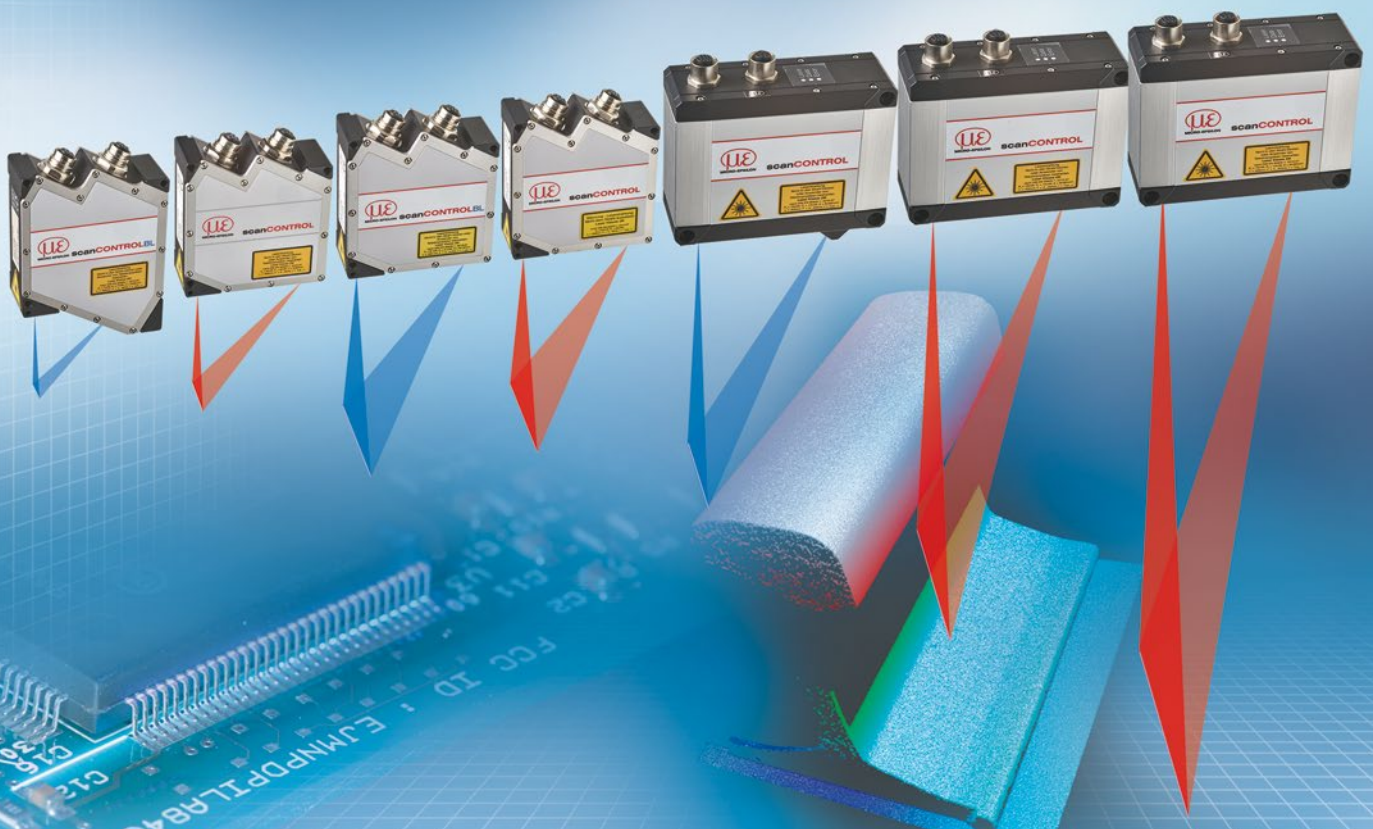




# More Precision

scanCONTROL // 2D/3D Laser profile sensors





Ideal for industrial series applications in production line & automation

Resolution (x-axis) 640 points

High signal stability

Also available with patented Blue Laser Technology

**Ideal for series applications**

scanCONTROL 25x0 laser scanners are designed for industrial measurement tasks. Thanks to their high signal stability, versatility and excellent price-performance ratio, the scanners are particularly suitable for measurement tasks involving large quantities. They measure and evaluate, e.g., angles, steps, gaps, distances and extreme values. Due to their compact design and low weight, these scanners are also suitable for applications with high accelerations, such as on robots.

