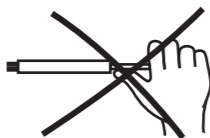


**Assembly Instructions**  
**induSENSOR, LVDT series**

**Warnings**

- Avoid shock and vibration to the sensor.
- > Damage to or destruction of the sensor and/or the plunger
- The oscillator (supply) voltage may not exceed the specified limits (amplitude and frequency).
- > Damage to or destruction of the sensor
- Protect the sensor cable against damage.
- > Destruction of the sensor
- > Failure of the measuring device
- Do not transport the sensor on the plunger.
- > Risk of damage to the plunger.



**Notes on CE Identification**

Inductive displacement sensors are not automatically operable devices (components). An EC declaration of conformity or CE identification is therefore not required by EMC law<sup>1</sup>. An EMC check of the sensors was done together with the series MSC 710 signal conditioning electronics.

**Proper Environment**

- Protection class:
  - Displacement sensor type TA, SA, LA, SR: IP 40 / IP 67<sup>1</sup>
  - Displacement sensor type CA, CR: IP 67
- Operating temperature: -20 °C up to +80 °C (-4 up to +176 °F)
- Storage temperature: -40 °C up to +80 °C (-40 up to +176 °F)
- Humidity: 5 - 95 % (no condensation)
- Ambient pressure: Atmospheric pressure

1) Depends on used mating connector

**Installation and Assembly**

**Precautions**

Do not drop the free moving plunger of an inductive displacement sensor. Protect the cable sheath of the sensor cable from sharp edges and pointed or heavy objects. The minimum bending radius must not be exceeded. Avoid kinks.

- Check the plug connections for firm.

**Sensor Mounting**

Use peripheral clamping on the sensor housing to mount the sensor. This offers the highest reliability because the sensor is clamped over a board area by its cylindrical housing.

- Mount the sensor using radial point clamping with set screws at installation locations where there are no forces and vibrations.

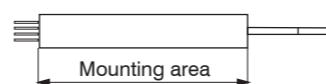
Plastic set screws must be used so that the sensor housing is not damaged or deformed.

- Screw the plunger of displacement sensors to the measurement object using the thread.

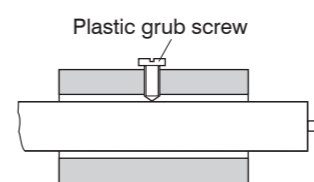
The screw joint must either be secured with a screw locking compound (e.g. Loctite ...) or counter-screwed with the lock-nut supplied. When mounting, it must be ensured that the plunger remains freely movable in the sensor and that tilting is avoided.

- Connect the sensor to the amplifier electronics by connectors or by wire terminals depending on the version used (pin assignment).

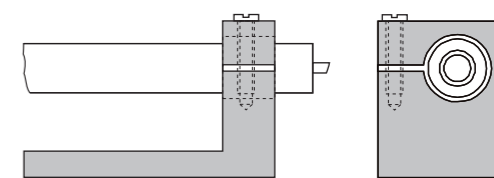
Ready-made connecting leads are available for sensors with plug connector.



Mounting of displacement sensors

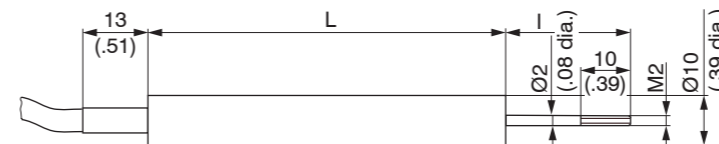


Mounting of displacement sensors with radial point clamping



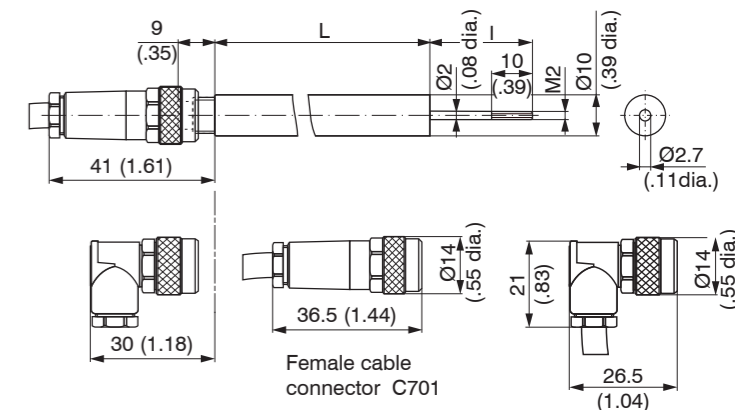
Mounting of displacement sensor with peripheral clamping

