

Pin Assignment

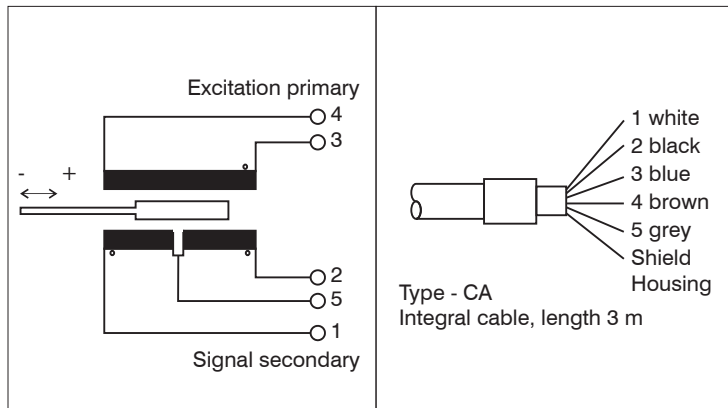


Fig. 1 Pin assignment for electrical connections

The integrated cable presents a strand cross-section of $5 \times 0.08 \text{ mm}^2$ (AWG28).

➡ Use suitable ferrules to connect the sensor to the controller.

You can download a PDF of the detailed operating instructions from our website:

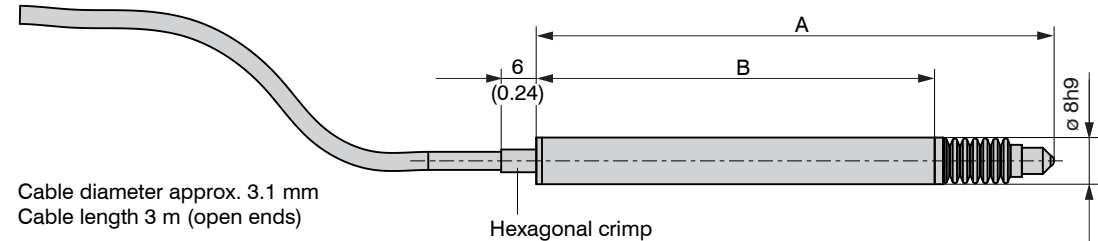
Gauge: www.micro-epsilon.de/download/manuals/man--induSENSOR-LVDT-Messtaster--de-en.pdf

Controller: www.micro-epsilon.de/download/manuals/man--induSENSOR-MS7xxx--en.pdf

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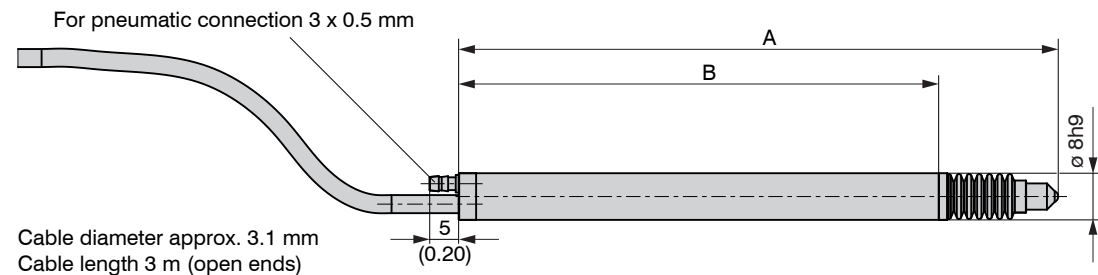
X9771286-A032050HDR

Dimensional Drawings



Cable diameter approx. 3.1 mm
Cable length 3 m (open ends)

Fig. 2 Housing dimensions for gauge DTA-xG8-x-CA, dimensions in mm (inches), not to scale



Cable diameter approx. 3.1 mm
Cable length 3 m (open ends)

Fig. 3 Housing dimensions for gauge DTA-xG8-x-CA-V, dimensions in mm (inches), not to scale

| Model | A (zero position) | B | Model | A (zero position) | B |
|---------------|---------------------|-----------------------|-----------------|-----------------------|-----------------------|
| DTA-1G8-3-CA | 83 mm (3.3 inches) | 64.3 mm (2.5 inches) | DTA-1G8-3-CA-V | 95 mm (3.7 inches) | 76.3 mm (3.0 inches) |
| DTA-3G8-3-CA | 89 mm (3.5 inches) | 68.3 mm (2.7 inches) | DTA-3G8-3-CA-V | 103 mm (4.1 inches) | 82.3 mm (3.2 inches) |
| DTA-5G8-3-CA | 118 mm (4.6 inches) | 89.5 mm (3.5 inches) | DTA-5G8-3-CA-V | 134 mm (5.3 inches) | 105.3 mm (4.1 inches) |
| DTA-10G8-3-CA | 155 mm (6.1 inches) | 121.7 mm (4.8 inches) | DTA-10G8-3-CA-V | 170.8 mm (6.7 inches) | 137.3 mm (5.4 inches) |

Fig. 4 Table with housing dimensions of gauges DTA-xG8-x-CA and DTA-xG8-x-CA-V



Assembly Instructions
induSENSOR,
DTA series (LVDT)
Gauges



Warnings

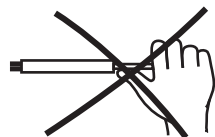
Avoid shocks and impacts to the gauge.

> Damage to or destruction of the gauge.

Excitation voltage and excitation frequency must comply with the requirements for the gauge.

> Damage to or destruction of the gauge

• Please use a suitable MSC7401, MSC7802, MSC7602 controller with corresponding excitation voltage and excitation frequency to operate the gauge.



