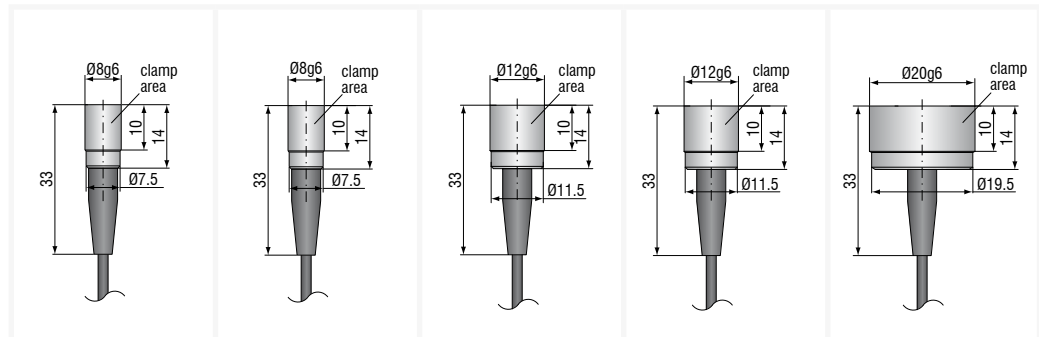




# More Precision

capa**N**CDT // Capacitive displacement sensors and systems





Sensor type		CSH02-CAM1,4	CSH05-CAM1,4	CSH1-CAM1,4	CSH1,2-CAM1,4	CSH2-CAM1,4
Article No.		6610086	6610087	6610088	6610089	6610107
Measuring range	reduced	0.1 mm	0.25 mm	0.5 mm	0.6 mm	1 mm
	nominal	0.2 mm	0.5 mm	1 mm	1.2 mm	2 mm
	extended	0.4 mm	1 mm	2 mm	2.4 mm	4 mm
Linearity <sup>1)</sup>		$\leq \pm 0.054 \mu\text{m}$	$\leq \pm 0.13 \mu\text{m}$	$\leq \pm 0.13 \mu\text{m}$	$\leq \pm 0.84 \mu\text{m}$	$\leq \pm 0.5 \mu\text{m}$
		$\leq \pm 0.027 \% \text{ FSO}$	$\leq \pm 0.026 \% \text{ FSO}$	$\leq \pm 0.013 \% \text{ FSO}$	$\leq \pm 0.07 \% \text{ FSO}$	$\leq \pm 0.025 \% \text{ FSO}$
Resolution <sup>1) 2)</sup>	static 2 Hz	0.15 nm	0.38 nm	0.75 nm	0.9 nm	1.5 nm
	dynamic 8.5 kHz	4 nm	10 nm	20 nm	24 nm	40 nm
Temperature stability	Zero <sup>5)</sup>	-19 nm/K	-19 nm/K	-19 nm/K	-19 nm/K	-19 nm/K
	Sensitivity	-2.4 nm/K	-6 nm/K	-12 nm/K	-14.4 nm/K	-24 nm/K
Temperature range	Operation	-50 ... +200 °C	-50 ... +200 °C	-50 ... +200 °C	-50 ... +200 °C	-50 ... +200 °C
	Storage	-50 ... +200 °C	-50 ... +200 °C	-50 ... +200 °C	-50 ... +200 °C	-50 ... +200 °C
Humidity <sup>3)</sup>		0 % ... 95 % r.H.	0 % ... 95 % r.H.	0 % ... 95 % r.H.	0 % ... 95 % r.H.	0 % ... 95 % r.H.
Dimensions <sup>4)</sup>		Ø8 × 14 mm	Ø8 × 14 mm	Ø12 × 14 mm	Ø12 × 14 mm	Ø20 × 14 mm
Active measuring area		Ø2.6 mm	Ø4.1 mm	Ø5.7 mm	Ø6.3 mm	Ø8.1 mm
Guard ring width		1.9 mm	1.2 mm	2.4 mm	2.1 mm	4.4 mm
Minimum target diameter		Ø7 mm	Ø7 mm	Ø11 mm	Ø11 mm	Ø17 mm
Weight (incl. cable and connector)		30 g	30 g	33 g	33 g	38 g
Material	Housing	1.4104 (magn.)	1.4104 (magn.)	1.4104 (magn.)	1.4104 (magn.)	1.4104 (magn.)
Connection	Cable integrated	Ø2.1 mm × 1.4 m axial	Ø2.1 mm × 1.4 m axial	Ø2.1 mm × 1.4 m axial	Ø2.1 mm × 1.4 m axial	Ø2.1 mm × 1.4 m axial
Mounting		clamping	clamping	clamping	clamping	clamping

FSO = Full Scale Output CSH Sensors are matched to controller with standard cable length

<sup>1)</sup> Valid with reference controller, relates to standard measuring range

<sup>2)</sup> RMS value of the signal noise

<sup>3)</sup> Non condensing

<sup>4)</sup> Without cable, bend protection and crimp

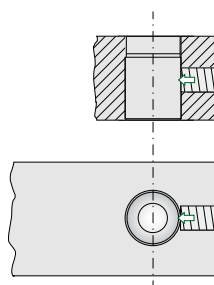
<sup>5)</sup> In the case of a sensor mounting 2 mm behind front surface

### Mounting cylindrical sensors

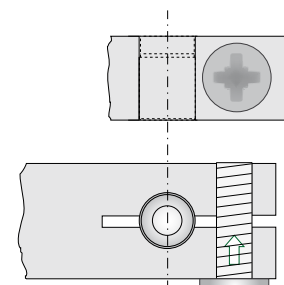
All sensors can be installed as both freestanding and flush units.

The sensors can be clamped or fastened using a collet.

#### Mounting with set screw (plastic)



#### Mounting with collet



### Important!

All Micro-Epsilon sensors are short circuit proof. Unlike other systems the pre-amplifier will not get damaged, if the front face of the sensor gets shorted by touching the conductive target.

## Sensors and Systems from Micro-Epsilon



Sensors and systems for displacement, distance and position



Sensors and measurement devices for non-contact temperature measurement



Measuring and inspection systems for metal strips, plastics and rubber



Optical micrometers and fiber optics, measuring and test amplifiers



Color recognition sensors, LED analyzers and inline color spectrometers



3D measurement technology for dimensional testing and surface inspection