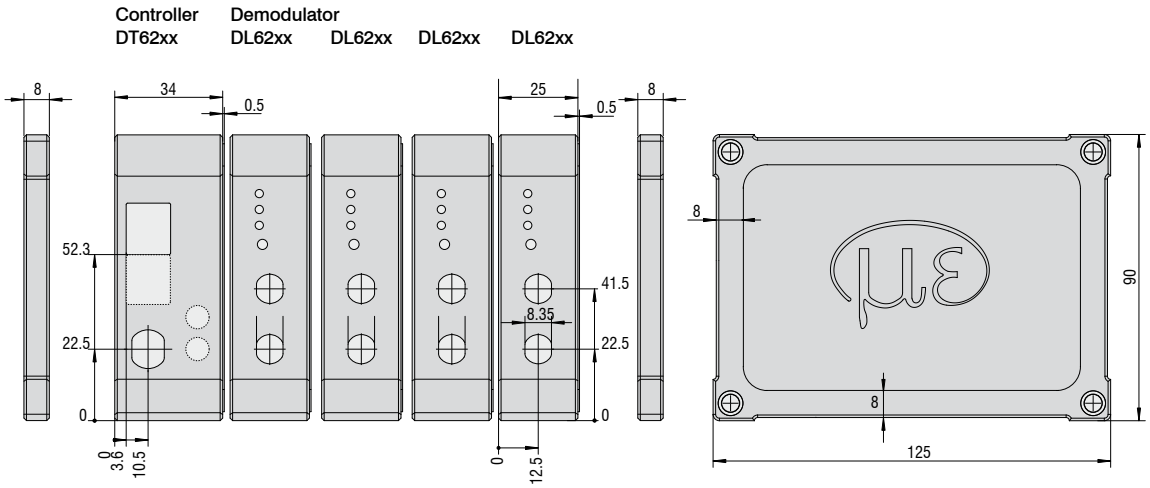
MICRO-EPSILON

More Precision

capaNCDT // Capacitive displacement sensors and systems

Controller type DT6222		Demodulator DL6222	Demodulator DL6222/ECL2
Resolution static		0.004% FSO	0.004% FSO
Resolution dynamic		0.05% FSO (20kHz)	0.1% FSO (20kHz)
Bandwidth		20kHz (-3dB)	20kHz (-3dB)
Bandwidth (switchable)		20kHz, 20Hz	20kHz, 20Hz
Data rate digital output		max. 3.906kSa/s	max. 3.906kSa/s
Linearity (typ.)		≤ ± 0.1% FSO	≤ ± 0.2% FSO
Sensitivity deviation		≤ ± 0.1% FSO	≤ ± 0.1% FSO
Long-term stability		≤ 0.02% FSO/month	≤ 0.02% FSO/month
Synchronous operation supported (multiple controllers)		no	no
Insulator measurement		no	no
Temperature stability		200ppm	200ppm
Temperature range (during operation)	Sensor	-20 ... +200°C	-20 ... +200°C
	Controller	+10 ... +60°C	+10 ... +60°C
Temperature range (storage)		-10 ... +75°C	-10 ... +75°C
Supply		24VDC (12 ... 36 VDC)	24VDC (12 ... 36 VDC)
Power consumption	DT6222	2.8W (typ.)	2.8W (typ.)
	per DL6222	1.2W (typ.); 1.4W (max.)	1.2W (typ.); 1.4W (max.)
Analog output		0 ... 10V (short circuit proof)	0 ... 10V (short circuit proof)
		4 ... 20mA (load max. 500Ω)	4 ... 20mA (load max. 500Ω)
Digital interface		Ethernet	Ethernet
Sensors		suitable for all sensors	suitable for all sensors
Sensor cable standard		CCm1,4x; CCg2,0x	CCm2,8x; CCg4,0x
Sensor cable (special tuning)		≤ 2.8m (with CCmxx) ≤ 4.0m (with CCgxx)	≤ 2.8m (with CCmxx) ≤ 4.0m (with CCgxx)
Trigger		TTL, 5V	TTL, 5V
No. of channels		max. 4	max. 4

