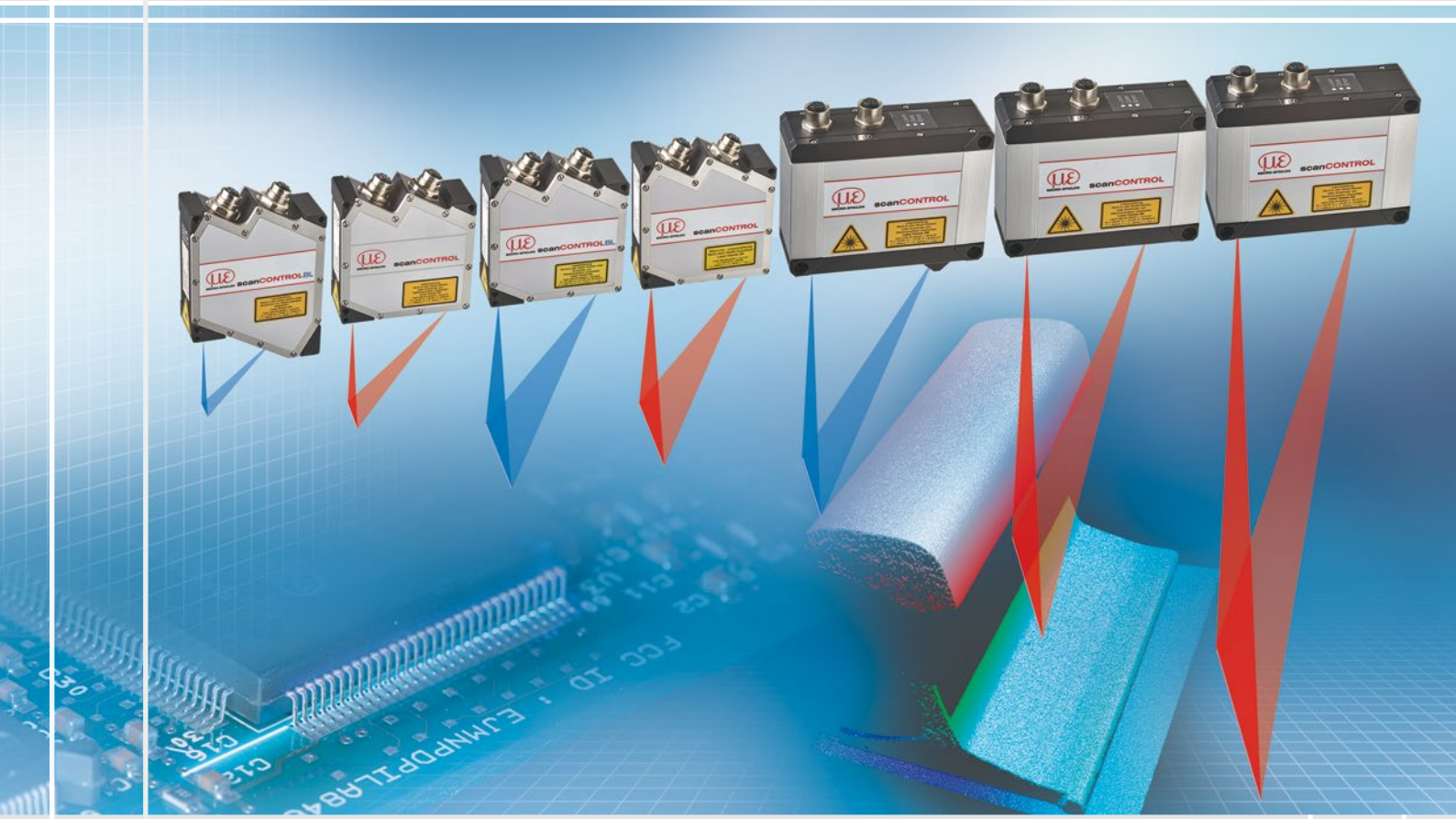
MICRO-EPSILON

More Precision

scanCONTROL // 2D/3D Laser profile sensors



Precise profile measurements for industrial measurement tasks

Resolution (x-axis) 1,024 points

Profile frequency 5,000 Hz

For small and large measuring ranges

Also available with patented Blue Laser Technology

Article designation

LLT	30	xx	-25	/SI

Options - see below

Measuring range
25 mm
50 mm
100 mm
200 mm

Class
02 = COMPACT
12 = SMART

Series
LLT30xx

Laser options*

/SI	Hardware switch-off of the laser line
/3R	Increased laser power (class 3R) e.g., for dark surfaces
/BL	Blue laser line (405 nm) for (semi-) transparent, red-hot glowing and organic materials

