

J6 LINEAR POTENTIOMETER CRACKMETER

Datasheet J6



Description

The Linear Potentiometer Crackmeter is a highly accurate and robust instrument used to measure displacements across cracks and joints of a structure.

The potentiometer is installed across a crack or joint of the structure to be monitored, using either groutable or expanding shell anchors.

As the crack expands or contracts, the change in the distance between the anchors causes the connecting rod within the potentiometer body to move. The movement of the potentiometer changes the output which determines the movement of the crack with high resolution and accuracy.

Features

- High resolution and accuracy
- Robust design
- Suitable for long-term monitoring
- Suitable for manual or remote monitoring
- Two versions available; Standard (IP67) and Submersible (IP68 to 1700 kPa)

Benefits

- Accurate, repeatable readings
- Long working life
- Long term stability and reliability
- Connecting cable is strong, screened and flexible



Comprehensive information about this product and our full range is available at www.soilinstruments.com
If you would like to speak with someone directly please call +44 (0)1825 765044 or email sales@soilinstruments.com

Operation

The Linear Potentiometer Crackmeter is anchored to the structure to be monitored with groutable or expansion anchors.

The change in distance between the anchors caused by the crack opening or closing, will cause a connecting rod to move within the potentiometer body, changing the resistance of the potentiometer via a voltage divider.

By reading this change in voltage, the movement of the crack can be determined.

Applications

The Linear Potentiometer Crackmeter measures displacements across cracks and joints in buildings, bridges, dams, pipelines and similar structures. It can measure both expansion and contraction of cracks or joints.

Typical monitoring applications include:

- Brick and stone buildings
- Settlement, heave or foundation clay shrinkage
- Bridges and dams
- Construction joints
- Pipelines
- Joints and bearing/support interaction
- Tunnels and lining cracks
- Structures susceptible to earthquake and landslide areas

Submersible Version



Associated products

For details on:	Catalogue code:
Dataloggers	D1
ARGUS Monitoring Software	D4

View our full product range on www.soilinstruments.com

Standard Version



THE TECHNICAL RATING FOR THIS PRODUCT:

As the correct installation of any monitoring sensor or system is vital to maximise performance and accuracy, Soil Instruments makes the following recommendations, for the skill level of the installation contractor.

ADDITIONAL SUPPORT

We offer installation and monitoring services to support this system. For more information please email : sales@soilinstruments.com or call : **+44 (0) 1825 765044**

BASIC 

ADVANCED 

INTERMEDIATE 

BASIC 

The installer is trained and experienced in the installation of this type of instrument or systems, and is ideally a specialist Instrumentation and Monitoring contractor.

The installer already has previous experience and/or training in the installation of this instrument or system.

As a minimum the installer has read and fully comprehends the manual, and if possible has observed these instruments or systems being installed by others.

Specifications

Linear Potentiometer

Ranges	25mm	50mm	75mm	100mm
Repeatability	< ± 0.01 mm			
Accuracy	±0.25% full scale			
Temperature range	-30 to +150°C			

Standard Version

Material	Anodised aluminium housing / Stainless Steel shaft			
Ingress protection	IP67			
Weight less cable	26g	29g	33g	37g
Dimensions ¹	L 95mm x Ø 9.5mm	L 120mm x Ø 9.5mm	L 145mm x Ø 9.5mm	L 178mm x Ø 9.5mm

Submersible Version

Material	Stainless Steel			
Ingress protection	IP68 to 1700 kPa			
Weight less cable	190g	212g	234g	254g
Dimensions ¹	L 290mm x Ø19mm	L 340mm x Ø19mm	L 390mm x Ø19mm	L 450mm x Ø19mm

Cable

Construction	4 Core, PUR sheath, foil screen & drain wire			
Diameter	4mm			
Weight/m	30g			

Anchors

Type	Groutable		Expanding Shell	
Materials	Zinc plated steel			
Diameter	12mm		16mm	
Length	100mm		80mm	
Weight per pair	176g		180g	

¹ In the closed position

Ordering Information

Standard Linear Potentiometer Crackmeter

Cable to be ordered separately

J6-1-25	25mm range
J6-1-50	50mm range
J6-1-75	75mm range
J6-1-100	100mm range

Submersible Linear Potentiometer Crackmeter

Cable to be ordered separately

J6-1S-25	25mm range
J6-1S-50	50mm range
J6-1S-75	75mm range
J6-1S-100	100mm range

4-20mA Output Version

Cable to be ordered separately

J6-2-25	25mm range
J6-2-50	50mm range
J6-2-75	75mm range
J6-2-100	100mm range

Mounted Anchors and Fixings

J2-CF-2.1	Groutable anchor; 2No. required per crackmeter - standard
J2-CF-2.2	Expanding shell anchor; 2No. required per crackmeter - standard
J2-2.1	Groutable anchor; 2No. required per crackmeter - Submersible
J2-2.2	Expanding shell anchor; 2No. required per crackmeter - Submersible

Connecting Cable and Fittings

CA-3.1-4-IC	Instrument cable, 4 core, 7/0.20, screened, Polyurethane jacket; priced per metre,
CA-4.1	Joint Sealing Kit
CA-4.2	Coloured adhesive tapes; set of 10No.
CA-4.3	Crimping tool
CA-4.4	Crimping sleeves; set of 100No.
W6-6.1	Nylon ties; 150mm x 3.5mm, pack of 100No.
ST1-3.5	Nylon ties; 370mm x 4.7mm, pack of 100No.

Installation Equipment

W6-4.4	Polyester resin cartridge; 150ml, to fix groutable anchor into drill hole
W6-4.5	Cartridge injection tool