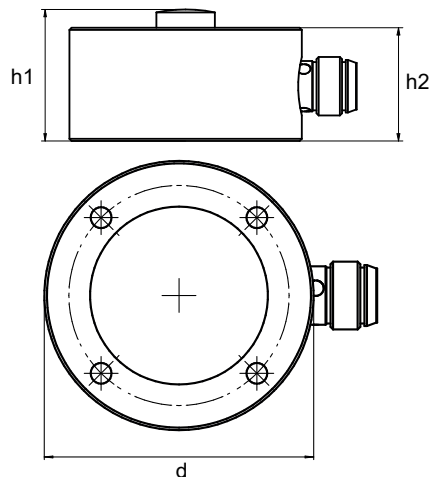


Quickstart



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

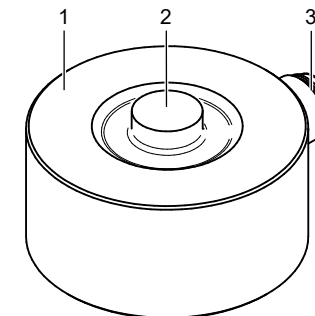
Applicable documents

- 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.

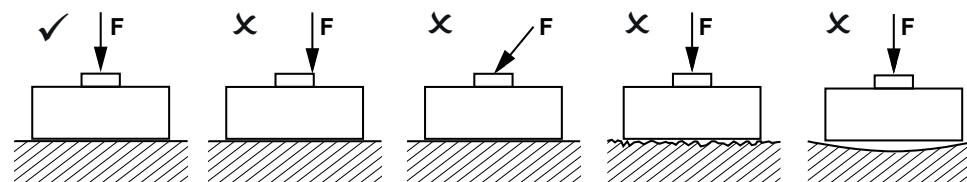
EN

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Installation instructions

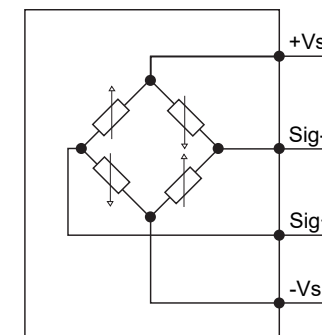


Force is to be applied centrally in axial direction.
The sensor's contact surface must be flat and sufficiently rigid.

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).