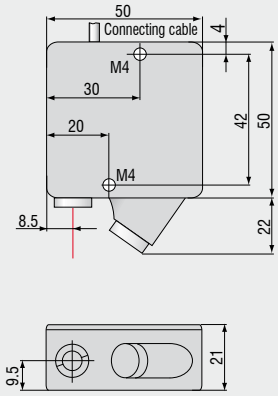
- Eight models with measuring ranges from 0.5mm to 200mm
- Sensor head and separate controller
- Up to 37kHz true analogue frequency response
- Analogue (U/I) and digital outputs
- Adjustable filter functions (firmware)
- Calibration certificate included

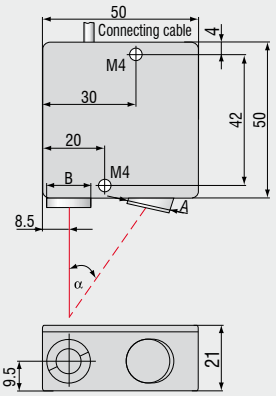
The true analogue optoNCDT 1607 is ideal for high speed measurements such as vibration amplitude, impact and drop tests. The 37kHz frequency response is available for all the measurement ranges from 0.5mm to 200mm and is most suited for tasks where targets move quickly and can be of fixed colour.

MR	Angle	A	B
0 5	SMR 1 75 mm, measures are not relevant		
2	45°	13	5
4	45°	13	5
10	29°	12	5
20	23°	12	5
50	28°	22	8
100	18°	22	8
200	12°	22	8

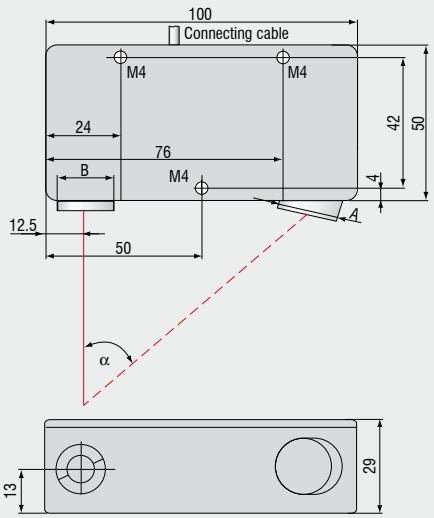
optoNCDT 1607 (0.5mm)



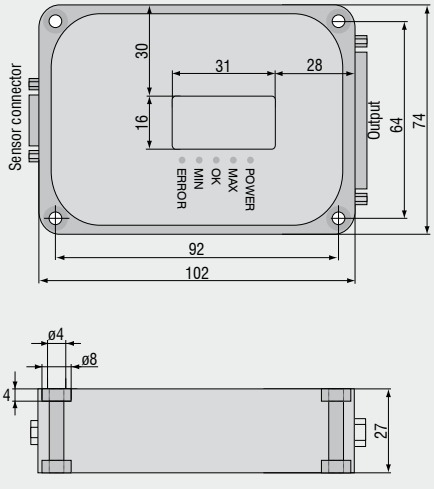
optoNCDT 1607 (2/4/10/20mm)



optoNCDT 1607 (50/100/200mm)



Controller



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

Model	LD 1607-0.5	LD 1607-2	LD 1607-4	LD 1607-10	LD 1607-20	LD 1607-50	LD 1607-100	LD 1607-200
Measuring range	0.5mm	2mm	4mm	10mm	20mm	50mm	100mm	200mm
Start of measuring range	23.75mm	23mm	22mm	40mm	55mm	95mm	170mm	240mm
Midrange	24mm	24mm	24mm	45mm	65mm	120mm	220mm	340mm
End of measuring range	24.25mm	25mm	26mm	50mm	75mm	145mm	270mm	440mm
Linearity	1µm	4µm	8µm	20µm	40µm	100µm	200µm	400µm
	≤0.2% FSO							
Resolution (Noise) [1] static	0.1µm	0.5µm	1µm	3µm	6µm	20µm	30µm	60µm
Frequency response	10kHz, 7kHz, 4kHz, 1kHz, 250Hz, 100Hz, 25Hz or 15Hz (-3dB), selectable with DIP switches optional: Model LD1627: 37kHz (-3dB)							
Temperature stability	±0.03 % FSO/°C							
Light source	laser <1mW, wavelength: 670nm (red)							
Life cycle typ.	100,000h (laserdiode)							
Laser safety class	class 2 (DIN EN 60825-1:2001-11)							
Spot diameter MMR	0.1mm	0.3mm	0.3mm	0.6mm	0.9mm	1.5mm	1.5mm	4mm
Permissible ambient light	20,000lx							
Output	displacement: ±10V / 4 - 20mA / RS232 intensity: 0 ... 10V							
Vibration	2g (IEC 68-2-6)							
Shock	15g (IEC 68-2-6)							
Operation temperature	0 ... +50°C							
Storage temperature / humidity	-20 ... +70°C / up to 90% RH							
Protection class	sensor: IP 64 / electronics: IP 40							
Supply	+ 24VDC / 200mA (10 ... 30VDC)							
Connector	25-pin Sub-D connector							
Weight Sensor	250g	240g				400g		
Weight Controller	275g							
Sensor cable length	2m							

FSO = Full Scale Output All specifications apply for a diffusely reflecting matt white ceramic target
[1] Frequency response 15 Hz
SMR = Start of measuring range MMR = Midrange EMR = End of measuring range

switching outputs (connector) 24 V logic	
MIN	+24V / 10mA
OK	+24V / 10mA
MAX	+24V / 10mA
Hysteresis	appr. 0.4% FSO

Output of errors (connector)	
Too little light	+24V / 10mA
Too much light	+24V / 10mA

LED - indicators		
POWER	GREEN	power on
MAX	RED	adjustable MAX value is exceeded
OK	GREEN	LED level indicator OK shows the position of the target within the set limits
MIN	YELLOW	adjustable value drops below the set MIN
ERROR	RED	too little light is reflected

Pin assignment controller		
Pin	Function	Cable Colors
1	Displacement output, ±10V	green
2	Too little light, +24V	-
3	Laser OFF Input +15 - 30V	white
4	TXD (RS232)	-
5	OK in range, +24V	-
6	4 ... 20mA	-
7	RXD (RS232)	-
8	0 V supply	brown
9-13	n.c.	-
14	Analogue ground	blue screen
15	Too much light +24V	-
16	MAX, +24V	-
17	n.c.	-
18	RTS (RS232)	-
19	MIN, +24V	-
20	Light intensity 0 - 10V	red
21	+24V supply (10 - 36V)	green
22-25	n.c.	-