**Available as COMPACT and SMART versions**

The scanCONTROL 25x0 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 sensor parameters and the desired measuring programs are set in the scanCONTROL Configuration Tools software and directly stored in the internal controller.


**Ideal for production and machine monitoring**

The scanCONTROL 25x0 laser scanners are available with three measuring ranges with red or blue laser. Optional accessories, cable types and interface modules allow a wide range of applications in the production line and in machine building.


**Article designation**

LLT	25	00	-25	/PT
Options - see below				
<b>Measuring range</b>				
25 mm				
50 mm				
100 mm				
<b>Class</b>				
00=COMPACT				
10=SMART				
<b>Series</b>				
LLT25x0				

**Laser options\***

	/SI	Hardware switch-off of the laser line
	/3B	Increased laser power (class 3B, ≤ 20 mW), 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") Length 0.25 m
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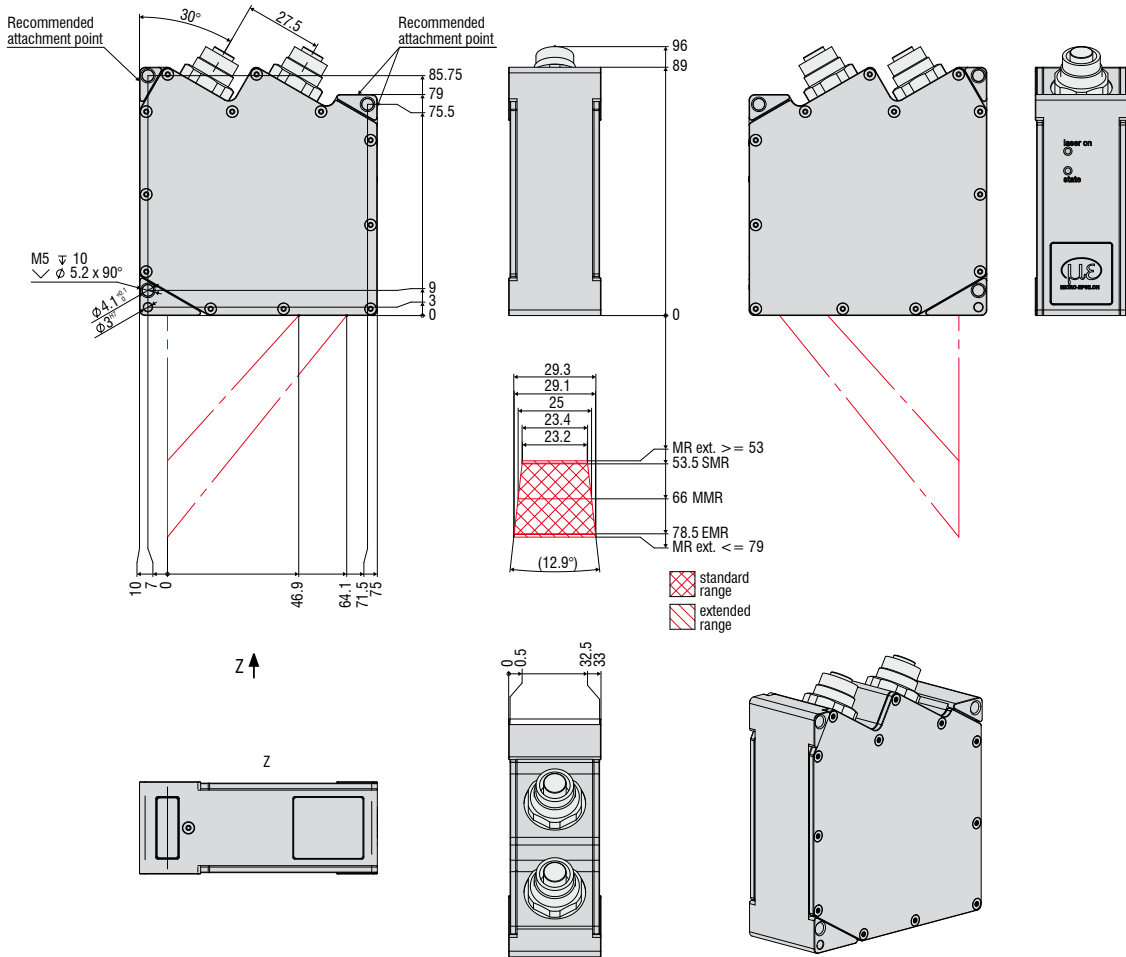
\*Options can be combined

