

More Precision



optoNCDT 1750BL

Blue Laser Triangulation Displacement Sensors



Model		ILD1750-20BL	ILD1750-200BL	ILD1750-500BL	ILD1750-750BL
Measuring range		20 mm	200 mm	500 mm	750 mm
Start of measuring range		40 mm	70 mm	200 mm	200 mm
Mid of measuring range		50 mm	170 mm	450 mm	575 mm
End of measuring range		60 mm	270 mm	700 mm	950 mm
Measuring rate ¹⁾		continuously adjustable between 0.3 ... 7.5 kHz; 6 adjustable stages: 300 Hz / 625 Hz / 1.25 kHz / 2.5 kHz / 5 kHz / 7.5 kHz			
Linearity		< ± 12 µm	< ± 160 µm	< ± 350 µm	< ± 670 µm
		< ± 0.06 % FSO	< ± 0.08 % FSO	< ± 0.07 % FSO	< ± 0.09 % FSO
Repeatability ²⁾		< 0.8 µm	< 15 µm	< 20 µm	< 45 µm
Temperature stability ³⁾		± 0.03 % FSO / K			
Light spot diameter (± 10 %)	SMR	320 µm	1300 µm	1500 µm	1500 µm
	MMR	45 µm			
	EMR	320 µm			
Light source		Semiconductor laser < 1 mW, 405 nm (blue violet)			
Laser safety class		Class 2 in accordance with DIN EN 60825-1 : 2015-07			
Permissible ambient light		10,000 lx			
Supply voltage		11 ... 30 VDC			
Power consumption		< 3 W (24 V)			
Signal input		1x HTL/TTL multi-function input input trigger in / slave in, zero setting / mastering / teach-in; 1 x RS422 synchronization input trigger in / sync in / master slave / master slave alternating			
Digital interface		RS422 (18 bits)			
Analog output		4 ... 20 mA / 0 ... 5 V / 0 ... 10 V (16 bits, freely scalable within the measuring range)			
Switching output		1 x HTL/TTL laser on/off; 2 x switching output (error & limit value): npn, pnp, push pull			
Synchronization		possible for simultaneous or alternating measurements			
Connection		integrated pigtail 0.25 m with 14-pin ODU plug; optional extension to 3 m / 10 m			
Mounting		Screw connection via three mounting holes			
Temperature range	Storage	-20 ... +70 °C			
	Operation	0 ... +50 °C			
Shock (DIN-EN 60068-2-29)		15 g / 6 ms in 3 axes			
Vibration (DIN-EN 60068-2-6)		2 g / 20 ... 500 Hz			
Protection class (DIN-EN 60529)		IP65			
Material		Die-cast zinc housing		Aluminum housing	
Weight		approx. 550 g (incl. pigtail)			approx. 600 g (incl. pigtail)
Control and display elements		Select & function buttons for interface selections, mastering (zero), teach, presets, quality slider, frequency selection, factory settings; Web interface with application-specific presets, peak selection, video signal, freely selectable averaging possibilities, data reduction, setup management ⁴⁾			

FSO = full scale output, SMR = start of measuring range, MMR = mid of measuring range, EMR = end of measuring range
The specified data apply to a white, diffuse reflecting surface (reference: ceramics)

¹⁾ Factory setting 5 kHz; modifying the factory settings requires the IF2001/USB converter (optionally available)

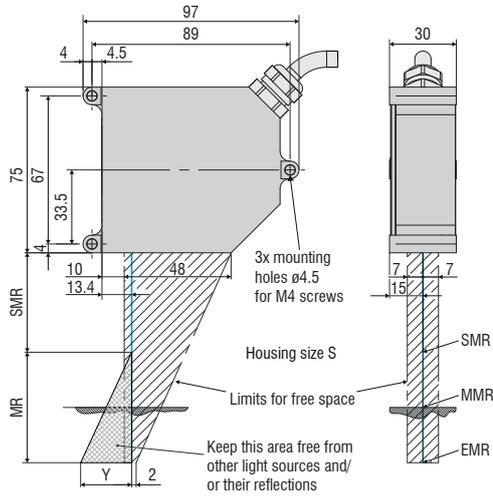
²⁾ Measuring rate 5 kHz, median 9

³⁾ Based on digital output

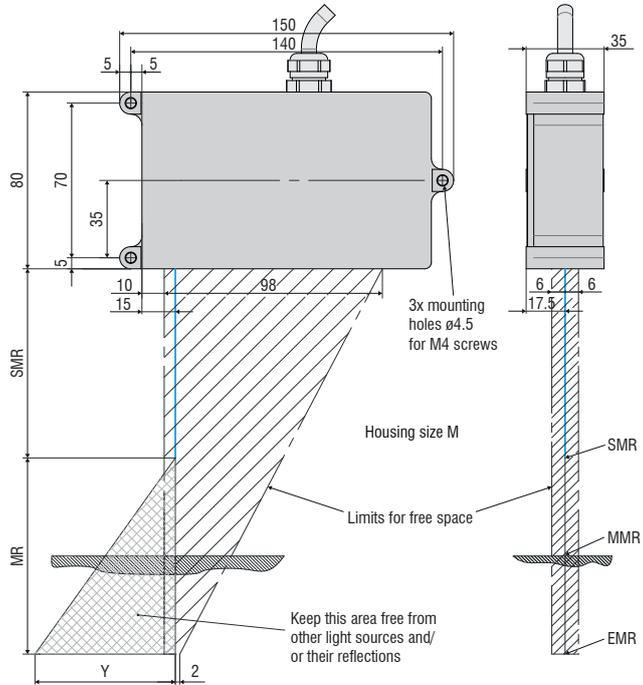
⁴⁾ Connection to PC via IF2001/USB (optionally available)

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optoNCDT 1750BL (20/200 mm)



optoNCDT 1750BL (500/750 mm)



MR	SMR	Y
20	40	12
200	70	70
500	200	180
750	200	270

(Dimensions in mm, not to scale)