DATASHEET

VW Anchor Load Cell VWLC-5000 Series

The VWLC 5000 series Vibrating Wire Anchor Load Cells consist of a cylinder of high strength steel with 3 or 5 vibrating wire strain sensors which measure the compression of the cylinder under load

GEOSENSE

VW Anchor Load Cell VWLC-5000 Series

Overview

Geosense® VWLC 5000 series Vibrating Wire Anchor Load Cells consist of a cylinder of high strength steel with 3 or 5 vibrating wire strain sensors (depending on capacity) mounted parallel to the longitudinal axis arranged equidistant around the circumference which measure the compression of the cylinder under load.

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

With the multi-sensor configuration it is possible to obtain accurate readings under mildly eccentric loading conditions as the sensors are read individually.

The readings from the individual sensors are averaged and when used in conjunction with a calibration factor, supplied with each cell, allow the applied load to be calculated.

In multi-strand anchors it is therefore possible to tension the strands uniformly by monitoring the load in each sensor as appropriate.

The abutment plate (provided locally) is normally made to suit specific site requirements and load distribution plate pairs (supplied by Geosense) should be used to minimise eccentric loading and provide a smooth parallel bearing surface and evenly spread the load to the cell. These 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

- High strength steel construction
- Load distribution plates available
- Proven long term accuracy
- Accommodates eccentric loading
- Multiple gauge system
- Data logger compatible
- Available with plug connector or cable

VW Anchor Load Cell VWLC-5000 Series

Specifications

VW LOAD CELL

Thermistor	3k Ohms at 25°C
Over range capacity	120% FS
Accuracy[1]	0.5% FS*
Resolution	0.05% FS
Output	1200 - 2800 Hz
Temperature range	-20°C to + 80°C
Material	High tensile, stress relieved steel

[1] System accuracy depends on loading coditions; * 0.25% FS available on request

STANDARD DIMENSIONS (BAR ANCHORS)

Capacity(kN)	Sensors	ID(mm)	OD(mm)	Height(mm)
500	3	41	86.4	100
750	3	41	86.4	100
1000	3	52	118.8	100
1250	3	52	118.8	100
1500	3	52	118.8	100

STANDARD DIMENSIONS (STRAND ANCHORS)

500	3	92	127	100
750	3	92	127	100
1000	3	92	127	100
1250	5	112	161.1	100
1500	5	112	161.1	100
1750	5	112	161.1	100
2000	5	162	203.8	100
2500	5	162	212.8	100
3000	5	162	221.4	100

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Specifications

LOAD DISTRIBUTION PLATES

	ID(mm)	OD(mm)	Height(mm)
To fit load cell OD 86.4mm	41	94.5	30
To fit load cell OD 118.8mm	52	127	30
To fit load cell OD 127mm	92	135	40
To fit load cell OD 161.1mm	112	169	40
To fit 2000kN load cell OD 203.8mm	162	212	50
To fit 2500kN load cell OD 212.8mm	162	221	50
To fit 3000kN load cell OD 221.4mm	162	230	50

ANCILLARY EQUIPMENT

VW-2106 readout

Data loggers

Load distribution plates

Cable - Type 910 - Multi-core with Foil Screen & Drain Wire

Centraliser bushings if required

Fly Connector

Cable End Protector

Jump Cables

ORDERING INFORMATION

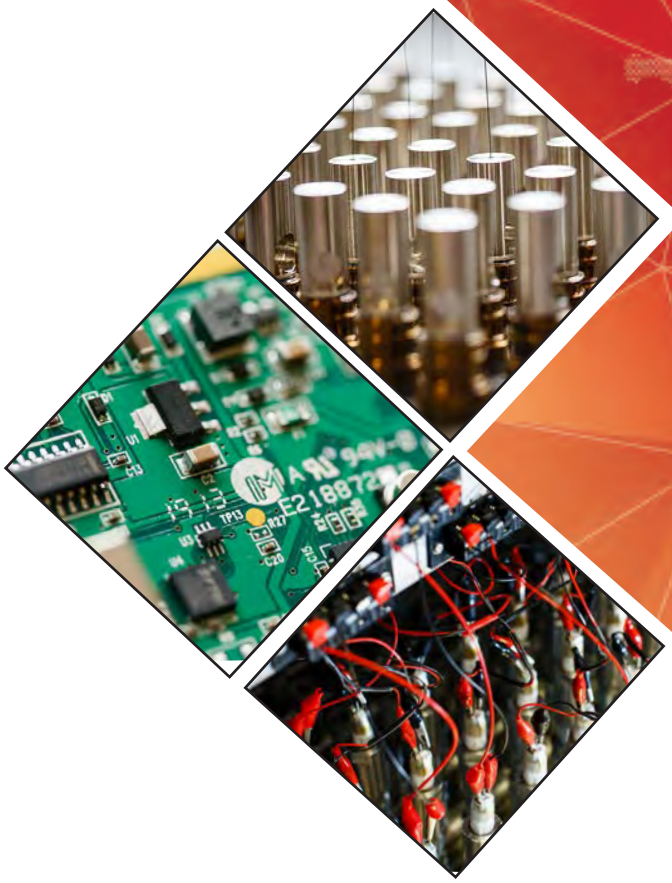
Capacity

Cable length

Readout

Load distribution plate

Connectors



GEOSENSE

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