

RESISTANCE WIRE EXTENSOMETER

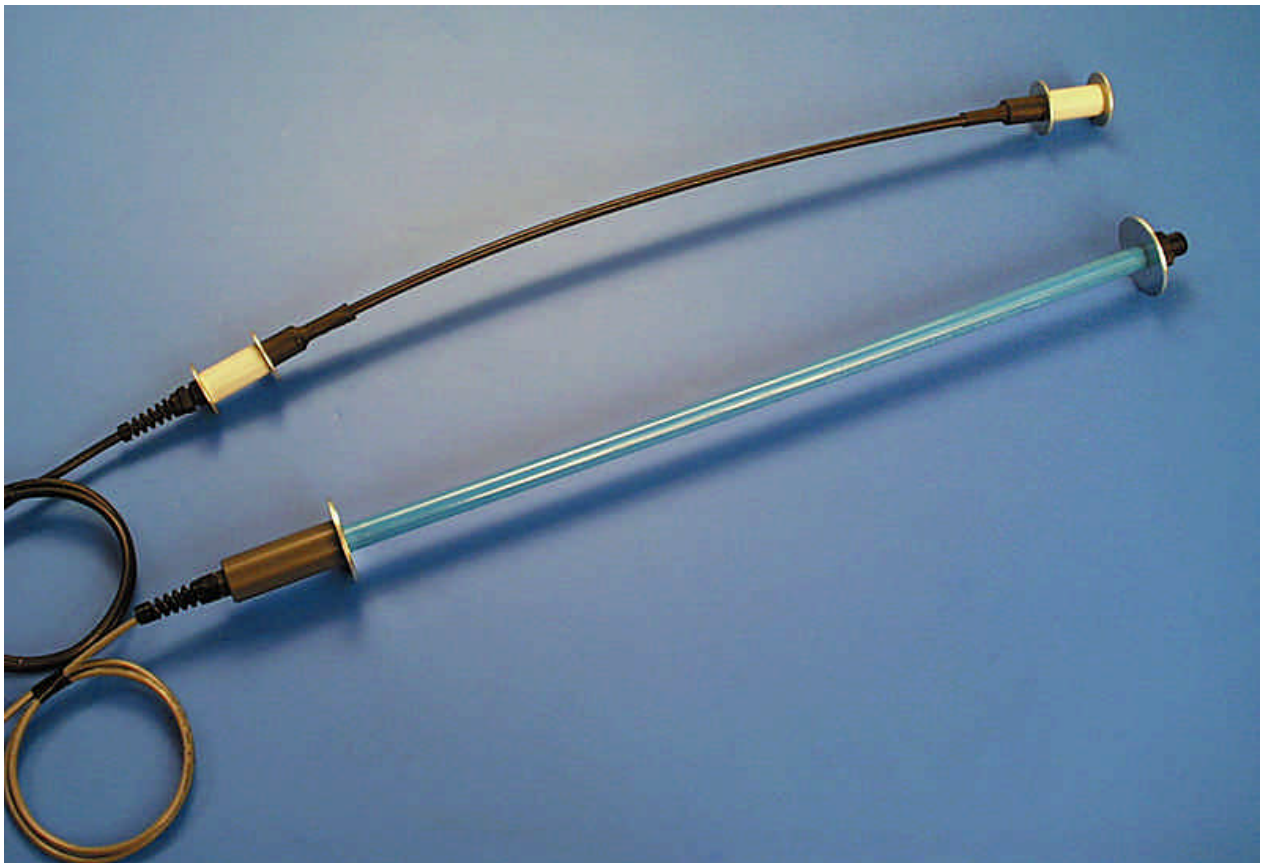
MODEL 4040

The Geotechnical Systems Australia Pty Ltd [Resistance Wire Extensometer](#) has been designed for accurate monitoring of tensile strains in underground mining, fault zones and natural slopes.

It is capable of high accuracy output and is able to be read by a variety of readouts.

APPLICATIONS

- Underground hard rock mines: pillar and stope wall displacement
- Underground coal mines: roof and pillar displacement
- Embankment displacement
- Construction joint displacement
- Retaining wall bridge pier and abutment displacement



FEATURES

- High Resolution
- Large Tensile Range
- Tolerant of Cross Borehole Deformations
- Remote Readout Capability
- Configurable as 1/4 or Full Bridge
- Built in Voltage Regulator
- Waterproof
- Available in 1 and 2 metre lengths



Quality
Endorsed
Company

ISO 9002 Lic 4022
Standards Australia

GEOTECHNICAL SYSTEMS AUSTRALIA PTY. LTD.

Specialists in Geotechnical Instrumentation

ACN 006 720 887
ABN 28 006 720 887



SPECIFICATION	RESISTANCE WIRE EXTENSOMETER	Model 4040
Standard Size	16 mm OD x 1000 mm long	
Optional Size	16 mm OD x 2000 mm long	
Instrument Head	26 mm OD x 120 mm long	
Material	PVC and Polyethylene	
Sealing	IP68	
Wire Resistance	70 Ohm/m	
Output	micro Volt	
Sensitivity to Movement	0.005 mm	

OPERATING PRINCIPLE

A resistance wire extensometer (RWE) basically consists of an electrical resistance wire element situated inside a 1 – 2 metre long plastic tube. The wire is attached, under mild tension, to each end of the tube and is configured to have a resistance of 120 Ohms. The RWE can be monitored with a resistance meter, conventional strain gauge measuring equipment, or a data logger. No additional displacement transducer is required to convert movement of the extensometer into a proportional electrical signal. An RWE is installed by grouting into a percussive or diamond drilled borehole. A number of RWE's can be installed end-to-end into a borehole by attaching them to a suitable carrier (such as PVC conduit) to facilitate installation. The resistance wire is pre-tensioned within the hollow tube enabling up to 0.5% compressive strain to be measured. However, up to 18-20% tensile strain can be measured with high sensitivity. Due to the hollow tube construction, the RWE has low sensitivity to moderate displacements across the borehole.

ORDERING

When ordering please specify

- Model No. and Quantity
- Instrument Length
- Cable Length

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...

**1/72 Bayfield Road
Bayswater
VIC 3153
Australia**

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ACN 006 720 887
ABN 28 006 720 887



Phone
+61 3 9720 5950

Fax
+61 3 9720 5942

E-mail

geotech@geotechsystems.com.au