Cable output options*

/PT	Cable directly out of the sensor ("Pigtail") Available lengths: 0.3 / 0.6 / 1 m
/ST	1 cable directly out of the sensor ("Single Tail"), no multi-function port Available lengths: 0.3 / 0.6 / 1.00 m

*Options can be combined

Precise 2D/3D profile measurements

The new LLT30x2 laser profile scanners provide calibrated profile data with up to 5.12 million points per second. They allow profile frequencies up to 5 kHz and resolutions up to 1,024 points. Thanks to their high accuracy and versatility, the scanners are particularly suitable for static and dynamic applications as well as robotic applications They measure and evaluate, e. g., angles, steps, gaps, distances, and circles.

Available as COMPACT and SMART versions

The scanCONTROL 30x2 series is available as COMPACT and SMART versions. The COMPACT scanners provide calibrated profile data that can be further processed on a PC with software evaluation provided by the customer. SMART scanners operate autonomously and provide selected measurement values. The scanCONTROL 30x2 series supports all SMART functions and programs that are set in the scanCONTROL Configuration Tools software and directly stored in the internal controller.

The easy way of machine integration

The design of the LLT30x2 series is compact and lightweight. The controller is integrated in the sensor itself, which simplifies mechanical integration. The measurement data can be output directly.

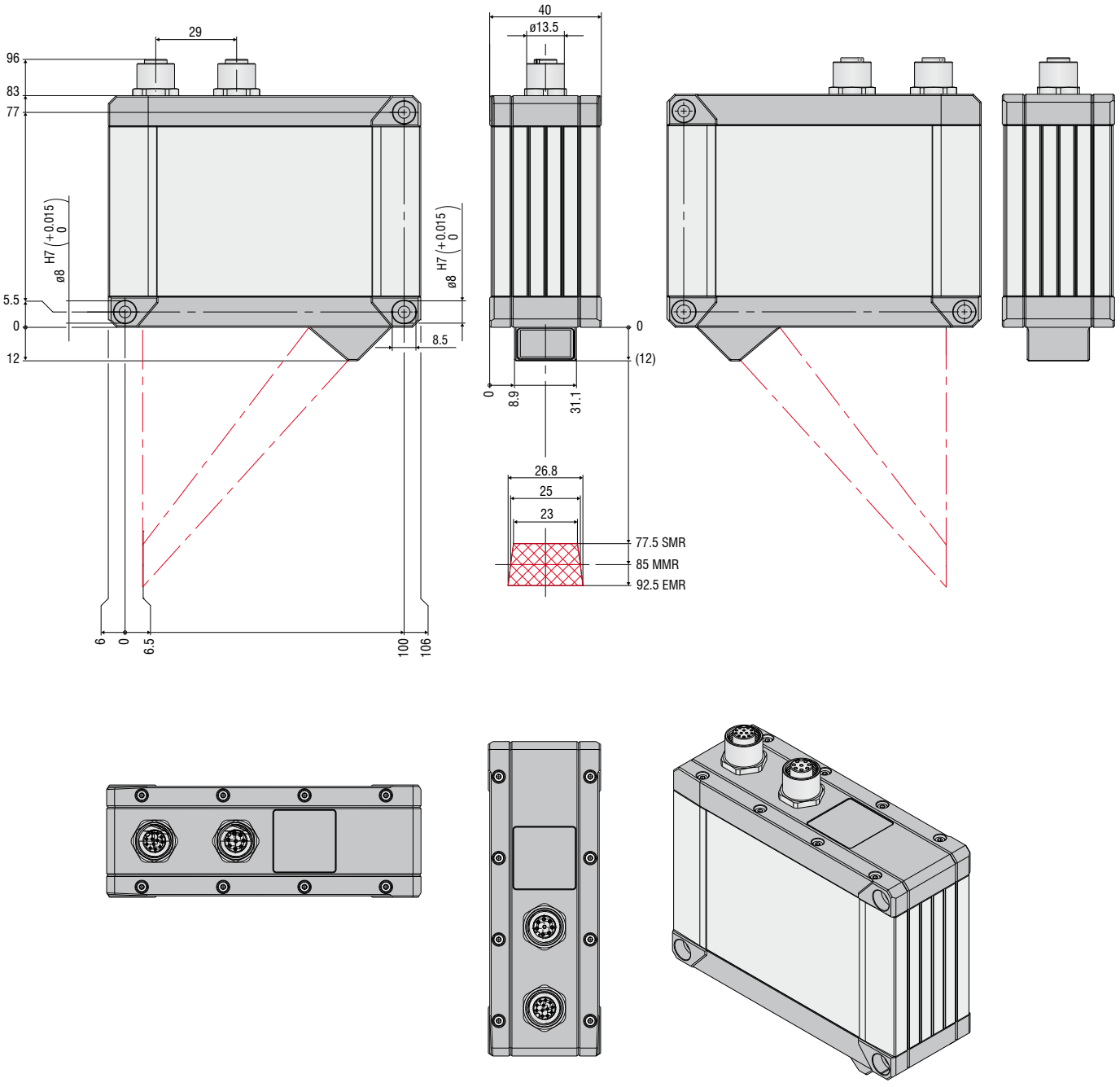
Accessories from page 38

	Model		LLT 30x2-25	LLT 30x2-50	LLT 30x2-100	LLT 30x2-200
	Available laser type		Red Laser / Blue Laser	Red Laser / Blue Laser	Red Laser / Blue Laser	Red Laser
z-axis	Measuring range	Start of measuring range	77.5 mm	105 mm	200 mm	200 mm
		Mid of measuring range	85 mm	125 mm	270 mm	310 mm
		End of measuring range	92.5 mm	145 mm	340 mm	420 mm
		Height of measuring range	15 mm	40 mm	140 mm	220 mm
	Extended measuring range	Start of measuring range	-	-	190 mm	160 mm
