

# SPO Series Single Point Load Cells



## Standard Features

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- C3 precision class
- Off center load compensated
- Aluminium alloy construction
- IP67 protection
- Max. capacities from 3 to 40 kg
- For platforms with dimensions up to 300 x 300 mm
- Shielded connection cable
- OIML and test certificates available upon request

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**CAPACITIES (kg):** 3, 5, 10, 15, 20, 30, 40.

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**OIML R60. C3** precision class.

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**Aluminium** alloy. **IP67** protection.

Load cells for off center loads, suitable for example to build CE-M approved scales with a single load cell with maximum dimensions of 300x300 mm.

## Specifications

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**Minimum load cell verification interval:**

$V_{min} = E_{Max}/8.000-15.000$

**Maximum number of verification intervals:**

nLC = 3000

**Full Scale Output:**

2mV/V +/- 10%

**Temperature effect on zero:**

from  $\pm 0,0093\%$  F.S./10K to  $\pm 0,0175\%$  F.S./10K

**Temperature effect on full scale output:**

0,0117% F.S./10K (-10°C/+20°C) 0,0175% F.S./10K (+20°C/+40°C)

**Compensated Temperature Range:**

-10°C/+40°C

**Operating Temperature Range:**

-10°C/+50°C

**Maximum tolerated excitation voltage:**

15 VDC

**Input Resistance:**

300..500 Ohm

**Output Resistance:**

300..500 Ohm

**Insulation Resistance:**

>2000 MOhm

**Safe Overload:**

150% F.S.

**Ultimate Overload:**

300% F.S.

**Shielded cable:**

4-wire shielded cable, 40cm long, 3,2mm diameter

## Wiring Code

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<b>Wiring Code</b>	
<i>Color</i>	<i>Function</i>
YELLOW	SHIELD
WHITE	OUTPUT +
BLUE	INPUT +
RED	OUTPUT -
BLACK	INPUT -

## ATEX Version

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The CCATEX certificate makes the load cell suitable for use in hazardous areas with protection methods according to:

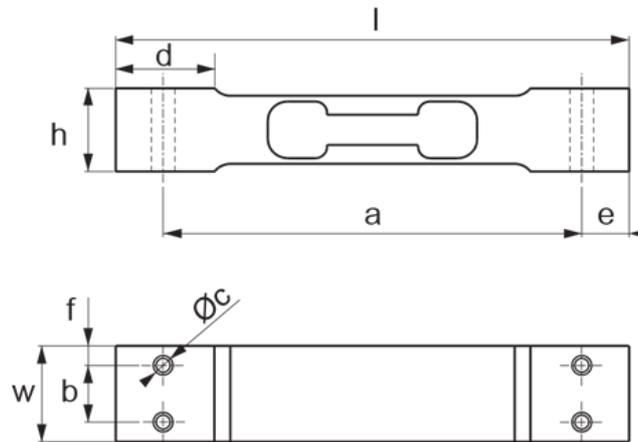
ATEX II 1G Ex ia IIC T6 (Ta -20÷+40°C) TX (Ta -20÷+65°C) Ga

ATEX II 1D Ex ta IIIC TX°C (Ta -20÷+40°C) TX°C (Ta -20÷+65°C) Da IP65

The certificate includes the manual and the ATEX CE conformity declaration (available in EN, DE, FR, and IT).

**IMPORTANT:** the certificate refers to the single load cell. For systems with more load cells, it is necessary to order one certificate for each load cell.

## Dimensions



Code	Max (kg)	Plate Max (mm)	l (mm)	w (mm)	h (mm)	a (mm)	b (mm)	c $\phi$ (mm)	d (mm)	e (mm)	f (mm)
<u>SPO3-1</u>	3	150 x 150	130	25,4	22	106	15	N°4 x M6	25	12	5
<u>SPO5-1</u>	5	300 x 300	130	25,4	22	106	15	N°4 x M6	25	12	5
<u>SPO10-1</u>	10	300 x 300	130	25,4	22	106	15	N°4 x M6	25	12	5
<u>SPO15-1</u>	15	300 x 300	130	25,4	22	106	15	N°4 x M6	25	12	5
<u>SPO20-1</u>	20	300 x 300	130	25,4	22	106	15	N°4 x M6	25	12	5
<u>SPO30-1</u>	30	300 x 300	130	25,4	22	106	15	N°4 x M6	25	12	5
<u>SPO40-1</u>	40	300 x 300	130	30	22	106	15	N°4 x M6	25	12	5

## Parts

**Part #**      **Description**

### Available Versions

**SPO3-1**      Single point approved load cell, C3, Max=3kg in aluminium alloy, IP67 protection degree, 350 Ohm output resistance.

**SPO5-1**      Single point approved load cell, C3, Max=5kg in aluminium alloy, IP67 protection degree, 350 Ohm output resistance.

**SPO10-1**      Single point approved load cell, C3, Max=10kg in aluminium alloy, IP67 protection rating, 350 Ohm output resistance.

**SPO15-1**      Single point approved load cell, C3, Max=15kg in aluminium alloy, IP67 protection degree, 350 Ohm output resistance.

**SPO20-1**      Single point approved load cell, C3, Max=20kg in aluminium alloy, IP67 protection degree, 350 Ohm output resistance.

**SPO30-1**      Single point approved load cell, C3, Max=30kg in aluminium alloy, IP67 protection degree, 350 Ohm output resistance.

**SPO40-1**      Single point approved load cell, C3, Max=40kg. Aluminium alloy, IP67 protection degree, 350 Ohm output resistance.

## Options

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**Part #**      **Description**

### Options for ATEX Version

<b>LCCB</b>	Shielded cable 6x0.25 mm <sup>2</sup> (suitable for Ex zones). PVC inner sheath. Tinned copper braid shielding. PVC outer sheath, diameter 5.8 mm. Temperature range: -40 / +80 °C. Minimum bending radius $\geq$ 6 x O.D. €/m. Maximum orderable length: 100 m (longer lengths available only upon request).
<b>LCCBA</b>	Armoured cable 6x0.25 mm <sup>2</sup> (suitable for Ex zones). PVC inner sheath, diameter 5mm. Iron-zinc alloy armour. Transparent PVC outer sheath, 8 mm diameter. Temperature range: -15 / +70 °C. Minimum bending radius $\geq$ 5 x O.D. €/m. Maximum orderable length: 100 m (longer lengths available only upon request).
<b>EXCB6</b>	Blue shielded cable 6x0.22 mm <sup>2</sup> , only for EX i (2GD) assemblies. PVC inner sheath. Tinned copper braid shielding. Polyurethane outer sheath, diameter 5.8 mm. Temperature range: -40 / +80 °C. Minimum bending radius $\geq$ 7 x O.D. €/m. Maximum orderable length: 100 m (longer lengths available only upon request).
<b>CCATEX-1</b>	Optional ATEX version for single load cell. Marking: ATEX II 1G Ex ia IIC T6 (Ta -20 $\pm$ +40°C) TX (Ta -20 $\pm$ +65°C) Ga and ATEX II 1D Ex ta IIIC TX°C (Ta -20 $\pm$ +40°C) TX°C (Ta -20 $\pm$ +65°C) Da IP65. Provided with safety instructions and the ATEX EU declaration of conformity (EN, DE, FR, ES and IT).
<b>CCATEX3GD</b>	ATEX certificate for each load cell. Marking: ATEX II 3G Ex nA IIC T6 Gc for gas and ATEX II 3D Ex tc IIIC T115°C Dc IP65 for dusts. Complete with manual and ATEX CE conformity declaration (available in EN, DE, FR and IT).

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