

Liability for Material Defects

All components of the device have been checked and tested for functionality at the factory. However, if defects occur despite our careful quality control, MICRO-EPSILON or your dealer must be notified immediately.

The liability for material defects is 12 months from delivery. Within this period, defective parts, except for wearing parts, will be repaired or replaced free of charge, if the device is returned to MICRO-EPSILON with shipping costs prepaid. Any damage that is caused by improper handling, the use of force or by repairs or modifications by third parties is not covered by the liability for material defects. Repairs are carried out exclusively by MICRO-EPSILON.

Further claims can not be made. Claims arising from the purchase contract remain unaffected. In particular, MICRO-EPSILON shall not be liable for any consequential, special, indirect or incidental damage. In the interest of further development, MICRO-EPSILON reserves the right to make design changes without notification. For translations into other languages, the German version shall prevail.

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

<http://www.micro-epsilon.de/download/manuals/man--MSC7401--en.pdf>

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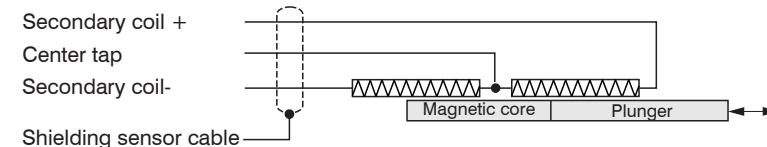


Pin Assignment

Connect the shields of the signal and supply cables, if available, to the housing /shield connection of the controller.

	Cable ¹ LDR-x-CA	Connector ¹ LDR-x-SA	Sensor cable ¹ C7210-x
Secondary coil +	white	1	brown
Secondary coil -	brown	3	blue
Center tap	green	4	black
Shielding	shield	housing	----

1) The colors and pins listed refer to the sensors from MICRO-EPSILON GmbH.



Sensor pin assignment

The maximum cable length of a user made cable is 10 m (32 ft) to keep the EMC regulations.



MICRO-EPSILON

Assembly Instructions
induSENSOR
LDR series



Warnings

Avoid shocks and impacts to the sensor.

> Damage to or destruction of the controller and/or the plunger

Oscillator (supply) voltage must comply with the indicated excitation voltage and excitation frequency.

> Damage to or destruction of the sensor

• Please use a suitable controller with corresponding excitation voltage and excitation frequency to operate the sensor.

Protect the sensor cable against damage.

> Destruction of the sensor

> Failure of the measuring device

Do not carry the sensors on the plunger.

> Damage to the plunger



Notes on CE Marking

Inductive displacement sensors based on the LDR principle are devices (components) which cannot be operated autonomously. Neither an EU Declaration of Conformity nor an 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 sensors were EMC tested together with the MSC7401 controllers.

Proper Environment

- Protection class: IP 67
- Temperature range:
 - Operation
 - Displacement sensor SA: -15 °C ... +80 °C (+5 °F ... +176 °F)
 - Displacement sensor CA: -40 °C ... +160 °C (-40 °F ... +320 °F)
 - Storage:
 - Displacement sensor SA: -40 °C ... +80 °C (-40 °F ... +176 °F)
 - Displacement sensor CA: -40 °C ... +160 °C (-40 °F ... +320 °F)
- Humidity: 5 - 95 % (non-condensing)
- Ambient pressure: Atmospheric pressure

Installation and Assembly

Precautions

Do not drop the freely moving plunger of the inductive displacement sensors. Protect the cable sheath of the sensor cable from sharp, pointed and heave objects. Never bend the sensor cable more tightly than the minimum bending radius. Avoid folding the cables.

➡ Check the plug-in connections for firm seating.

Sensor Mounting

➡ Use a peripheral clamping on the sensor housing to mount the sensor.

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

➡ At installation locations where there are no forces and vibrations, mount the sensor using radial point clamping with set screws.

The grub screw must be made of plastic so that it cannot damage or deform the sensor housing.

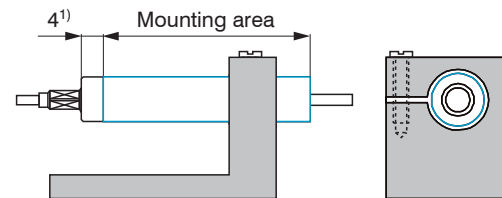
➡ Screw the plunger of the displacement sensors to the measurement object using the thread.

The screw joint must either be secured with a screw locking compound (e.g. Loctite) or counter-screwed with the lock-nut supplied.

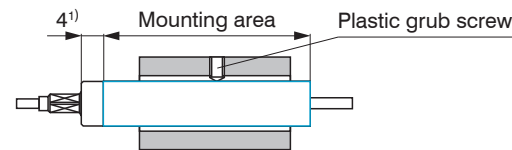
• When mounting, ensure that the plunger remains freely movable in the sensor and that tilting is avoided.

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

Ready-made connecting cables are available for sensors with plug connectors.



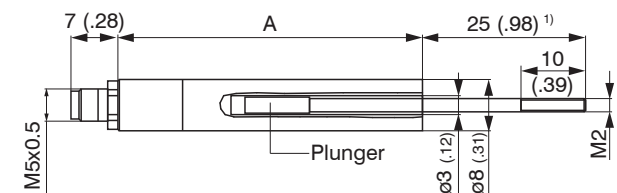
Clamping around circumference



Spot clamping

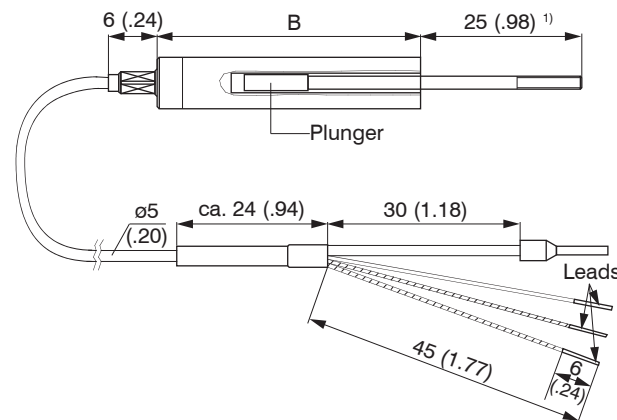
1) 10 mm for LDR-x-SA

Dimensional Drawings



Displacement sensor type SA with integrated cable

	Length A	Bending radius Sensor cable C7210-x for LDR-x-SA: 8 mm (fixed installation) 15 mm (in motion)	Bending radius
LDR-10-SA	47		
LDR-25-SA	73		
LDR-50-SA	127		



Displacement sensor type CA with axial plug-in connection

	Length A	Bending radius Sensor cable LDR-x-CA: 10 mm (fixed installation) 30 mm (in motion)	Dimensions in mm, not to scale 1) Plunger position at the start of the measuring range
LDR-10-CA	41		
LDR-25-CA	67		
LDR-50-CA	121		