

Overview



The load cell is ideal for use in tank weighing, hybrid weighing machines or suspended container weighing. It is made of stainless steel and therefore also suitable for use in harsh environments.

The SIWAREX WL250 ST-S SA is suitable for both s-type tension and compression loads. The preferred direction of measurement is tension, with factory calibration for the load cells. For compression applications, adherence to the characteristic values and error limits cannot be guaranteed.

Design

The measuring element is hermetically encapsulated and has a calibrated output current.

Technical specifications

SIWAREX WL 250 ST-S SA

Possible applications	<ul style="list-style-type: none"> • Voltage and pressure applications • Suspended scales • Hopper scales • Hybrid weighing machines
Type of construction	S-type load cell
Rated load E_{max}	<ul style="list-style-type: none"> • 50 kg (110.23 lb) • 100 kg (220.46 lb) • 250 kg (551.16 lb) • 500 kg (1 102.31 lb) • 1 t (0.98 tn. l.) • 2.5 t (2.46 tn. l.) • 5 t (4.92 tn. l.) • 10 t (9.84 tn. l.)
Accuracy class according to OIML R-60	C3
Max. scale interval n_{IC}	3 000
Min. scale interval V_{min}	<ul style="list-style-type: none"> • $E_{max} = 50, 100$ kg (110.23 lb, 220.46 lb) $E_{max}/7\ 000$ • $E_{max} = 0.25, 0.5, 1, 2.5$ t $E_{max}/10\ 000$ • $E_{max} = 5, 10$ t $E_{max}/12\ 000$
Combined error F_{Comb}	$\pm 0.02\% C_N$
Repeatability F_V	$\pm 0.02\% C_N$
Creep error F_{Cr}	$\pm 0.02\% C_N$
• 30 min	
Temperature coefficient	
• Zero signal t_{K0}	0.017% $C_N/5$ K
• Characteristic value t_{Kc}	0.014% $C_N/5$ 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}	100% E_{max}
Deflection h_n	
• $E_{max} = 50, 100$ kg (110.23 lb, 220.46 lb)	0.18 mm
• $E_{max} = 250, 500$ kg (551.16 lb, 1 102.31 lb)	0.24 mm
• $E_{max} = 1$ t	0.37 mm
• $E_{max} = 2.5, 5$ t	0.8 mm
• $E_{max} = 10$ t	0.57 mm
Rated characteristic value C_N	3.0 \pm 0.008 mV/V
Tolerance D_0 of zero signal	$\pm 1.0\% C_N$
Input resistance R_e	430 $\Omega \pm 4 \Omega$
Output resistance R_a	350 $\Omega \pm 3.5 \Omega$
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 (DIN)	Stainless steel EN 1.4542
Maximum tightening torque of the fixing screws	
• $E_{max} = 50, 100$ kg (110.23 lb, 220.46 lb)	25 Nm
• $E_{max} = 250, 500$ kg, 1 t (551.16 lb, 1 102.31 lb, 0.98 tn. l.)	75 Nm
• $E_{max} = 2.5, 5$ t	450 Nm
• $E_{max} = 10$ t	1 450 Nm
Degree of protection to EN 60529; IEC 60529	IP67
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

Load Cells

S-Type load cells

SIWAREX WL250 ST-S SA

Load cell

Selection and ordering data

Load cell, type WL250 ST-S SA

Legal-for-trade according to OIML R-60 up to 3 000d, connecting cable 6 m (19.69 ft)

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

Rated load

- 50 kg (110.23 lb)
- 100 kg (220.46 lb)
- 250 kg (551.16 lb)
- 500 kg (1 102.31 lb)
- 1 t (0.98 tn. l.)
- 2.5 t (2.46 tn. l.)
- 5 t (4.92 tn. l.)
- 10 t (9.84 tn. l.)

Explosion protection

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

Article No.

7MH5105-

D 0

2 P

3 A

3 H

3 P

4 A

4 H

4 P

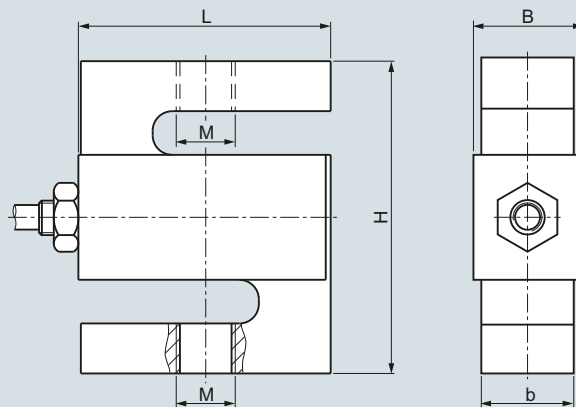
5 A

0

0

1

Dimensional drawings



Rated load [kg]	L	H	b	B	M
50 ... 100	50.8 (2.00)	60.96 (2.40)	11.68 (0.46)	15.06 (0.59)	M8
250 ... 500	50.8 (2.00)	60.96 (2.40)	18.03 (0.71)	21.41 (0.84)	M12

Rated load [t]	L	H	b	B	M
1	50.8 (2.00)	60.96 (2.40)	24.38 (0.96)	27.76 (1.09)	M12
2.5	76.2 (3.00)	99.06 (3.90)	24.38 (0.96)	27.76 (1.09)	M20 x 1.5
5.0	74.68 (2.94)	99.06 (3.90)	30.74 (1.21)	34.12 (1.34)	M20 x 1.5
10	112.78 (4.44)	177.8 (7.00)	42.93 (1.69)	46.31 (1.82)	M30 x 2

SIWAREX WL 250 ST-S SA load cell, dimensions in mm (inch)