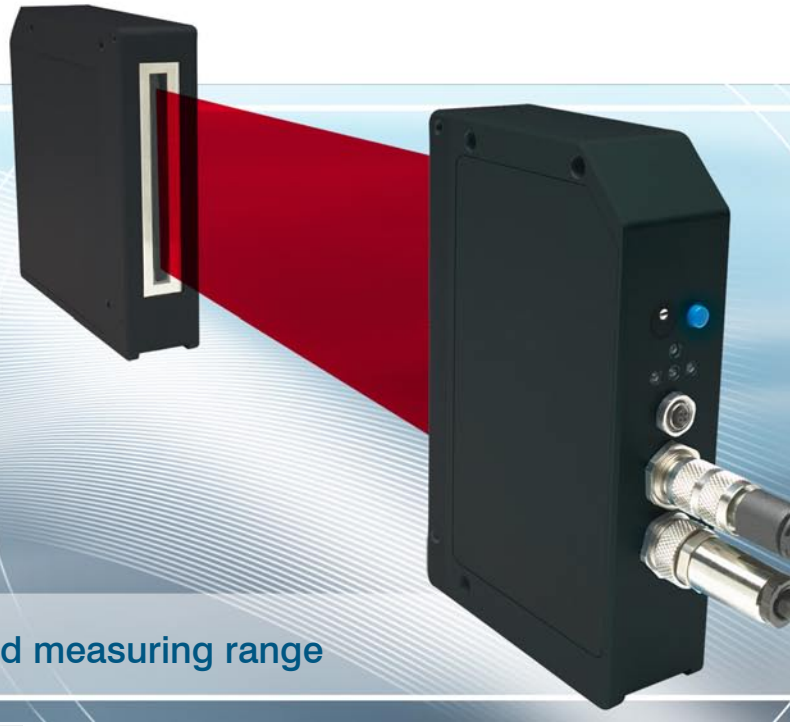
ALAT UJI
Products, Solution, Services

optoCONTROL 1202



- Measuring ranges 75 and 98mm
- Resolution ≥ 8µm
- Measuring rate up to 400Hz
- Analogue output 0 ... 10 VDC
- Serial interface RS232
- Laser class 1

Digital micrometers with extended measuring range

- High resolution CCD array detector with integrated controller
- Sub-pixel evaluation
- Measuring distance selectable from 20 to 2000mm
- Integrated polarisation filter / interference filter
- 2 digital inputs
- 3 digital outputs (limit switch)

Measuring principle

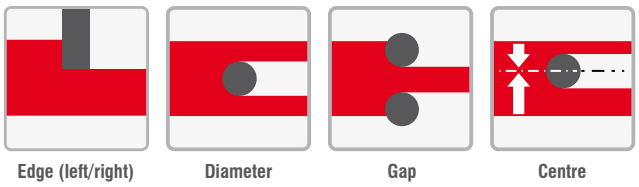
The laser beam for the optoCONTROL 1202 laser micrometers is output from the optical transmitter as a parallel aimed laser beam. The laser line strikes a CCD array in the receiving optical system. The amount of light collected by each of these receiving elements during the integration time is read out separately as analogue voltage and stored as a digital value in a data field after analogue-to-digital conversion.

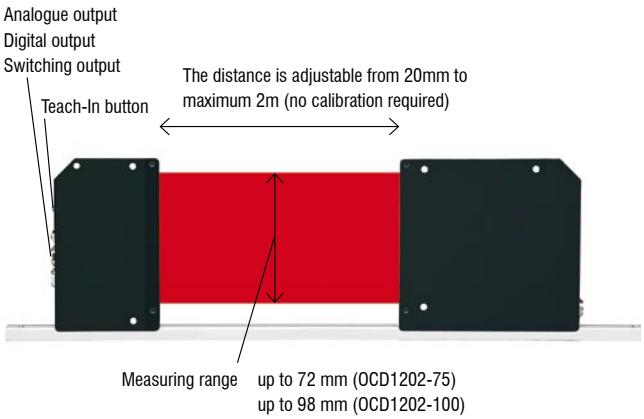
If there is a non-transparent measurement object in the laser line, only the receiving elements of the lines outside the shadow zone of the measurement object are illuminated. As the spacing of the pixels of the CCD array is known, the size and position of the measurement object can be determined.

System design

optoCONTROL consists of a light source and a receiving unit. The complete controller electronics are integrated in the receiver housing. The light source and receiver can be installed at any distance from each other. All models can be installed without additional brackets in both the vertical and horizontal positions.

