Load Cells
SIWAREX WL100T

Load cell

Overview

The compression load cell is particularly suitable for implementation in container, hopper and vehicle scales.

Design

The measuring element is a solid cylinder made of stainless steel to which 4 strain gauges are applied.

The load which acts centrally in the measuring direction causes the spring bodies and therefore the friction-locked strain gauges to be elastically deformed. This generates a measuring signal voltage that is proportional to the load.

Technical specifications

SIWAREX WL100T	
Possible applications	Container weighers
Model	Compression load cell
Rated load/maximum load $E_{max.}$	100 t
Accuracy class according to OIML R60	C3
Max. load cell verification interval n_{LC}	3 000
Min. load cell verification interval V_{min}	
· E_{max} = 100 t	E_{max}/9 000
Minimum application range $R_{min(LC)}$	33 %
Combined error F_{comb}	± 0.02 % C_n
Repeatability F_v	± 0.02 % C_n
Creep error F_{cr}	
· 30 min	± 0.023 % C_n
Temperature effect	
· Zero signal T_{Ko}	0.023 % C_n/5 K
· Characteristic value T_{Kc}	0.017 % C_n/5 K
Min. dead load E_{min}	0 kg
Safe load limit L_u	150 % E_{max}
Ultimate load L_D	300 % E_{max}
Safe side load L_{lq}	10 % E_{max}
Rated measuring path h_n at E_{max}	0.36 mm
Recommended supply voltage (range)	5 … 12 V DC
Rated characteristic value C_n	2.0 ± 0.02 mV/V
Tolerance D_0 of zero signal	± 1.0 % C_n
Input resistance R_e	700 ± 7
Output resistance R_a	700 ± 7
Insulation resistance R_{is}	5 000 M at 50 V DC
Rated temperature range B_{tn}	-10 … +40 °C
Operating temperature range B_{tu}	-35 … +65 °C
Storage temperature range B_{ts}	-35 … +65 °C
Sensor material	Stainless steel
Degree of protection according to EN 60529; IEC 60529	IP68

Cable connection	
Function	Color
· EXC + (supply +)	· Green
· EXC – (supply -)	· Black
· SIG + (measured signal +)	· White
· SIG – (measured signal -)	· Red
· Sense + (sensor line +)	· Yellow
· Sense – (sensor line -)	· Blue
· Shield	· Transparent