

SPG Series Off-Center Load Cells, C3 Class



Standard Features

- C3 precision class
- Off center load compensated
- Aluminium alloy construction
- IP67 protection
- Max. capacities from 10 to 200 kg
- For platforms with dimensions up to 600 x 600 mm
- Shielded connection cable
- OIML certificate available upon request
- Test certificate available upon request

Approvals



CAPACITIES (kg): 10, 15, 20, 30, 50, 100, 200.

OIML R60. C3 precision class.

Aluminium alloy. **IP67** protection.

Load cells for off center loads, suitable for example to build CE-M approved scales with a single load cell; maximum platform dimensions of 600x600 mm.

Specifications

Minimum load cell verification interval:

$V_{min} = E_{Max} / 10.000-15.000$

Maximum number of verification intervals:

$n_{LC} = 3000$

Sensitivity:

$2mV/V \pm 10\%$

Temperature effect on zero:

10kg: $\pm 0,0140\%$ F.S./10K
15kg: $\pm 0,0093\%$ F.S./10K
20kg: $\pm 0,0140\%$ F.S./10K
30kg: $\pm 0,0093\%$ F.S./10K
50kg: $\pm 0,0140\%$ F.S./10K
100kg: $\pm 0,0140\%$ F.S./10K
200kg: $\pm 0,0140\%$ F.S./10K

Temperature effect on Full Span:

range $-10^{\circ}C/+20^{\circ}C$: $0,0058\%$ F.S./10K
range $+20^{\circ}C/+40^{\circ}C$: $0,0087\%$ F.S./10K

Compensated Temperature Range:

$-10^{\circ}C/+40^{\circ}C$

Operating Temperature Range: $-10^{\circ}C/+50^{\circ}C$

Maximum excitation voltage without damage:

15 Vdc

Input Resistance:

300..500 Ohm

Output Resistance:

300..500 Ohm

Zero Balance:

$0 \pm 0,12 mV/V$ (at 100 V)

Insulation Resistance:

$>2000 MOhm$

Mechanical limit load in service:

150% F.S.

Destructive load:

300% F.S.

Deflection at nominal load:

$<0,5mm$

Shielded cable:

6-wire shielded cable, 3m long, 4,7mm diameter

Wiring Code

Wiring Code	
Colour	Function
YELLOW	SHIELD
WHITE	OUTPUT +
GREEN	SENSE +
BLUE	INPUT +
RED	OUTPUT -
GREY	SENSE -
BLACK	INPUT -

ATEX Version

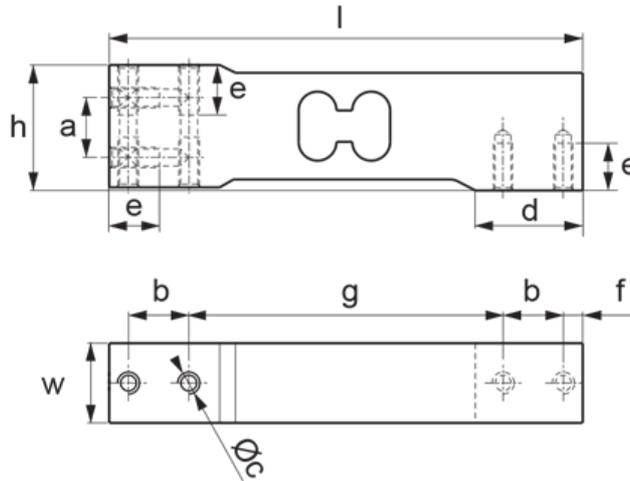
The CCATEX certificate makes the load cell suitable for use in hazardous areas with protection methods according to:

ATEX II 1G Ex ia IIC T6 (Ta $-20^{\circ}C/+40^{\circ}C$) TX (Ta $-20^{\circ}C/+65^{\circ}C$) Ga
ATEX II 1D Ex ta IIIC TX $^{\circ}C$ (Ta $-20^{\circ}C/+40^{\circ}C$) TX $^{\circ}C$ (Ta $-20^{\circ}C/+65^{\circ}C$) 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 Ø (mm)	d (mm)	e (mm)	f (mm)
<u>SPG10-1</u>	10	300 x 300	150	25,4	40	19,1	19,1	N°8 x M6	34	16	6,1
<u>SPG15-1</u>	15	450 x 450	150	25,4	40	19,1	19,1	N°8 x M6	34	16	6,1
<u>SPG20-1</u>	20	450 x 450	150	25,4	40	19,1	19,1	N°8 x M6	34	16	6,1
<u>SPG30-1</u>	30	450 x 450	150	25,4	40	19,1	19,1	N°8 x M6	34	16	6,1
<u>SPG50-1</u>	50	600 x 600	150	25,4	40	19,1	19,1	N°8 x M6	34	16	6,1
<u>SPG100-1</u>	100	600 x 600	150	25,4	40	19,1	19,1	N°8 x M6	34	16	6,1
<u>SPG200-1</u>	200	600 x 600	150	30	40	19,1	19,1	N°8 x M6	34	16	6,1

Parts

Part # **Description**

Available Versions

SPG10-1 Single point approved load cell, C3, Max=10kg in aluminium alloy, IP67 protection degree, 300..500 Ohm output resistance.

SPG15-1 Single point approved load cell, C3, Max=15kg in aluminium alloy, IP67 protection degree, 300..500 Ohm output resistance.

SPG20-1 Single point approved load cell, C3, Max=20kg in aluminium alloy, IP67 protection degree, 300..500 Ohm output resistance.

SPG30-1 Single point approved load cell, C3, Max=30kg in aluminium alloy, IP67 protection degree, 300..500 Ohm output resistance.

SPG50-1 Single point approved load cell, C3, Max=50kg in aluminium alloy, IP67 protection degree, 300..500 Ohm output resistance.

SPG100-1 Single point approved load cell, C3, Max=100kg in aluminium alloy, IP67 protection degree, 300..500 Ohm output resistance.

SPG200-1 Single point approved load cell, C3, Max=200kg in aluminium alloy, IP67 protection degree, 300..500 Ohm output resistance.

Options

Part # **Description**

Options for ATEX Version

LCCB	Shielded cable 6x0.25 mm ² (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 >= 6 x O.D. €/m. Maximum orderable length: 100 m (longer lengths available only upon request).
LCCBA	Armoured cable 6x0.25 mm ² (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 >= 5 x O.D. €/m. Maximum orderable length: 100 m (longer lengths available only upon request).
EXCB6	Blue shielded cable 6x0.22 mm ² , 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 >= 7 x O.D. €/m. Maximum orderable length: 100 m (longer lengths available only upon request).
CCATEX-1	Optional ATEX version for single load cell. Marking: ATEX II 1G Ex ia IIC T6 (Ta -20÷+40°C) TX (Ta -20÷+65°C) Ga and ATEX II 1D Ex ta IIIC TX°C (Ta -20÷+40°C) TX°C (Ta -20÷+65°C) Da IP65. Provided with safety instructions and the ATEX EU declaration of conformity (EN, DE, FR, ES and IT).
CCATEX3GD	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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