

More Precision.



optoNCDT 1810 / 2210 Long Range Sensor

Large base distance with a small measurement range

The Long Range Sensors optoNCDT 2210 and 1810-50 are optoelectronic displacement measurement systems for large measuring distances with high accuracy. It measures distances to a wide spectrum of material surfaces without making physical contact.

In contrast to conventional laser triangulation displacement sensors, the

Long Range series measures targets which are located at a long distance from the sensor. This is of particular advantage with measurements for which the sensor cannot be mounted in the immediate vicinity of the target.

The sensor operates with a high resolution CMOS array and can compensate the effects of varying surfaces very quickly.

Model		ILD 1810-50	ILD 2210-10	ILD 2210-20
Measuring range		50 mm	10 mm	20 mm
Start measuring range	SMR	550 mm	95 mm	90 mm
Midrange	MMR	575 mm	100 mm	
End of measuring range	EMR	600 mm	105 mm	110 mm
Linearity		50 μm	3 μm	6 μm
		± 0.1 % FSO	± 0.03 % FSO	
Resolution		5 μm	0.5 μm	1 μm
		0.01 % FSO (2.5 kHz)	0.005 % FSO (10 kHz)	
Measuring rate		2.5 kHz	10 kHz	
Permissible ambient light		10.000 lx	30.000 lx	
Spot diameter	SMR	400 x 500 μm	130 μm	200 μm
	MMR	400 x 500 μm	60 μm	60 μm
	EMR	400 x 500 μm	130 μm	200 μm
Light source		semiconductor laser <1 mW, 670 nm (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/ $^{\circ}\text{C}$		
Operation temperature		0 to 50 $^{\circ}\text{C}$		
Storage temperature		-20 to 70 $^{\circ}\text{C}$		
Output	analog	± 5 V (-10 V ... + 10 V)	± 5 V	
	digital	option: RS 232 or RS 485	RS 422 / 687.5 kBaud	
Power supply		24 VDC (± 15 %), max. 500 mA		
Sensor cable length		standard: 2 m - integrated option: 5 m/10 m on request		
Controller		functions: auto zero / signal averaging dimensions (mm): 143 x 145 x 52 - without mounting clips		
Electromagnetic compatibility (EMC)		EN 50081-1 and EN 50082-2		
Vibration		2 g / 20 ... 500 Hz		
Shock		15 g / 6 ms / 3 Axis		

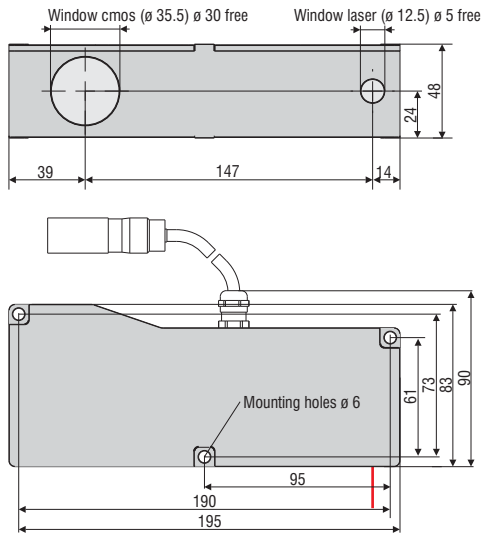
FSO = Full Scale Output

All specifications apply for a diffusely reflecting matt white ceramic target

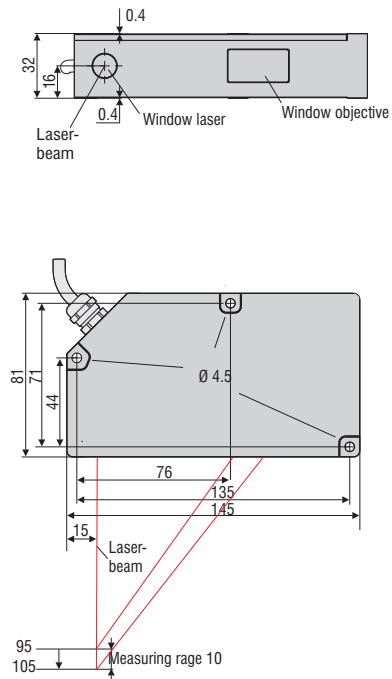
SMR = Start of measuring range MMR = Midrange EMR = End of measuring range

Dimensions

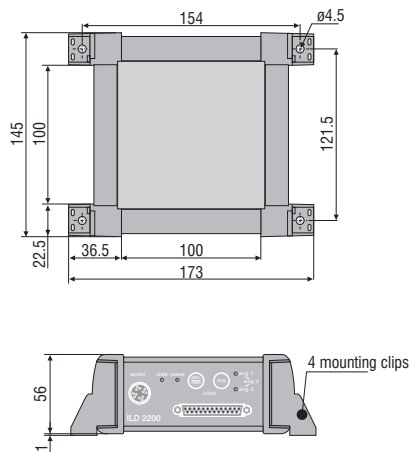
Sensor optoNCDT 1810-50



Sensor optoNCDT 2210



Controller



Dimensions in mm (inch), not to scale