

Load Cells

Compression load cells
SIWAREX WL270 CP-S SA

Load cell

Overview



The can compression cell is particularly suitable for implementation in hopper scales, bin weighing equipment 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 WL270 CP-S SA	
Possible applications	Vehicle scales, overhead rail scales, hopper scales
Type of construction	Can compression cell
Rated load/maximum load E_{max} .	<ul style="list-style-type: none"> • 0.5 t (0.49 tn. l.) • 1 t (0.98 tn. l.) • 2 t (1.97 tn. l.) • 5 t (4.42 tn. l.) • 10 t (9.84 tn. l.) • 20 t (19.68 tn. l.) • 30 t (29.53 tn. l.) • 50 t (49.21 tn. l.)
Accuracy class according to OIML R-60	C3 ¹⁾
Max. scale interval n_{IC}	3 000
Min. scale interval V_{min}	$E_{max}/10\,000$
Minimum application range $R_{min(IC)}$	30%
Combined error F_{Comb}	$\pm 0.02\% C_N$
Repeatability F_V	Not applicable
Creep error F_{Cr}	<ul style="list-style-type: none"> • 30 min $\pm 0.023\% C_N$
Temperature coefficient	
• Zero signal T_{K0}	$0.023\% C_N/5\ K$
• Characteristic value T_{KC}	$0.017\% C_N/5\ K$
Min. dead load E_{min}	0 kg
Max. working load L_u	$150\% E_{max}$
Breaking load L_d	$300\% E_{max}$
Safe side load L_{Iq}	$75\% E_{max}$
Deflection h_n at E_{max}	0.5 mm
Recommended supply voltage (range)	5 ... 12 V DC
Rated characteristic value C_N	$2.0 \pm 0.02\ mV/V$
Tolerance D_0 of zero signal	$\leq \pm 1.0\% C_N$
Input resistance R_e	$700\ \Omega \pm 7\ \Omega$
Output resistance R_a	$700\ \Omega \pm 7\ \Omega$
Insulation resistance R_{iS}	5 000 M Ω at 50 V DC
Rated temperature range B_{Tn}	-10 ... +40 °C (-14 ... 104 °F)
Operating temperature range B_{Tu}	-35 ... +65 °C (-31 ... 149 °F)
Storage temperature range B_{Ts}	-35 ... +65 °C (-31 ... 149 °F)
Sensor material	Stainless steel EN 1.4542
Degree of protection according to EN 60529; IEC 60529	IP68
Cable connection	
Function	Color
• EXC + (supply +)	Red
• EXC - (supply -)	Black
• SIG + (measured signal +)	Green
• SIG - (measured signal -)	White
• Shield (not connected to the load cell body)	Transparent

¹⁾ SIWAREX WL270 CP-S SA 0.5 ... 5 t (0.49 ... 4.42 tn. l.) are not approved for legal-for-trade operation.

Selection and ordering data

Article No.

Load cell, type WL270 CP-S SA



7MH5108-

Legal-for-trade according to OIML R-60 up to 3 000d,
15 m connecting cable (49.21 ft)

D 0

↗ Click on the Article No. for the online
configuration in the PIA Life Cycle Portal.

Rated load

- 0.5 t (0.49 tn. l.)¹⁾
- 1 t (0.98 tn. l.)¹⁾
- 2 t (1.97 tn. l.)¹⁾
- 5 t (4.92 tn. l.)¹⁾
- 10 t (9.84 tn. l.)
- 20 t (19.68 tn. l.)
- 30 t (29.63 tn. l.)
- 50 t (49.21 tn. l.)

3 P
4 A
4 G
4 P
5 A
5 G
5 K
5 P

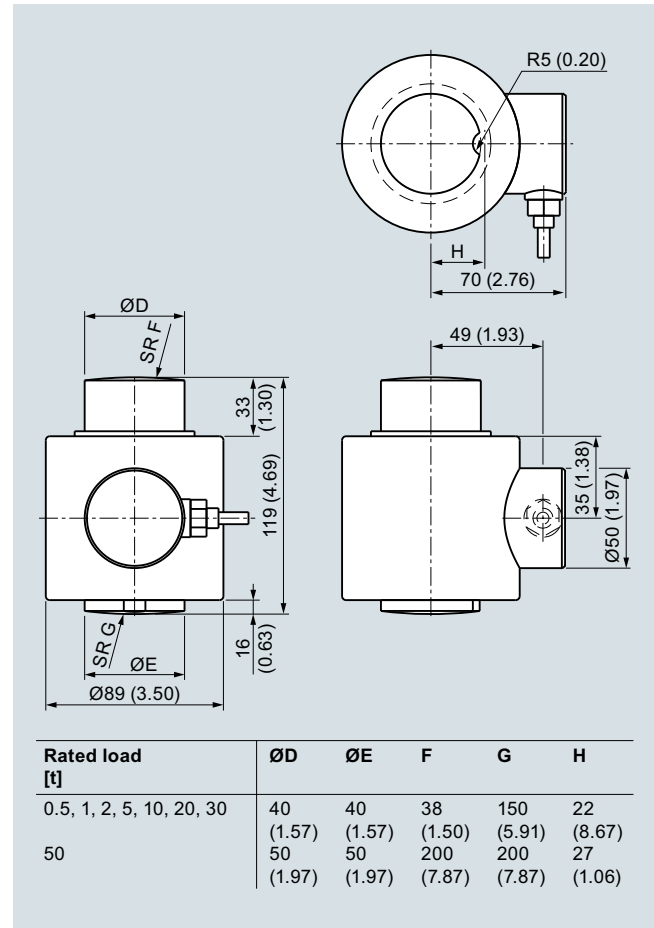
Explosion protection

- Without
- Explosion protection for zones 0, 1, 2, 20, 21, 22

0
1

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Dimensional drawings



SIWAREX WL270 CP-S SA load cell, dimensions in mm (inch)