TIME DOMAIN REFLECTOMETRY CABLE

GEOKON®

MODEL TDR-CBL

Model TDR-CBL Time Domain Reflectometry Cable

APPLICATIONS

The Model TDR-CBL Time Domain Reflectometry Cable is designed to measure:

- Soil mass and rock movements
- Soil volumetric water content
- Soil bulk electrical conductivity
- Any user-specific time-domain measurement

OPERATING PRINCIPLE

Time Domain Reflectometry (TDR) is a proven technology for monitoring slope stability by detecting ground movement along potential slip surfaces. A coaxial cable is installed in a borehole and grouted in place; when the slope deforms, the cable bends or shears, causing measurable reflections in the TDR signal. By analyzing these reflections, engineers can identify the depth and progression (but not magnitude or rate of movement) of slope movement in real time.

TDR systems (consisting of a TDR cable, pigtail, and data logger,) provide a cost-effective, durable, and automated means of detecting slope instability. TDR systems are often used in combination with inclinometers and piezometers to provide a comprehensive assessment of slope performance and early warning of failure.

Modle 8910-TDR Data Logger, with TDR-PIGTAIL and TDR-CBL cable.

FEATURES

- Precise shear zone monitoring
- Easy to install and read
- Read remotely
- Provides real-time monitoring
- Can be installed in borehole with other instrumentation

TECHNICAL SPECIFICATIONS

Minimum Bend Radius	50 mm
Velocity of Propagation	88%
Center Conductor	Copper-clad aluminum wire or copper, 4.8 mm
Weight	24 kg per 100 m
TDR Cable End Connector	N Type, Male
TDR Cable Jacket O.D.	15.9 mm
Pigtail Connector	N Type, Female to BNC
Pigtail Length	1.5 m

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GEOKON
48 Spencer Street
Lebanon, NH 03766 • USA

www.geokon.com
e: teamsales@geokon.com
p: +1 · 603 · 448 · 1562

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