

# Load Cells

## SIWAREX R12

### Overview



The load cell is suitable for small platform scales with one load cell (max. platform size 350 x 350 mm) as well as for use in medium accuracy weighing machines of Class III with a max. scale verification intervals  $n_{\max} = 3\,000$  d.

### Design

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

### Technical specifications

#### SIWAREX R12

Possible applications	Smaller conveyor scales, small platform scales
Model	Single point
Rated load $E_{\max}$	6/12 kg
Accuracy class acc. to OIML R60	C3
Max. load cell verification intervals $n_{ic}$	3 000
Min. load cell verification intervals $v_{\min}$	$E_{\max}/12\,000$
Combined error $F_{\text{comb}}$	$\pm 0.02\% C_n$
Repeatability $F_v$	$\pm 0.01\% C_n$
Return of zero signal	$\pm 0.0167\% C_{n1}$
Creep error $F_{cr}$	
· 30 min	$\pm 0.0245\% C_{n1}$
· 20 ... 30 min	$\pm 0.0053\% C_{n1}$
Temperature effect	
Zero signal $T_{K0}$	$\pm 0.0058\% C_n/5\text{ K}$
Characteristic value $T_{Kc}$	$\pm 0.0045\% C_n/5\text{ K}$
Min. dead load $E_{\min}$	0 % $E_{\max}$
Maximum working load $L_u$	150 % $E_{\max}$
Ultimate load $L_d$	300 % $E_{\max}$
Maximum lateral load $L_{lq}$	100 % $E_{\max}$
Rated measuring path $h_n$ at $E_{\max}$ 6 kg	$0.24 \pm 0.02$ mm
Rated measuring path $h_n$ at $E_{\max}$ 12 kg	$0.19 \pm 0.01$ mm
Supply voltage $U_{sr}$ (reference value)	10 V
Supply voltage (range)	5 ... 15 V
Rated characteristic value $C_n$	-312 mV/V
Tolerance $D_c$ of characteristic value	$\pm 10\%$
Tolerance $D_o$ of zero signal	$\pm 1\% C_n$
Input resistance $R_e$	410 $\pm 6$
Output resistance $R_a$	350 $\pm 7$
Insulation resistance $R_{is}$	5 000 M
Rated temperature range $B_m$	-10 ... +40 °C

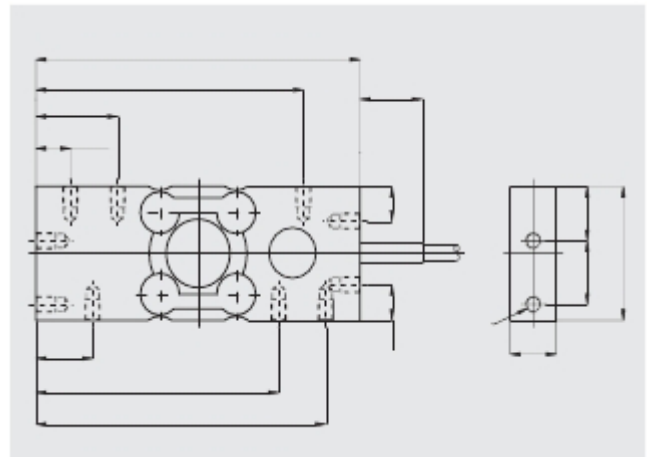
Operating temperature range $B_{tu}$	-40 ... +80 °C
Storage temperature range $B_{ts}$	-40 ... +90 °C
Sensor material (DIN)	Stainless steel, mat. no. 1.4542
Degree of protection to EN 60529	IP66/IP68
Maximum tightening torque of the fixing screws	6 Nm
Ex protection to ATEX (optional)	II 2 G EEx ib IIC T6/T4 II 3 G EEx nA/nL IIC T6/T4 II 1D/2D/3D T 70 °C

#### 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 (not connected to housing)	· Transparent

<sup>1)</sup> For rated temperature -10 ... +40 °C.

### Dimensional drawings



SIWAREX R 12, dimensions in mm