



More Precision

scanCONTROL 30xx-25/BL // Laser scanner with blue laser line



High-performance laser scanner with blue laser line

scanCONTROL 30xx-25/BL



- Measuring rate
up to 5,500,000 points/sec
- Measurement speed up to 10 kHz
- Resolution (x-axis) up to 2,048 points
- Selectable operating modes
- Blue laser for sharp profile projection

Achieve precise 2D profile data quickly

scanCONTROL laser scanners are among the highest performing laser profile sensors in the world in terms of their size, accuracy and measuring rate. The latest LLT30xx/BL laser profile scanner series provides calibrated 2D profile data with up to 5.5 million points per second. The high-resolution sensor matrix with 2,048 points achieves a point distance of just 12 μm . Measuring across the entire width of the measuring field is possible at up to 2.7 kHz, with reduced operation up to 10 kHz can be achieved.

The scanCONTROL 30xx/BL laser profile scanners are equipped with a blue-violet laser diode. Particularly with semi-transparent measurement objects, the blue laser offers high signal stability.

The easy way of machine integration

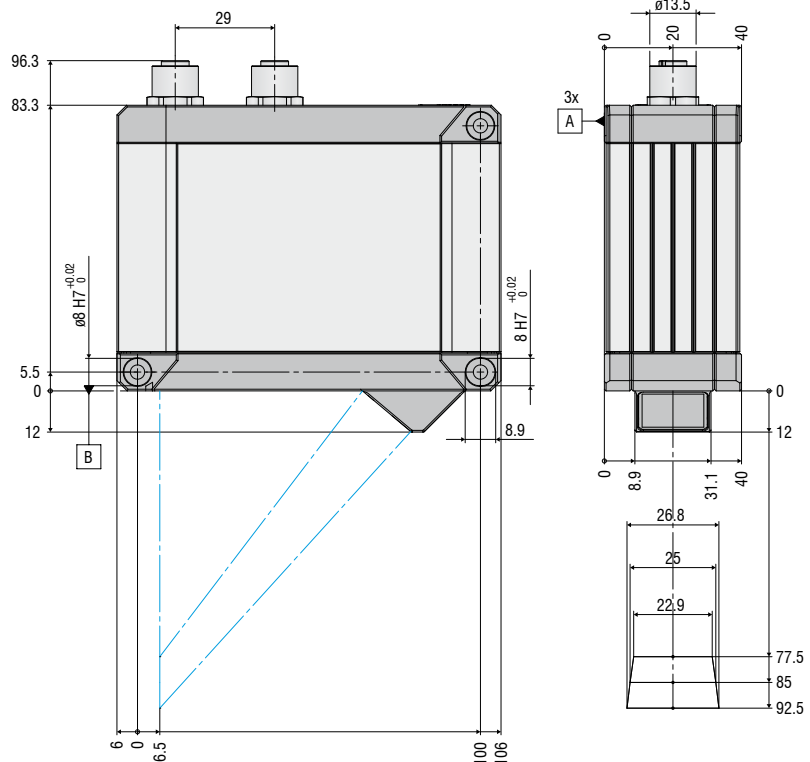
The design of the LLT30xx/BL series is compact and lightweight. The controller is integrated in the sensor itself, which simplifies mechanical integration. Numerous interfaces such as digital switch signals, Ethernet, PROFINET, EtherNet/IP or EtherCAT allow for measured data to be output directly.

Innovative exposure control to master difficult surfaces

On inhomogeneous or dark surfaces, optimize your measurement results with the HDR (High Dynamic Range) data acquisition 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 to be exposed in HDR mode can be selected individually.

Top performances with selectable operating modes

Choose from three predefined operating modes for your specific measurement task: "High-Resolution" for maximum precision, "High Dynamic Range" for optimal profile detection on difficult surfaces and "High Speed" for ultra-fast measurements.





Model		LLT30xx-25/BL
Z-axis	Start of measuring range	77.5 mm
	Measuring range (standard)	85 mm
	End of measuring range	92.5 mm
	Height of measuring range	15 mm
Linearity ¹⁾	(2 sigma)	±0.06 % FSO
X-axis	Start of measuring range	22.9 mm
	Measuring range (standard)	25 mm
	End of measuring range	26.8 mm
Resolution (x-axis)		2,048 points/profile
Profile frequency	COMPACT / SMART	up to 300 Hz
	HIGHSPEED	up to 10,000 Hz
Interfaces	Ethernet GigE Vison	Output of measurement values Sensor control Profile data transmission
	Digital inputs	Mode switching Encoder (counter) Trigger
	RS422 (half-duplex) ⁴⁾	Output of measurement values Sensor control Trigger Synchronization
Output of measurement values		Ethernet (UDP / Modbus TCP); RS422 (ASCII / Modbus RTU) analog ⁵⁾ ; switch signal ⁵⁾ PROFINET ⁶⁾ ; EtherCAT ⁶⁾ ; EtherNet/IP ⁶⁾
Display (LED)		1 x Laser ON/OFF, 1 x Data, 1 x Error
Light source		semiconductor laser 405 nm (blue)
Laser power		≤ 10 mW (laser class 2M)
Laser switch-off		via software, hardware switch-off with /SI option
Permissible ambient light (fluorescent light) ²⁾		10,000 lx
Protection class (sensor)		IP67 (when connected)
EMC requirements		according to DIN EN 61000-6-2: 2005, DIN EN61000-6-3: 2007, DIN EN61326-1:2013 and DIN EN50581:2012
Vibration		2 g / 20 ... 500 Hz
Shock		15 g / 6 ms
Operating temperature		0 ... +45 °C
Storage temperature		-20 ... +70 °C
Dimensions		108.3 x 112 x 40mm
Sensor weight (without cable)		415 g
Power supply		11 ... 30 VDC, nominal value 24 V, 500 mA, IEE 802.3af class 2, Power over Ethernet

FSO = Full Scale Output

¹⁾ Measuring range (standard)

²⁾ Measurement object: Micro-Epsilon standard object

³⁾ according to a one-time averaging across the measuring field (2,048 points)

⁴⁾ RS422 interface, programmable either as serial interface or as input for triggering/synchronization

⁵⁾ only with Output Unit

⁶⁾ only with scanCONTROL Gateway

Sensors and Systems from Micro-Epsilon



Sensors and systems for displacement, distance and position



Sensors and measurement devices for non-contact temperature measurement



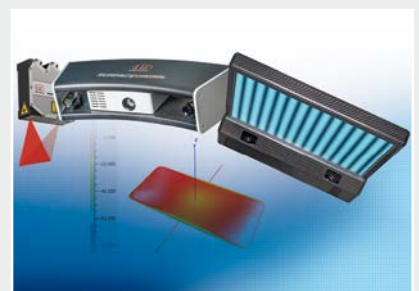
Measuring and inspection systems for metal strips, plastics and rubber



Optical micrometers and fiber optics, measuring and test amplifiers



Color recognition sensors, LED analyzers and inline color spectrometers



3D measurement technology for dimensional testing and surface inspection

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