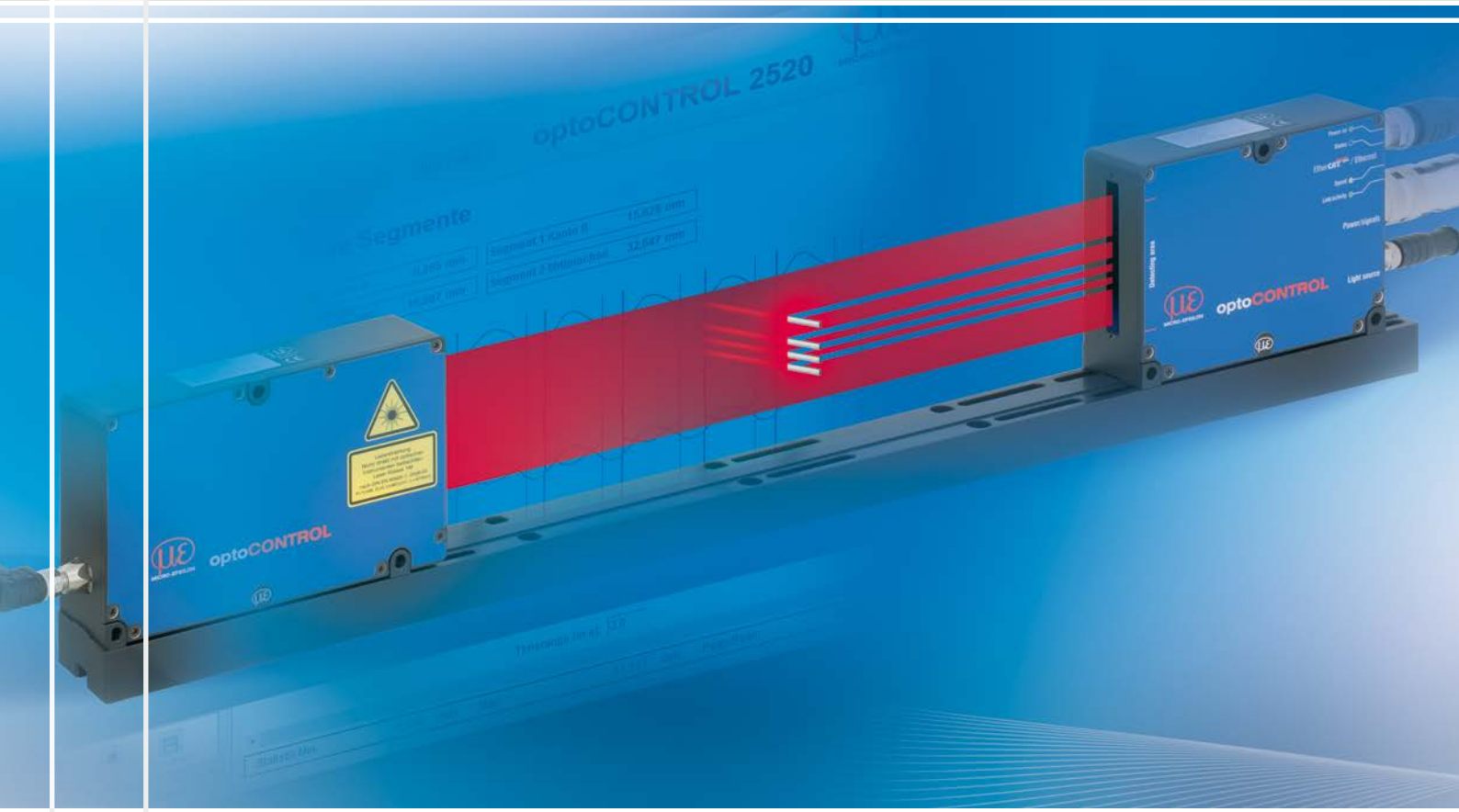
MICRO-EPSILON

More Precision

optoCONTROL 2520 // Compact laser micrometer



- Measuring range 46 mm
- Target-sensor gap up to 2m
- Linearity ±20µm
- INTERFACE: Ethernet / EtherCAT / RS422 / Analogue interface
- Laser class 1M
- Configurable via web interface