		End of measuring range	-	-	360 mm	460 mm
	Max. deviation of a single point [1] (2 sigma)	Red Laser	±0.09 %	±0.09 %	±0.08 %	±0.12 %
		Blue Laser	±0.08 %	±0.08 %	±0.07 %	-
	Line linearity [1] [2]		2 µm	4 µm	10 µm	30 µm
			±0.013 %	±0.01 %	±0.007 %	±0.014 %
x-axis	Measuring range	Start of measuring range	23 mm	43.3 mm	75.6 mm	130 mm
		Mid of measuring range	25 mm	50 mm	100 mm	200 mm
		End of measuring range	26.8 mm	56.5 mm	124.4 mm	270 mm
	Extended measuring range	Start of measuring range	-	-	72.1 mm	100 mm
		End of measuring range	-	-	131.1 mm	290 mm
	Resolution		1,024 points/profile			
	Profile frequency		up to 5,000 Hz			
	Interfaces	Ethernet GigE Vison	Output of measurement values Sensor control Profile data transmission			
		Digital inputs	Mode switching Encoder (counter) Trigger			
		RS422 (half-duplex) [3]	Output of measurement values Sensor control Trigger Synchronization			
	Output of measurement values		Ethernet (UDP / Modbus TCP); RS422 (ASCII / Modbus RTU) analog [4]; switch signal [4] PROFINET [5]; EtherCAT [5]; EtherNet/IP [5]			
	Control and display elements		3x color LEDs for laser, data and error			
	Light source	Red Laser	≤ 10 mW			≤ 12 mW
			Standard: laser class 2M, semiconductor laser 658 nm			
			≤ 30 mW		≤ 50 mW	
			Option: laser class 3R, semiconductor laser 658 nm			
		Blue Laser	≤ 10 mW			-
			Standard: laser class 2M, semiconductor laser 405 nm			-
		Laser switch-off	via software, hardware switch-off with /SI option			
	Aperture angle of laser line		23°	28°	30°	45°
	Permissible ambient light (fluorescent light) [1]		10,000 lx			
	Protection class (DIN EN 60529)		IP67 (when connected)			
	Vibration (DIN EN 60068-2-27)		2 g / 20 … 500 Hz			
	Shock (DIN EN 60068-2-6)		15 g / 6 ms			
	Temperature range	Storage	-20 … +70 °C			
		Operation	0 … +45 °C			
	Weight		415 g (without cable)			
	Supply voltage		11 … 30 VDC, nominal value 24 V, 500 mA, IEEE 802.3af class 2, Power over Ethernet (PoE)			

