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Beam Load Cell BM (BM-Ex) 50

The BM 50 and BM-Ex 50 load cell bridges the gap between the BL (BL-Ex) and BM (BM-Ex) 70. Based on Eilersen's proven digital capacitive technology, the load cell delivers reliable and accurate weighing in demanding process and industrial applications. The stainless steel, hermetically sealed construction ensures high durability, easy cleaning and protection against harsh environments, making the BM 50 especially ideal for large mobile units and single-use systems where reliable performance, flexibility and hygienic design are essential. The BM/BM-Ex 50 load cell is suitable for process weighing, industrial weighing, filling and general weighing applications and is certified for installation in ATEX (Ex) and IECEx environments in Zone 1, 2, 21 and 22.

Type:	BM (Bm-Ex) 50
Capacity (Emax):	1000, 1500 kg (2000 kg pending)
Accuracy:	Industrial 0.10%, Precision 0.05%, High Precision 0.025%
Overload Tolerance:	300% at 1000 kg capacity

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Special Features

Developed and manufactured in Denmark

Hygienic (aseptic) design without gaps or edges for easy cleaning to minimize the risk of bacteria growth

High tolerance of up to 300% overload

Robust capacitive technology

Hermetically sealed to IP68

Electropolished stainless steel 1.4542 (17-4 PH)

ATEX and IECEx certified (Zone 1, 2, 21, 22)

Withstands welding voltages and ESD

High accuracy, high resolution

Capacity (Emax): 1000, 1500 kg (2000 kg pending)

Accuracy: Industrial 0.10%, Precision 0.05%, High Precision 0.025%

Load cell cable length up to 100 meters

Load cell calibration independent of cable length

Replaceable load cell cable

Easy mechanical and electrical installation

OIML and NTEP approvals

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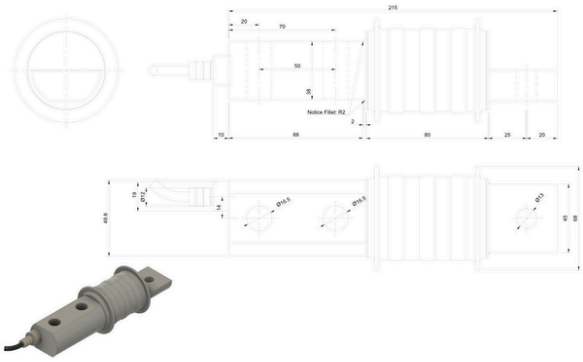
Dimensions (mm)



Specifications

Parameter	Unit	0.10%	0.05%	0.025%
Rated capacity (E_{max})	kg		1000, 1500, (2000 pending)	
Safe overload limit	% of E_{max}		Up to 300	
Safe sideload limit	% of E_{max}		Up to 300	
Combined Accuracy	% of E_{max}	0.100	0.050	0.025
Repeatability	% of E_{max}	0.020	0.016	0.012
Hysteresis	% of E_{max}	0.06	0.03	0.02
Creep 30 min.	% of E_{max}	0.035	0.030	0.030
Temperature effect on zero	% of E_{max}	0.050	0.035	0.035
Temperature effect on sensitivity	% /10°C	0.050	0.035	0.035
Compensated temperature range	°C		-10 to 50	
Operating temperature range	°C		-40 to +70 (100*)	
Deflection at E_{max}	mm		0.20	
Measuring rate	Hz		500	
Supply	Vdc		24Vdc ±5%	
Internal resolution	Bit		24	
Material			Stainless Steel 17-4 PH and AISI 316	
Protection			IP68	
Cable			6 meter standard coaxial RG-58 (Ø6mm) with BNC connector	
Maximum cable length	m		100	
Weight	kg		2.5	
Output options			EtherNet/IP, PROFINET, EtherCAT, Profibus DP, Modbus TCP/IP, DeviceNet, RS485, 4-20mA, 0-10Vdc	

* Only for non-ATEX and with Teflon load cell cable

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Applications

Belt scales

big-bag equipment

Bioreactor weighing

Conveyor scales

Dynamic weighing

Filling and dosing

Flow measurement

Force measurement

High-shear mixers

Hopper scales

Mobile single-use systems

mobile weighing

On-board weighing

Platform scales

Process weighing

Tank weighing

Vibration feeders

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Options

ATEX and IECEx (Zone 1, 2, 21, 22) version type BM-Ex

ATEX II 2G Ex ia IIC T6 Gb / ATEX II 2D Ex IIIC T85°C Db

Mounting kits available

Load cell cable length 10, 20, 50 or 100 meters

Mud resistant and Halogen free cables for offshore installation

Special PE load cell cable available for freezing low temperature (can be used down to -50 degrees Celsius)

Special Teflon load cell cable available for very high temperature (can be used up to 100 degrees Celsius)

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