Compression Load Cell DLC (DLC-Ex)

Capacitive load cells with integrated lift-off protection (Patent Pending) for installations e.g. in areas with seismic activity, outdoor silos and high shear mixers. These robust digital compression load cells in EHEDG compliant design are produced in electropolished stainless steel and hermetically sealed to IP68. The load cells type DLC-Ex can be used in ATEX (Ex) and IECEx applications (Zone 1, 2, 21 and 22).

Type:	DLC (Non-ATEX) DLC-Ex (ATEX)
Capacity (Emax):	50, 100, 150, 250, 500, 1000, 1500, 2000, 3000, 4000, 5000 kg
Accuracy:	Industrial 0.10%, Precision 0.05%, High Precision 0.025%
Overload Tolerance:	Up to 300% of rated capacity

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Do you need help?

Special Features

Compression load cell with integrated lift-off protection (Patented Load Cell Design)

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

Developed and manufactured in Denmark

Low profile and hygienic design

High tolerance of up to 300% overload

Robust capacitive technology

Hermetically sealed to IP68

Electropolished stainless steel 1.4542 (17-4 PH)

Laser welded with Duplex 1.4462 stainless steel

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

Easy mechanical and electrical installation

High accuracy, High resolution

Capacity (Emax): 50, 100, 150, 250, 500, 1000, 1500, 2000, 3000, 4000, 5000 kg

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

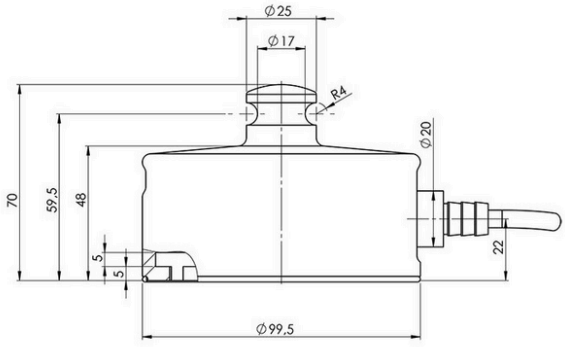
Load cell cable replaceable on-site

Withstands welding voltages and ESD

Can be used in both ATEX / IECEx and non-ATEX installations

Can be supplied with Mud resistant and Halogen free cables for offshore installation

Dimensions (mm)



Specifications

Parameter	Unit	0.10%	0.05%	0.025%
Rated capacity (E_{max})	kg	50, 100, 150, 250, 500, 1000, 1500, 2000, 3000, 4000, 5000		
Safe overload limit (compression)	% of E_{max}	300		
Safe overload limit (tension/lift-up)	% of E_{max}	300		
Safe sideload limit (tension or compression)	% of E_{max}	300		
Combined accuracy	% of E_{max}	0.100	0.050	0.025
Repeatability	% of E_{max}	0.030	0.025	0.020
Hysteresis	% of E_{max}	0.055	0.040	0.020
Creep 30 min.	% of E_{max}	0.060	0.040	0.040
Temperature effect on zero	% /10°C	0.060	0.055	0.055
Temperature effect on sensitivity	% /10°C	0.060	0.055	0.055
Compensated temperature range	°C	-10 to 50		
Operating temperature range	°C	-40 to +70 (100*)		
Deflection at E_{max}	mm	0.10		
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	4.0 **		
Output options		EtherNet/IP, PROFINET, EtherCAT, Profibus DP, Modbus TCP/IP, DeviceNet, RS485/422, 4-20mA, 0-10Vdc		

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

** including base plate

Applications

Outdoor silos

Tank weighing

Process weighing

High shear mixers

Big-bag equipment

Filling and dosing

Offshore

Installations in seismic area

Level measurement

Platform scales

Hopper scales

Heavy duty applications

Belt scales

Options

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

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

Standard base plate available

Mounting top

Customized top

Tank leg (different dimensions)

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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