

LOAD CELL PRE

Application

The load cell PRE is an electrical transducer for the measurement of forces. It is mainly used to monitor anchor forces, in conventional and in prestressed structures (of any type). A load cell can also be used in other applications such as for anchor load testing, as well as lifting and load distribution on large containers.

For manual measurement the user friendly readout unit Indi-poc is used to display the load directly in kN. Due to its standard signal remote measurement is easily possible. A permanent load should not be more than 80% of the load cells nominal capacity (FS). For a short period the load cell may be loaded up to 110% of its nominal load without zero point shifting. The more rigid the supports (below and above of the load cell) the better the precision.

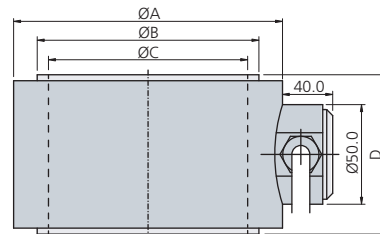
Description

The load cell PRE is designed for the use on construction sites. Basically it is maintenance free, splashproof, temperature compensated and of robust mechanical design.

Strain gauges are applied in a temperature compensated arrangement directly on a thermally treated steel cylinder. When a load is applied, a change in resistance on the strain gauges results due to the deformation of the steel cylinder. The electrical signal is adjusted in order for the actual load to be read directly in kN on the readout unit.



Load cell PRE 1000/100/80 monitoring a retaining wall



Technical Data

Type	PRE 1000/100/80	PRE 1500/125/80	PRE 2000/160/80	PRE 3000/190/80	PRE 10000/0/120
Nominal load (FS)	0–1000 kN	0–1500 kN	0–2000 kN	0–3000 kN	0–10 000 kN
Outside Ø	135 mm	160 mm	200 mm	235 mm	189 mm
Outside Ø bearing ring	111 mm	139 mm	179 mm	212 mm	153 mm
Inside Ø bearing ring	100 mm	125 mm	160 mm	190 mm	without hole
Overall height	80 mm	80 mm	80 mm	80 mm	120 mm
Measuring system	Strain gauges				
Precision *	±1% FS	±1% FS	±1% FS	±1% FS	±1% FS
Temperature error	0.01%/°C	0.01%/°C	0.01%/°C	0.01%/°C	0.01%/°C
Resolution	1 kN	1 kN	1 kN	1 kN	10 kN
Signal FS	3.3 mV/V	3.3 mV/V	2.12 mV/V	2.12 mV/V	3.3 mV/V
Operating temperature	-30...+60 °C	-30...+60 °C	-30...+60 °C	-30...+60 °C	-30...+60 °C
Overvoltage protection	optional				
Cable	TS-PUR / TAP47				

* System accuracy depending on ambient and installation