

Overview



The load cell is ideal for use in tank weighing, hybrid scales 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 Container weighers Hybrid scales
Model	S-Type
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 R60	C3
Max. load cell verification intervals n_{IC}	3 000
Min. load cell verification intervals V_{min}	
<ul style="list-style-type: none"> $E_{max} = 50, 100$ kg $E_{max} = 0.25, 0.5, 1, 2.5$ t $E_{max} = 5, 10$ t 	$E_{max}/7000$ $E_{max}/10\ 000$ $E_{max}/12\ 000$
Combined error F_{comb}	$\pm 0.02\ % C_n$
Repeatability F_v	$\pm 0.02\ % C_n$
Creep error F_{cr}	
<ul style="list-style-type: none"> 30 min 	$\pm 0.02\ % C_n$

SIWAREX WL 250 ST-S SA

Temperature effect	
<ul style="list-style-type: none"> Zero signal T_{K0} Characteristic value T_{KC} 	0.017 % $C_n/5$ K 0.014 % $C_n/5$ 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_{Iq}	100 % E_{max}
Rated measuring path h_n	
<ul style="list-style-type: none"> $E_{max} = 50, 100$ kg $E_{max} = 250, 500$ kg $E_{max} = 1$ t $E_{max} = 2.5, 5$ t $E_{max} = 10$ t 	0.18 mm 0.24 mm 0.37 mm 0.8 mm 0.57 mm
Rated characteristic value C_n	3.0 ± 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
Maximum tightening torque for fixing screws	
<ul style="list-style-type: none"> $E_{max} = 50, 100$ kg $E_{max} = 250, 500$ kg, 1 t $E_{max} = 2.5, 5$ t $E_{max} = 10$ t 	25 Nm 75 Nm 450 Nm 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
• Screening	Transparent

Load Cells

S-Type load cells

SIWAREX WL250 ST-S SA

Load cell

Selection and ordering data

Article No.

Load cells type WL250 ST-S SA

7MH5105-

Legal-for-trade according to OIML R60 up to 3 000d, connecting cable 6 m (19.69 ft)

D 0

➤ 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 (tn. L..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.)

2 P
3 A
3 H
3 P
4 A
4 H
4 P
5 A

Explosion protection

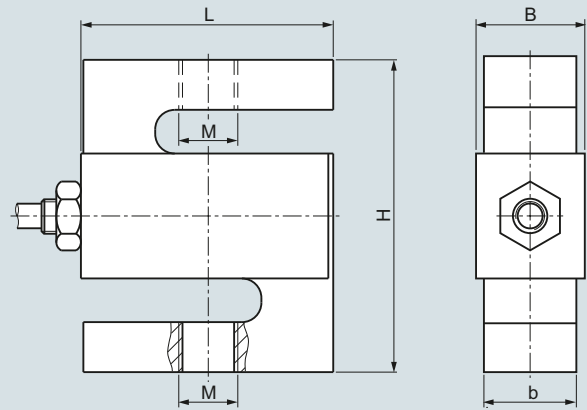
Without

0

Explosion protection for zones 0, 1, 2, 20, 21, 22

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)