Model		LLT 25xx-25	LLT 25xx-50	LLT 25xx-100	
Available laser type		<span style="color: red;">Red Laser</span> <span style="color: blue;">Blue Laser</span>	<span style="color: red;">Red Laser</span> <span style="color: blue;">Blue Laser</span>	<span style="color: red;">Red Laser</span> <span style="color: blue;">Blue Laser</span>	
z-axis	Measuring range	Start of measuring range	53.5 mm	70 mm	190 mm
		Mid of measuring range	66 mm	95 mm	240 mm
		End of measuring range	78.5 mm	120 mm	290 mm
		Height of measuring range	25 mm	50 mm	100 mm
	Extended measuring range	Start of measuring range	53 mm	65 mm	125 mm
		End of measuring range	79 mm	125 mm	390 mm
	Max. deviation of a single point <sup>1)</sup>	(2 sigma)	±0.10 %	±0.10 %	±0.10 %
Line linearity <sup>1)2)</sup>		2 μm	4 μm	12 μm	
		±0.008 %	±0.008 %	±0.012 %	
x-axis	Measuring range	Start of measuring range	23.4 mm	42 mm	83.1 mm
		Mid of measuring range	25 mm	50 mm	100 mm
		End of measuring range	29.1 mm	58 mm	120.8 mm
	Extended measuring range	Start of measuring range	23.2 mm	40 mm	58.5 mm
		End of measuring range	29.3 mm	60 mm	143.5 mm
Resolution		640 points/profile			
Profile frequency		up to 2,000 Hz			
Interfaces	Ethernet GigE Vison	Output of measurement values Sensor control Profile data transmission			
	Digital inputs	Mode switching Encoder (counter) Trigger			
	RS422 (half-duplex) <sup>3)</sup>	Output of measurement values Sensor control Trigger Synchronization			
Output of measurement values		Ethernet (UDP / Modbus TCP); RS422 (ASCII / Modbus RTU) analog <sup>4)</sup> ; switch signal <sup>4)</sup> PROFINET <sup>5)</sup> ; EtherCAT <sup>5)</sup> ; EtherNet/IP <sup>5)</sup>			
Control and display elements		3x color LEDs for laser, data and error			
Light source		≤ 8 mW			
	<span style="color: red;">Red Laser</span>	Standard: laser class 2M, semiconductor laser 658 nm			
		≤ 20 mW			
		Option: laser class 3B, semiconductor laser 658 nm			
	<span style="color: blue;">Blue Laser</span>	≤ 8 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		20°	25°	25°	
Permissible ambient light (fluorescent light) <sup>1)</sup>		10,000 lx			
Protection class (DIN EN 60529)		IP65 (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		380 g (without cable)			
Supply voltage		11 ... 30 VDC, nominal value 24 V, 500 mA, IEEE 802.3af class 2, Power over Ethernet (PoE)			

<sup>1)</sup> According to measuring range; Measuring object: Micro-Epsilon standard object  
<sup>2)</sup> According to a one-time averaging over the width of the measuring field (640 points)  
<sup>3)</sup> RS422 interface, programmable either as serial interface or as input for triggering/synchronization  
<sup>4)</sup> Only with 2D/3D Output Unit  
<sup>5)</sup> Only with 2D/3D Gateway

