

# 2D/3D Profile Sensor

## MLWL201

## LASER

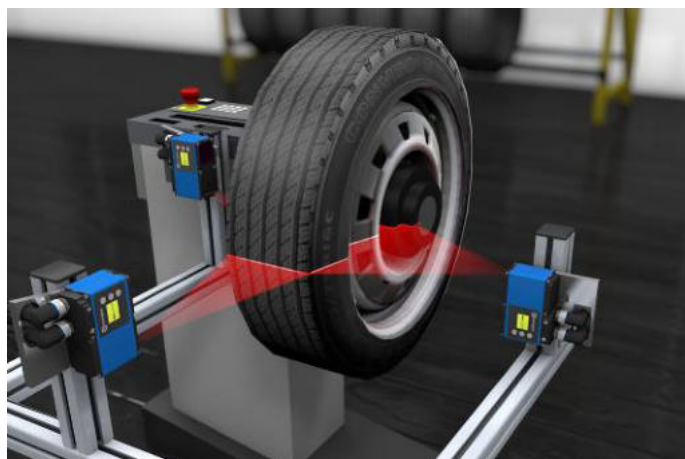
Part Number

weCat3D



- Optimized profile quality thanks to HDR function
- Precise measuring range resolution X (> 2000 measuring points)
- Up to 12 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	120...300 mm
Measuring range Z	180 mm
Measuring range X	65...145 mm
Linearity Deviation	45 $\mu$ m
Resolution Z	5,2...26 $\mu$ m
Resolution X	36...81 $\mu$ m
Light Source	Laser (red)
Wavelength	660 nm
Laser Class (EN 60825-1)	1M
Max. Ambient Light	5000 Lux

#### Electrical Data

Supply Voltage	18...30 V DC
Current Consumption (Ub = 24 V)	300 mA
Measuring Rate	175...6000 /s
Subsampling	350...6000 /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	1610573-000

#### Mechanical Data

Housing Material	Aluminum
Degree of Protection	IP67
Connection	M12 $\times$ 1; 12-pin
Type of Connection Ethernet	M12 $\times$ 1; 8-pin, X-cod.
Optic Cover	Glass
Weight	580 g

Web server	yes
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Configurable as PNP/NPN/Push-Pull

Switchable to NC/NO

Connection Diagram No.

1022 1034

Control Panel No.

X2 A22

Suitable Connection Equipment No.

50 87

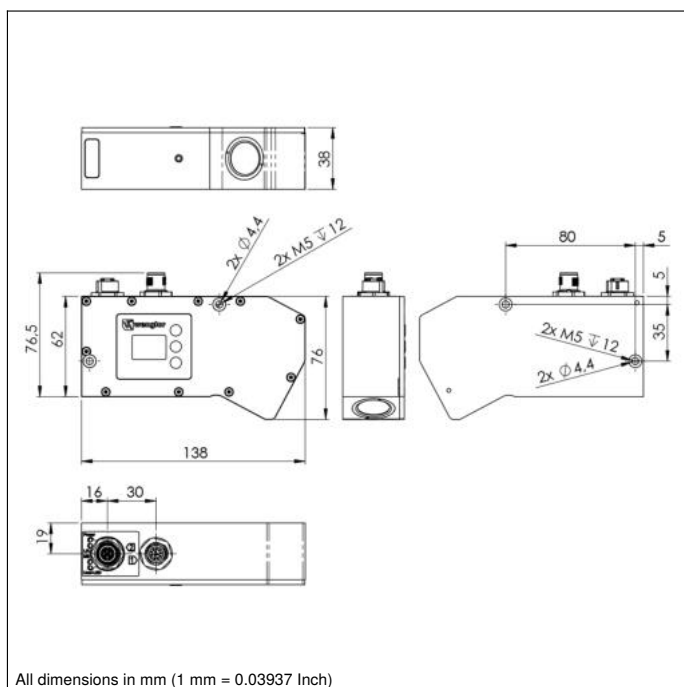
Suitable Mounting Technology No.

343

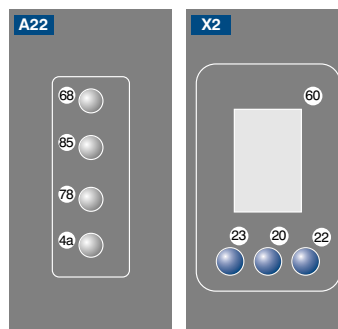
Display brightness may decrease with age. This does not result in any impairment of the sensor function.

