MICRO-EPSILON

More Precision

capaNCDT // Capacitive displacement sensors and systems

- *Compact and robust design*
- *Excellent temperature stability*
- *Nanometer repeatability*
- *Any conductive target*
- *24V (9 – 36V) power supply*
- *Ideal for OEM applications*
- *Works with all Micro Epsilon sensors*

System configuration

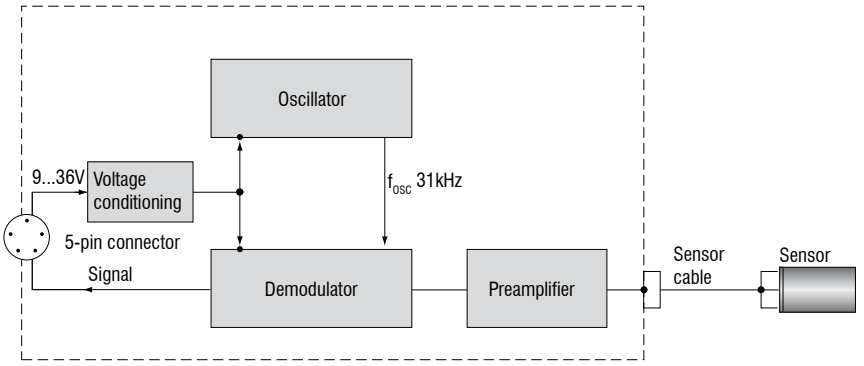
The capaNCDT 6110 is a compact single-channel system compatible with all Micro-Epsilon sensors. The analog measurement system is unique in its compact design combined with such high performance. The miniaturized controller and its easy operation offers a perfect solution for the integration in machines and systems. With the wide power supply between 9 – 36 V, the system can also be operated in passenger cars or trucks. The capaNCDT 6110 provides an excellent price/performance ratio and is well suited for any measuring tasks.

A measuring system consists of:

- Capacitive displacement sensor
- Sensor cable
- Controller
- Supply and signal output cable

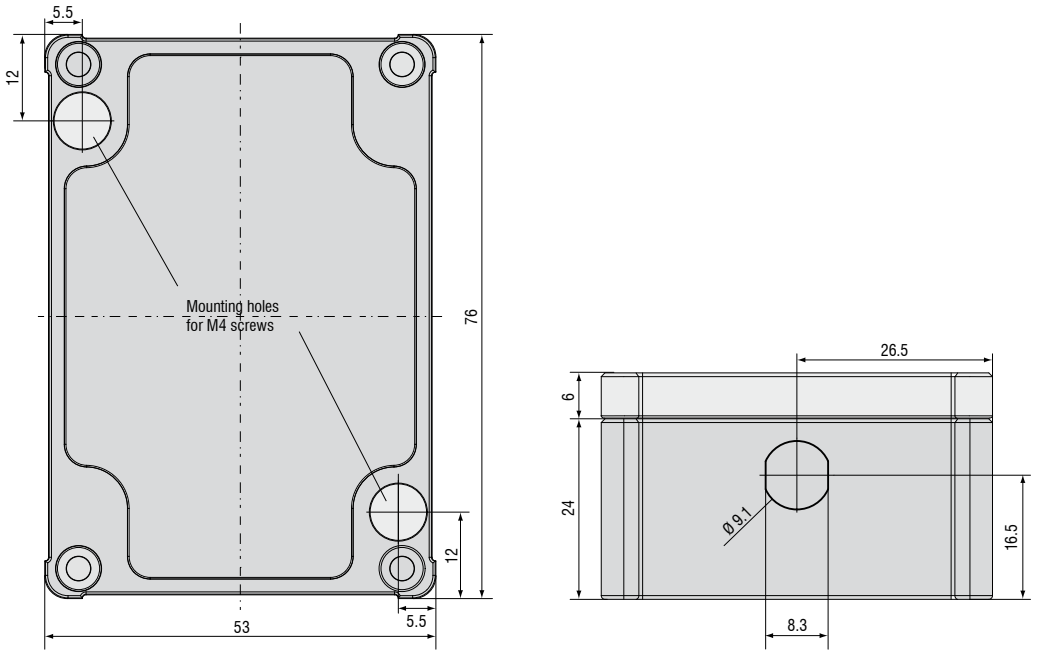
Accessory:

