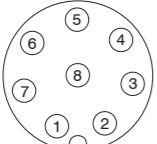


## Pin assignment

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.

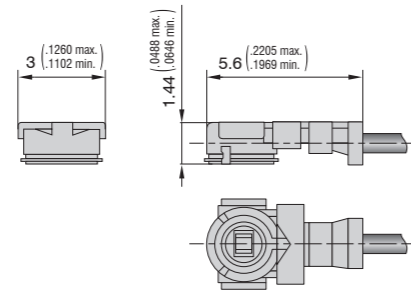


Abb. 1 Dimensional drawing of sensor cable, dimensions in mm (inches, rounded off)

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

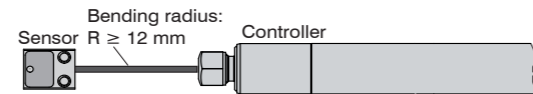
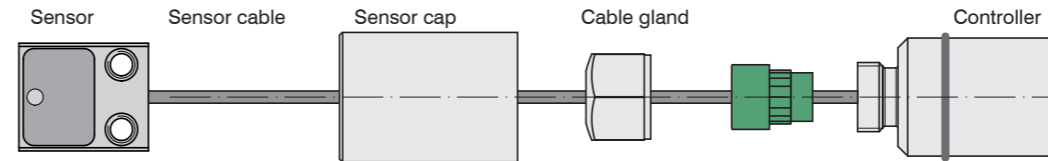
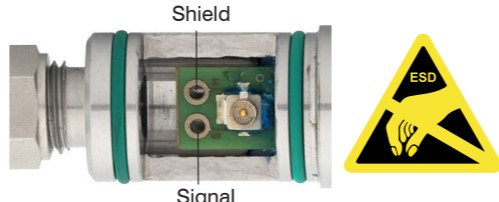
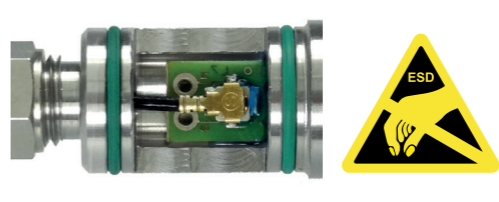


Abb. 2 Minimum bending radii for the sensor cable

## 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.



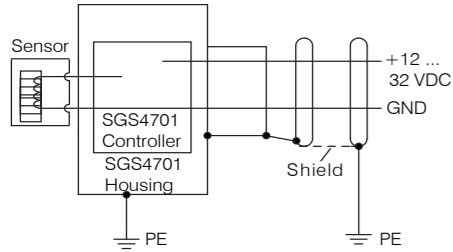
Solder connection	Plug-in connection
	
Solder the sensor cable to the connection board.	Connect the sensor cable to the socket. Plug guarantees 20 mating cycles.
Close the cable gland.	Slide the sensor cap onto the controller housing until it clicks into place.



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  $\mu\text{m}$  for 500  $\mu\text{m}$  measuring range).

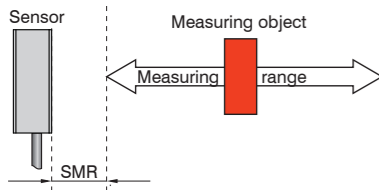
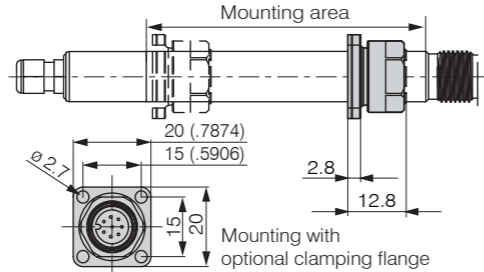


Abb. 6 Start of measuring range (SMR), the shortest distance between the front surface of the sensor and the measuring object

## 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.

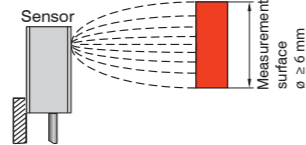


Abb. 4 Min. size of the measurement area for eddy current displacement sensors

## Sensors

Sensor size  
10 x 4 x 4 mm

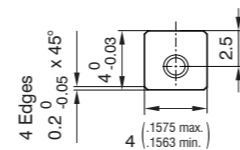
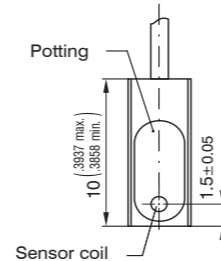
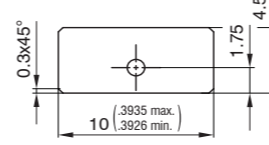
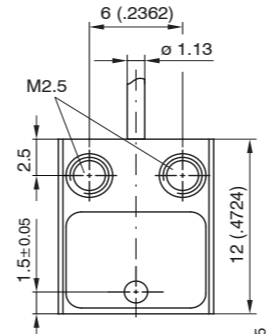


Abb. 3 Dimensional drawing of sensor, dimensions in mm (inches, rounded off)

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.

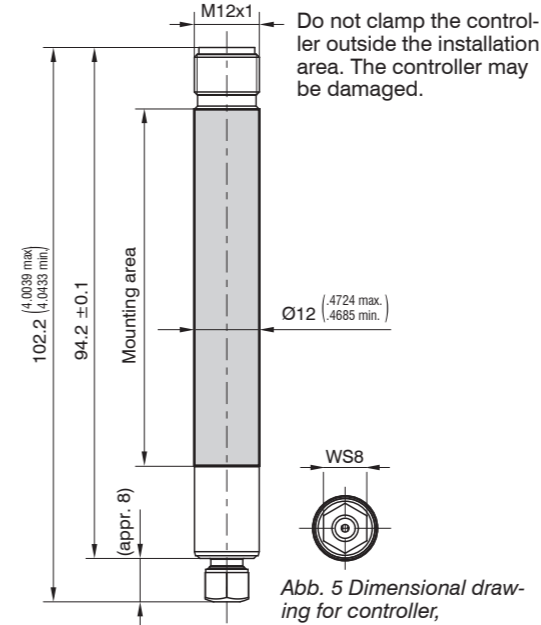


Abb. 5 Dimensional drawing for controller, dimensions in mm

## 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/download-file/man--eddyNCDT-SGS-4701--en.pdf>

