

SBX-1KL Series Shear Beam Load Cells, from 3000kg to 4500kg



As of: Thursday, March 19,
2026



Standard Features

- C3 precision class
- Stainless steel construction with laser welding
- IP68 protection, IP69k upon request
- Max. Capacities from 3000 to 4500 kg
- Shielded connection cable
- Test certificate provided as standard

Capacities (kg): 3000, 4500

OIML R60. C3 precision class

Stainless steel. IP68 protection

Output Resistance **1000 Ohm**

Stainless steel approved shear beam load cells, with low-power 1000 Ohm output resistance for mobile battery applications.

Suitable for creating CE-M approved scales with 4 load cells, or for weighing tanks and hoppers, with the aid of its accessories.

Specifications

Minimum load cell verification interval Vmin:
EMax / 10.000

Maximum number of verification intervals:
nLC = 3000

Combined error:
0,017% of Full Scale Output (F.S.)

Full Scale Output:
2mV/V +/- 0.5%

Temperature effect on zero:
0,002%/°C

Temperature effect on full scale output:
0,002%/°C

Compensated Temperature Range:
-10°C/+50°C

Operating Temperature Range:
-20°C/+60°C

Creep error after 30 minutes:
0,02% F.S.

Maximum tolerated excitation voltage:
15 VDC

Input Resistance:
1100 ± 20 Ohm

Output Resistance:
1000 ± 20 Ohm

Insulation Resistance:
>5000 MOhm

Safe Overload:
120% F.S.

Ultimate Overload:
300% F.S.

Shielded cable:
6-wire shielded cable, 5m long,
5 mm diameter

Wiring Code

Colour	Function
--	SHIELD
YELLOW	OUTPUT +
GREY	SENSE +
BROWN	INPUT +
WHITE	OUTPUT -
GREEN	INPUT -
PINK	SENSE -

ATEX Version

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

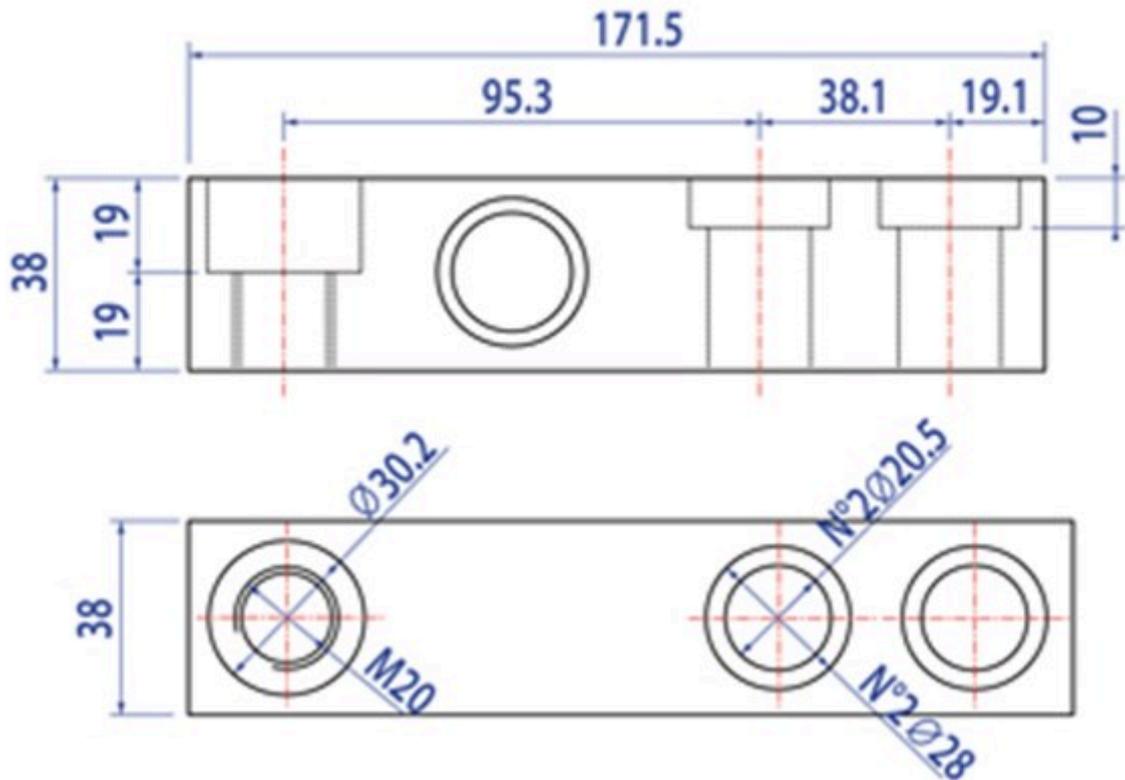
ATEX II 1G Ex ia IIC T6 (Ta -20÷+40°C) TX (Ta -20÷+65°C) Ga

