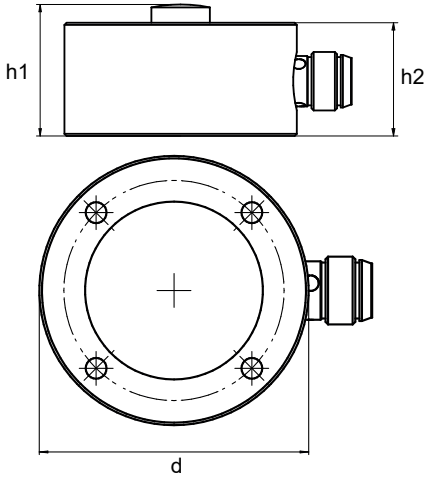
Baumer

Quickstart

DLMx0-BU

Force sensor

Dimensional drawing



	DLM20	DLM30	DLM40
h1 [mm]	11	18	21
h2 [mm]	9	15.5	18
d [mm]	19	31.8	38

Scope of delivery

- 1 x sensor
- 1 x quickstart

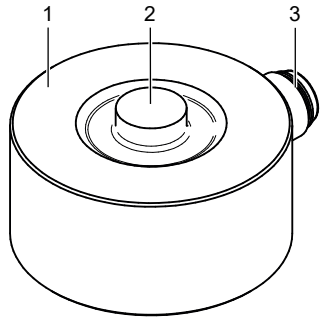
Applicable documents

- Download from www.baumer.com:
  - Operating manual
  - Data sheet
  - EU Declaration of Conformity
- Attached to product:
  - General information sheet (11042373)

Functionality

It is a passive sensor without amplifier electronics. It is screwed in place at a machine element and measures the applied force. Any change in force measured at the spring by a strain gauge is converted into an electric signal. Compressive force makes the sensor deliver a positive measurement signal. The output signal is proportional to force and delivered in mV/V.

Structure



1	Sensor housing	2	Print stamp
3	Connection 4-pin		

Preventive maintenance

The sensor is maintenance-free. No special preventive maintenance is required. Regular cleaning and regular checking of the plug connections are recommended.

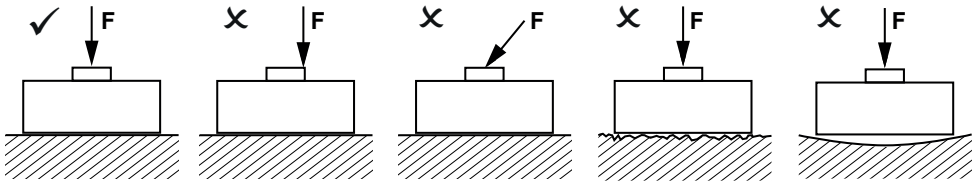
EN

Baumer Electric AG
Hummelstrasse 17
CH-8501 Frauenfeld, Switzerland
☎ +41 (0) 52 728 11 55
info@baumer.com

For further Baumer contacts go to:
www.baumer.com

8/24/2022, 81327761, V2
ID 9007199534279051

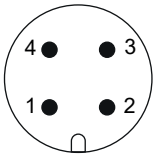
Installation instructions



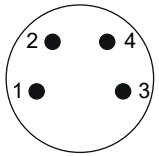
Force is to be applied centrically in axial direction.
The sensor's contact surface must be flat and sufficiently rigid.

Pin assignment

DLM20 (M5):

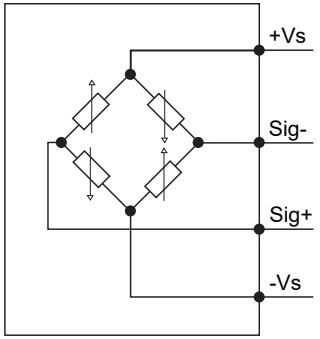


DLM30/40 (M8):



Pin	Assignment
1	+Vs
2	Sig+
3	-Vs
4	Sig-

Connection diagram



Note on electromagnetic compatibility: Shielded supply cable is recommended. Ground the cable shield on both sides over a large surface and ensure potential equalization. Disconnect the system from power prior to connecting the device.
+Vs = 2 ... 7 VDC (UL Class 2)[1]
[1] Alternatively, the device must be protected by an external R/C or approved fuse (rated max. 100 W/Vp or max. 5 A under 20 V).

Preparing installation

NOTICE

The sensor will supply imprecise measurement results when mounted on an uneven surface.

a) Mount the sensor on a prepared, flat surface.

Instruction:

a) Provide four through bores of the appropriate diameter at a 90 degree angle at the desired mounting surface.
Observe orientation of the cable outlet.
b) Select sensor-appropriate screws of the required length.
c) Clean the mounting surface from soiling such as oil and grease.

	DLM20	DLM30	DLM40
Pitch circle diameter [mm]	16.5	25	33
Through bore diameter [mm]	2.4	3.4	3.4
Required screws	M2	M3	M3

Mounting the sensor

Instruction:

a) Mount the sensor onto a flat and plain surface using four screws.
b) Screw the sensor in place applying the following tightening torque:
DLM20-BU: 0.3 Nm
DLM30-BU: 1.3 Nm
DLM40-BU: 1.3 Nm

Electrical sensor connection

Instruction:

- Perform electrical sensor connection according to the pin assignment /connection diagram.

Sensor deployment

- After the installation: If possible, 10 times expose sensor to full load to minimize effects of settlement.
- Only operate the sensor within the defined nominal force range (see data sheet).