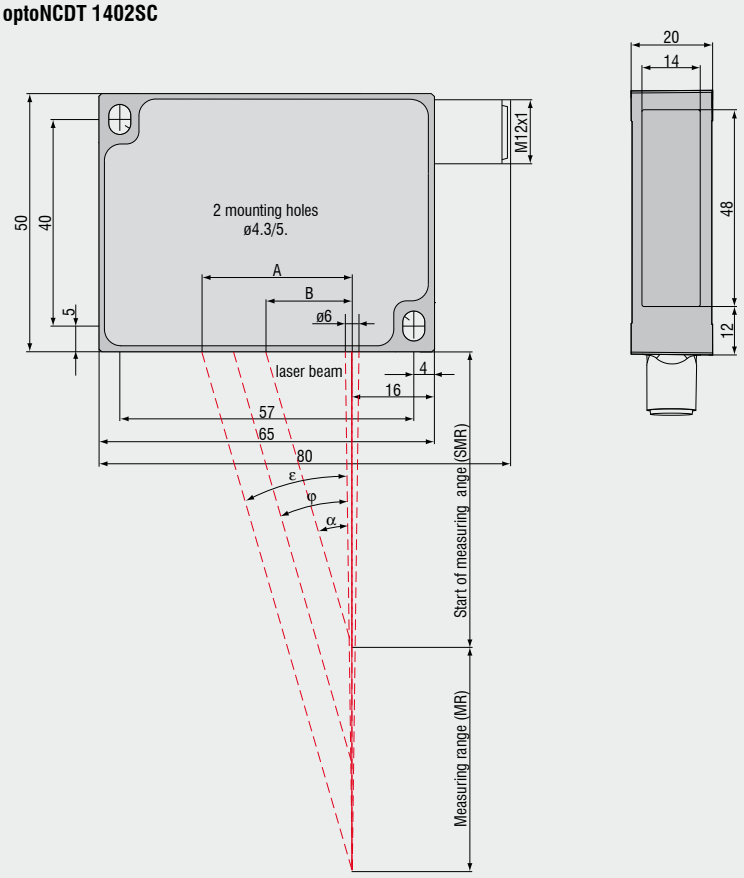
- Seven models with measuring ranges from 5mm to 600mm
- Ideal for OEM applications
- Compact sensor with stainless steel housing
- Adjustable measuring rate up to 1.5kHz
- Analogue (U/I) and digital output
- Trigger input and teach-in
- Adjustable filter functions Peak selection (firmware)
- High flex cables for dragchain and robot use
- Calibration certificate included
- Configuration via software www.micro-epsilon.com/download

The optoNCDT 1402SC sensor is protected to IP69K and is available in all measuring ranges between 5mm and 600mm. Due to its very robust design, the sensor is suitable for the food industry, outdoor use or for demanding process manufacturing applications. The housing for this model comprises V4A steel and complies with all food industry requirements. In this version, the sensor is resistant to high pressure jet washing and to aggressive cleaning detergents and disinfection agents, including hydrogen peroxide and other alkaline-based cleaning materials and cleaning materials that contain chlorine. The sensor electronics are similar to those used by the optoNCDT 1402 standard model.

optoNCDT 1402SC



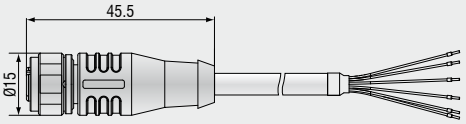
(Dimensions in mm, not to scale)

MR	SMR	α	φ	ε	A	B
5	20 0	33 5	35 5	37.1	18 9	13 2
10	20 0	33 5	32 9	32.4	19.1	13 2
20	30 0	31 2	27 9	25 8	24 2	18 2
50	45 0	25.1	19 6	16 9	28 9	21.1
100	50 0	23.1	14.4	11 3	30.1	21 3
200	60 0	20.1	9.4	6.8	30 8	22 0
250VT	100.0	14.7	7.6	5.5	33 9	26 2
600	200.0	9.7	4.3	3	41 6	33.7

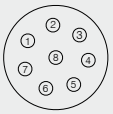
Model		ILD 1402-5SC	ILD 1402-10SC	ILD 1402-20SC	ILD 1402-50SC	ILD 1402-100SC	ILD 1402-200SC	ILD 1402-250SC	ILD 1402-600SC
Measuring range		5mm	10mm	20mm	50mm	100mm	200mm	250mm	600mm
Start of measuring range	SMR	20mm	20mm	30mm	45mm	50mm	60mm	100mm	200mm
Midrange	MMR	22.5mm	25mm	40mm	70mm	100mm	160mm	225mm	500mm
End of measuring range	EMR	25mm	30mm	50mm	95mm	150mm	260mm	350mm	800mm
Linearity		5...9µm	5...18µm	7...36µm	12...90µm	20...180µm	40...360µm	50...1200µm	120...3000µm
		≤0.18% FSO						≤0.5% FSO	
Resolution [1]	averaged with averaging factor 64	0.6µm	1µm	2µm	5µm	10µm	13µm	32µm	80µm
		0 01% FSO							
	dynamic 1.5 kHz	1...3µm	2...5µm	5...10µm	6.. 25µm	12.. 50µm	13...100µm	32...300µm	80.. 600µm
		0.02.. 0.05% FSO						0.02...0.12% FSO	
Measuring rate, programmable		1 5kHz; 1kHz; 750Hz; 375Hz; 50Hz							
Exposure rate, programmable [2]		0.6ms; 1ms; 1.3ms; 2.6ms; 20ms							
Light source		semiconductor laser <1mW, 670nm (red)							
Laser safety class		class 2 IEC 60825-1 : 2001-11							
Spot diameter	SMR	110µm	110µm	210µm	1100µm	1400µm	2300µm	5000µm	2.6 x 5mm
	MMR	380µm	650µm	530µm	110µm	130µm	2200µm	5000µm	2.6 x 5mm
	EMR	650µm	1200µm	830µm	1100µm	1400µm	2100µm	5000µm	2.6 x 5mm
Protection class		IP 69 K							
Vibration		15g / 10Hz … 1kHz						20g / 10Hz…1kHz	
Shock		15g / 6ms (IEC 68-2-29)							
Weight (without cable)		appr. 83g						appr. 130g	
Temperature stability		0.03 % FSO/°C				0.08 % FSO/°C			
Operation temperature		0 …+50°C							
Storage temperature		-20 ... +70°C							
Output	analogue	4 ... 20mA (1 ... 5V with cable PC 1402-3/U); free scalable within the nominal range							
	digital	RS422 / 14bit							
Control I/O		1x open collector output (switching output, switch, error); 1x input (teach in, trigger); 1x laser on/off							
Supply		11 ... 30VDC, 24VDC / 50mA							
Controller		integrated signal processor							
Software		free setup and aquisition tool + SDK (software development kit)							
Electromagnetic compatibility (EMC)		EN 61326-1:2006 / EN 55011 Class B (Interface emission) EN 61326-1:2006 / EN 61000-4-2:1995 + A1:1998 + A2:2001 (Interference resistance)							

FSO = Full scale output All specifications apply for a diffusely reflecting matt white ceramic target
[1] resolution digital output 14bit [2] tide to measurement rate
SMR = Start of measuring range MMR = Midrange EMR = End of measuring range

Connector axial



8-pin-connector



Pin	Description	colour
1	I_{OUT}	white
2	Error	brown
3	RS422 Rx+	green
4	RS422 Rx–	yellow
5	RS422 Tx+	grey
6	RS422 Tx–	pink
7	GND	blue
8	$+U_B$	red
	Laser off	
	Teach in	