ANCLO - Resistive Anchor Load Cell

Load Cell

HIGH STABILITY
ANCHOR LOAD CELL
RESISTIVE STRAIN GAUGE

The robust ANCLO load cell is used to measure tensile or compressive loads. The Versatile designs fits all types of rockbolts or tiebacks.

Description

The load sensing element is a spool of high strength heat-treated steel or aluminum that withstands rough handling and loading. Electrical resistance strain gauges are bonded to the periphery of the spool. The gauges are mounted in a full bridge configuration that compensates for unevenly distributed loads. High resistance strain gauges are used to minimize cable effects. The load cells are compensated for temperature variations encountered during normal operations.

A steel housing with O-ring seals covers the spool and protects the strain gauges from mechanical damage and water infiltration. A plain PVC cable is wired directly to the cell or is connected via a detachable multi-pin connector. On large cells, the cable exit is parallel to the surface of the steel housing to give better clearance.

Key Features

- Versatile designs, fits all types of rockbolts or tiebacks
- Compatible with conventional strain indicator readouts
- May be used to monitor prop loads
- Rugged waterproof construction
- High stability and sensitivity
- Temperature compensated
- Eccentric loading possible

Applications

- Rock bolts and soil nails monitoring
- Mines and slope stabilization
- Anchoring systems for deep excavations
- Tie-down anchors for buoyant structures
- Load monitoring in structures
- Anchored retaining walls

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Specifications

Range	100, 200, 250, 500, 750, 1000, 1500, 2000 or 5000 kN
Accuracy	±0.5 % F.S.
Overload	1.5 × F.S.
Operating temperature	−20°C to +80°C
Maximum excitation voltage	10.0 VDC
Full bridge resistance	350 Ω
Electrical cable	IRC-41A

Load ranges are nominal only and can be modified to suit project requirements.
For dimensions, contact Roctest.
System accuracy depends on end loading conditions.

Installation

The surface against which the load cell bears should be smooth and perpendicular to the axis of the anchor or tieback. A seating pad comprised of a layer of mortar or concrete may be required. The use of a load bearing plate of suitable thickness between the base of the cell and the bearing surface is recommended. The load bearing plate, load cell, load distribution plate and anchor head assembly thread onto the anchor in sequence.

Ordering Information

Please specify:

- Range
- Hollow or solid cell center
- Cable connection and cable length
- Connector waterproofing for underwater installation

Optional Accessories

- Load distribution plate and bearing plate
- Load distribution plate incorporating centralizer bushing
- Readout instruments: P-3, SENSLOG

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