Measurement mode (programmable via software)

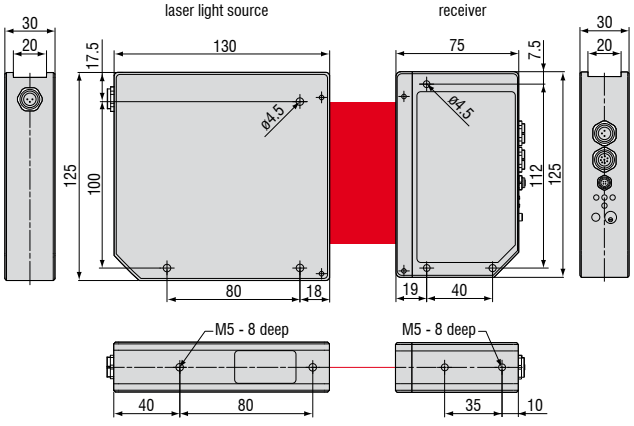




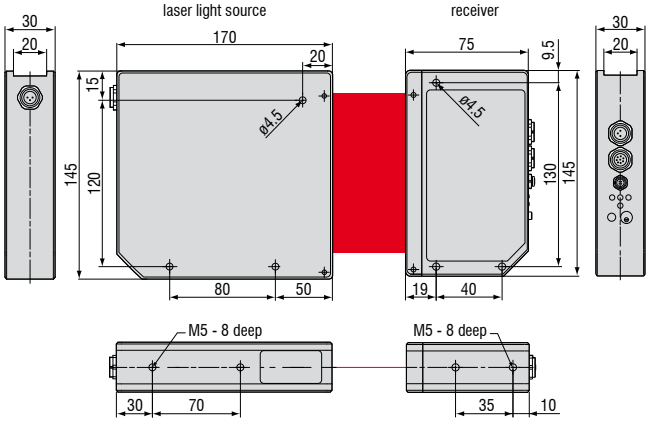
Model		optoCONTROL 1202-75	optoCONTROL 1202-100
Measuring range		typ. 75mm	typ. 98mm
Distance transmitter - receiver		minimal 20mm, maximal 2000mm	
Resolution		typ. 8µm [1]	typ. 8µm [1]
Repeatability		≤±10µm	≤±10µm
Linearity		±0.2%	±0.2%
Measuring rate		max 400Hz / 700Hz (digital)	max 360Hz / 600Hz (digital)
Max. switching current		100mA, short-circuit proof	
Interface		RS232, programmable using Windows	
Laser		Semiconductor laser, 670nm, DC-operation, ≤0,39mW max opt. power, laser class 1, the use of these laser sensors therefore requires no additional protective measures	
Permissible external light		≤5000Lux [2]	
Optical filter		interference filter, red light filter RG630, polarization filter	
Housing material		aluminium, anodised in black	
Connector receiver		8-pin female connector type binder series 712 (SPS/Power) 4-pin female connector type binder series 707 (PC/RS232) 3-pin female connector binder series 712 (connection to the transmitter)	
Connector transmitter		3-pin female connector type binder 712 (connection to receiver)	
Connection cable		Connection serial interfaces: SCD1202-2; connection analogue: SCA1202-2; connection cable transmitter/receiver: CE1202-2	
Output polarity		bright-/dark-switching, adjustable using Windows	
Teach button		Teach button at the housing for set point value teaching	
LED- indication		LED red (+): measured value > upper tolerance threshold LED green: measured value lies within tolerance window LED red (-): measured value < lower tolerance threshold LED yellow: multifunction	
EMC		EN 60947-5-2	
Shock		15g / 6ms	
Vibration		15g / 10Hz…1kHz	
Protection class		electronics IP 54, optics: IP 67	
Operation temperature		-10°C to +50°C	
Storage temperature		-20°C to +85°C	
Output	analogue	0 …+10V	
	digital	(OUT0, OUT1, OUT2): pnp bright-switching/npn dark-switching or pnp dark-switching/npn bright-switching, adjustable using Windows, 100mA, short-circuit proof	
Digital input	IN0	external trigger, input voltage +Ub/0V with protective circuit	
	IN1	teach/reset, input voltage +Ub/0V with protective circuit	
Power supply		+15VDC …+ 30VDC	
Sensitivity adjustment		using Windows via PC (parameterization software included)	
Laser adjustment		adjustable using Windows via PC	
Consumption		typ. 200mA	

The quoted technical data apply for a displacement transmitter to receiver about 800mm and a temperature of 20°C.
[1] Display resolution of the software ≥10µm
[2] Shadowing from ambient daylight increases the signal stability

optoCONTROL 1202-75



optoCONTROL 1202-100



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