

FXD Series Bending Beam Load Cell



Standard Features

- C3 Precision Class
- Stainless steel
- IP68 Protection
- Max. capacities from 10 to 500 kg
- Shielded connection cable
- OIML certificate available upon request
- Test certificate available upon request

CAPACITIES (kg): 10, 20 , 50, 100, 200, 300, 500.

OIML R60. C3 precision class.

Stainless steel. IP68 protection.

Bending beam load cells for approved weighing (capacities from 100kg to 500kg), automatic systems, dosage.

Specifications

Minimum load cell verification interval:

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

Maximum number of verification intervals:

$n_{LC} = 3000$

Full Scale Output:

$2 \text{ mV/V} \pm 0,1\%$

Combined error:

0,012% of Full Scale Output (F.S.)

Non-Repeatability:

0,01% F.S.

Temperature effect on zero:

$\pm 0,02\% \text{ F.S.} / 10^\circ\text{C}$

Temperature effect on full scale output:

$\pm 0,02\% \text{ F.S.} / 10^\circ\text{C}$

Compensated Temperature Range:

$-10^\circ\text{C}/+50^\circ\text{C}$

Operating Temperature Range:

$-20^\circ\text{C}/+60^\circ\text{C}$

Creep error after 30 minutes:

$\pm 0,012\% \text{ F.S.}$

Maximum tolerated excitation voltage:

15 VDC

Input Resistance:

$385 \pm 10 \text{ Ohm}$

Output Resistance:

$350 \pm 3 \text{ Ohm}$

Insulation Resistance:

$> 5000 \text{ MOhm}$

Safe Overload:

120% F.S.

Ultimate Overload:

150% F.S.

Nominal displacement:

$< 0,4 \text{ mm}$

Shielded cable:

4-wire shielded cable, 3m long, 5mm diameter.

Wiring Code

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

ATEX Version

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

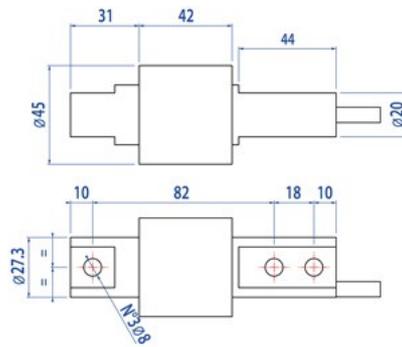
ATEX II 1G Ex ia IIC T6 (Ta -20 \pm +40 $^\circ$ C) TX (Ta -20 \pm +65 $^\circ$ C) Ga

ATEX II 1D Ex ta IIIC TX $^\circ$ C (Ta -20 \pm +40 $^\circ$ C) TX $^\circ$ C (Ta -20 \pm +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)	l (mm)	h (mm)	a (mm)	b (mm)	c Ø (mm)	d (mm)	e (mm)	f (mm)	g (mm)	i (mm)
<u>FXD10</u>	10	120	45	18	82	N°3 x 8	20	44	27,3	18,6	20
<u>FXD20</u>	20	120	45	18	82	N°3 x 8	20	44	27,3	18,6	20
<u>FXD50</u>	50	120	45	18	82	N°3 x 8	20	44	27,3	18,6	20
<u>FXD100</u>	100	120	45	18	82	N°3 x 8	20	44	27,3	18,6	20
<u>FXD200</u>	200	120	45	18	82	N°3 x 8	20	44	27,3	18,6	20
<u>FXD300</u>	300	120	45	18	82	N°3 x 8	20	44	27,3	18,6	20
<u>FXD500</u>	500	120	45	18	82	N°3 x 8	20	44	27,3	18,6	20

Parts

Part # **Description**

Available Versions

FXD10	Bending beam load cell, Max=10kg. Stainless steel, IP68 protection degree, 350 Ohm output resistance.
FXD20	Bending beam load cell, Max=20kg. Stainless steel, IP68 protection degree, 350 Ohm output resistance.
FXD50	Bending beam load cell, Max=50kg. Stainless steel, IP68 protection degree, 350 Ohm output resistance.
FXD100	Bending beam approved load cell, C3, Max=100kg. Stainless steel, IP68 protection degree, 350 Ohm output resistance.
FXD200	Bending beam approved load cell, C3, Max=200kg. Stainless steel, IP68 protection degree, 350 Ohm output resistance.
FXD300	Bending beam approved load cell, C3, Max=300kg. Stainless steel, IP68 protection degree, 350 Ohm output resistance.
FXD500	Bending beam approved load cell, C3, Max=500kg. Stainless steel, IP68 protection degree, 350 Ohm output resistance.

Options

Part #	Description
Joints	
AVM8	Stainless steel/rubber M8 elastic joint for FXC/FXD/FXE cells up to 500kg.
SBJ8	Ball joint for load cells.
Base Plates	
BPFX10	10 mm base plate for FXC, FXD, FXE load cells. Size: 42 x 30 x 10 mm
Mounting kits	
KFX	Kit in stainless steel for assembling a FXC/FXD/FXE bending beam load cell up to 500 kg. (Load cell not included)
KFXDN-1	Stainless steel kit for assembling 1 FXC/FXD/FXE cell up to 500kg. (Load cell not included)
Connection Cables	
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).
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).
LCCBM	Shielded 4x0,34 mm ² 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.
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).
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).
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.

Part #	Description
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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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