



Electric anchor load cells consist of a compact cylindrical steel body that is placed between anchor nut and anchor board. The complete load of the anchor is thus transmitted to the cell in axial direction by the initial stressing force of the anchor. The proved compression is recorded by electric strain foil gauges, that are regularly distributed at the circumference of the cylinder surface. The force is calculated by multiplication of compression and known modulus of elasticity of the steel body.

By the multiple equipment of the steel body with strain foil gauges representative mean values can be received even in case of asymmetrical load. A compensating crown enables axle deviations of about 5 ° in case of oblique load.

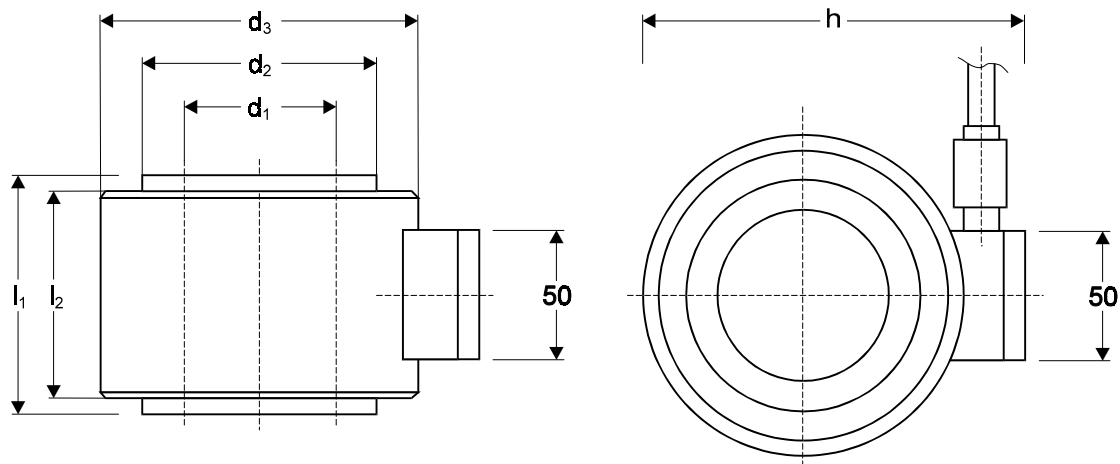
The measuring accuracy obtained with these cells is very high (quality class 0.5), but the necessary quality for the operation and the use of electric measuring bridges is more expensive than the hydraulic anchor load cells. In return the electric anchor load cells are well suited for continuous monitoring, especially for the recording of dynamic phenomena.

Electromagnetic interferences can be neglected owing to the high measuring signal of the strain foil gauge. The measuring signal and the zero point are adjusted to fixed values in every cell, thus the measuring results are directly available without calculation or adaptation.

Indicating instruments, measuring amplifiers and data recording units are connected to the anchor load cells by a 4-wire-circuit. The cables are already connected during fabrication, their influence to the measuring signal is compensated. At the measuring instrument they are inserted in a coupling that is compactly poured by synthetic resin against moisture.

The price for the cell types EA 400 until EA 3000 that are dimensioned for different anchor loads contains a characteristic curve for each measuring range. For an extra charge we deliver an official calibration of a material test laboratory with a certificate of the state.

For the following nominal loads electric anchor load cells are available as standard types:



Type	Nominal load*	Dimensions in mm					
		d ₁	d ₂	d ₃	l ₁	l ₂	h
EA 400	400	56	64	89	50	60	132
EA 600	600	65	75	102	50	80	148
EA 1000/1	1000	62	80	108	50	100	144
EA 1000/2	1000	78	90	115	50	100	161
EA 1500	1500	88	105	127	60	160	173
EA 2000	2000	114	136	159	60	180	205
EA 2500	2500	123	144	171	60	180	217
EA 3000	3000	161	180	216	60	180	262

* Special dimensions on demand

For measuring indication different types are available (indication by data sheet). Furthermore the anchor load cells type EA can be connected to all strain foil bridges, measuring amplifiers and data recording units, customary in the trade, that are equipped with a strain foil gauge integrated bridge connection.

The cables are seized as follows: Current supply (max. 10 V) black and blue, signal red and white.

**Sales Information**

- 3.1.1.1 Anchor load cell EA 500/1
500 kN, inner diameter 50 mm
- 3.1.1.2 Anchor load cell EA 500/2
500 kN, inner diameter 70 mm
- 3.1.1.3 Anchor load cell EA 1000/1
1000 kN, inner diameter 62 mm
- 3.1.1.4 Anchor load cell EA 1000/2
1000 kN, inner diameter 82 mm
- 3.1.1.5 Anchor load cell EA 2000/1
2000 kN, inner diameter 90 mm
- 3.1.1.6 Anchor load cell EA 2000/2
2000 kN, inner diameter 126 mm
- 3.1.1.7 Anchor load cell EA 3000/1
3000 kN, inner diameter 114 mm
- 3.1.1.8 Anchor load cell EA 3000/2
3000 kN, inner diameter 146 mm
- 3.1.1.9 Readout unit with rechargeable
NiCd batteries, direct indication in kN
incl. loader and transport case
- 3.1.1.10 Measuring cable 4 x 1.0 mm²