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



Available versions

Code	Max (kg)
<u>SBX3000-1KL</u>	3000
<u>SBX4500-1KL</u>	4500

Parts

Part # **Description**

Available Versions

SBX3000-1KL Shear beam approved load cell, C3, Max=3000kg. Stainless steel, IP68 protection degree, 1000 Ohm output resistance.

SBX4500-1KL Shear beam approved load cell, C3, Max=4500kg. Stainless steel, IP68 protection degree, 1000 Ohm output resistance.

Options

Part # Description

IP69K Protection

IP69KLC IP69K version for one loadcell.

Base Plates

BPSBX5 5 mm base plate for SBX load cells capacity 3000-4500 kg . Size: 70 x 40 x 5 mm

Mounting kits

KSB5 Stainless steel kit for assembling 1 SBK/SBX cell from 3000 to 5000kg.

KSB5H Stainless steel articulated plate with M20x65mm threading. Applicable to SB.. load cells with capacity from 3000 to 5000 kg. To combine with BLKM20I bush.

Support feet for 4-cell platforms

SBFI3K-1 Stainless steel articulated foot with 70 mm non-slip rubber support base. Threading M20 x 2,5 x 33,5. For SBxx cells up to 3000/5000kg. To combine with BLKM20I bush.

KSB5FI-1 Stainless steel articulated foot with 60 mm non-slip rubber base. Threading M20 x 2.5 x 58.

BLKM20I Stainless steel M20 bush.

Stay Rod

LNK2635 Galvanized stay rod with ball-and-socket joints. Max 100 kN. For proper installation, 2xLNKST are needed. Note: They can't be ATEX-certified.

LNKST Single plate for stay rod. Fitted with fixing screw. (For proper installation, LNK2635 and a second LNKST are needed). Note: They can't be ATEX-certified.

Connection Cables

LCCB Shielded cable 6x0.25 mm² (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 $\geq 6 \times \text{O.D.}$ €/m. Maximum orderable length: 100 m (longer lengths available only upon request).

LCCBA Armoured cable 6x0.25 mm² (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 $\geq 5 \times \text{O.D.}$ €/m. Maximum orderable length: 100 m (longer lengths available only upon request).

LCCBM Shielded 4x0,34 mm² cable for moving applications. €/m. Maximum orderable length: 100 m (longer lengths available only upon request).

PRCB Protection sheathing for shielded cable. €/meter internal Ø 15mm. Maximum orderable length: 100 m (longer lengths available only upon request).

Junction Boxes

JB4Q Equalisation box for connection with up to 4 load cells. ABS box, IP67 protection rating, with 4 + 1 fairleads.

Part #	Description
JB4QI	Stainless steel equalisation box for connection with up to 4 load cells. IP65 protection rating, with 4 + 1 fairleads.
JC4Q	Equalisation board for up to 4 cells. With UL marked PCB, Terminal block, plastic box and labels (if expected).

