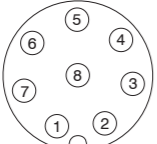


## Pin assignment

Pin	Wire color PC4701-10	Comments
1	White	Ground
2	Brown	12 ... 32 VDC
3	Green	Displacement (0.5 ... +9.5 V) at 100 ... 600 $\mu\text{m}$
4	Yellow	Temperature (0.5 ... +9.5 V) at 0 ... +90 °C
5	Gray	NC
6, 7	Pink, blue	assigned internally
8	Red	NC
Shield	-	Housing

8-pin controller plug, view on pin side	
Connection cable PC4701-10 optionally available.	

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X9770318-A012034TSw

## Sensor cable

The sensor cable must not be shortened. Loss of functionality. Removing the connector is only permitted behind the plug-sided crimp when using the solder connections.

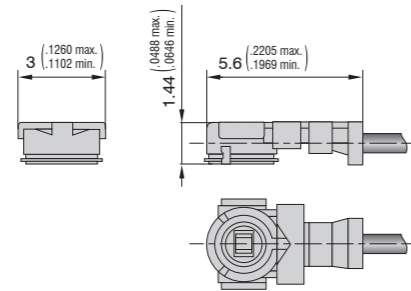


Abb. 1 Dimensional drawing of sensor cable, dimensions in mm (inches, rounded off)

Sensor cable lengths between 40 ... 150 cm are possible in 10 cm increments.

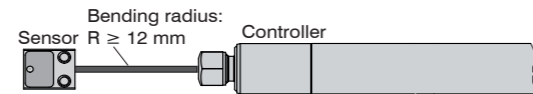
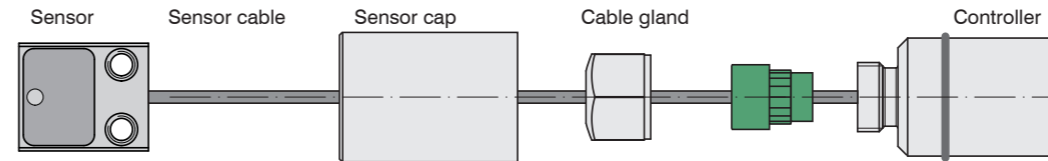


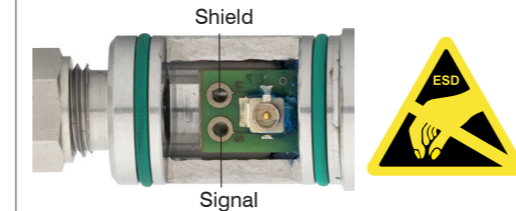
Abb. 2 Minimum bending radii for the sensor cable

## Connecting the sensor to the controller

Guide the sensor cable through the sensor cap and the cable gland. Please observe the notes regarding electrostatic discharge, see Operating Instructions Chapter A4.



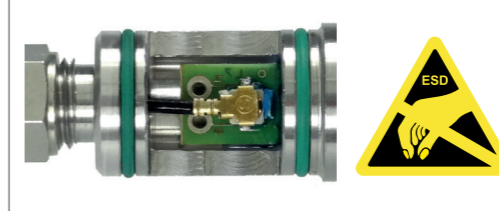
### Solder connection



Solder the sensor cable to the connection board.

➔ Close the cable gland.

### Plug-in connection



Connect the sensor cable to the socket. Plug guarantees 20 mating cycles.

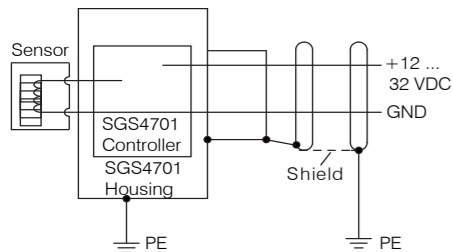
➔ Slide the sensor cap onto the controller housing until it clicks into place.



Installation instructions  
**eddyNCDT**  
**SGS 4701**



## Grounding



## Start of measuring range

Each sensor must have a minimum offset distance from the measuring object. By default, the SMR is 20% FSO (= 100  $\mu$ m for 500  $\mu$ m measuring range).