[1] According to measuring range; Measuring object: Micro-Epsilon standard object
[2] According to a one-time averaging across the measuring field (1,024 points)
[3] RS422 interface, programmable either as serial interface or as input for triggering/synchronization
[4] Only with 2D/3D Output Unit
[5] Only with 2D/3D Gateway

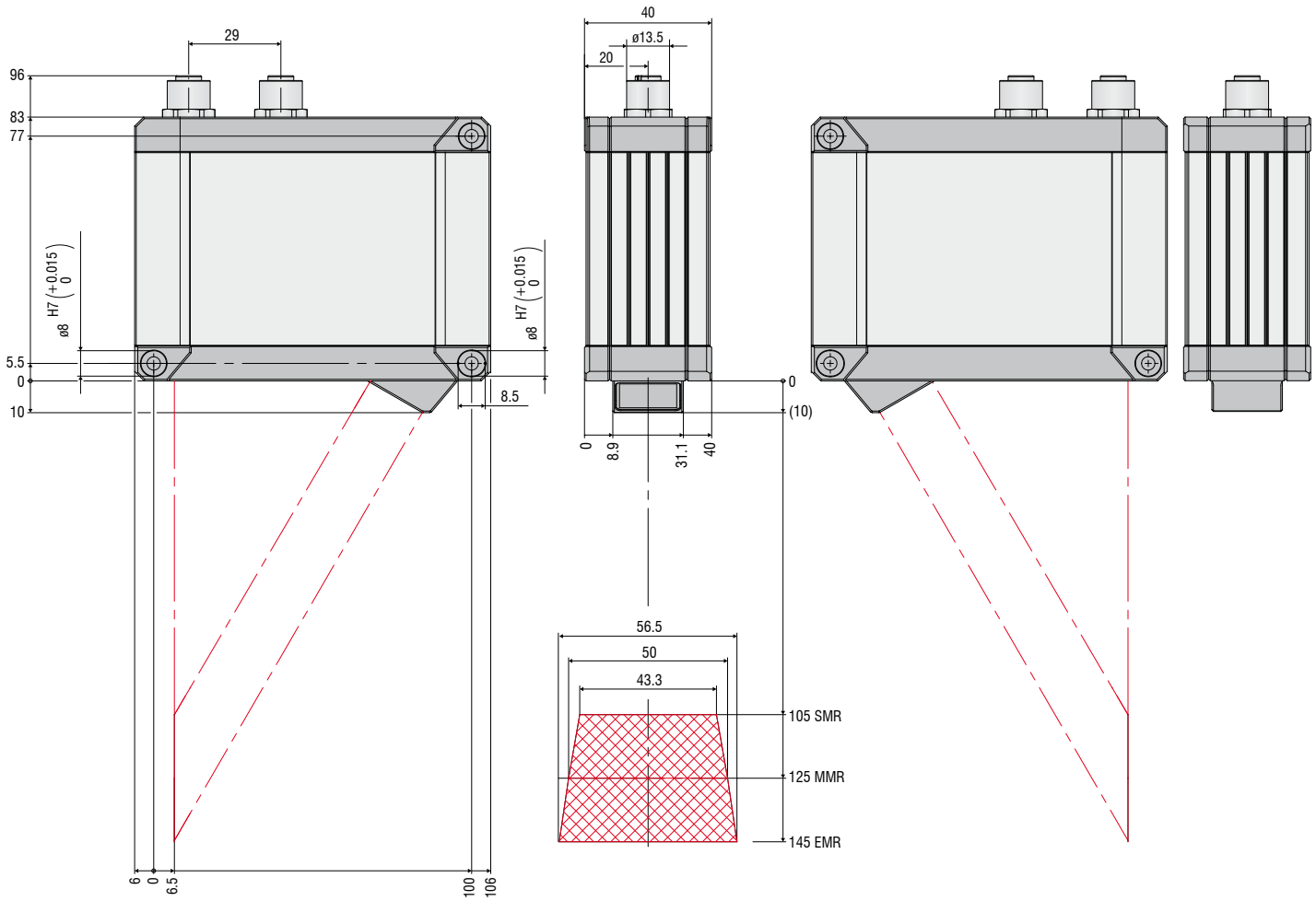
LLT30x2-25 / LLT30x0-25

