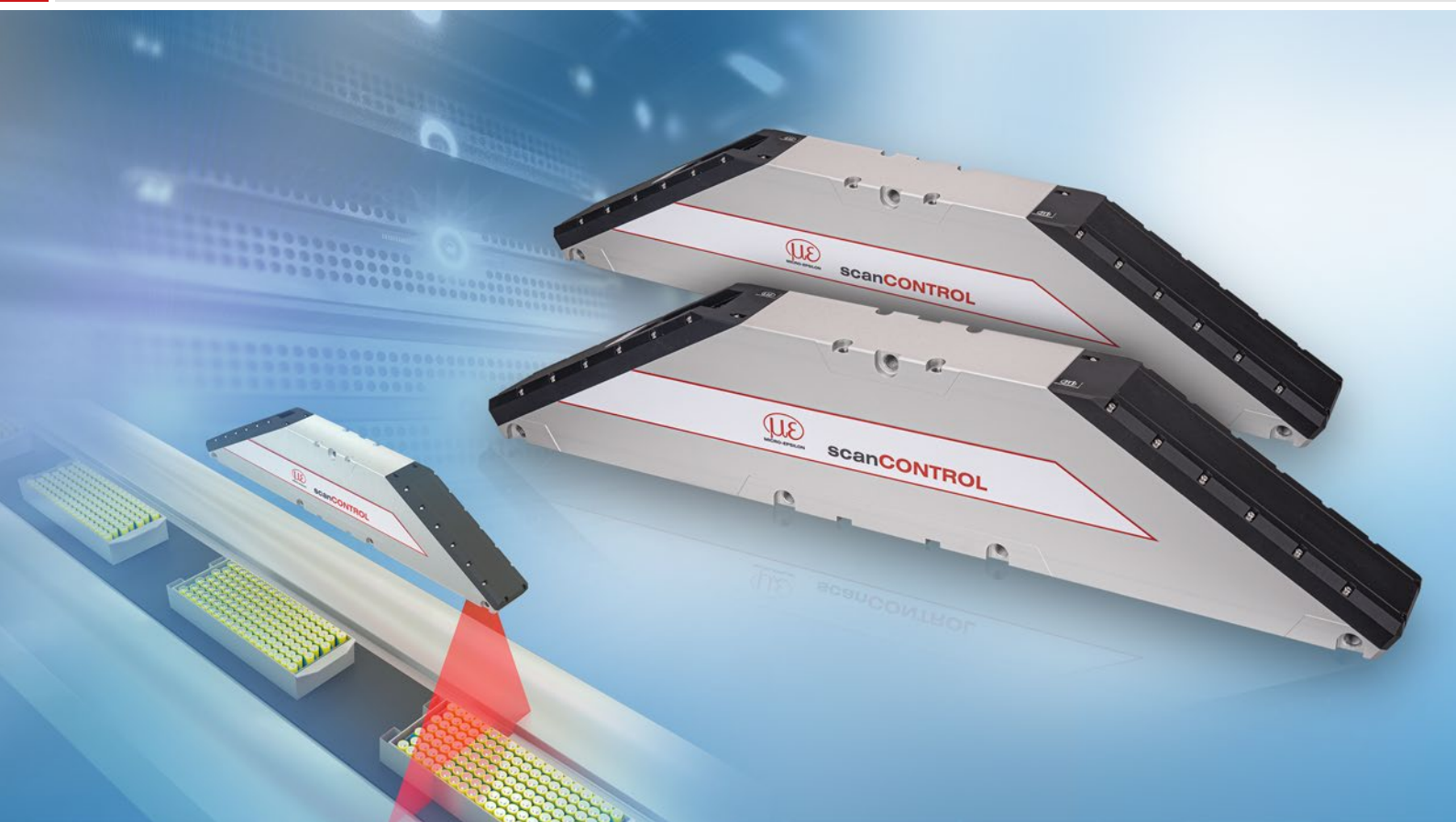




# More Precision

**scanCONTROL 30x0-430 / -600** // High performance laser scanner



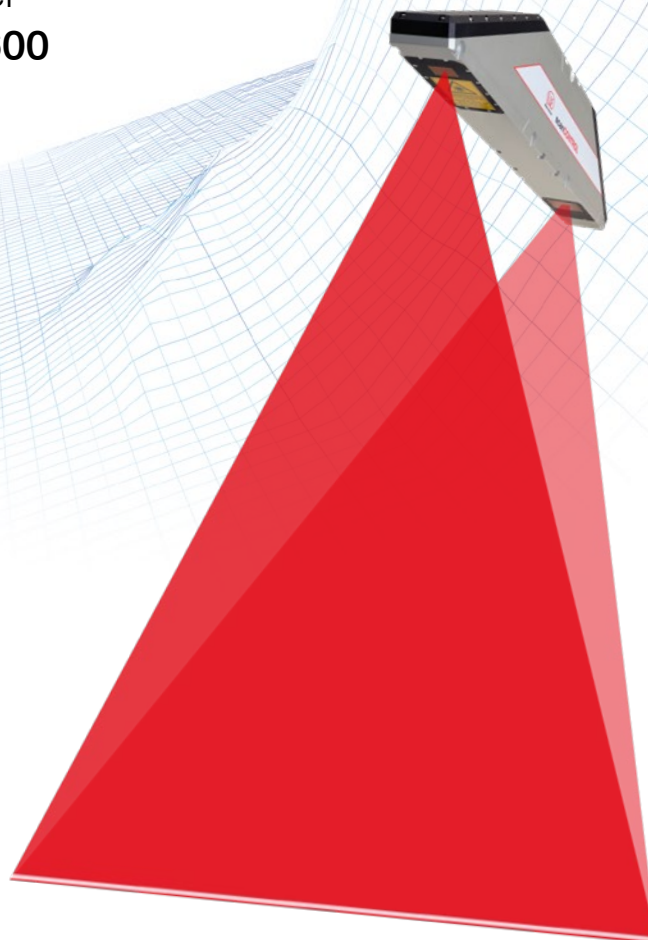
# High performance laser scanner scanCONTROL 30x0-430 / -600

Precise profile measurements for industrial measurement tasks

Resolution x-axis 2,048 points

Profile frequency 10,000 Hz

Large measuring range up to 760 mm



## Wide portfolio of measuring ranges

Laser profile scanners from Micro-Epsilon are among the highest performing profile sensors with respect to accuracy and measuring rate. In addition, all common measuring ranges from 10 up to 600 mm are available in the current portfolio. The different measuring ranges enable on the one hand the precise detection of the finest details, and on the other hand, the measurement of large objects at a large offset distance. Today, a laser profile scanner with a large measuring range is able to cover as much as several sensors of older generations together used to.

## Fast and precise 2D/3D profile measurements

The new LLT30x0 laser profile scanners provide calibrated profile data with up to 9.6 million points per second. Thanks to their high accuracy, high profile frequency and versatility, these powerful scanners are suitable for demanding measurement tasks. They measure and evaluate, e.g., angles, steps, gaps, distances and circles with high precision. These sensors also offer predefined operating modes that enable optimal results for various applications.

## Innovative exposure control to master difficult surfaces

On inhomogeneous or dark surfaces, the HDR (High Dynamic Range) data acquisition mode and the improved auto exposure optimizes the measurement results. In HDR mode, the rows of the sensor matrix are exposed differently but at the same time which avoids time offsets between the recordings. This is how moving objects can be detected reliably. The areas for auto exposure can be selected individually.

