



Electric Load Cells

OG150

Technical Features

The cell is made of a stainless steel cylindrical body equipped with 8 or 16 resistance strain gauges. Strain gauges are equally distributed along the cell and are in a Wheatstone bridge configuration. This instrument is extremely reliable thanks to the material it is made of (100% stainless steel), its IP68 protection, and its excellent thermal compensation. Installation is simple and the chance of a wrong placement is very low, adding to the reliability of this instrument. Cells are compensated for misaligned loads. Internal parts are completely filled up with gel in order to prevent any type of infiltration of moisture and water for a long period of time. When cells are loaded, their strain gauges change their resistance value. Output signal is directly proportional to the applied load. To equally spread the supplied load, cells for tunnels supporting structures are equipped with a spherical distribution plate, while anchor load cells are equipped with bearing plates (if necessary).

Application

The load on the cell is an important indication of the state and the functionality of anchorage, showing eventual overloads on the structure. The load is directly measured by installing a steel plate.

Load cells can be used to:

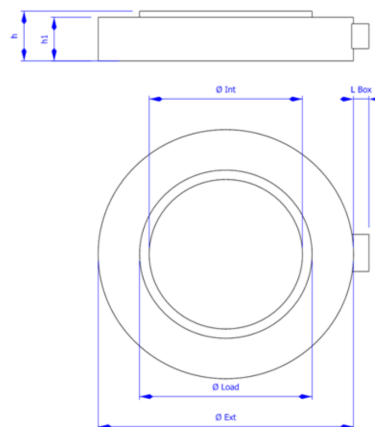
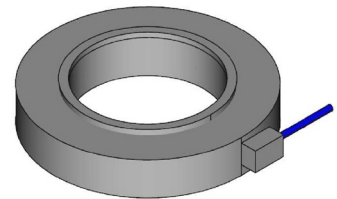
- measuring tension in cable anchors and rock bolts
- monitoring loads on structural beams
- monitoring load at a centring base

Uses

- Monitoring tension in cable anchors
- Monitoring loads in steel supporting structures in tunnels
- Measurement of loads during pile testing
- Monitoring of diaphragms, walls, retaining walls e bulkheads

Related Instrumentation

- 2x2x0.25 PUR cable
- NTC
- Readout Unit OG180
- Data-logger D800-D1600-D3200
- 4-20 mA Converters
- IP65 Connector
- OtrMonitoring web site



Model	Full Scale [kN]	Ø Int [mm]	h [mm]	Ø ext [mm]	h1 [mm]	L Box [mm]	Ø Load [mm]	Output [mV/V/FS]	In/Out Ω
OG150-20	200	18	50	50	49	12	32	2	350
OG150-30	300	35	50	70	48	12	49	2	350
OG150-40	500	40	40	110	35	23	60	2	700
OG150-45	1000	40	40	160	35	25	91	2	1400
OG150-60	1000	60	40	160	35	25	91	2	1400
OG150-80	1750	80	40	200	35	23	150	2	1400
OG150-120	1000	120	40	200	35	25	150	2	1400
OG150-165	1500	165	40	250	35	25	185	2	1400
OG150-220	2500	220	40	300	35	25	240	2	1400

Different Measures, Full scale, Output are available on demand

Technical Specifications

				
Model	OG150-20-30	OG150-40-60-80	OG150-120-165	OG150-220
Full scale	200-300 KN	1500-1000-1750 KN	1000-1500 KN	2500 KN
Electrical full scale	2mV/V/F.S.	2mV/V/F.S.	2mV/V/F.S.	2mV/V/F.S.
Accuracy	0.5% F.S.	0.5% F.S.	0.5% F.S.	0.5% F.S.
Overload	120%	120%	120%	120%
Signal output	mV/V Std 4-20 mA (available with 4-20 mA transmitter)			
Compensated temperature range	-10° / +50°C	-10° / +50°C	-10° / +50°C	-10° / +50°C
Temperature working range	from -10° to +50°C (For tougher temp. ranges special treatments are needed, on request)			
Material	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
Protection	IP 68	IP68	IP68	IP67
	Other full scales available on request.			

Codes & Part Numbers

P/N 2008000 Center hole load cell Ø 18mm 200 KN
 P/N 2008001 Center hole load cell Ø 35mm 300 KN
 P/N 2008002 Anular Load Cell Ø 40mm 500 KN 40/40/110
 P/N 2008003 Anular Load Cell Ø 60mm 1000 KN 60/40/160
 P/N 2008004 Anular Load Cell Ø 80mm 1750 KN 80/40/200
 P/N 2008005 Anular Load Cell Ø 120mm 1000 KN 120/40/200
 P/N 2008006 Anular Load Cell Ø 165mm 1500 KN 165/40/250
 P/N 2008007 Anular Load Cell Ø 220mm 2500 KN 220/40/300
 P/N 2008008 4-20 mA converter for load cells in IP66 box