FSO = Full Scale Output



Options

Art. No.	Description	Description	Suitable for articles			
			2303018 DL6220	2303022 DL6220/ECL2	2303023 DL6220/ECL3	2303029 DL6220/LC
2982044	LC DL62x0 digital	special calibration of linearity on digital output	○	○	○	•
2982045	LC DL62x0 analog	special calibration of linearity on analog output	○	○	○	•
2982046	ECL2 DL6220	special tuning for double standard cable length (CC =2m / CCm =2.8m / CCg =4m)	-	•	-	•
2982047	ECL3 DL6220	special tuning for triple standard cable length (CC =3 m / CCm =4,2 m / CCg =6 m)	-	-	•	•
2982048	EMR2 DL6220	extended measuring range (factor: 2) contains LC DL62x0 digital and LC DL62x0 analog	○	○	○	•
2982049	RMR1/2 DL6220	reduced measuring range (factor: 1/2) contains LC DL62x0 digital and LC DL62x0 analog	○	○	○	•

Art. No.	Description	Description	Suitable for articles			
			2303019 DL6230	2303024 DL6230/ECL2	2303025 DL6230/ECL3	2303030 DL6230/LC
2982044	LC DL62x0 digital	special calibration of linearity on digital output	○	○	○	•
2982045	LC DL62x0 analog	special calibration of linearity on analog output	○	○	○	•
2982054	ECL2 DL6230	special tuning for double standard cable length (CC =2m / CCm =2.8m / CCg =4m)	-	•	-	•
2982055	ECL3 DL6230	special tuning for triple standard cable length (CC =3m / CCm =4.2m / CCg =6m)	-	-	•	•
2982051	EMR2 DL6230	extended measuring range (factor: 2) contains LC DL62x0 digital and LC DL62x0 analog	○	○	○	•
2982052	EMR3 DL6230	extended measuring range (factor: 3) contains LC DL62x0 digital and LC DL62x0 analog	○	○	○	•
2982053	RMR1/2 DL6230	reduced measuring range (factor: 1/2) contains LC DL62x0 digital and LC DL62x0 analog	○	○	○	•

Art. No.	Description	Description	Suitable for articles		
			2303035 DL6222	2303036 DL6222/ECL2	2303038 DL6222/LC
2982045	LC DL62x0 analog	special calibration of linearity on analog output	○	○	•
2982059	ECL2 DL6222	special tuning for double standard cable length	-	•	•
2982061	EMR2 DL6222	extended measuring range (factor: 2)	○	○	•
2982062	RMR1/2 DL6220	reduced measuring range (factor: 1/2)	○	○	•

• Articles already contain the option
○ Option available
- No option available

- *Compact and robust construction*
- *High temperature stability*
- *Nanometer repeatability*
- *Suitable for all conductive materials*
- *24V (9 – 36V) standard power supply for industrial applications*
- *Ideal for OEM applications*
- *Suitable for practically all sensors*

System design

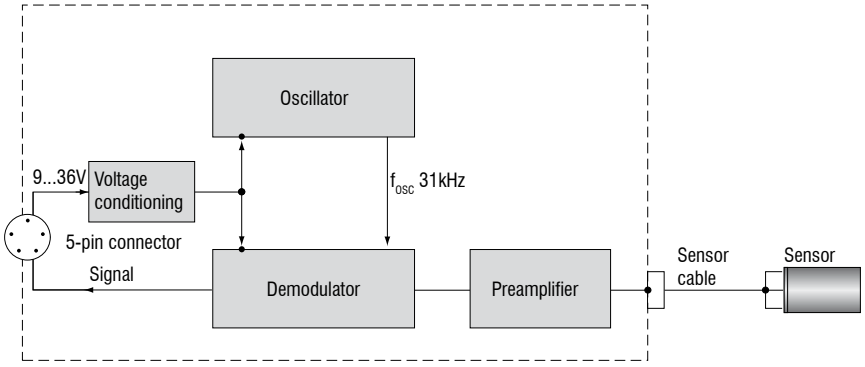
The capaNCDT 6110 single channel capacitive electronics is compatible with all Micro-Epsilon capacitive sensor ranges. The analog measuring system stands out due to its compact design together with high performance. Due to the miniaturized design and its ease of use, the capaNCDT 6120 is ideally suited to integration in machines and facilities. The flexible 9-36V power supply, enables the capaNCDT 6110 series to also be used in mobile applications. The capaNCDT 6110 stands out due to its excellent price/performance ratio, which makes it particularly suitable for high volume applications.