Available Weight Indicator / Transmitter

DGT1S	Weight transmitter on DIN bar, with 2 INPUTS and 2 OUTPUTS. Fitted with 5-key keypad and LED display. Multifunction weighing program.
DGT1	Weight transmitter for DIN bar. 5-key keypad, LED display, date/time, alibi memory, and multifunction weighing program.
DGT4	Transmitter for DIN bar with 4 channels, 2 IN and 2 OUT. 5-key keypad, LED display, and standard weighing program.
DGTQ	Transmitter for panel mounting, with 2 IN and 2 OUT. 5-key keypad, LED display, and standard weighing program.

Options for ATEX Version

ZBA1S	Intrinsic protection three channel Zener barrier. Specific for connection to load cells, for mounting on DIN rail in a safe area, or in a flame-proof case. Marking: ATEX/IECEX II (1) GD [Ex ia Ga] IIC [Ex ia Da] IIIC. Provided with safety instructions and the ATEX EU declaration of conformity (EN, DE, FR, ES and IT).
KZBA-1	ATEX ABS housing kit with Zener Barrier ZBA1S for load cells. For intrinsically safe weighing systems in a dangerous zone. Dimensions 179x359x166,5mm. Marking of housing + Zener Barrier ZBA1S: ATEX II 3(1)G Ex nA [ia Ga] IIC T4 Gc X for gas, ATEX II 3(1)D Ex tc [ia Da] IIIC T135°C Dc IP66 X for dust. Provided with safety instructions and the ATEX EU declaration of conformity (EN and IT).
JB4QAI	ATEX equalisation box made of stainless steel IP66 for up to 4 cells. 4 + 1 fairleads. Marking: ATEX II 2G Ex ib IIC T6 Gb for gases, ATEX II 2D Ex tb IIIC T115°C Db IP65 for dusts. Provided with safety instructions and the ATEX EU declaration of conformity (EN, DE, FR, ES and IT).
JB4QA	ATEX equalisation box made of ABS IP67, for up to 4 cells. 4 + 1 fairleads. Marking: ATEX II 2G Ex ib IIC T6 Gb for gases, ATEX II 2D Ex tb IIIC T115°C Db IP65 for dust. Provided with safety instructions and the ATEX EU declaration of conformity (EN, DE, FR, ES and IT).
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 $\geq 6 \times$ 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 $\geq 7 \times$ O.D. €/m. Maximum orderable length: 100 m (longer lengths available only upon request).
KMB4-1	Kit of 3 ATEX Zener barriers for load cells, in an ABS box. For up to 4 load cells of 350 ohm, for intrinsic protection weighing systems in a dangerous area. Marking of the whole box with three Zener barriers: ATEX II 3(1)G Ex nA [ia Ga] IIC T4 Gc (-20°C = Ta = +40°C) for gas, ATEX II 3(1)D Ex tb [ia Da] IIIC T130°C Dc IP65 (-20°C = Ta = +40°C) for dusts. Provided with safety instructions and the ATEX EU declaration of conformity (EN and IT).

Part #	Description
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).
DCATEXMECH	ATEX version for the PLATFORM / LOAD CELL MOUNTING KIT for zone 1/21 (for the load cells ATEX declaration see CCATEX code). Option to be offered only if the platform is ordered without the indicator, otherwise refer to the available certifications for the chosen weight indicator. Provided with safety instructions and ATEX EU declaration of conformity (EN, DE, FR, ES and IT). Includes IP68 connection between platform and weight indicator.
DCATEXMB4	ATEX declaration for the whole system with Dini Argeo Zener barriers. Ex II 2G IIC T6 Gb X e Ex II 2D IIIC T125°C Db X system, with label of the whole system, for weight indicator connected to Dini Argeo zener barriers, connected to a mechanical structure with ATEX load cells (each cell must be certified with CCATEX option). Provided with descriptive document of the assembly and ATEX EU declaration of conformity of the assembly (EN and IT).

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