- Power supply
- Supply and signal output cable: SCA3/5



Controller type		DT6110	DT6110/ECL2	DT6112
Resolution static		0.01 % FSO	0.01 % FSO	0.01% FSO
Resolution dynamic		0.015 % FSO (1kHz)	0.015 % FSO (1kHz)	0.03% FSO (20kHz)
Bandwidth		1 kHz (-3dB)	1 kHz (-3dB)	20kHz (-3dB)
Linearity (typ.)		<0.05% FSO	<0.05% FSO	<0.1% FSO
Max. sensitivity deviation		<0.1% FSO	<0.1% FSO	<01% FSO
Long term stability		<0.05% FSO/month	<0.05% FSO/month	<0.05% FSO/month
Synchronous operation		no	no	no
Insulator measurement		no	no	no
Temperature stability		200ppm/°C	200ppm/°C	200ppm/°C
Temperature range (operation)	Sensor	-50 ... + 200 °C	-50 ... + 200 °C	-50 ... +200°C
	Controller	+10 … +60°C	+10 … +60°C	+10 … +60°C
Temperatur range (storage)		-10 … +75°C	-10 … +75°C	-10 … +75°C
Supply		24VDC/55mA (9 ... 36V)	24VDC/55mA (9 ... 36V)	24VDC/55mA (9 ... 36V)
Output		0 … 10V (short-circuit-proof), optional: <5V, 10 … 0V	0 … 10V (short-circuit-proof), optional: <5V, 10 … 0V	0 … 10V (short-circuit-proof), optional: <5V, 10 … 0V
Sensors		suitable for all sensors	suitable for all sensors	suitable for all sensors
Sensor cable		CC cable ≤ 1m CCm cable = 1.4m CCg cable = 2m	CC cable ≤ 2m CCm cable = 2.8m CCg cable = 4m	CC cable ≤ 1m CCm cable = 1.4m CCg cable = 2m

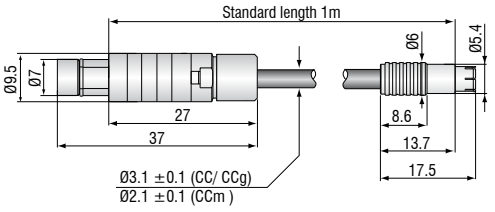
FSO = Full Scale Output



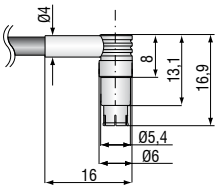
Sensor cable	**Cable CCx,x / CCx,x/90**	**Cable CCmx,x / CCmx,x/90**	**Cable CCgx,x / CCgx,x/90**
Description	Low-outgassing cable up to 4m length, for applications in clean rooms	Low-outgassing cable up to 4.2m length, for applications in clean rooms, UHV and EUV	Robust cable up to 8m length, for industrial applications
Temperature stability	-100°C to +200°C	-100°C to +200°C	-20°C to +80°C (permanent) -20°C to +100°C (10,000 h)
Outer diameter	3.1mm ±0.1mm	2.1mm ±0.1mm	3.1mm ±0.1mm
Bending radius	3x cable diameter during installation; 7x cable diameter for movement; 12x cable diameter recommend at continous movement		