A measuring system consists of:

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

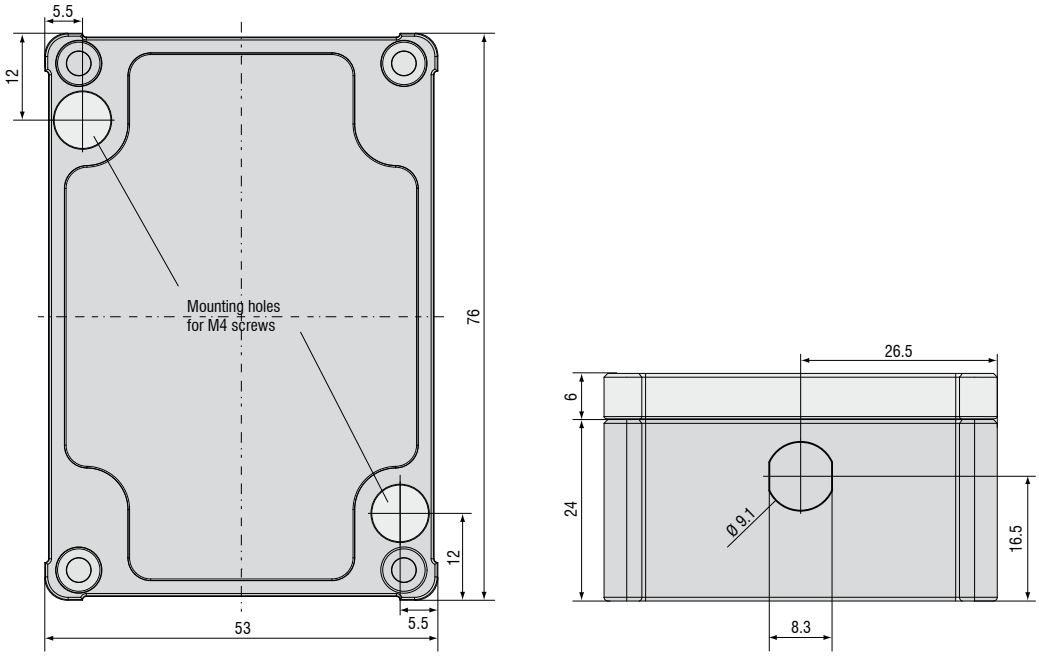
Accessories:

- Power supply



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		1kHz (-3dB)	1kHz (-3dB)	20kHz (-3dB)
Linearity (typ.)		≤ ± 0.05% FSO	≤ ± 0.05% FSO	≤ ± 0.1 % FSO
Sensitivity deviation		≤ ± 0.1% FSO	≤ ± 0.1% FSO	≤ ± 0.1 % 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	200ppm	200ppm
Temperature range (during operation)	Sensor	-50 ... +200°C	-50 ... +200°C	-50 ... +200°C
	Controller	+10 ... +60°C	+10 ... +60°C	+10 ... +60°C
Temperature 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



High performance sensors made by Micro-Epsilon

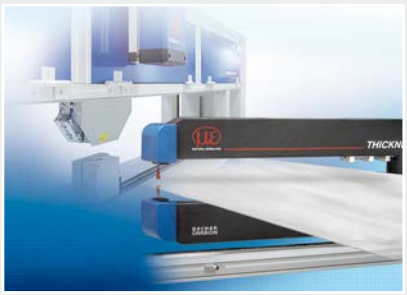
Sensors and systems for displacement and position

Sensors and measurement devices for non-contact temperature measurement

2D/3D profile sensors (laser scanner)

Optical micrometers, fiber optic sensors and fiber optics

Color recognition sensors, LED analyzers and color inline spectrometer



Measurement and inspection systems

Modifications reserved / Y9761319-H011038GKE

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