OVERVIEW

GEOSEQ – STL Series Strain Gauge Anchor Load Cells are force and load measuring devices used in various applications. They are typically used to directly measure the force or load applied to a structure. These load cells are made from high-strength steel alloys. Anchor-type load cells are commonly used in various applications such as anchors, ground nails, piles, and retaining structures. They are attached to the point where the load is generated using different mounting methods, ensuring the direct transfer of force to the load cell.

These types of load cells operate on the principle of strain measurement. When a load is applied, the strain gauges inside the load cell detect changes in strain. The strain sensors alter the electrical resistance of the load cell, and this change is measured to determine the amount of applied force. The resulting electrical signal is transmitted to data acquisition devices or control systems to obtain force or load values.

Anchor-type load cells are available in different capacities and designs. The capacity of a load cell determines the maximum force that can be applied to it, usually expressed in tons or kN. The design of the load cell is suitable for environmental conditions, featuring water resistance, dustproofing, and lightning protection. Heavy-duty multi-wire cables are protected by polyurethane sheaths. For optimal performance, it is recommended that the mounting surfaces be flat. Additionally, it is advised to use them with lower and upper bearing plates.

FEATURES

- **High-Strength Steel Construction:** The product features a robust structure made from high-strength steel, ensuring durability and longevity.
- **Load Distribution Plate Design:** Equipped with load distribution plates, the product provides precise load distribution, offering safe and stable usage**.**
- **Proven Long-Term Accuracy:** Delivers proven high accuracy levels for long-term use, helping you achieve reliable results.

- **Suitable for Eccentric Loading:** Designed to accommodate eccentric loads, meeting various application requirements.
- **Data Logger Compatible:** Seamlessly integrates with data logger systems, making it ideal for recording and analyzing measurement data.
- **Compatible with Plug Connector or Cable:** Easily connects with both plug connectors and cables, offering flexibility and supporting various connection options.

APPLICATIONS

- **Anchors:** Measures load changes experienced by anchors and enables more accurate and precise locking of anchor loads.
- **Applied Load Measurements:** Used to accurately measure and monitor the loads acting on structures and surfaces.
- **Piling Systems:** Employed to optimize the performance and ensure the safety of pile-based structures.
- **Struts (Support Systems):** Used when temporary or permanent support of structures is required, enhancing safety and stability.
- **Arch and Tunnel Monitoring:** Used to monitor deformations in arches and tunnels to ensure safety.
- **Props (Support Columns):** Used for the temporary or permanent support of structures, increasing their stability.
- **Nailed Constructions:** Provides monitoring and measurement to ensure the safety and durability of nailed structures, reducing potential risks**.**

TECHNICAL SPECIFICATION

Range	: 200 TO 2000 kN or customised
Repeatability	: <0.2% FS
Accuracy	: <±0.5% FS
Sensitivity	: 2.0 mV/V +/-0.15%
Thermal Factor	: 0.002%FS/C
Temperature Range	: -20°C to +70°C
Output Signal	: mV/V

STANDART DIMENSIONS

Center Hole Load Cell						Bearing Plate				Load Distribution Plate		
Range kN	D1 mm	D2 mm	D3 mm	Ht. mm		Ht. mm	OD mm	ID mm		Ht. mm	OD mm	ID mm
200	40	60	155	40		23	155	116		23	75	40
500	52	78	155	40		35	155	116		35	98	52
750	60	90	165	40		35	165	125		35	105	60
1000	78	116	200	40		45	200	150		45	135	75
1000	105	138	225	40		45	225	172		45	155	105
1500	85	130	225	50		55	225	165		55	150	85
1500	130	165	260	50		55	260	200		55	180	130
2000	105	160	260	50		65	260	195		65	180	105
2000	155	192	260	50		65	260	226		65	210	155
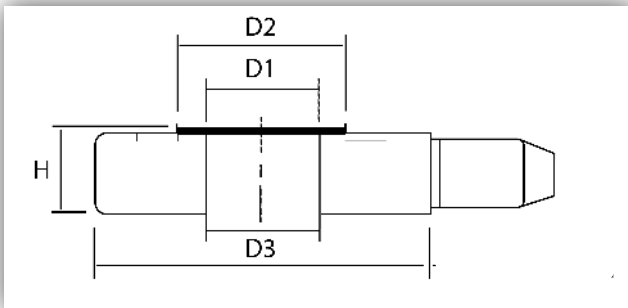
GEOSEQ – STL Series Strain Gauge Anchor Load Cells are designed to precisely measure physical force with long-term accuracy. They play a critical role in many industrial and field applications. Offered in various capacities to best meet the needs of your projects, these load cells are engineered with high precision and reliability.

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