DATA DIGGER EQUIPMENT

DATA SHEET

VIBRATING WIRE LOAD CELL

INTRODUCTION

DATA DIGGER he Load Cell is designed to measure Uni- directional load in anchors and structural elements associated with many type of structures like:
Concrete Dams, Cut Rock Slopes, Deep Excavation, Retaining Walls, Bridges, Cavern Lining & Tunnels.

FEATURES

- Rugged, robust and low cost.
- Suitable for hostile & severe environment.
- Easy installation.

APPLICATION

- Vibrating wire Load cell have high stability and sensitivity.
- Readings can be Logged by Data Accusation System.
- Rugged Waterproof Construction and Design.
- Accurately measure E centric pressure.
- Versatile design for use with tie backs, rock bolts, struts or arch support.

Overview

Vibrating Wire Load Cell consists of cylinder of high-strength steel with 3, or 6 vibrating wire strain gauges located around the circumference of the load cell. Load applied to the cell are measured by vibrating wire strain gauge. The effect of uneven and eccentric loading is minimized by averaging the output of all 3, or 6 individual readings.

Description

The Vibrating Wire Load Cell consists of a high-strength, heat treated steel cylinder which consists of a set of vibrating wire gauges mounted parallel to each other equally spaced in a ring in an alloy steel cylindrical housing with three to six vibrating wire strain gauges located to its circumference. Load applied to the load cells are measured by vibrating wire strain gauges and the reading are averaged to minimize the effects of uneven and eccentric loading. All model load cells are fitted with inbuilt thermistor to enable load reads to be corrected for temperature variation. The average sensitivity of these cell is 0.5% F.S.

The Vibrating Wire Load Cell has proven long term stability, and the housing and cable are permanently sealed for field conditions. The Load Cell is supplied with the standard connector mounted on the cable end with an protection end is fitted to the end of the cable to protect against dirt, moisture and damage. The Load Cell Multiplexer unit enables rapid connections of all gauges to the readout unit. Alternatively, a Multiplexer unit can be used to automatically sum the output of the strain gauges. The total load can then be displayed by the readout unit in engineering units. Each Load Cell is supplied with calibration certificate.

Specification

Working Load (kN)	:	250/500/1000/1500/2000
Overall Dia (mm)	:	70/90/110/130/160
Centre Hole Dia (mm)	:	32/50/70/90/120
Height (mm)	:	90/90/90/120/120
Rated Capacities	:	100 to 10,000 kN
Over Range	:	150% F.S.
Resolution	:	0.25% F.S.
Accuracy	:	±0.5% F.S.
Temperature Range	:	-20˚C to +60˚C