Compact laser micrometer for large distances

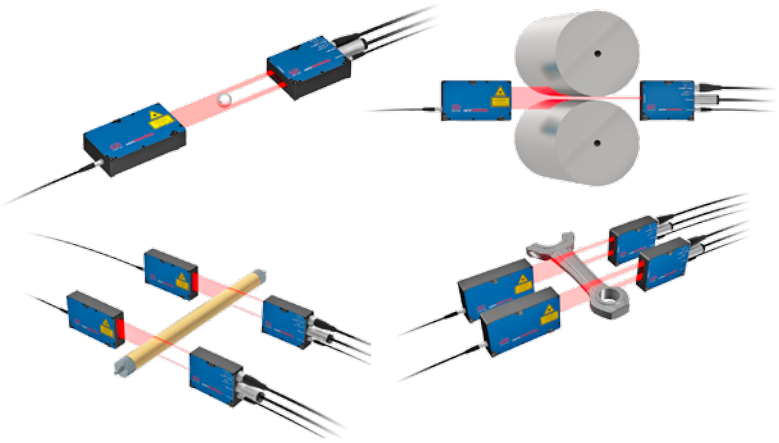
optoCONTROL 2520 is a compact laser micrometer which stands out due to a high accuracy with a maximum measuring range of 46 mm. optoCONTROL 2520 is flexible in use. Therefore, the measurement object can be in any position within the light curtain and the distance from the transmitter to the receiver may be chosen freely. The smallest detectable diameter of the measurement object is about 0.5 mm whereby for example PINs or small gaps can be measured. optoCONTROL 2520 can also be used for counting tasks and roundness measurement.

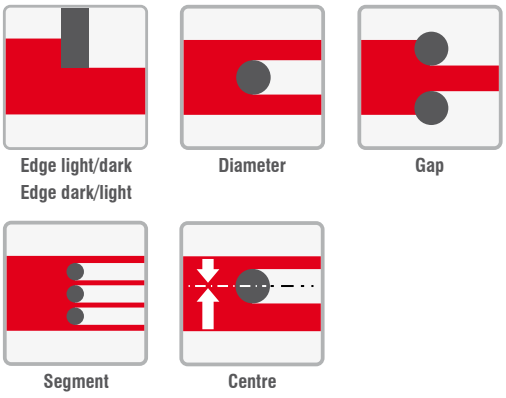
RS422 as well as Ethernet / EtherCAT are available as interfaces. The configuration is performed via a comfortable web interface. Thereby, measured values and limiting values can be shown in a simple way, measuring programs may be chosen and filters be applied easily. Apart from this, a video signal is provided for the measurement setting.

- Distance-independent measurement
- Output of several measuring values at the same time
- Triggering and synchronisation
- Measurement view including limit values
- Statistics as well as many averaging and filtering modes
- Simple setting by video signal
- Display of light and dark edges

Measuring modes

The centre line as well as the position of the single edges can be output for every segment, gap or diameter.



