### Instrumentation



# **Magnetic Extensometer**

The Geosense<sup>®</sup> GEO-XM settlement system is used typically to monitor settlement and heave in foundations, excavations and embankments. Settlement is identified at the depth/position where the settlement has occurred and as well as measuring the total amount of settlement.

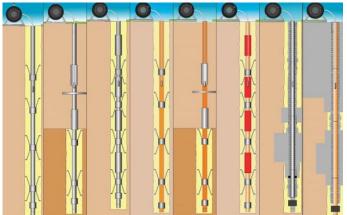
The GEO-XM system comprises a series of magnetic targets positioned so that they move freely outside flush jointed access casing or inclinometer casing. The targets may be 3 or 6 Leaf "Spider" targets, magnetic settlement plates or magnetic joints.

Settlement is measured by the relative position of the magnetic targets using a Reed Switch Probe that detects the magnets lowered down through the central access casing. Inclination where desired is measured using a portable inclinometer

#### **Ordering Information**

- Geo-XM Variety
- Depth of installation
- Target type
- Number of magnetic targets and datum magnets
- Reed switch probe range
- Installation tool range

#### **GEO-XM Settlement layouts**



GXM-100 GXM-100P GXM-100T GXM-200 GXM-200P GXM-200T GXM-300 GXM-300i



### **Features**

- Measures Total & Incremental Settlement
- Simple to Install
- Can be used with standard Reed Switch Probe

## **Applications**

- Excavations
- Embankments
- Dams
- Tunnels
- Foundations

## **Technical Specifications**

Reed Switch Probe	30, 50, 100, 150, 200 m
Installation Tool	30, 50, 100, 150, 200 m
Mastic Tape	10 m



# **Magnetic Extensometer**

#### **GXM-100 Series Specifications**

GXM-100, 100P & 100T use un-keyed access casing to monitor only settlement or heave in foundations.

#### Access Casing Specifications:

Access Casing OD: 33mm Access Casing ID: 25mm Access Casing Length: 1.5 or 3m Access Casing Weight: 0.6 kg/m Bottom Cap OD: 33mm Material: PVC

#### Access Casing Telescopic Section Specifications:

Telescopic Section OD: 42mm Telescopic Section ID: 35mm Length: 500mm Weight: 0.5 kg Material: PVC

#### Access Casing Magnetic Target Specifications:

Spider Magnets: 3 & 6 Leaf\* Magnet Targets: 35x60mm Plate Magnet Target: 33x300mm Datum Target: 33x60mm

#### **GXM-200** Series Specifications

GXM-200, 200P & 200T use inclinometer casing so that the combined system can monitor settlement, heave and also inclination with the use of a portable inclinometer.

#### **Inclinometer Casing Specifications**

Casing OD: 70mm83mmCasing ID: 59mm71mmCasing Length: 1.5 or 3mCasing Weight: 1.27 kg1.35 kgMaterial: ABSGroove Spiral: <0.005 Rad/3m</td>Bottom Cap OD: 70mm83mm

#### **Inclinometer Casing Telescopic Section Specifications**

Section OD: 70mm 83mm Compressed Length: 508mm Extended Length: 660mm Range: 152mm Weight: 0.77 kg 0.90 kg Material: ABS Groove Spiral: <0.005 Rad/3m

Inclinometer	Casing	Magnetic	Target
Specifications			
Spider Magnets:	3 & 6 leaf		
Spider Target Ch	ain: 300mm	400mm	
Spider Target: R	elease pin		
Magnet Target:	100x70mm	110x85mm	
Datum Target: 1	00x70mm	110x85mm	

\*6 Leaf targets only size suitable for high settlement regions with many telescopic joints

#### **GXM- 300 Series Specifications**

The GXM-300 & 300i series surround either access casing or inclinometer casing with a flexible corrugated pipe that moves freely. It is intended for use in regions where high settlement is expected.

#### **Corrugated Pipe Specifications**

Pipe OD: 42mm Pipe ID: 35mm Length: 3m or 50m coil Magnetic Target/Coupler: 42x50mm Material: PE Bottom Cap: 43mm

### **About PCTE**

PCTE have over 30 years' experience in the measurement and testing of construction materials. PCTE can provide more than just the equipment, they can provide expert training. PCTE have a service centre in Sydney in which they can provide calibration, repairs and warranty repairs.

PCTE supply three main ranges: NDT, Lab and Geotech Instrumentation.

NDT includes: Rebound Hammers, Covermeters, Ultrasonics, GPR, Corrosion Testing, Coating Testing and Foundation Testing

Lab includes equipment for: Concrete, Cement, Aggregate, Soil, Asphalt and Metal

Geotech Instrumentation includes: Strain Gauges, Piezometers, Inclinometers, Extensometers,

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