MICRO-EPSILON

More Precision

optoCONTROL 2520-46(090) // Optical precision micrometers
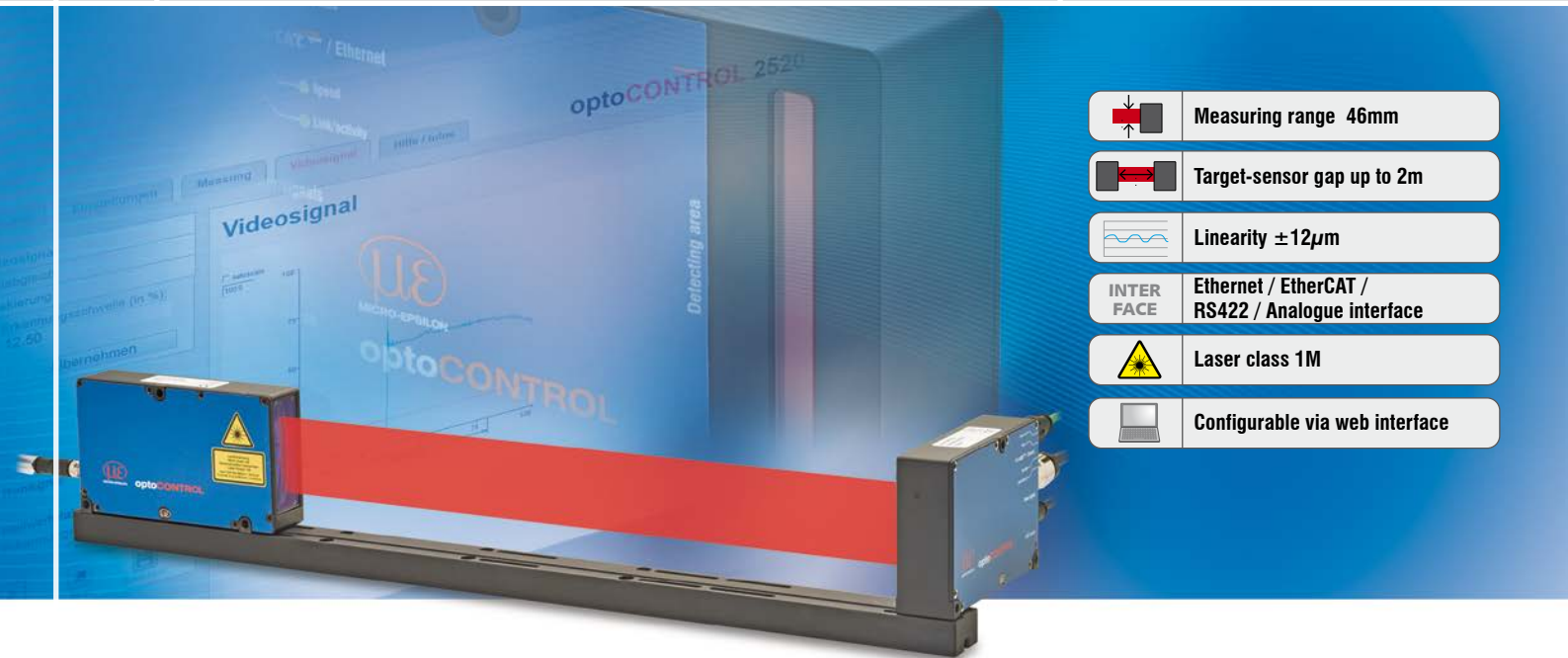
	Measuring range 46mm
	Target-sensor gap up to 2m
	Linearity ±12μm
INTER FACE	Ethernet / EtherCAT / RS422 / Analogue interface
	Laser class 1M
	Configurable via web interface