## Article designation

LLT	30	xx	-430	/SI
Options - see below				
<b>Measuring range</b>				
430 mm				
600 mm				
<b>Class</b>				
00 = COMPACT				
10 = SMART				
<b>Series</b>				
LLT30xx				

## Laser options

/SI	Hardware switch-off of the laser line
/3R	Increased laser power (class 3R) e.g., for dark surfaces

## Cable outlet options

/PT	Cable directly out of the sensor ("Pigtail") Available lengths: 0.3 / 0.6 / 1.00 m
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Model		LLT 30x0-430	LLT 30x0-600	
z-axis	Measuring range	Start of measuring range	330 mm	530 mm
		Mid of measuring range	515 mm	770 mm
		End of measuring range	700 mm	1010 mm
		Height of measuring range	370 mm	480 mm
	Extended measuring range	Start of measuring range	330 mm	450 mm
		End of measuring range	720 mm	1060 mm
	Line linearity <sup>1) 2)</sup>		12 $\mu$ m $\pm 0.0032$ %	15 $\mu$ m $\pm 0.0031$ %
x-axis	Measuring range	Start of measuring range	324 mm	456 mm
		Mid of measuring range	430 mm	600 mm
		End of measuring range	544 mm	762 mm
	Extended measuring range	Start of measuring range	324 mm	408 mm
		End of measuring range	560 mm	788 mm
	Resolution		2,048 points/profile	
Profile frequency		up to 10,000 Hz		
Interfaces	Ethernet GigE Vision	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 indicator elements		3x color LEDs for laser, data and error		
Light source	Laser		$\leq 26$ mW	
			Standard: laser class 2M, semiconductor laser 660 nm	
			$\leq 100$ mW	
	Laser switch-off		Option: laser class 3R, semiconductor laser 660 nm via software, hardware switch-off with /SI option	
Aperture angle of laser line		60 °		
Permissible ambient light (fluorescent light) <sup>1)</sup>		5,000 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		2630 g (without cable)		
Supply voltage		11 ... 30 VDC, nominal value 24 V, 500 mA, IEEE 802.3af class 2, Power over Ethernet (PoE)		
Connections		sockets, cable outlets on top (/PT)		