**Dimensional Drawings**



Sensor type - CA with integral cable

Dimensions in mm (inches), not to scale

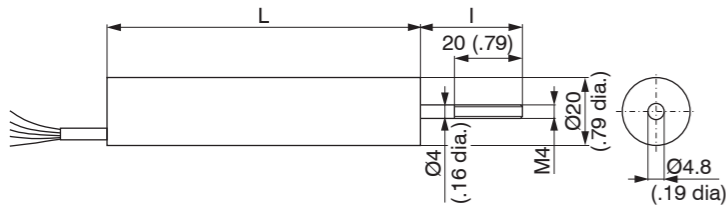


Sensor type - SA with axial plug connection

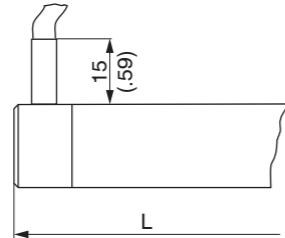
Basic model		DTA-1D-□-		DTA-3D-□-		DTA-5D-□-		DTA-10D-□-		
Connection		CA	SA	CA	SA	CA	SA	LA	CA	SA
Length of housing L	mm (inches)	40 (1.57)	40 (1.57)	57 (2.24)	57 (2.24)	73 (2.87)	73 (2.87)	78 (3.07)	87 (3.43)	87 (3.43)
Length of plunger l <sup>1</sup> in zero position	mm (inches)	19 (0.75)	19 (0.75)	29 (1.14)	29 (1.14)	30 (1.18)	30 (1.18)	35 (1.38)	35 (1.38)	35 (1.38)
Housing diameter	mm (inches)	10 (0.39)								

Housing dimensions for displacement sensors up to ±10 mm measuring range

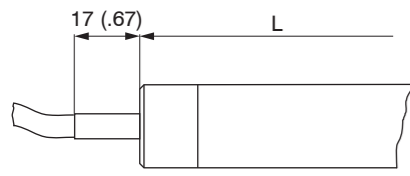
1) Plunger in zero position / (±10 % of measuring range ±1 mm)



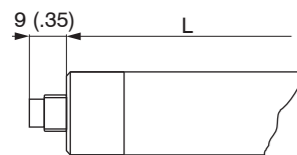
Sensor type - LA with axial stranded wire



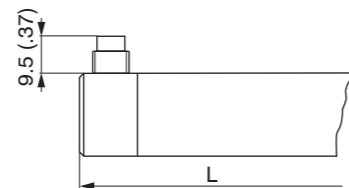
Sensor type - CR with integral (radial) cable



Sensor type - CA with integral cable



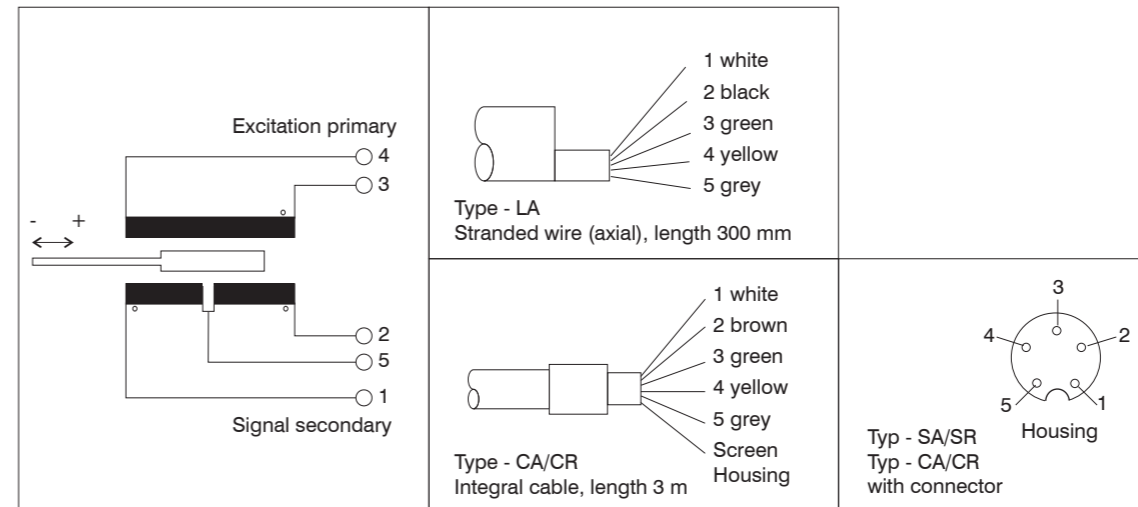
Sensor type - SA with axial plug connection



Sensor type - SR with radial plug connection

Dimensions in mm (inches), not to scale

### Pin Assignment



Basic model		DTA-15D- □ -					DTA-25D- □ -				
Connection		LA	CA	CR	SA	SR	LA	CA	CR	SA	SR
Length of housing L	mm (inches)	92.5 (3.64)	106.5 (4.19)	106.5 (4.19)	106.5 (4.19)	106.5 (4.19)	129.5 (5.10)	143.5 (5.65)	143.5 (5.65)	143.5 (5.65)	143.5 (5.65)
Length of plunger l <sup>1</sup> in zero position	mm (inches)	51 (2.01)	51 (2.01)	51 (2.01)	51 (2.01)	51 (2.01)	62 (2.44)	62 (2.44)	62 (2.44)	62 (2.44)	62 (2.44)
Housing diameter	mm (inches)	20 (0.79)									

1) Plunger in zero position  
(±10 % of measuring range ±1 mm)

Housing dimensions for sensors with ±15 mm measuring range

Read the detailed instruction manual before using the sensor. The manual is available online on:  
[www.micro-epsilon.com/download/manuals/man--induSENSOR-Serie-LVDT--de-en.pdf](http://www.micro-epsilon.com/download/manuals/man--induSENSOR-Serie-LVDT--de-en.pdf)

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