Digital Bus In-Place Inclinometer System

Description

NOTE: This is a legacy and discontinued product not available for order.

Each IPI employs MEMS accelerometer sensors housed inside a 31.75 mm (1.25 in.) diameter, water-tight, stainless steel enclosure. The sensor body is rigidly connected to a 25.4 mm (1.0 in.) diameter bay rod which establishes the length of the IPI. Multiple IPIs are assembled with pivots allowing sensing of displacement over discreet, configurable intervals. Wheel assemblies centralize the pivot point and establish the azimuth of each IPI. They are available in sizes to fit 70 mm (2.75 in.) or 85 mm (3.34 in.) O.D. inclinometer casing.

The sensors are read through a connectorized signal cable designed to chain together multiple sensors. A datalogger is used to monitor the deflection of each sensor on the digital bus. If necessary, an alarm can be triggered when movement reaches a threshold rate or magnitude.

Digital Bus In-Place Inclinometer System Specifications

Electrical

ITEM	SPECIFICATION
Range	±15°
Resolution	±1 arc sec. (±0.0003°) (0.004 mm/m)
Non-linearity	±0.0125% F.S. (±0.002°) (0.03 mm/m)
Repeatability	±0.0125% F.S. (±0.002°) (0.03 mm/m)
Sensor	MEMS (Micro-Electro-Mechanical Systems) Accelerometer - Triaxial
Sensor Offset	+/- 0.002 arc deg./deg. C
Sensor Sensitivity	+/- 0.013 % of reading/deg. C
Supply Voltage	8 - 15V DC
Operating Temp.	-40 to 60°C (-40 to 140°F)
Ingress Protection	IP68 to 200m H20 (2 MPa)

Mechanical

ITEM	SPECIFICATION
Gauge Length	0.5 - 3 meters
Housing Diameter	31.75 mm (1.25 in.) (sensor)
Wheel Assembly	70 mm (2.75 in.) 85 mm (3.34 in.)
Bay Rod Diameter	25.4 mm (1.0 in.)

SPECIFICATIONS