

2D/3D Profile Sensor

MLSL275 LASER

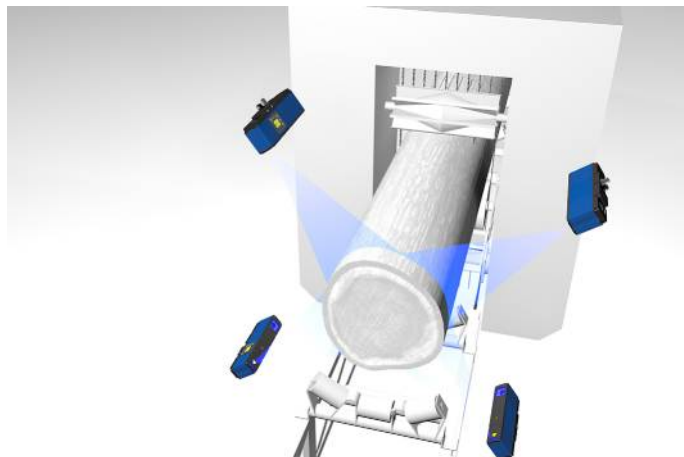
Part Number

weCat3D



- Blue light for applications on metal, organic or semi-transparent materials
- Compact, lightweight design – even suitable for robot applications
- Precise measuring range resolution X (> 1200 measuring points)
- Up to 3.6 million measuring points per second

2D/3D Profile Sensors project a laser line onto the object to be detected and generate an accurate, linearized height profile with an internal camera which is set up at a triangulation angle. Thanks to its uniform, open interface, the weCat3D series can be incorporated by means of the DLL program library or the GigE Vision standard without an additional control unit. Alternatively, wenglor offers its own software packages for implementing your application.



Technical Data

Optical Data	
Working range Z	280...1280 mm
Measuring range Z	1000 mm
Measuring range X	200...850 mm
Linearity Deviation	500 µm
Resolution Z	40...570 µm
Resolution X	190...760 µm
Light Source	Laser (blue)
Wavelength	450 nm
Laser Class (EN 60825-1)	3B
Max. Ambient Light	5000 Lux

Electrical Data	
Supply Voltage	18...30 V DC
Current Consumption (U _b = 24 V)	800 mA
Measuring Rate	200...4000 /s
Subsampling	800...4000 /s
Temperature Range	0...45 °C
Storage temperature	-20...70 °C
Inputs/Outputs	4
Switching Output Voltage Drop	< 1,5 V
Switching Output/Switching Current	100 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Interface	Ethernet TCP/IP
Baud Rate	100/1000 Mbit/s
Protection Class	III
FDA Accession Number	1710966-000

Mechanical Data	
Housing Material	Aluminium; Plastic
Degree of Protection	IP67
Connection	M12 × 1; 12-pin
Type of Connection Ethernet	M12 × 1; 8-pin, X-cod.
Connection: external 24 V laser circuit	M12 × 1; 8-pin
Optic Cover	Plastic
Weight	550 g

Web server	yes
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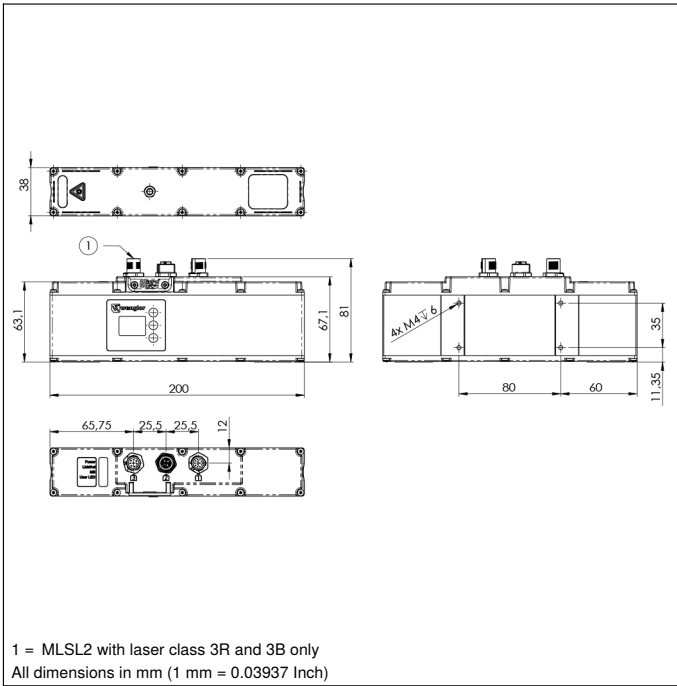
Configurable as PNP/NPN/Push-Pull	<input checked="" type="checkbox"/>
Switchable to NC/NO	<input checked="" type="checkbox"/>

Connection Diagram No.	1022 1025 1034
Control Panel No.	X2 A26
Suitable Connection Equipment No.	50 87 89
Suitable Mounting Technology No.	343

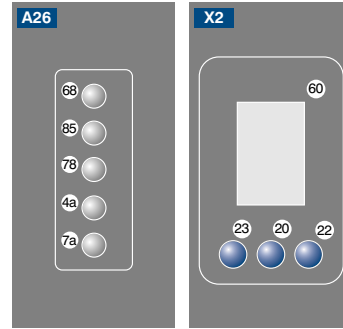
Display brightness may decrease with age. This does not result in any impairment of the sensor function.