	Cable with connector type C for sensors CS005 / CS02 / CS05 / CSE05 / CS08 / CSE1						Cable with connector type B for sensors CS1 / CS1HP / CS2 / CSE2 / CS3 / CS5 / CS10					
Version	2 x straight connector			1 x straight / 1 x 90° connector			2 x straight connector			1 x straight / 1 x 90° connector		
Type	CCx,xC	CCmx,xC	CCgx,xC	CCx,xC/90	CCmx,xC/90	CCgx,xC/90	CCx,xB	CCmx,xB	CCgx,xB	CCx,xB/90	CCmx,xB/90	CCgx,xB/90
Standard 1m	•		•	•		•	•		•	•		•
1.4m		•			•			•			•	
2m	•		•	•		•	•		•	•		•
2.8m		•			•			•			•	
3m	•			•			•			•		
4m			•			•			•			•
4.2m		•			•			•			•	
6m			•			•			•			•
8m			•			•			•			•

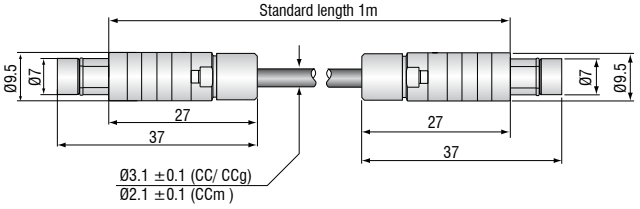
Sensor cable with connector type C



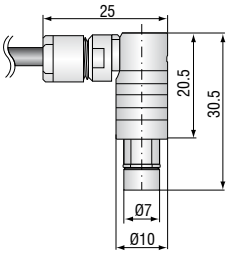
Connector type C/90



Sensor cable with connector type B

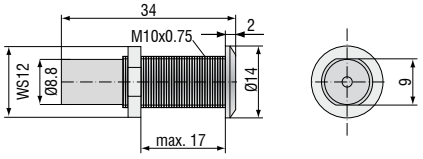


Connector type B/90



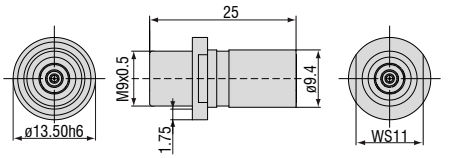
Accessories capaNCDT	6110	6200	6500
MC2.5 Micrometer for sensor calibration, range 0 - 2.5mm, Resolution 0.1µm. Suitable for sensors CS005 to CS2	•	•	•
MC25D Digital micrometer for sensor calibration, range 0 - 25mm, adjustable offset (zero). Suitable for all sensors.	•	•	•
HV/B Vacuum feed through triaxial	•	•	•
UHV/B Vacuum feed through triaxial for ultra-high vacuum	•	•	•
PC6200-3/4 Power-/trigger cable, 4 pin, 3m		•	
SCAC3/4 Signal output cable, (necessary for multi channel applications), 4 pin, 3m		•	
SCAC3/5 Signal output cable, analog, 5 pin, 3m	•		
SC6000-1,0 Synchronization cable, 5 pin, 1m		•	•
CA5 Preamplifier cable 5 pin, 5m			•
PS2020 Power supply for DIN rail mounting; Input 230VAC (115VAC); Output 24VDC / 2.5 A; L/W/H 120x120x40mm	•	•	

HV/B Vacuum feed through (Art.-no. 0323050)



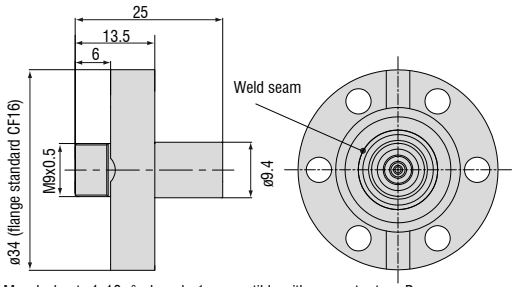
Max. leak rate 1x10e^{-7} mbar · l s^{-1}, compatible with connector type B

UHV/B Vacuum feed triax weldable (Art.-no. 0323346)