<sup>1)</sup> Based on the measuring range; measuring object: Micro-Epsilon standard object

<sup>2)</sup> According to a one-time averaging over the measuring field (2,048 points)

<sup>3)</sup> RS422 interface, programmable either as serial interface or as input for triggering/synchronization

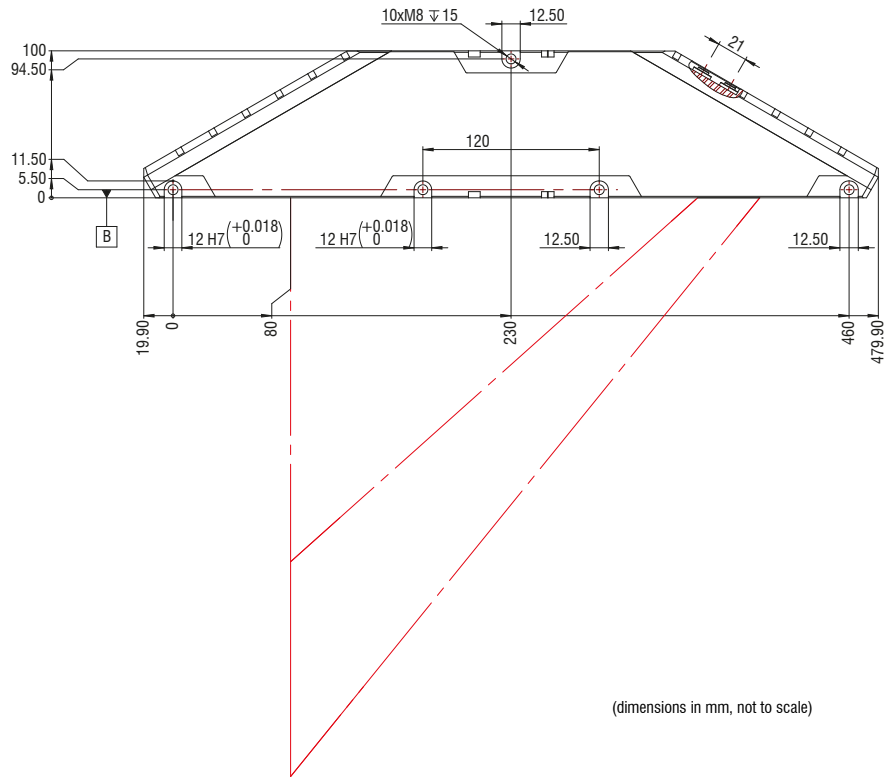
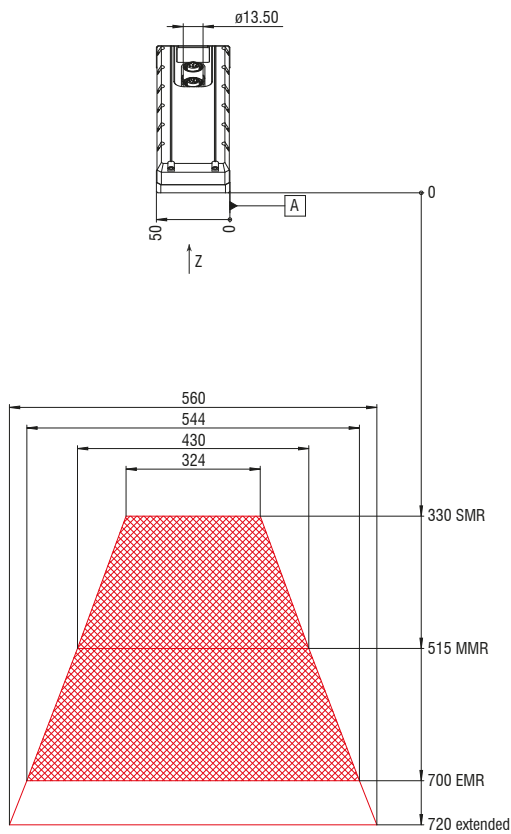
<sup>4)</sup> Only with 2D/3D Output Unit

<sup>5)</sup> Only with 2D/3D Gateway

# Technical drawings

## scanCONTROL 30x0-430 / -600

Dimensional drawing scanCONTROL 30xx-430



Dimensional drawing scanCONTROL 30xx-600