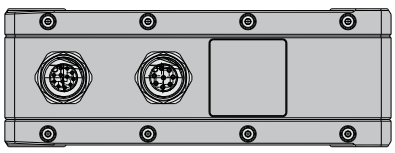
Red Laser Blue Laser

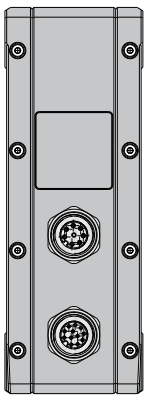


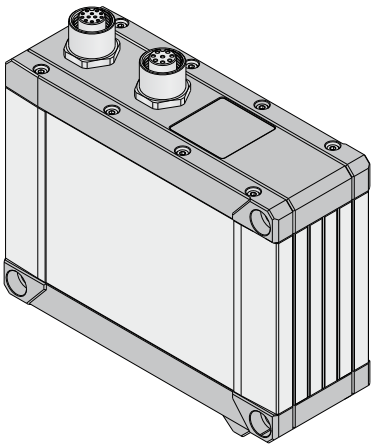
LLT30x2-50 / LLT30x2-50

Red Laser Blue Laser



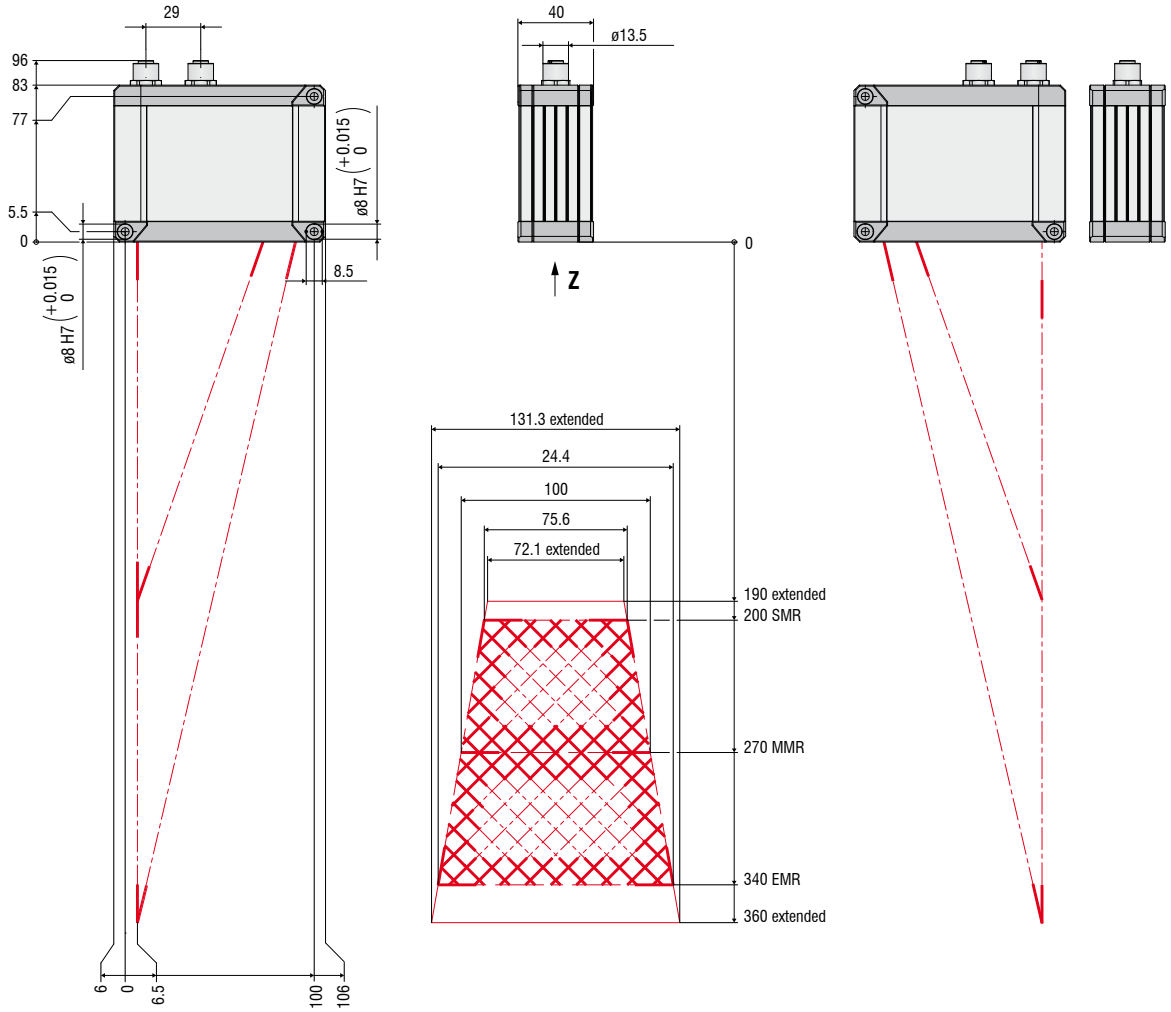


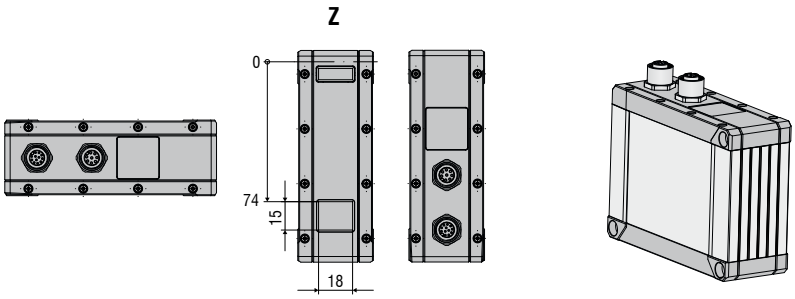




LLT30x2-100 / LLT30x0-100

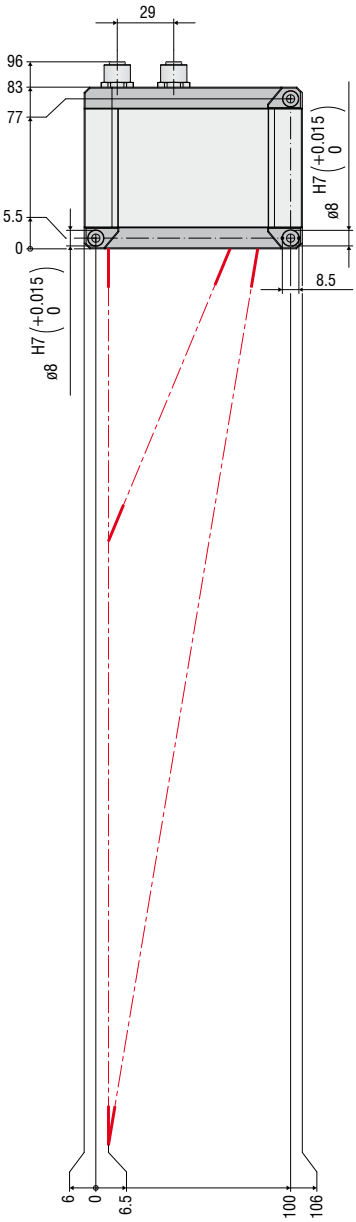
Red Laser Blue Laser

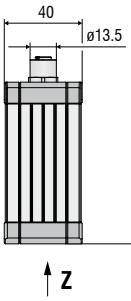


