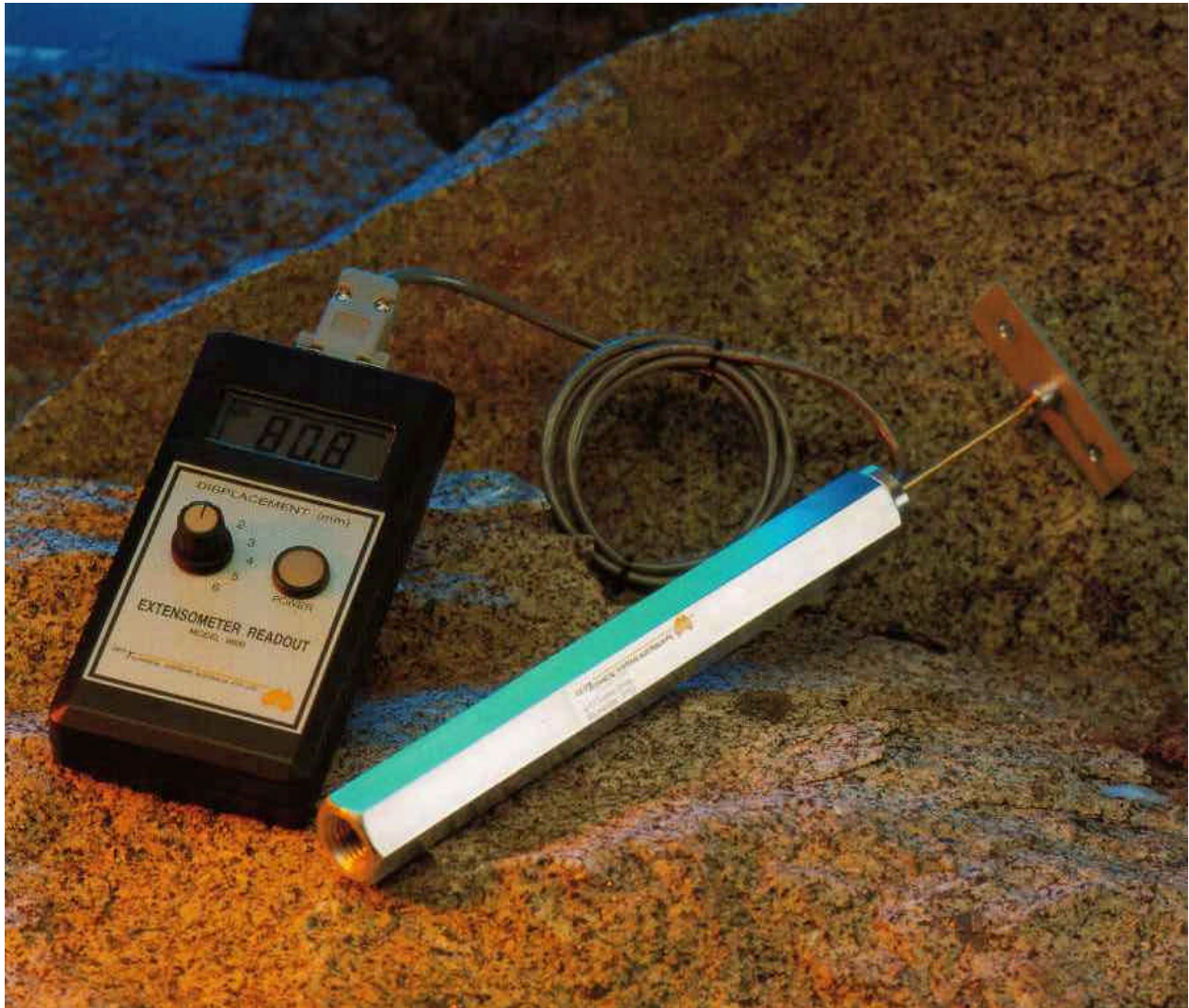


# ROCK MOVEMENT INDICATOR

## MODEL 4012



Model 4012 Rock Movement Indicator and Model 9600 hand-held Extensometer Readout Unit

### MODEL 4012

The Geotechnical Systems Australia Pty Ltd **Rock Movement Indicator** (RMI) is a single-point extensometer built specifically for use with rock bolts in the monitoring of roof support systems.

