



## **ELECTRIC ANCHOR LOAD CELLS**

Electrical resistance anchor load cell consists of a ring-shaped stainless steel body which incorporates from 8 to 16 electrical resistance strain gauges in full bridge configuration.

Typical applications include performance testing of anchor systems in tunnelling or deep excavations. The cell design minimizes the sensitivity to the eccentric load.

Anchor load cells are available in a variety of ranges and diameters. A very stiff distribution plate is supplied, in order to ensure that the load is applied equally over the annular loading surface of the cell.

**Anchor load cells from  
300 to 10000 KN**

**Monitoring and control of  
loads and tunnel linings  
or retaining walls**

**8 to 16 strain gauge  
arrays for high accuracy  
and reduced sensitivity  
to eccentric loading**

**Low profile and compact**

**Waterproof and robust**



# ELECTRIC ANCHOR LOAD CELLS

## ACCESSORIES

<b>OELC420MA00</b>	4-20 mA transmitter for electrical load cells
<b>OECON07MV00</b>	Flying connector with cap for easy and direct connection to the readout units.
<b>OEPM00000000</b>	Terminal measuring box for maximum N.3 load cell cable inputs.
<b>OEPC0000S00</b>	Switch measuring box to terminate cables at readout point. Available in different sizes to connect up to 24 transducer outputs.

## READOUT UNITS

<b>OCRD4000000</b>	Universal digital readout with graphic color display, showing readings in both electrical and engineering units. Please refer to readout datasheets for further informations
<b>OCDL400N000</b>	New Leonardo universal portable datalogger. It is equipped with high performance microprocessor, Ni-MH batteries and color graphic display (sunlight reliable). Please refer to readout datasheet for further information.

## TECHNICAL SPECIFICATIONS

Full scale capacity	from 300 to 10000 KN
Overload	150% available
Sensitivity	0.001 mV/V
Accuracy	< 0.5% F.S.
Thermic zero shift	< 0.005% F.S./°C
Electrical supply	from 2V d.c. to 10V d.c
Output signal full scale	1.5 mV/V, 2.0 mV/V external 4-20 mA transmitter on request
Electric insulation	5 GΩ
Bridge resistance	1400 standard
Compensated temp. range	-10°C +60 °C
Temp. operating range	-15°C +70 °C

**CE** electromagnetic compatibility according to EN 61326-1 and EN 61326-A1 directives for EMC emission and immunity



Abutment plates are normally designed to suit specific site requirements. In all cases the minimum abutment thickness should be the thickness of the load distribution plate. The abutment plate surface area must be greater than the load cell area. Load distribution plate and load cell have the same central hole diameter.

## ANCHOR LOAD CELLS

Product code	Range	Centre hole	Sensitive ring	External diameter	Height
	[kN]	[mm]	[mm]	[mm]	[mm]
<b>OL204V03000</b>	0÷300	40	91	155	40
<b>OL204V05000</b>	0÷500	40	91	155	40
<b>OL207V05000</b>	0÷500	71	91	155	40
<b>OL207V07500</b>	0÷750	71	91	155	40
<b>OL211V07500</b>	0÷750	110	131	200	40
<b>OL212V10000</b>	0÷1000	120	155	220	40
<b>OL216V15000</b>	0÷1500	165	190	260	40
<b>OL219V18000</b>	0÷1800	190	230	300	40
<b>OL222V25000</b>	0÷2500	225	264	340	40

**Material** 17-4PH s/steel for all models except OL222V25000 and OL225V50000

## LOAD DISTRIBUTION PLATES

Product code	Centering ring	Centre hole	Overall diameter	Height
	[mm]	[mm]	[mm]	[mm]
<b>OL20040PD00</b>	92	40	110	30
<b>OL20040PD00</b>	92	40	110	30
<b>OL20071PD00</b>	92	71	110	30
<b>OL20071PD00</b>	92	71	110	30
<b>OL20110PD00</b>	136	110	155	30
<b>OL20120PD00</b>	156	120	180	30
<b>OL20165PD00</b>	192	165	210	30
<b>OL20190PD00</b>	192	190	210	30
<b>OL20225PD00</b>	268	231	290	30

**Material** zinc plated steel