LLT25x0-25 / LLT29x0-25

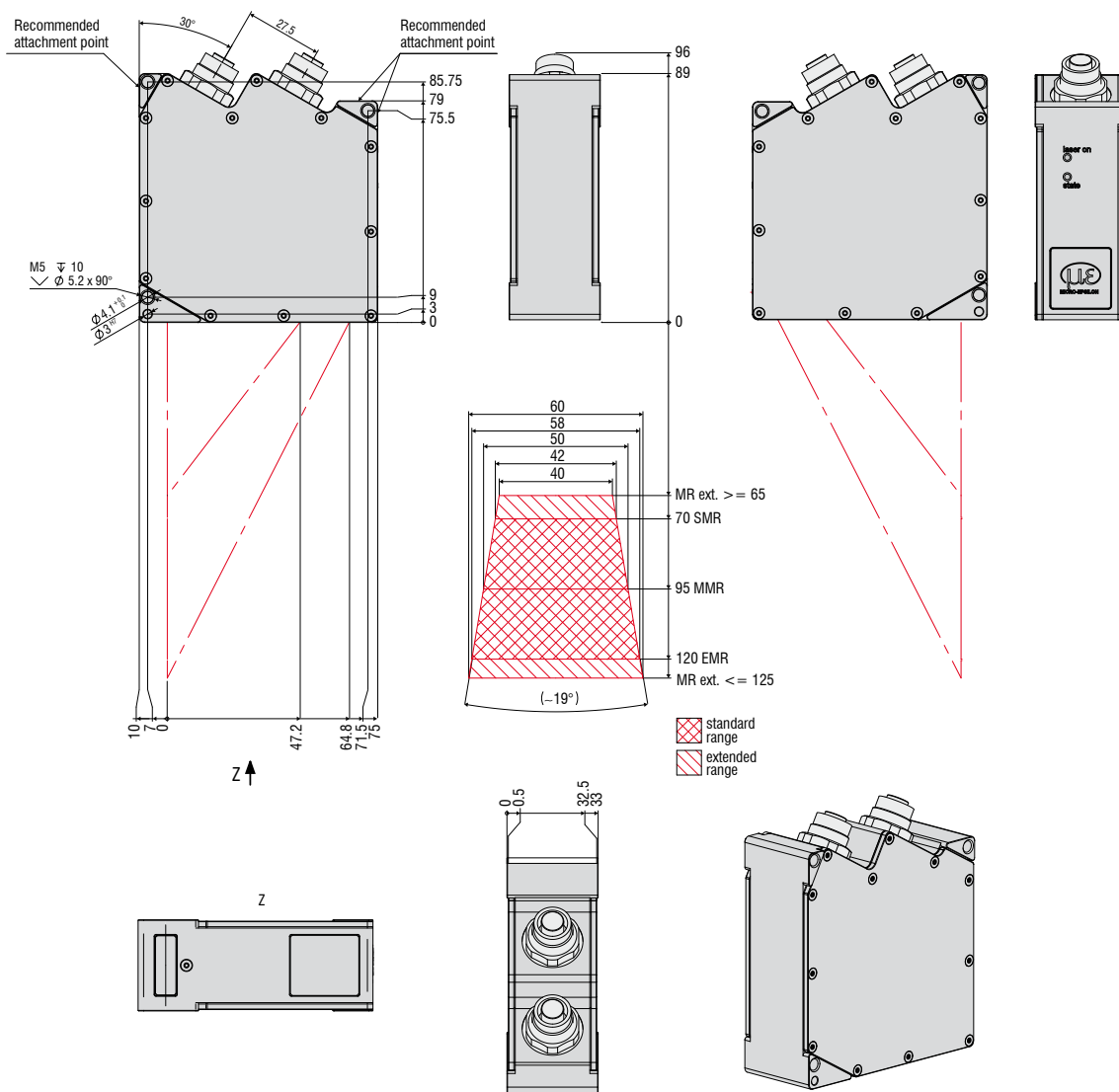
Red Laser Blue Laser



LLT25x0-50 / LLT29x0-50

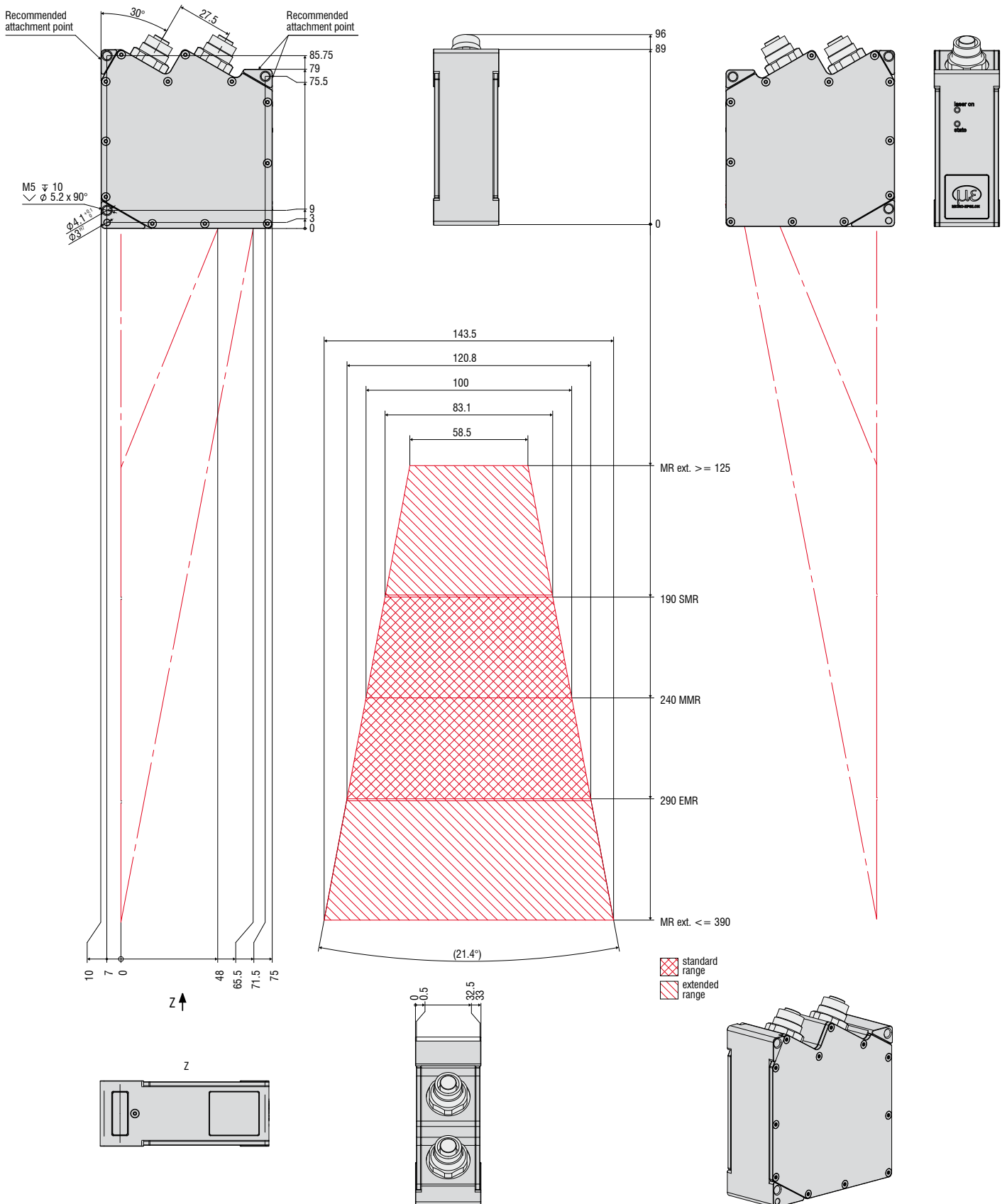
Red Laser

Blue Laser



# LLT25x0 / LLT29x0-100

Red Laser Blue Laser



## Sensors and Systems from Micro-Epsilon



Sensors and systems for displacement, position and dimension



Sensors and measurement devices for non-contact temperature measurement



Measuring and inspection systems for quality assurance



Optical micrometers, fiber optics, measuring and test amplifiers



Color recognition sensors, LED Analyzers and inline color spectrometers



3D measurement technology for dimensional testing and surface inspection