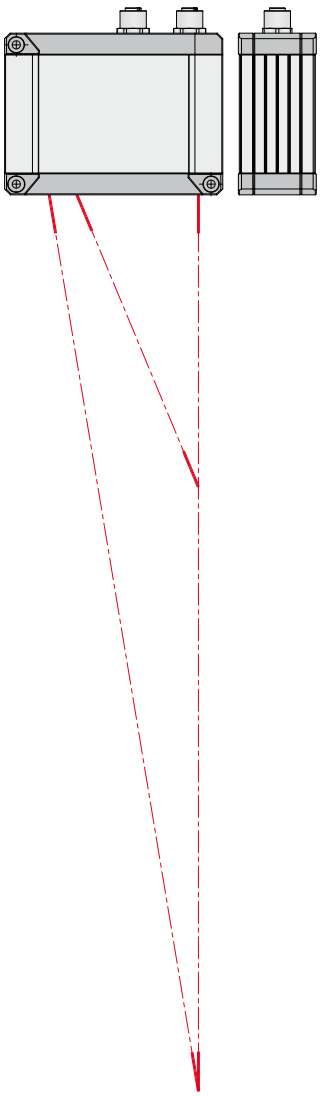


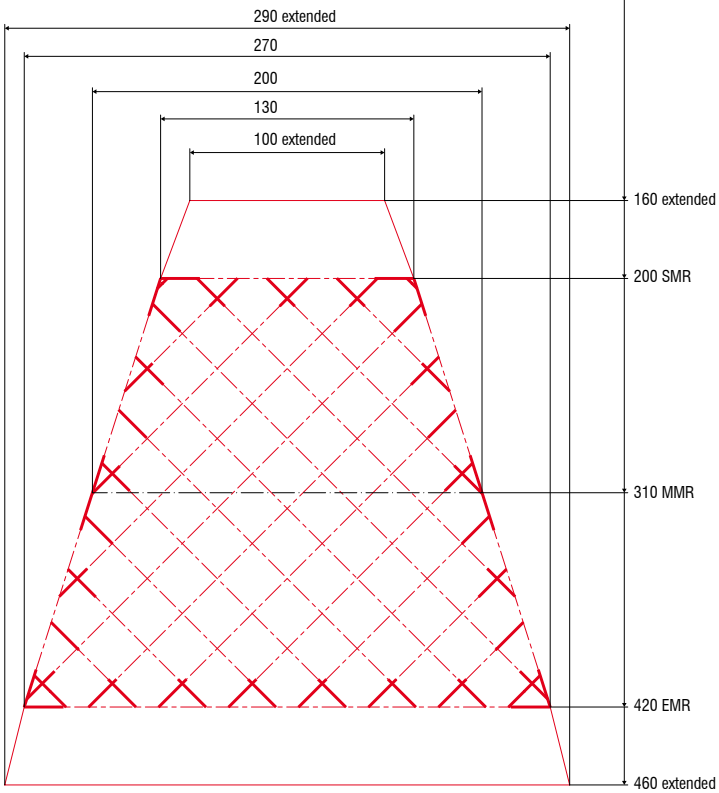
LLT30x2-200 / LLT30x0-200

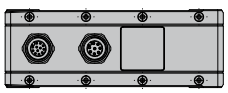
Red Laser

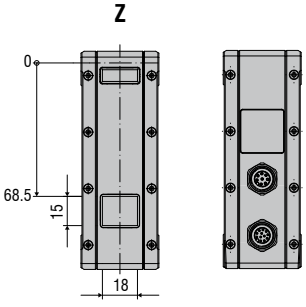


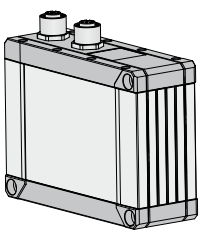












Sensors and Systems from Micro-Epsilon

Sensors and systems for displacement, position and dimension

Sensors and measurement devices for non-contact temperature measurement

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Optical micrometers, fiber optics, measuring and test amplifiers

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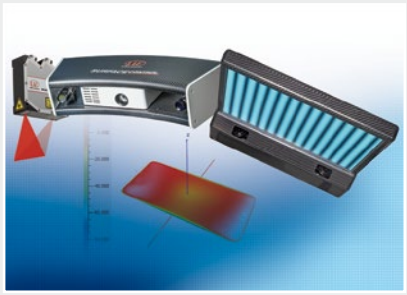

3D measurement technology for dimensional testing and surface inspection

MICRO-EPSILON

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