, 3.5-in
Memory card capacity	64 MB
Initial database size	200 KB
Program footprint	128 KB
Internal batteries	2.2 Ah rechargeable, removable, lithium-ion, with external battery charger input
Battery life	8 to 12 hours (with or without backlight on)
Interfacing	USB jumper cable and memory card
Operating temperature	0°C to +40°C

### REMOTE HANDHELD ACTIVATOR

Dimensions	65 × 35 × 15 mm
Weight	26 g
Battery	1 × GP23A

1. Derived empirically from surveys that include systematic and random errors introduced by casing, probe and operator.

## ACCESSORIES

PART NUMBER	DESCRIPTION
99-099G11	Battery charger for inclinometer reel (Replacement)
99-099G10	PDA cradle
99-099G09	High capacity battery pack for extended PDA battery life (Replacement)
99-099G08	Key fob (remote handheld activator) (Replacement)
99-099G07	Dry pack for PDA (Replacement)
99-099G05	Cable gate for 70-mm casing
99-099G06	Cable gate for 85-mm casing (Replacement)
99-099G04	PDA alone with in-port software loaded (Replacement)
99-099G01	In-site software for data management with 1 licence
99-099G02	In-site software for data management with 2 or 3 licences
99-099G03	In-site software for data management with 4 to 10 licences
99-SOFTGTILT	GTILT Software for data management
99-SOFTGTILTPW	GTILT+ Software for data management

## ORDERING INFORMATION

Basic inclinometer system includes probe, cable, cable reel, PDA, PDA batteries, battery chargers, USB jumper cable, PDA carrying case, dry pack, In-Port PDA based software, remote handheld activator, and cable gate for 85-mm casing (also fits 70-mm casing).

Please specify:

- Type of probe (metric or imperial)
- Length of cable
- Accessories



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