








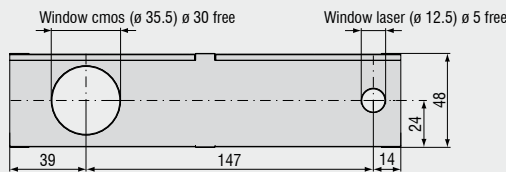




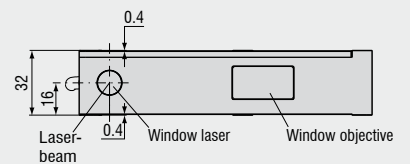
-  **High accuracy and long standoff distances**
-  **Three models with measuring ranges from 10mm to 50mm**
-  **Sensor head and separate controller**
-  **Measurement rate up to 10kHz**
-  **Real Time Surface Compensation**
-  **Analogue and digital output**
-  **Adjustable filter functions (firmware)**
-  **Calibration certificate included**
-  **Configuration via software [www.micro-epsilon.com/download](http://www.micro-epsilon.com/download)**

In contrast to conventional laser sensors, the Long-Range series allows accurate measurements to be taken at much longer stand off distances than normal. This is an important advantage, especially if the sensor cannot be mounted close to the target due to the environment the target is within. The long stand off is particularly useful if you need to look through a window at a target in a pressure chamber or similar vessel. A special CMOS line and the Real Time Surface Compensation enable the sensor to be used even on changing surfaces.

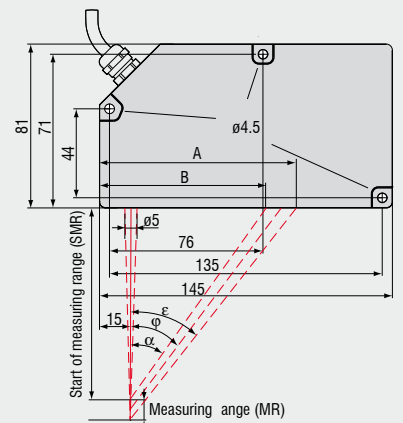
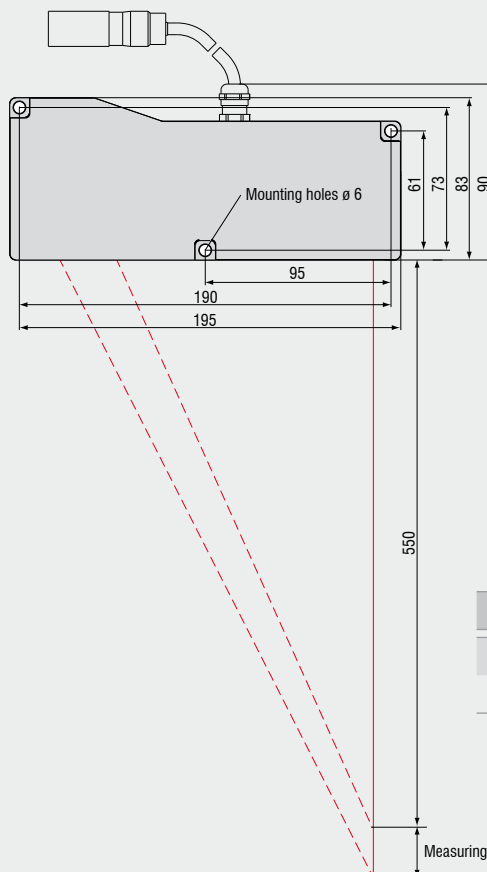
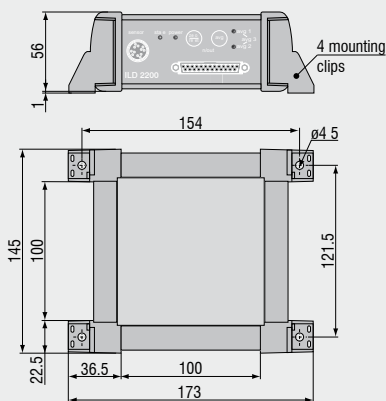
optoNCDT 1810-50 (50mm)



optoNCDT 2210 (10/20mm)



**Controller**



(Dimensions in mm, not to scale.)

MR	SMR	$\alpha$	$\phi$	$\epsilon$	A	B
10	95	34.6°	36.9°	38.8°	99.4	80.6
20	90	36.1°	36.9°	37.5°	99.4	80.6

Model		ILD 1810-50	ILD 2210-10	ILD 2210-20
Measuring range		50mm	10mm	20mm
Start of measuring range		550mm	95mm	90mm
Midrange		575mm	100mm	
End of measuring range		600mm	105mm	110mm
Linearity		50µm	3µm	6µm
		≤0.1% FSO	≤0.03% FSO	
Resolution	dynamic <sup>1)</sup>	5µm	0.5µm	1µm
		0.01% FSO	0.005% FSO	
Measuring rate		2.5kHz	10kHz	
Permissible ambient light		10.000lx	30.000lx	
Spot diameter	SMR	400 x 500µm	130µm	200µm
	MMR	400 x 500µm	60µm	60µm
	EMR	400 x 500µm	130µm	200µm
Light source		semiconductor laser <1mW, 670nm (red)		
Laser safety class		class 2 acc. DIN EN 60825-1 : 2001-11 / Class 2 (IEC 60825-1) Class II (FDA)		
Protection class		sensor: IP 65 controller: IP 50		
Temperature stability		0.01 % FSO/°C		
Operation temperature		0 ... 50°C		
Storage temperature		-20 ... 70°C		
Output	analogue	±5V (-10V ... +10V)		
	digital	option: RS232 or RS422	RS422 / 687.5kBaud	
Power supply		24VDC (±15%), max. 500mA		
Sensor cable length		standard: 2m - integrated option: 5m/10m on request		
Controller		functions: auto zero / signal averaging dimensions: 143mm x 145mm x 52mm - without mounting clips		
Electromagnetic compatibility (EMC)		EN 50081-1 and EN 50082-2		
Vibration		2g / 20 ... 500Hz		
Shock		15g / 6ms / 3 axis		
Weight	sensor	~800g	~500g	
	controller		~1000g	

FSO = Full Scale Output

All specifications apply for a diffusely reflecting matt white ceramic target

<sup>1)</sup> series 1810: at 2.5 kHz without averaging, series 2210: at 10 kHz without averaging

SMR = Start of measuring range MMR = Midrange EMR = End of measuring range

### Custom Sensor Modifications

For applications where the above standard sensors do not meet your requirements, it may be possible to supply a sensor with modified specification. Please contact us for further information.

### Options

- Non standard measuring range and stand off
- Custom housing or mounting geometry
- Measuring rate 2.5 / 5 / 10 / 20kHz
- Non standard signal interfaces
- Special cable length of electrical connector
- Vacuum suitability
- Reduced mass
- Increased shock and vibration resistance