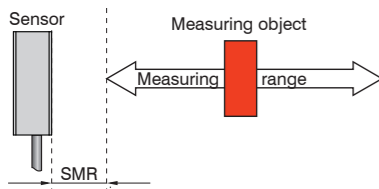
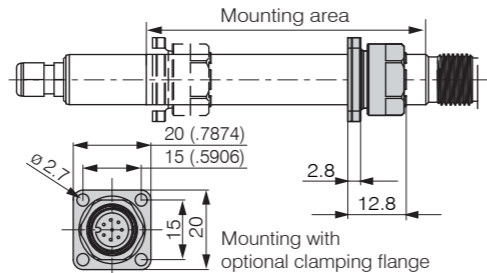


Abb. 6 Start of measuring range (SMR), the shortest distance between the front surface of the sensor and the measuring object

## Mounting



## Measurement surface

The minimum diameter of the measuring surface for the eddy current displacement sensor must be 6 mm or larger. Sensors with a minimum measurement spot diameter of 3.5 mm are available as an option. If the minimum measurement area is smaller than necessary, a reproducible measurement is not possible.

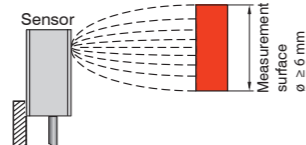
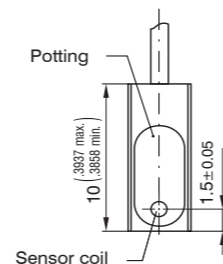


Abb. 4 Min. size of the measurement area for eddy current displacement sensors

## Sensors

Sensor size  
10 x 4 x 4 mm



Sensor coil

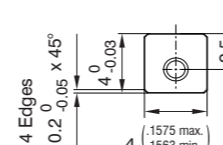
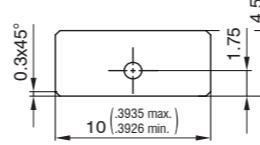
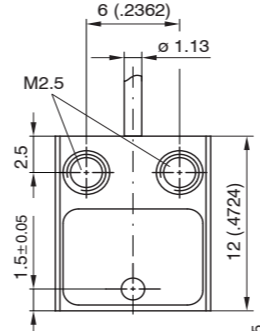


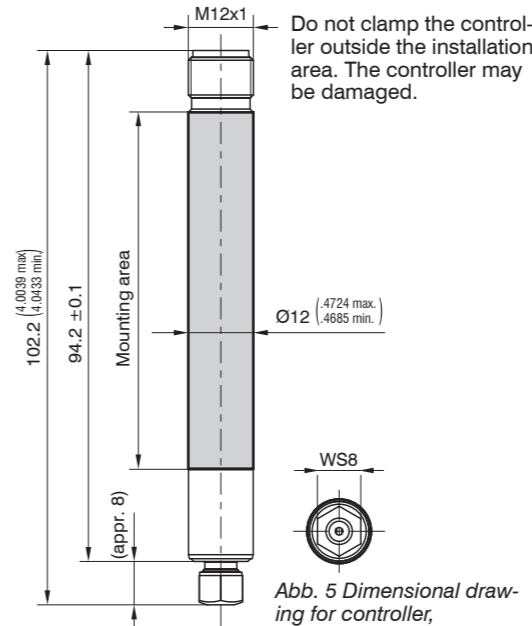
Abb. 3 Dimensional drawing of sensor, dimensions in mm (inches, rounded off)

Sensor size  
12 x 10 x 4,5 mm



## Controller

The controller is attached to the housing with a circumferential clamp or with an optional clamping flange.



Do not clamp the controller outside the installation area. The controller may be damaged.

Abb. 5 Dimensional drawing for controller, dimensions in mm

## Proper environment

Sensor system	SGS 4701	
Protection class	IP67 (when connected)	
Continuous operating temperature	Sensor	0 ... +90 °C
	Controller	+10 ... +70 °C
Temperature compensation range	Sensor	+10 ... +80 °C
	Controller	+10 ... +70 °C
Temperature range (storage)	0 ... +70 °C	
Ambient pressure	Atmospheric pressure	
Humidity	5 ... 95 % (non-condensing)	

You can find more information about the sensor in the operating instructions. You will find these online at: <https://www.micro-epsilon.de/fileadmin/download/manuals/man-eddyNCDT-SGS-4701--en.pdf>