Protect the sensor cable against damage.

> Destruction of the gauge

> Failure of the measuring device

Do not clamp the gauge with a grub screw at one point.

> Damage to the gauge

Do not carry the gauge on the probe tip.

> Damage to the probe tip

Correctly lay the compressed air hose for gauges with pneumatic push (avoid kinks in the hose and do not pull over sharp edges, comply with the permissible bending radii).

Check that the pneumatic system is leak-tight.

> Loss of functionality

Supply the gauge with pneumatic push with clean compressed air (free of oil, dust and water). Install the maintenance units with water and oil traps, and with fine filters (5 μ).

> Damage to the gauge

> Loss of functionality

Notes on CE Marking

Inductive gauges based on the LVDT principle are devices (components) which cannot be operated autonomously. Neither an EU Declaration of Conformity nor a CE marking are thus required according to the EMC law.

Sources: EMVG (Electromagnetic Compatibility Act), Guidelines on the application of directive 2014/30/EU. The gauges were EMC tested together with the MSC7401, MSC7802 and MSC7602 controllers.

Proper Environment

- Protection class:
 - with bellows: IP65
 - without bellows: IP54
- Temperature range:
 - Operation:
 - with bellows: 0 ... +80 °C (+32 ... +176 °F)
 - without bellows: -20 ... +80 °C (-4 ... +176 °F)
 - Storage: -40 ... +80 °C (-40 ... +176 °F)
- Humidity: 5 - 95 % (non-condensing)
- Ambient pressure: Atmospheric pressure

Installation and Assembly

Precautions

Avoid lateral forces on the probe tip of the gauge. Protect the cable sheath of the sensor cable from sharp, pointed and heavy objects.

Do not bend more tightly than the bending radius of the sensor cable. Avoid folding the cables.

Sensor Mounting

➡ Use a circumferential clamping on the sensor housing (gauge) to mount the sensor.

It ensures the highest level of reliability because the gauges cylindrical cover is clamped over a relatively large area.

The integrated spring pushes the probe tip of the gauge onto the measurement object.

➡ Connect the gauge (depending on the respective model) to the controller using plug connectors or wire terminals (see pin assignment).

➡ Readjust the controller when replacing the gauge!

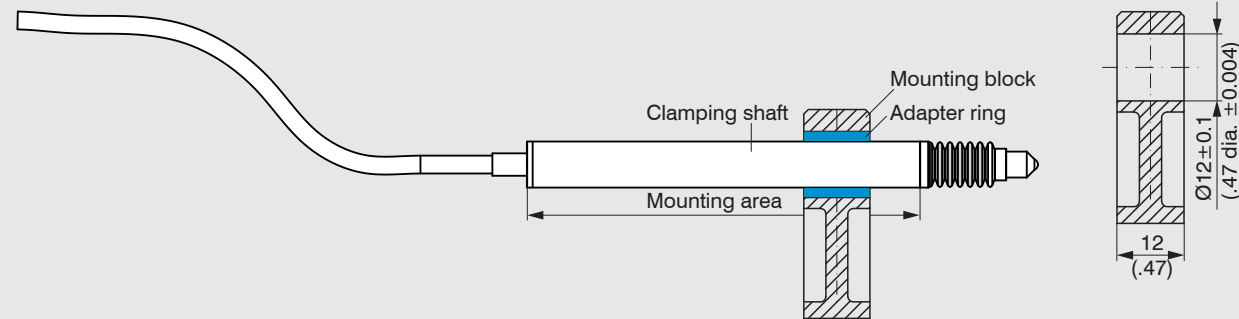


Fig. 5 Mounting the gauge with circumferential clamping using the optional mounting block MBS12/8 ¹

1) Mounting with circumferential clamping using the optional mounting block MBS12/8 and an optional adapter ring MBS12/8 possible, also see chapter Optional Accessories in the Operating Instructions.

Inductive Gauge with Pneumatic Push

For gauges with pneumatic drive, the probe tip is retracted into the sensor housing by spring force (rest position). By applying low pressure of compressed air (8 ... 15*10⁴ Pa or 0.8 ... 1.5 bar), the probe tips are extended and pressed against the test object in the measuring position. Therefore, compressed air is only required at the moment of measurement. If air supply is interrupted, the gauges automatically release the test object.

The following measures and operating notes must be observed when using gauges with pneumatic push:

➡ Operate all gauges with pneumatic push with an air pressure of 0.8 ... 1.5 bar.

With lower temperatures it may be necessary to increase the air pressure in order to move the probe tip faster.

➡ Equip every compressed air hose which leads to a gauge with a non-return throttle valve

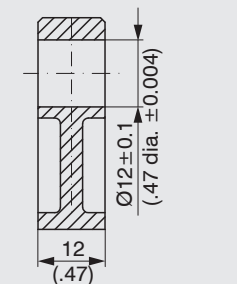


Fig. 6 Optional mounting block MBS12/8

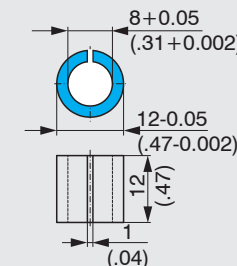


Fig. 7 Optional adapter ring MBS12/8 for mounting block MBS12/8

This enables to individually control moving each probe tip and to compensate for possible tolerances on the clamp bracket or the gauge.

➡ Keep the length of the compressed air hose between the gauge and the air valve as short as possible.

This enables to increase and to reduce pressure quickly.

Dismantling the Bellows

➡ Unscrew the probe tip.

➡ Remove the front support ring.

➡ Remove the rear support ring.

➡ Remove the bellows.

➡ Attach the probe tip again.