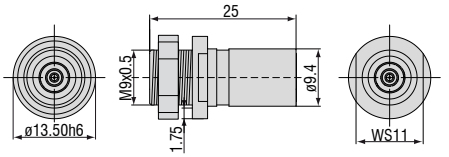
Max. leak rate 1x10e^{-9} mbar · l s^{-1}, compatible with connector type B

UHV/B Vacuum feed triax with flange CF16 (Art.-no. 0323349)



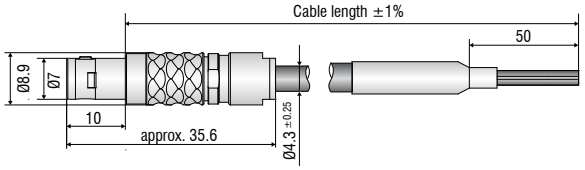
Max. leak rate 1x10e^{-9} mbar · l s^{-1}, compatible with connector type B

UHV/B Vacuum feed triax screwable (Art.-no. 0323370)

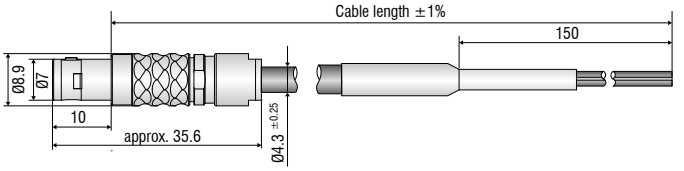


Max. leak rate 1x10e^{-9} mbar · l s^{-1}, compatible with connector type B

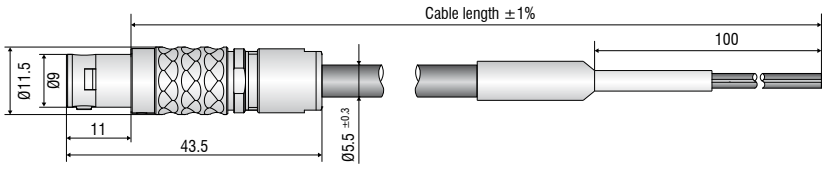
SCA3/4 Signal output cable (Art.-no. 2902104)



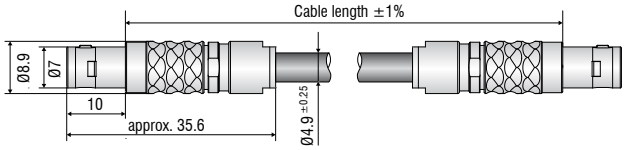
SCA3/5 Signal output cable (Art.-no. 2902112)



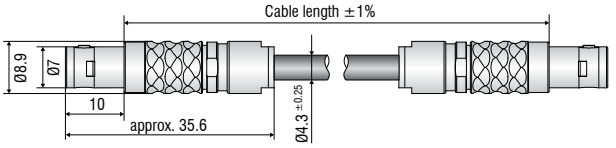
PC6200-3/4 Power-/trigger cable (Art.-no. 2901881)



SC6000-1,0 Synchronization cable (Art.-no. 2903473)



CA5 Preamplifier cable (Art.-no. 2903180)



High performance sensors made by Micro-Epsilon

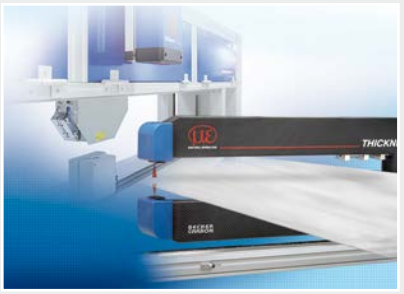
Sensors and systems for displacement and position

Sensors and measurement devices for non-contact temperature measurement

2D/3D profile sensors (laser scanner)

Optical micrometers, fibre optic sensors and fibre optics

Color recognition sensors, LED analyzers and color online spectrometer



Measurement and inspection systems

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