

optoNCDT 2200 - World leading technology Measurement with unmatched precision

At the head of the Micro-Epsilon laser family stands the optoNCDT 2200 Series. The linearity and resolution achieved with this device is at the limits of laser triangulation sensor technology. The extreme accuracy, high measuring rate and the constant signal stability, can be achieved at full speed without any signal averaging. This world first capability enables the sensor to solve the most demanding measurement applications.

The digital output signal can be combined with the IF2004 PCI card (also designed and supplied by Micro-Epsilon) to synchronise multiple sensors at full measurement rate and easily input this data into a PC.

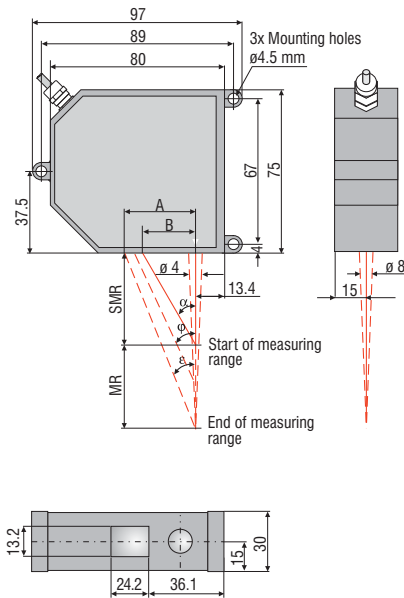
Model	ILD 2200-2	ILD 2200-10	ILD 2200-20	ILD 2200-40	ILD 2200-50	ILD 2200-100	ILD 2200-200
Measuring range	2 mm	10 mm	20 mm	40 mm	50 mm	100 mm	200 mm
Start of measuring range SMR	24 mm	30 mm	40 mm	175 mm	45 mm	70 mm	130 mm
Midrange MMR	25 mm	35 mm	50 mm	195 mm	70 mm	120 mm	230 mm
End of measuring range EMR	26 mm	40 mm	60 mm	215 mm	95 mm	170 mm	330 mm
Linearity	1 μm	3 μm	6 μm	12 μm	15 μm	30 μm	60 μm
	± 0.05 % FSO	± 0.03 % FSO					
Resolution (at 10 kHz without averaging)	0.03 μm	0.15 μm	0.3 μm	0.6 μm	0.8 μm	1.5 μm	3 μm
	0.0015 % FSO						
Measuring rate	10 kHz						
Permissible ambient light	30,000 lx						
Spot diameter	SMR	80 μm	110 μm	160 μm	230 μm	215 μm	1300 μm
	MMR	35 μm	50 μm	60 μm	210 μm	80 μm	1300 μm
	EMR	80 μm	110 μm	160 μm	230 μm	215 μm	1300 μm
Light source	semiconductor laser <1 mW, 670 nm (red)						
Laser safety class	class 2 acc. DIN EN 60825-1/A1 12.99 / IEC 825-1/A1 12.99 / FDA						
Protection class	sensor: IP 65 / controller: IP 50						
Temperature stability	0.01 % FSO/ $^{\circ}\text{C}$						
Operation temperature	0 ... +50 $^{\circ}\text{C}$						
Storage temperature	-20 ... +70 $^{\circ}\text{C}$						
Output	analog: ± 5 V digital: RS 422 / 691.2 kBaud						
Power supply	24 VDC (± 15 %), max. 500 mA						
Sensor cable length	standard: 2 m - integrated option: 5 m/10 m						
Controller	functions: auto zero / signal averaging						
Electromagnetic compatibility (EMC)	EN 50081-1 and EN 61000-6-2						
Vibration	2 g / 20 ... 500 Hz						
Shock	15 g / 6 ms / 3 Axis						

FSO = Full Scale Output

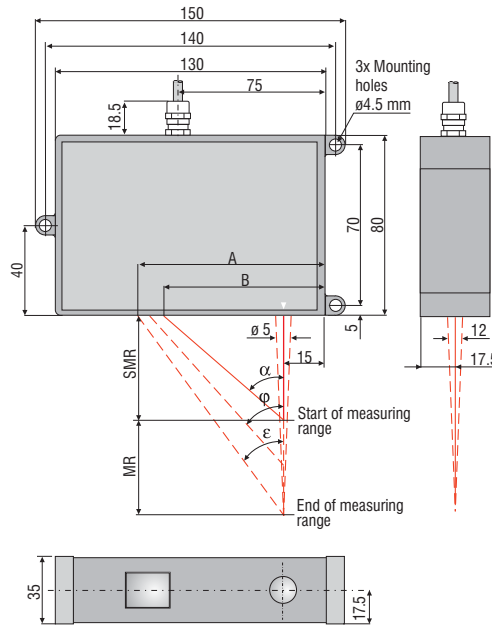
All specifications apply for a diffusely reflecting matt white ceramic target

optoNCDT 2200 dimensions and accessories

optoNCDT 2200 (2/10/20/50/100 mm)

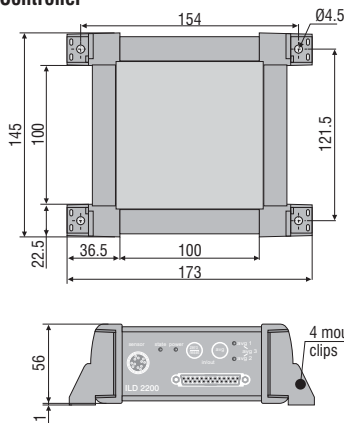


optoNCDT 2200 (40/200 mm)



MR	SMR	α	φ	ε	A	B
2	24	35.0°	40.0°	44.8°	25.8	16.8
10	30	34.3°	35.2°	35.6°	28.7	20.5
20	40	28.8°	27.5°	26.7°	30.1	22
50	45	26.5°	23.0°	18.3°	31.5	22.5
100	70	19.0°	15.4°	10.9°	32.6	24.1
40	175	22.1°	21.9°	21.8°	101	86
200	130	25.1°	16.7°	13.1°	91.6	7

Controller



(Dimensions in mm, not to scale. CAD files are available online)

Accessories optoNCDT 2200

Supply and output cable

- PC 1800-3 (3 m)
- PC 1800-8 (8 m)
- PC 1800-3/10/RS 485 (3 m, for RS 485)
- PC 2200-3/3/RS422
- IF/RS422/USB

Sensor cable extension

- CE 1800-3 (3 m)
- CE 1800-8 (8 m)

Power supply

- PS 2010 (for top-hat rail mounting; LxWxH 120x120x40 mm)
- Input 115 / 230 VAC selectable; output 24 VDC / 2.5 A)

Protection housing

- SGx 1800 (for models ILD 2200-2/10/20/50/100)
- SGx 2200-200 (for models ILD 2200-40/200)
- SGxF 1800 (option with compressed air clean setup)
- SGxF 2200-200 (option with compressed air clean setup)

Interface-card

- IF2004 (RS422 PCI-interface-card for PC for 1-4 sensors optoNCDT or 3 sensors and 1 encoder)

Display

- DD800 (digital readout, programmable)
- CSP301 (digital processing and readout unit, programmable for two analog outputs)