- ▸ Position target anywhere in measurement field
- ▸ Output multiple measurement values simultaneously
- ▸ Triggering and synchronisation of multiple channels
- ▸ Many filtering modes and statistical calculations
- ▸ View video signal via web browser
- ▸ Display of light and dark edges
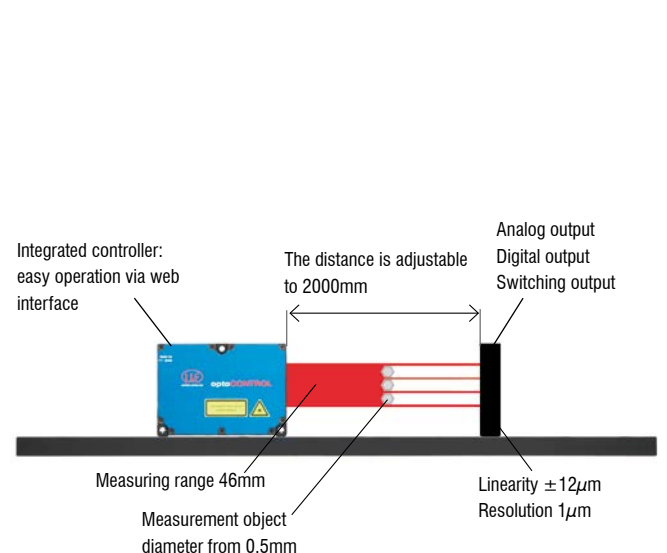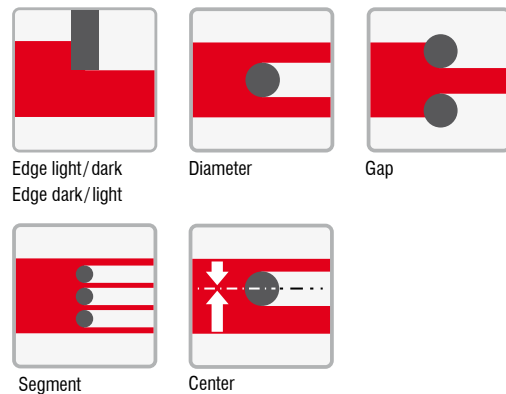- ▸ Measures up to 8 segments simultaneously

Compact multifunction micrometer with large working range

The optoCONTROL 2520 is a high performance, self contained laser micrometer with integrated controller and many programmable functions. It has a maximum measurement width of 46mm and the transmitter to receiver gap can be up to 2m (further can be achieved with reduction in measurement performance). Unlike current high accuracy micrometers, the optoCONTROL 2520 can have the target positioned at any point in the gap rather than just a small ‚working position'. This gives the user much more flexibility in use. Small objects with 0.5mm diameter can be reliably detected.

RS422, Ethernet / EtherCAT interfaces are available directly from the sensor. For analog outputs, a small DIN rail module is supplied. An intuitive web browser interface is used for viewing and recording measurement values, configuration of sensor parameters and visualisation of the sensor video signal.

Measuring modes

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

Edge light / dark
Edge dark / light

Diameter

Gap

Segment

Center

Integrated controller: easy operation via web interface

The distance is adjustable to 2000mm

Analog output
Digital output
Switching output

Measuring range 46mm

Measurement object diameter from 0.5mm

Linearity ±12μm
Resolution 1μm

Modell	ODC2520-46(090)
Measuring range	46mm
Smallest diameter or gap	typ. ≥0.5mm
Distance light source - receiver (free space)	with mounting rail 100 … 300mm; without mounting rail up to approx. 2m
Distance (target to receiver)	20mm, max. 1500 ... 2000mm [3]
Linearity (3σ) [1]	<± 12μm
Digital resolution	1μm
Repeatibility [1] [2]	≤5μm
Measuring rate	2.5kHz
Light source	semiconductor laser 670nm (red), laser class 1M (P_{max} 2mW)
Analog output	0 … 10V not electrically isolated, 14Bit D/A
Digital output	RS 422; max. 4 MBaud, full-duplex, not electrically isolated
	Ethernet, electrically isolated
	EtherCAT
Switching outputs	2 outputs, selectable for error or limit values, not electrically isolated 24V logic (HTL), High level depends to operating voltage
In-/Outputs	Zeroing / mastering, reset to factory setting; not electrically isolated, 24 V logic (HTL), High level depends to operating voltage
	TrigIn / SyncIn / symmetrical SyncOut, RS422 level, load resistance (120 Ohm) and direction switchable via software, not electrically isolated
Shock	15g / 6ms
Vibration	2g / 20 ... 500Hz
Operation temperature	0 ... 50°C
Storage temperature	-20 ... 70°C
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
Protection class receiver / light source	IP 64
Measuring programs	Edge light/dark; edge dark/light (outer-) diameter/ width incl. centre gap / (inner diameter) incl. centre Any segment edges incl. centre
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] Distance light source - receiver 300mm, distance target - receiver 20mm and 50mm, mode: edge light/dark
[2] Measured at static noise for 3min.
[3] Calibrated target positions 20/50/100/150mm

