ANCHOR LOAD CELL

Model ANCLO

APPLICATIONS

ANCLO load cells are used to measure tensile loads in tie-back anchors and rockbolts, or compressive loads in structures. Typical applications include:

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

ANCLO load cells and plates

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 or armor-jacketed electrical 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.

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.

FEATURES

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

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	–40 to +75°C
Maximum excitation voltage	10.0 VDC
Full bridge resistance	350 Ω
Electrical cable	IRC-41AP, IRC-41A (optional)

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

ACCESSORIES

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

ORDERING INFORMATION

Please specify:

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

E50033-050901

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