



Applications:

The pin type load cell model PR is mainly foreseen for applications on cranes weighing systems or, in general, where the load applied on a pin have to be measured.

Some applications are:

- Crane overload control
- Rope load, belt tension measurement, etc.

Main features:

- Immersion proof construction
- Stainless steel plasma welded construction
- Available with double bridge output (for redundant system)
- Available with **CANopen** output (CIA 404)
- Available with analog output 4-20mA
- Atex certification

Nominal load:

da 500 Kg a 100 t



PIN LOAD CELL TYPE PR

Specification according to VDI/VDE 2637

Metrological Characteristics	Par.	Un.	
Initial Load	Ln	t	0,5÷100
Minimum Load	Lp	%Ln	5
Maximum Load	Ll	%Ln	260
Linearity	Flin	±%Ln	0,5
Hysteresis	Fu	±%Ln	0,05
Repeatibility	Fv	±%Ln	0,04
Creep (in 30')	Fcr	±%Ln	0,03
Nominal Temperature Range	Btn	°C	-10+40
Zero Temperature Range (10÷60°C, over 10°C)	TKO	±%Cn	0,2
Output Temperature Range (10÷60°C, over 10°C)	TKC	±%Cn	0,6
Environmental Pressure Effect	Fpr	%Ln/Kpa	0

Electrical Data			
Nominal Output	Cn	mV/V	1
Nominal Supply Voltage	Bsu	V	5÷12
Maximum Supply Voltage	Usmax	V	15
Input Resistance	Re	Ω	350±10%
Output Resistance	Ra	Ω	350±1%
Insulation Resistance @20V	Ris	MΩ	>1000
Zero balance	Do	±%Cn	±0,05

Mechanical Data			
Breaking Load	Ld	%Ln	>500
Maximum Side Load	hn	mm	<0,2
Deflection		m	3
Cable Length			

Environmental Conditions			
Working Temperature Range	Bts	°C	-40+85
Storage Temperature Range			IP -68

Subject to change without notice
All the characteristics depend on the mounting conditions



PIN LOAD CELL TYPE PR

Description:

Strain-gage load cells are made by a metallic core over which one or more strain-gages are stick; the strain-gages detect the strain of the metal produced by the load applied on the load cell.

The strain-gages are wired in a Wheatstone bridge mode in such a way that the voltage on one diagonal of the bridge (output signal) is proportional to the load and the supply voltage (mV/V).

Pin load cells are normally used in single cell weighing systems and, thus, the output signal is not calibrated at zero and full scale as the calibration have to be done, anyhow, at the transmitter.

Model PR load cell can guarantee an high reliability due to the stainless steel construction and the protection of the strain-gages obtained by the plasma welding of the seal disks.

Model PR does not foresee standard nominal load and dimension. The mechanical characteristics and the dimensions are designed in according to the specific requirements of each application.

Installation:

Load cell must be installed on rigid structures (fixed and weigh support) as the deflection of the structures produces measurements errors.

Installation area must not be subject to abnormal vibration and the load cells must be protected from direct sunrays and wind.

Quick temperature variations and uninformed heating of the load cell produces thermal drift, which will exceed the specification.

The fixing mean and load cell support must be sized for the load cell breaking load also in case that the weighing systems has a lower capacity.

The installation of pin type load cells requires that mounting conditions are carefully agreed as per mounting sketch:

- Mounting hole diameter have to be matched
- Load must be distributed over all support area
- Load direction must be respected

Warning:

If mounting hole diameter precision and load distribution are not respected the breaking load is not guaranteed.

If load direction is out of measurement load axis, measurement errors will occur.

MOUNTING EXAMPLE



