

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 R60	C3
Max. scale interval n_C	3 000
Min. scale interval V_{min}	$E_{max}/7\ 000$
<ul style="list-style-type: none"> • $E_{max} = 50, 100$ kg (110.23 lb, 220.46 lb) • $E_{max} = 0.25, 0.5, 1, 2.5$ t • $E_{max} = 5, 10$ t 	$E_{max}/10\ 000$ $E_{max}/12\ 000$
Combined error F_{comb}	$\pm 0.02\% C_n$
Repeatability F_V	$\pm 0.02\% C_n$
Creep error F_{cr}	$\pm 0.02\% C_n$
<ul style="list-style-type: none"> • 30 min 	
Temperature coefficient	
<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
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	
<ul style="list-style-type: none"> • $E_{max} = 50, 100$ kg (110.23 lb, 220.46 lb) • $E_{max} = 250, 500$ kg (551.16 lb, 1 102.31 lb) • $E_{max} = 1$ 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 \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	
<ul style="list-style-type: none"> • $E_{max} = 50, 100$ kg (110.23 lb, 220.46 lb) • $E_{max} = 250, 500$ kg, 1 t (551.16 lb, 1 102.31 lb, 0.98 tn. l.) • $E_{max} = 2.5, 5$ 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
<ul style="list-style-type: none"> • EXC + (supply +) • EXC - (supply -) • SIG + (measured signal +) • SIG - (measured signal -) • Shield (not connected to the load cell body) 	Red Black Green White 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 R60 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

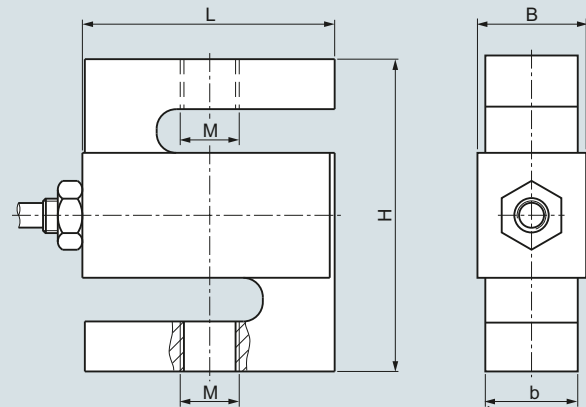
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Dimensional drawings

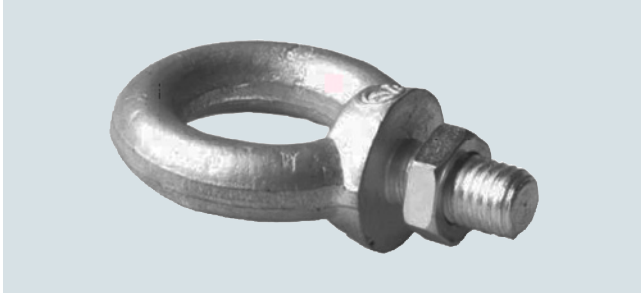


Rated load [kg]	L	H	b	B	M
50 ... 100	50.8 (2.00)	60.96 (2.40)	11.68 (0.46)	15.06 (0.59)	M8
250 ... 500	50.8 (2.00)	60.96 (2.40)	18.03 (0.71)	21.41 (0.84)	M12

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)

Overview



The lifting eye bolt for SIWAREX WL250 ST-S SA load cells makes it easier to install the cell.

The lifting eye bolt is suitable for rated load cell ranges from 50 kg up to 5 t (110.23 lb up to 4.92 tn. l.).

Design

The lifting eye bolt is screwed into the load cell.

Selection and ordering data

WL250 ST-S SA lifting eye bolts

Material: Steel

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.)

Article No.

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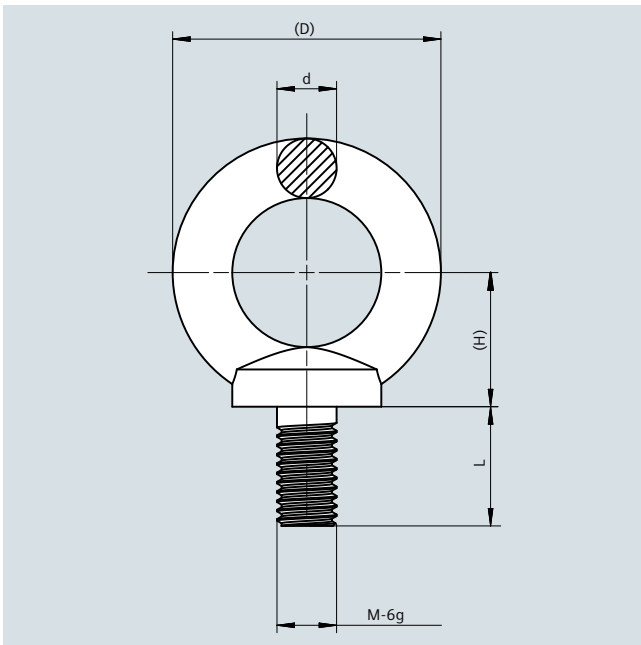
4 P

Technical specifications

SIWAREX WL250 ST-S SA lifting eye bolt

Material	Steel						
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.)	2.5t t (2.46 tn. l.)	5 t (4.92 tn. l.)
Lifting capacity (static)	0.16 t (0.16 tn. l.)	0.25 t (0.24 tn. l.)	0.4 t (0.39 tn. l.)	1 t (0.98 tn. l.)	1.6 t (1.57 tn. l.)	4 t (3.94 tn. l.)	6.3 t (6.2 tn. l.)

Dimensional drawings



Dimensions in mm (inch)

Rated load	D	d	H	Ø	M × P × L
50 kg (110.23 lb)	36 (1.42)	9.1 (0.36)	18 (0.71)	17.8 (0.70)	M8 × 1.25 × 16
100 kg (220.46 lb)	44 (1.73)	11.1 (4.37)	22 (0.87)	21.8 (0.86)	M10 × 1.5 × 16
250 kg (551.16 lb)	52 (2.05)	13.1 (0.52)	26 (1.02)	25.8 (1.02)	M12 × 1.75 × 16
500 kg (1 102.31 lb)	62 (2.44)	15.2 (0.60)	31 (1.22)	31.6 (1.24)	M12 × 1.75 × 22
1 t (0.98 tn. l.)	72 (2.83)	17.4 (0.69)	36 (1.42)	37.2 (1.46)	M12 × 1.75 × 22
2.5 t (2.46 tn. l.)	104 (4.09)	25.7 (1.01)	53 (2.09)	52.6 (2.07)	M20 × 1.5 × 32
5 t (4.92 tn. l.)	123 (4.84)	30 (1.18)	63 (2.48)	63 (2.48)	M20 × 1.5 × 35