Complementary Products

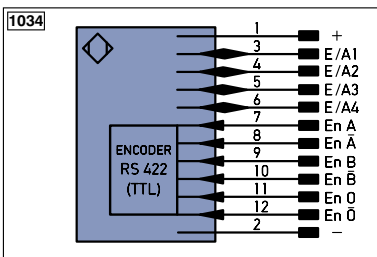
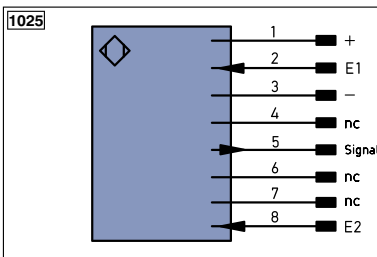
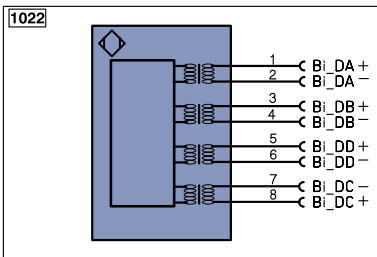
Control Unit	
Cooling Unit ZLSK001	
Protective Screen Retainer ZLSS002	
Software	
Switch EHSS001	



Ctrl. Panel



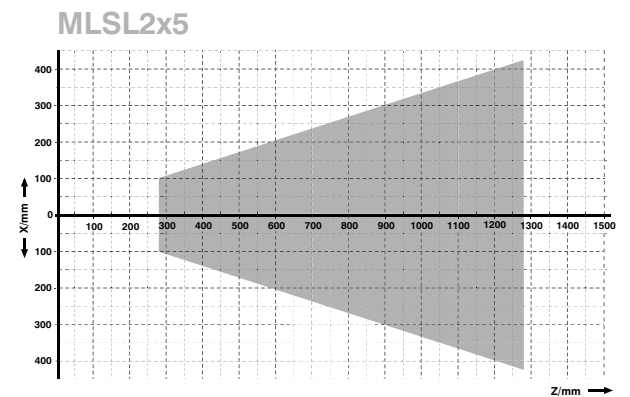
- 20 = Enter Button
- 22 = UP Button
- 23 = Down Button
- 4a = User LED
- 60 = Display
- 68 = Supply Voltage Indicator
- 78 = Module status
- 7a = Laser (MLSL2 with laser class 3R and 3B only)
- 85 = Link/Act LED



Legend

+	Supply Voltage +	PT	Platinum measuring resistor	EN _A RS422	Encoder A/Ā (TTL)
-	Supply Voltage 0 V	nc	not connected	EN _B RS422	Encoder B/B̄ (TTL)
~	Supply Voltage (AC Voltage)	U	Test Input	EN _A	Encoder A
A	Switching Output (NO)	Ū	Test Input inverted	EN _B	Encoder B
Ā	Switching Output (NC)	W	Trigger Input	A _{MIN}	Digital output MIN
V	Contamination/Error Output (NO)	W-	Ground for the Trigger Input	A _{MAX}	Digital output MAX
V̄	Contamination/Error Output (NC)	O	Analog Output	A _{OK}	Digital output OK
E	Input (analog or digital)	O-	Ground for the Analog Output	SY _{in}	Synchronization In
T	Teach Input	BZ	Block Discharge	SY _{OUT}	Synchronization OUT
Z	Time Delay (activation)	AWV	Valve Output	OL _T	Brightness output
S	Shielding	a	Valve Control Output +	M	Maintenance reserved
RxD	Interface Receive Path	b	Valve Control Output 0 V	rsv	reserved
TxD	Interface Send Path	SY	Synchronization	Wire Colors according to IEC 60757	
RDY	Ready	SY-	Ground for the Synchronization	BK	Black
GND	Ground	E+	Receiver-Line	BN	Brown
CL	Clock	S+	Emitter-Line	RD	Red
E/A	Output/Input programmable	±	Grounding	OG	Orange
PoE	Power over Ethernet	S _n R	Switching Distance Reduction	YE	Yellow
IN	Safety Input	Rx+/-	Ethernet Receive Path	GN	Green
OSSD	Safety Output	Tx+/-	Ethernet Send Path	BU	Blue
Signal	Signal Output	Bus	Interfaces-Bus A(+)/B(-)	VT	Violet
Bi_D+/-	Ethernet Gigabit bidirect. data line (A-D)	La	Emitted Light disengageable	GY	Grey
EN ₀ RS422	Encoder 0-pulse 0-0̄ (TTL)	Mag	Magnet activation	WH	White
		RES	Input confirmation	PK	Pink
		EDM	Contacting Monitoring	GNYE	Green/Yellow

Measuring field X, Z



Z = Working distance
 X = Measuring Range