Light curtain

Light source

Mounting rail
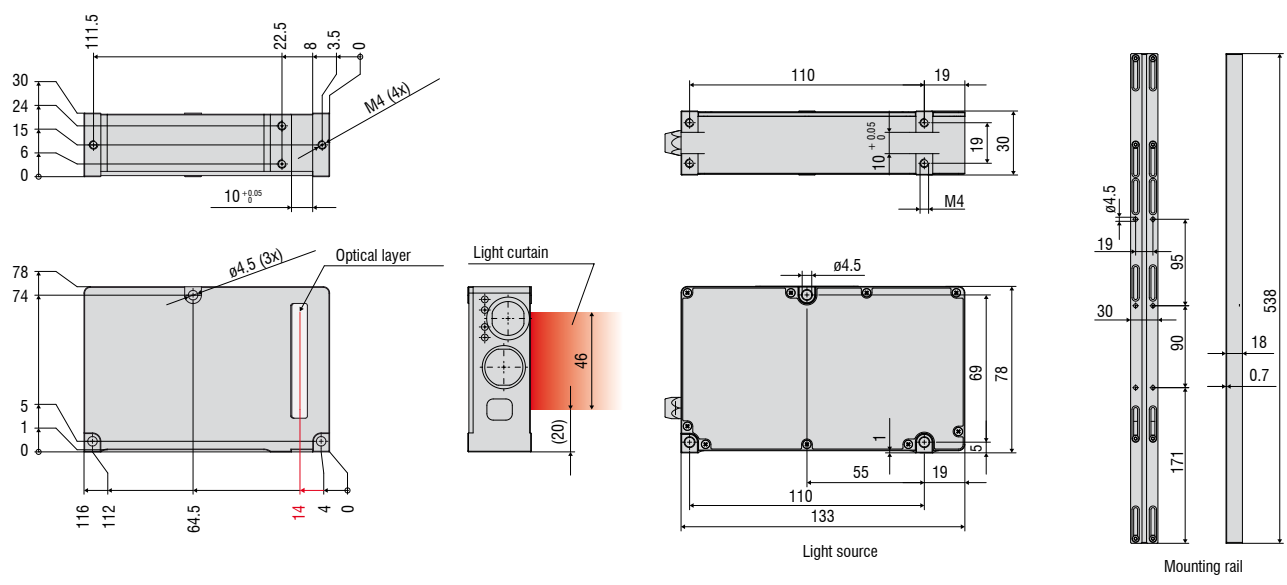
Accessories

2901925	SCD2520-3	Digital output cable, 3m, RJ45/ Ethernet/EtherCAT
29011002	SCD2520/90-5	Digital output cable, 5m, RJ45/ Ethernet/EtherCAT
29011042	SCD2520/90-8	Digital output cable, 8m, RJ45/ Ethernet/EtherCAT
29011003	PC/SC2520/90-5	Supply-, interface- and signal cable, 5m
2901918	PC/SC2520-3	Supply-, interface- and signal cable, 3m
29011037	PC/SC2520-10	Supply-, interface- and signal cable, 10m
29011038	PC/SC2520-20	Supply-, interface- and signal cable, 20m
29011039	PC/SC2520-30	Supply-, interface- and signal cable, 30m
29011040	SCD2520-5 M12	Digital output cable Ethernet/EtherCAT, 5m
2901919	CE2520-1	Connecting cable light source-receiver, 1m
2901920	CE2520-2	Connecting cable light source-receiver, 2m
2901921	CE2520-5	Connecting cable light source-receiver, 5m
2901923	CE2520/90-2	Connecting cable light source-receiver, 2m
2901924	CE2520/90-5	Connecting cable light source-receiver, 5m
2901967	PC/SC2520-3/CSP	Interface and supply cable for CSP2008
29011014	PC/SC2520-3/IF2008	Interface and supply cable for IF2008
2213024	IF2004/USB converter	4 channel RS422/USB converter
2213022	RS-422/USB converter	Industrial converter for ODC2xxx sensors, RS-422/USB
2213025	IF2001/USB converter	Single channel RS422/USB converter
0260031.10	DD241PC(10)-U	Digital process display, 0...10V
0260031.11	DD241PC(11)-U	Digital process display, 2 limit switches, 0...10V
2213017	IF2008	PCI interface card RS422
2213018	IF2008E	Expansion board analogue / RS422 / PCI
2901528	IF2008-Y adaptation cable	Adaptation cable, Y-type, 100mm
2420057	CSP2008	Universal controller for displacement sensors
6414071	Extension clamp	Extension clamp RS422 to CSP2008
6414113	EK1122/CSP2008	2 port RJ45 EtherCAT junction
6414114	EK1100/CSP2008	Bus terminal

Digital display on request