Eilersen
Industrial Sensors

Digital Beam Load Cell – Type SDM80 0-7.000 kg

Special Features

- Stainless steel
- Robust capacitive technology
- Patented high reliability capacitive sensor
- OIML R60 accuracy classes up to C5
- High tolerance of up to 1.000% overload
- Hermetically sealed to IP68
- Laser welded
- High accuracy, High resolution
- Digital filters
- Cable length up to 100 meters
- Calibration independent of cable length
- Load cell cable replaceable
- Easy mechanical and electrical installation
- Withstands welding voltages and ESD

Technology

The robust digital load cell is based on a capacitive measurement principle where a non-contacting ceramic sensor is mounted inside the load cell body. As the load cell contains no moving parts and the sensor is not in contact with the load cell body, the load cell tolerates very high overloads, sideloads and torsion. Therefore, the mechanical installation of the load cell can be done without expensive and complicated mounting kits and overload protection devices.

The electrical installation of the digital load cell is pure plug-and-play as the signal from the non-contacting sensor is directly converted, compensated and calibrated by a microprocessor in the MCE2010 load cell module to a digital output in grams, kilograms, or Newton. Measurements and status codes are transmitted on a single wire coaxial cable (RG-58) which may be up to 100 meters long. The load cell cable can be replaced on-site if necessary.

The technology and mechanical design of the Eilersen load cells is covered worldwide by a number of patents.

CE OIML Ex

Capacities (in kg)

- 5.000
- 6.000
- 7.000

Options

- Mounting kits available
- Customized versions available
- Load cell cable length 10, 20, 50 or 100 meters

Applications

- Dynamic weighing
- Process weighing
- Tank and silo weighing
- Vibration feeders
- Hopper scales
- Conveyer scales
- Heavy duty platform scales
- Big-bag equipment
- On-board trucks
- Offshore/Marine applications
- Heavy duty applications

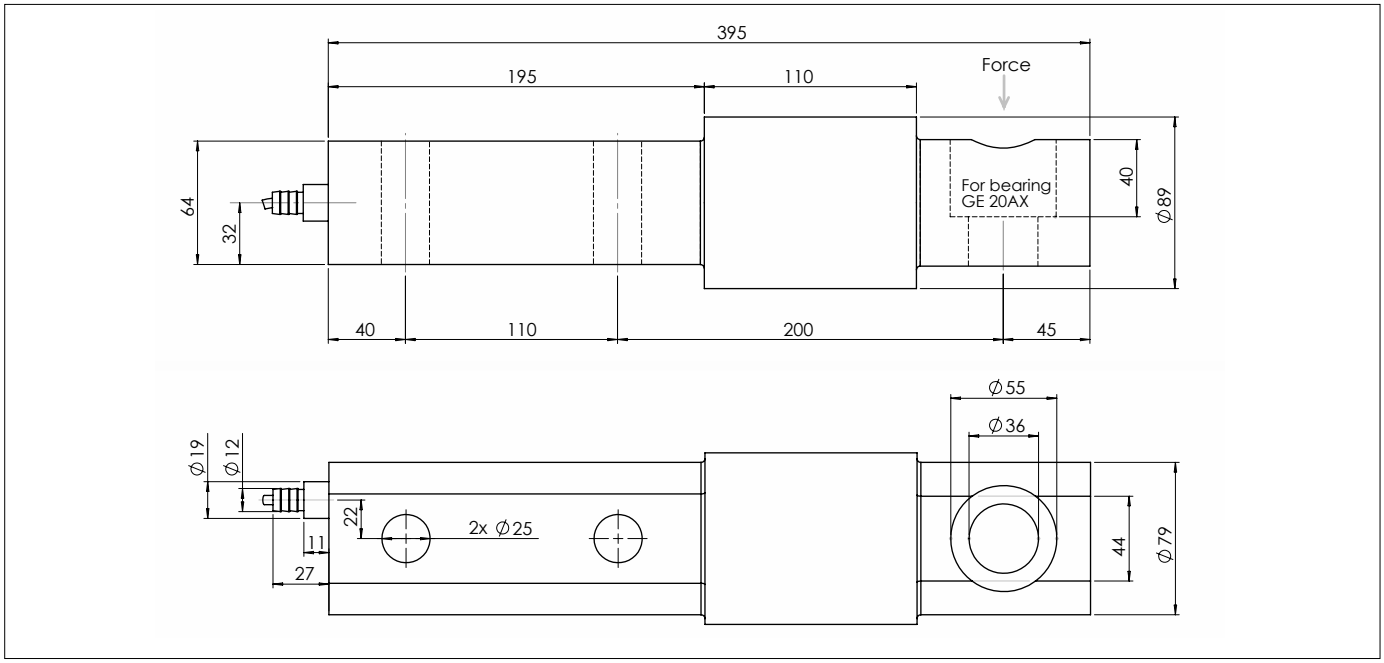
Specifications

Parameter	Unit	0,10% C1	0,05% C2	0,025% C3**
Rated capacity (Emax)	Kg	5.000, 6.000, 7.000		
Safe overload limit	% of Emax	300 to 500		
Safe sideload limit	% of Emax	500 to 1.000		
Minimum dead load	% of Emax	0		
Accuracy	% of Emax	0,100	0,050	0,025
Maximum number of load cell intervals	Nmax	1.000	2.000	3.000
Repeatability	% of Emax	0,025	0,020	0,010
Hysteresis	% of Emax	0,033	0,020	0,016
Creep 30 min.	% of Emax	0,040	0,025	0,016
Temperature effect on zero	% / 10 °C	0,045	0,030	0,016
Temperature effect on sensitivity	% / 10 °C	0,045	0,030	0,016
Compensated temperature range	°C	-10 to 50		
Operating temperature range	°C	-50 to 80 (100*)		
Deflection at Emax	mm	Max 0,10		
Measuring rate	Hz	Up to 1.000		
Supply	Vdc	24 +/- 10%		
Internal resolution	Bit	24		
Material		Stainless Steel 17-4 PH and AISI 316		
Protection		IP68		
Cable		6 meter standard coaxial RG-58 (ø 6 mm) with BNC connector		
Maximum cable length	meters	100		
Weight	grams	10.500		
Interface options		EtherNet/IP, RS485, Profibus DP, DeviceNet, Modbus ASCII/RTU, 4-20 mA, 0-10 V		

* with Teflon cable

** higher accuracies available on request

Dimensions (in mm)



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Order Information

Type	Capacity	Accuracy

Example

SDM80	7.000 kg	0,05 %

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