### Complementary Products

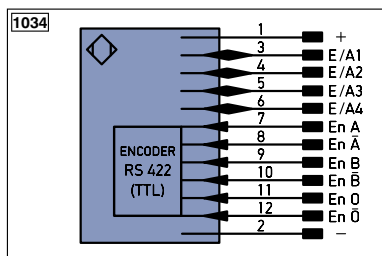
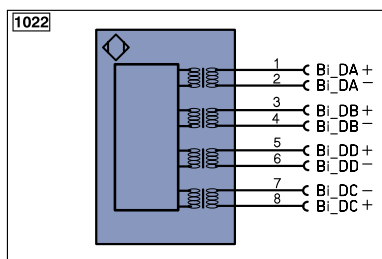
Control Unit
Cooling Unit ZLWK004
Protective Screen Retainer ZLWS004
Software
Switch EHSS001



## Ctrl. Panel



- 20 = Enter Button
- 22 = UP Button
- 23 = Down Button
- 4a = User LED
- 60 = Display
- 68 = Supply Voltage Indicator
- 78 = Module status
- 85 = Link/Act LED



## Legend

<b>+</b> Supply Voltage +	<b>PT</b> Platinum measuring resistor	<b>ENAR5422</b> Encoder A/Ä (TTL)
<b>-</b> Supply Voltage 0 V	<b>nc</b> not connected	<b>ENB5422</b> Encoder B/ß (TTL)
<b>~</b> Supply Voltage (AC Voltage)	<b>U</b> Test Input	<b>ENa</b> Encoder A
<b>A</b> Switching Output (NO)	<b>Ü</b> Test Input inverted	<b>ENb</b> Encoder B
<b>Ä</b> Switching Output (NC)	<b>W</b> Trigger Input	<b>AMIN</b> Digital output MIN
<b>V</b> Contamination/Error Output (NO)	<b>W-</b> Ground for the Trigger Input	<b>AMAX</b> Digital output MAX
<b>Ṽ</b> Contamination/Error Output (NC)	<b>O</b> Analog Output	<b>AOK</b> Digital output OK
<b>E</b> Input (analog or digital)	<b>O-</b> Ground for the Analog Output	<b>SY_in</b> Synchronization In
<b>T</b> Teach Input	<b>BZ</b> Block Discharge	<b>SY_OUT</b> Synchronization OUT
<b>Z</b> Time Delay (activation)	<b>AWV</b> Valve Output	<b>OLT</b> Brightness output
<b>S</b> Shielding	<b>a</b> Valve Control Output +	<b>M</b> Maintenance
<b>RxD</b> Interface Receive Path	<b>b</b> Valve Control Output 0 V	<b>rsv</b> reserved
<b>TxD</b> Interface Send Path	<b>SY</b> Synchronization	Wire Colors according to IEC 60757
<b>RDY</b> Ready	<b>SY-</b> Ground for the Synchronization	<b>BK</b> Black
<b>GND</b> Ground	<b>E+</b> Receiver-Line	<b>BN</b> Brown
<b>CL</b> Clock	<b>S+</b> Emitter-Line	<b>RD</b> Red
<b>E/A</b> Output/Input programmable	<b>±</b> Grounding	<b>OG</b> Orange
<b>IO-Link</b>	<b>SnR</b> Switching Distance Reduction	<b>YE</b> Yellow
<b>PoE</b> Power over Ethernet	<b>Rx+/-</b> Ethernet Receive Path	<b>GN</b> Green
<b>IN</b> Safety Input	<b>Tx+/-</b> Ethernet Send Path	<b>BU</b> Blue
<b>OSSD</b> Safety Output	<b>Bus</b> Interfaces-Bus A(+)/B(-)	<b>VT</b> Violet
<b>Signal</b> Signal Output	<b>La</b> Emitted Light disengageable	<b>GY</b> Grey
<b>Bi_D+/-</b> Ethernet Gigabit bidirect. data line (A-D)	<b>Mag</b> Magnet activation	<b>WH</b> White
<b>EN0.5422</b> Encoder 0-pulse 0-0 (TTL)	<b>RES</b> Input confirmation	<b>PK</b> Pink
	<b>EDM</b> Contactor Monitoring	<b>GNYE</b> Green/Yellow

## Measuring field X, Z