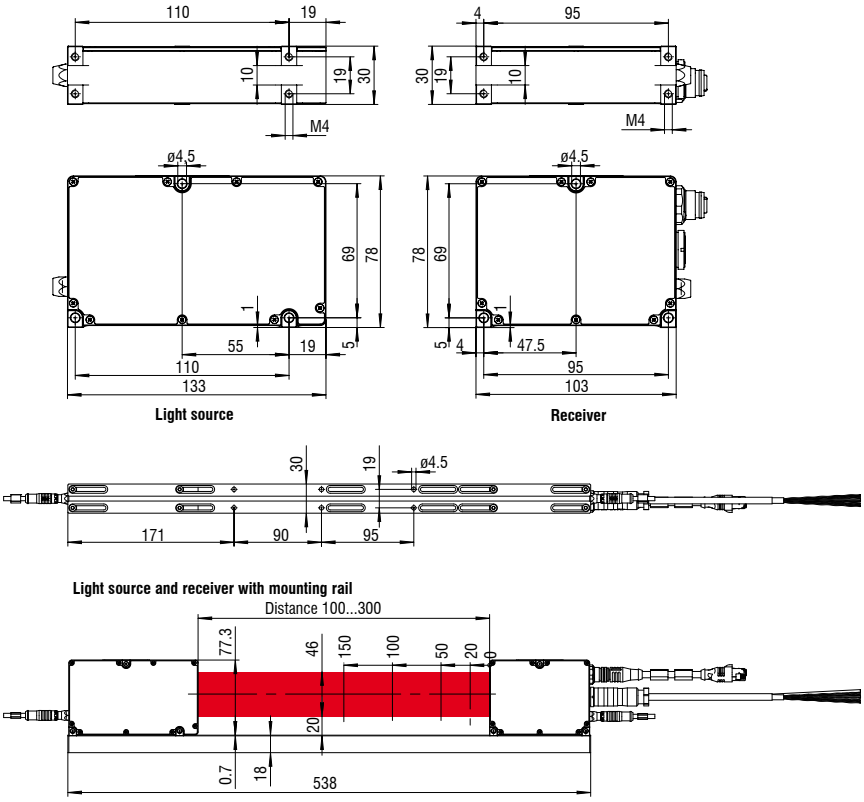


Model		ODC 2520
Measuring range		46mm
Measuring rate (sampling rate)		2.5kHz
Smallest diameter or gap (detectable target)		0.5mm
Distance transmitter - receiver (free space)		with mounting rail, 100 … 300mm; without mounting rail up to approx. 2m
Distance	target - receiver	20mm, max. 1500 ... 2000mm
Linearity [1]	target - receiver 20mm	< ± 20µm
	target - receiver 50mm	< ± 25µm
	target - receiver 100mm	< ± 25µm
	target - receiver 150mm	± 25µm
Repeatibility [1]		5µm
Digital resolution		1µm
Digital outputs		RS 422; max. 4 MBaud, full-duplex, not electrically isolated
		Ethernet, electrically isolated
		EtherCAT
Switching output		2 outputs, selectable for error or limit values, not electrically isolated 24V logic (HTL), High level depends from operating voltage
Analogue output		0 … 10V not electrically isolated, 14Bit D/A
In-/Outputs	Input	Zeroing / mastering, reset to factory setting; not electrically is lated, 24 V logic (HTL), High level depends on operating voltage
	In-/Output	TrigIn / SyncIn / symmetrical SyncOut, RS422 level, load resistance (120 Ohm) and direction switchable via software, not electrically isolated
Power supply		+24VDC (11…30VDC), < 1A
Connector	receiver	3-pin connector M8 for supply of the light source, 14-pin connector M16 for power supply and signals 4-pin connector M12x1 for Ethernet / EtherCAT
Display LEDs	receiver	Power on, Status, Speed, Link / activity
Light source		semiconductor laser 670nm (red), laser class 1M (P_{max} 2mW)
Ambient light		indirectly approx. 20,000 Lux; avoid direct incident radiation
Operation temperature		0 ... 50°C
Storage temperature		-20 ... 70°C
Protection class		IP 64 in connected condition (resp. with protection cap for Ethernet connector)
Mounting		3 through bore-holes 4.5mm / 4 thread M4 (light source / receiver)
Weight (without cable)	transmitter	322g
	receiver	273g
	mounting rail,	619g
Vibration	DIN EN 60068-2-6	2g / 20 ... 500Hz
Shock	DIN EN 60068-2-29	15g / 6ms
Measuring programs		Edge light/dark; edge dark/light (outer-) diameter/ width incl. center gap / (inner diameter) incl. center Any segment edges incl. center
Functions		averaging, filter; Threshold adjustment for transparent targets; edge detection and measurement direction reversible; current measuring value, Maximum, Minimum, Peak to Peak; edge / level / software triggering synchronization, counting function
Operation, measured value display		Web interface for parametrisation and display (incl. measurement server for transmitting multiple measuring values to the PC)

All specifications are measured at a constant temperature of 20 °C, sensor in continuous operation.

[1] Measured at static noise for 3 min, distance light source - receiver 300mm, mode: edge measurement

Technical drawing



Accessories

Art.-Nr.	description
29011002	SCD2520/90-5 digital output cable, 5m
29011003	PC/SC2520/90-5 power supply-, interface- and signal cable, 5m
2901918	PC/SC2520-3 supply-, interface- and signal cable, 3m
2901919	CE2520-1 connecting cable transmitter-receiver, 1m
2901920	CE2520-2 connecting cable transmitter-receiver, 2m
2901921	CE2520-5 connecting cable transmitter-receiver, 5m
2901922	CE2520/90-1 connecting cable transmitter-receiver, 1m
2901923	CE2520/90-2 connecting cable transmitter-receiver, 2m
2901924	CE2520/90-5 connecting cable transmitter-receiver, 5m
2901925	SCD2520-3 digital output cable, 3m
2901967	PC/SC2520-3/CSP interface and power supply cable
29011014	PC/SC2520-3/IF2008 interface and power supply cable
4321021	ODC2520-46 laser micrometer

MICRO-EPSILON

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