### APPLICATIONS

Measurement of deformation in

- tunnelling
- underground mines
- construction control

### OPERATION

As the overhead rock deforms, the relative position of the rod changes. This variation is measured with a potentiometric transducer at the collar of the borehole.

Measurements can be made using

- a hand-held readout - reads in millimetres
- a multimeter - reads in ohms (resistance can be converted to displacement using the relationship 20 Ohm = 1mm).



Quality  
Endorsed  
Company

ISO 9002 Lic 4022  
Standards Australia

**GEO TECHNICAL SYSTEMS AUSTRALIA PTY. LTD.**

Specialists in Geotechnical Instrumentation

ACN 006 720 887  
ABN 28 006 720 887



**SPECIFICATION****ROCK MOVEMENT INDICATOR****Model 4012**

Range of extension	150mm
Accuracy	0.1mm
Hexagonal section material	Aluminium
Hexagonal section width	25mm hex
Length (prior to extension)	270mm
Connection thread	16 x 1.5mm (or as required)

**INSTALLATION**

The RMI is supplied ready-to-use, allowing the operator to install the assembly very easily: it is simply screwed onto the end of a threaded bolt installed with a wedge-type anchor.

After connection to the rock bolt using a special tube spanner, the reference plate is fitted and pushed up against the collar of the borehole and secured in place if required.

The unit is now ready for initial readings to be taken.

**AUXILIARY EQUIPMENT**

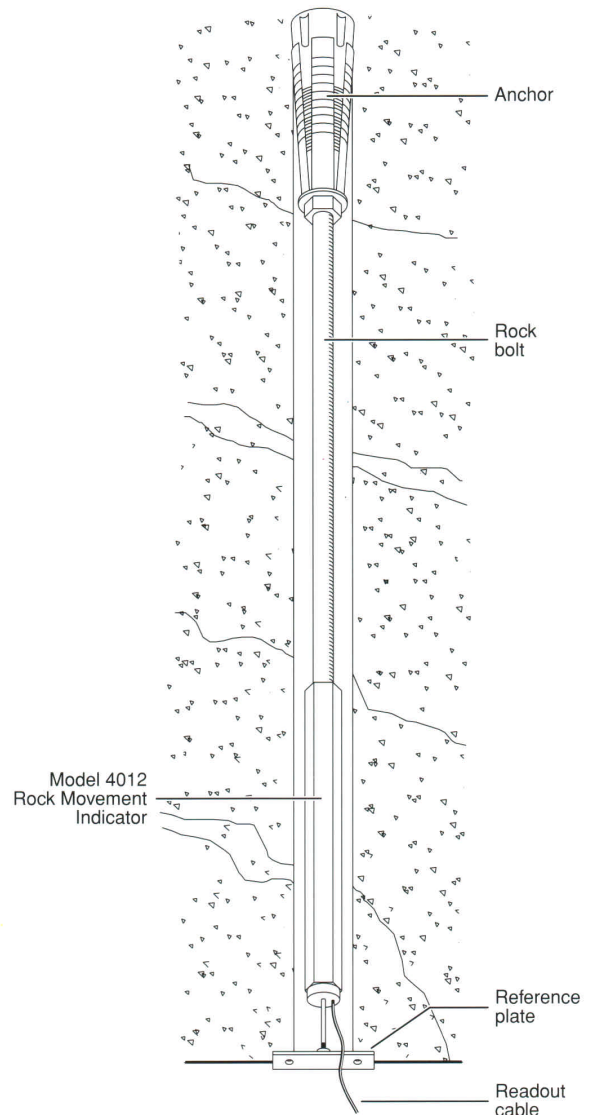
The RMI can be read using either a Model 9600 hand-held Extensometer Readout Unit, or any commercially available hand-held multimeter. If logging is required, a Model 9150 Geologger data logger is available (30-channel capacity).

A special tube spanner (Model 4012-2) is required for installation of the RMI to the threaded rod of the rock bolt.

**ORDERING INFORMATION**

When ordering, please specify

- number of RMIs (Model 4012-1)
- thread size of rock bolt
- RMI tube spanner if required (Model 4012-2)
- length of readout cable (Model 4012-3)
- connector for hand-held readout if required.



Because Geotechnical Systems is continually improving its products and processes, information contained within this brochure is subject to change without notice.

For more information or to discuss your application, contact...

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