

DSBI Series Double Shear Beam Stainless Steel Load Cell



Standard Features

- C4 Precision Class
- 17-4 PH Stainless Steel Construction
- IP68 Protection
- Max. capacities from 10,000 TO 30,000 kg
- Shielded connection cable
- Test certificate available upon request

CAPACITIES (kg): 10000, 20000, 30000.

OIML R60. C4 precision class.

17-4 PH stainless steel. IP68 protection.

Stainless steel double shear beam load cells suitable for building, for example, to make CE-M approved scales for high capacities or for weighing tanks and hoppers with the relevant accessories. High accuracy also with the expansion of the weighing structures.

Specifications

Minimum load cell verification interval:

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

Combined error:

0,03% of Full Scale Output (F.S.)

Full Scale Output:

2mV/V +/- 0,1%

Temperature effect on zero:

0,00116% /°C

Temperature effect on full scale output:

0,00097% /°C

Compensated Temperature Range:

-10°C/+40°C

Operating Temperature Range:

-30°C/+85°C

Creep error after 30 minutes:

<0,02% F.S.

Maximum tolerated excitation voltage:

15 VDC

Input Resistance:

700 ± 7 Ohm

Output Resistance:

700 ± 7 Ohm

Zero Balance:

+/- 1% F.S.

Insulation Resistance:

>5000 MOhm

Safe Overload:

150% F.S.

Ultimate Overload:

300% F.S.

Shielded cable:

6-wire shielded cable, 15m long, 5mm diameter.

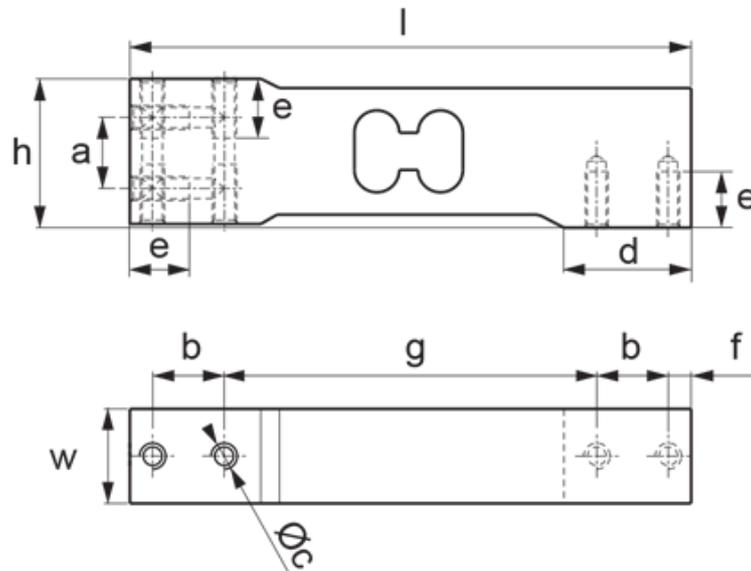
Wiring Code

<u>Wiring Code</u>	
<u>Colour</u>	<u>Function</u>
GREEN	OUTPUT +
PURPLE	SENSE +
RED	INPUT +
WHITE	OUTPUT -
BLACK	INPUT -
GREY	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



Code	Max (kg)	l (mm)	w (mm)	h (mm)	a (mm)	bØ (mm)	c Ø (mm)	d (mm)
<u>DSBI10</u>	10.000	170	49.2	49.2	142	N°2 x 20	25.4	12.7
<u>DSBI20</u>	20.000	170	49.2	49.2	142	N°2 x 20	25.4	12.7
<u>DSBI30</u>	30.000	170	49.2	49.2	142	N°2 x 20	25.4	12.7

Parts

Part # **Description**

Available Versions

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|---------------|---|
| DSBI10 | Double shear beam approved load cell, C4, Max=10000kg. Stainless steel, IP68 protection degree. |
| DSBI20 | Double shear beam approved load cell, C4, Max=20000kg. Stainless steel, IP68 protection degree. |
| DSBI30 | Double shear beam approved load cell, C4, Max=30000kg. Stainless steel, IP68 protection degree. |

Options

Part #	Description
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Mounting kits

KDSBN	Stainless steel kit for assembling 1 DSBI cell up to 30000kg. (Load cell not included)
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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).
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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).
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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).
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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).
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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).
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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 $\geq 5 \times$ O.D. €/m. Maximum orderable length: 100 m (longer lengths available only upon request).
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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).
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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).
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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).
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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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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.
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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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