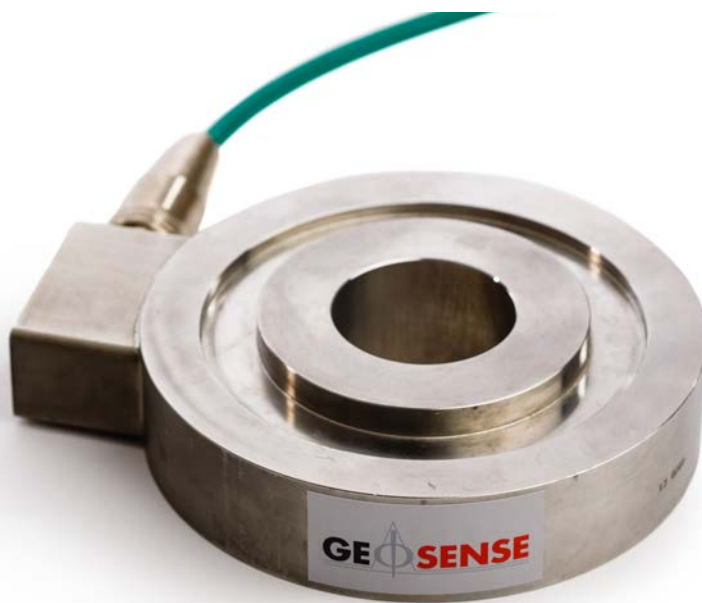


## Strain Gauge Anchor Load Cells SGLC-7000 Series

The SGLC 7000 series load cell consists of a cylinder of high strength steel with electrical resistance strain gauges connected around the periphery as a Wheatstone Bridge that provides a single mV/V signal output



# Strain Gauge Anchor Load Cells SGLC-7000 Series



## Overview



The Geosense® SGLC 7000 series load cell consists of a cylinder of high strength steel with a series of electrical resistance strain gauges connected around the periphery as a Wheatstone Bridge that compensates for unevenly distributed loads and provides a single mV/V signal output.

They are manufactured with a centre hole to accommodate anchors, rock bolts and tendons.

When the load cell is subjected to load the resistance of the strain gauges will change and the output signal is directly proportional to the applied load. The load cells are compensated for temperature variations often found during normal operating environments and have in-built lightning protection.

Connection to the load cell is via a heavy duty multi-core sheathed cable which can be connected to a direct portable readout, switched terminal units or a data logging system. Mounting surfaces should be flat and parallel for optimum performance and the use of abutment plates and load distribution plates is recommended.

The abutment plate (provided locally) is normally made to suit specific site requirements and the load distribution plate (supplied by Geosense) should be inserted between the load cell and the anchor head.

### APPLICATIONS

Measurement of load acting on:

Ground anchors

Rock Bolts

Tie-backs

Struts

Arch Supports

Props

### FEATURES

Robust stainless steel construction

Load distribution plates available

Dynamic testing possible

Accommodates eccentric loading

Multiple gauge system

Data logger compatible

Available with plug connector or cable



# Strain Gauge Anchor Load Cells SGLC-7000 Series

## Specifications

### GENERAL

|                          |                   |
|--------------------------|-------------------|
| Range                    | 300 to 2500kN     |
| Bridge resistance        | 1400Ω             |
| Over range               | up to 130%        |
| Sensitivity              | 2.0 mV/V +/-0.15% |
| Accuracy                 | < ±0.3% FS        |
| Temperature compensation | -10°C/+60°C       |
| Output signal            | 1.5mV/V           |
| Power input              | 5 to 15 V DC      |
| Operating temperature    | -20°C to + 70°C   |
| Material                 | Stainless steel   |
| Rating                   | IP68              |

### LOAD CELLS

| Model      | Capacity(kN) | Internal Diameter(mm) | Load Ring OD(mm) | Overall Diameter(mm) | Height(mm) |
|------------|--------------|-----------------------|------------------|----------------------|------------|
| SGLC 7001* | 300          | 40                    | 91               | 155                  | 40         |
| SGLC 7002  | 500          | 40                    | 91               | 155                  | 40         |
| SGLC 7003  | 500          | 50                    | 91               | 155                  | 40         |
| SGLC 7004  | 500          | 71                    | 91               | 155                  | 40         |
| SGLC 7005* | 750          | 71                    | 91               | 155                  | 40         |
| SGLC 7006  | 750          | 110                   | 135              | 200                  | 40         |
| SGLC 7007  | 1000         | 120                   | 155              | 220                  | 40         |
| SGLC 7008* | 1500         | 165                   | 192              | 260                  | 40         |
| SGLC 7009* | 1800         | 190                   | 230              | 300                  | 40         |
| SGLC 7010  | 2500         | 225                   | 264              | 340                  | 40         |

\*Standard range (other dimensions available on request)

# Strain Gauge Anchor Load Cells SGLC-7000 Series



## Specifications

### LOAD DISTRIBUTION PLATES

| Inside Diam (mm) | Outside Diam (mm) | Locating Ring Diam(mm) | Height(mm) |
|------------------|-------------------|------------------------|------------|
| 40               | 113               | 93                     | 30         |
| 50               | 113               | 93                     | 30         |
| 71               | 113               | 93                     | 30         |
| 110              | 157               | 137                    | 30         |
| 120              | 177               | 157                    | 30         |
| 165              | 214               | 194                    | 30         |
| 190              | 252               | 232                    | 30         |
| 225              | 286               | 266                    | 30         |

### ANCILLARY EQUIPMENT

Manual readouts

Data loggers

Load distribution plates

Cable Type - 800 - Multi-core with braid

Centraliser bushings if required

Fly Connector

Cable End Protector

Jump Cables

### ORDERING INFORMATION

Capacity

Cable length

Readout

Load distribution plate

Connectors



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