

2D/3D Profile Sensor

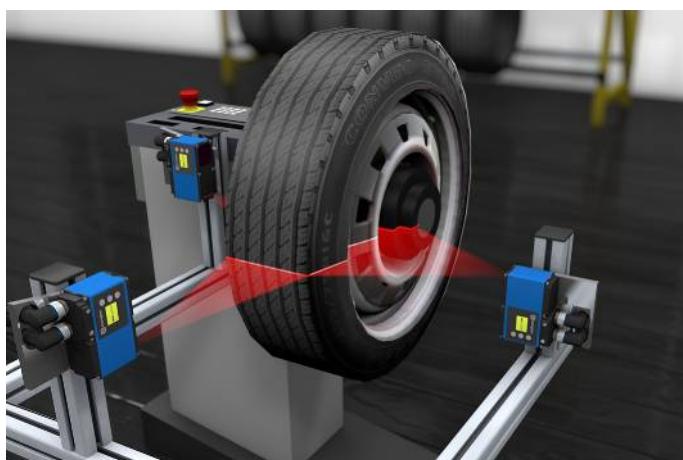
MLWL242 LASER

Part Number



- Increased resistance to extraneous light and high speed
- 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...470 mm
Measuring range Z	350 mm
Measuring range X	120...395 mm
Linearity Deviation	87,5 μ m
Resolution Z	8,9...76 μ m
Resolution X	68...198 μ m
Light Source	Laser (red)
Wavelength	660 nm
Laser Class (EN 60825-1)	3R
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	1710275-000

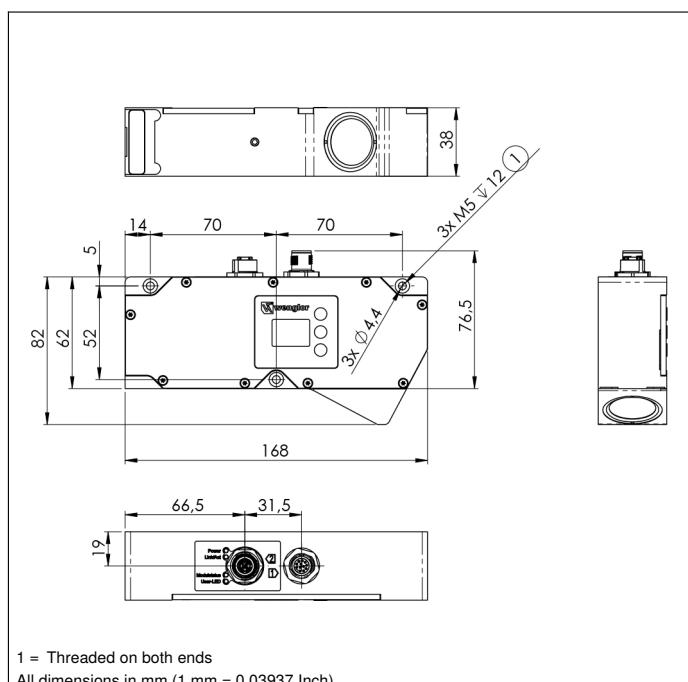
Mechanical Data

Housing Material	Aluminum
Degree of Protection	IP67
Connection	M12 x 1; 12-pin
Type of Connection Ethernet	M12 x 1; 8-pin, X-cod.
Optic Cover	Glass
Weight	750 g
Web server	yes
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

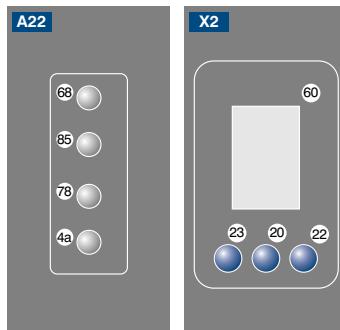
Display brightness may decrease with age. This does not result in any impairment of the sensor function.

Complementary Products

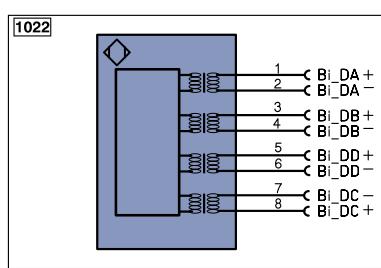
Control Unit
Cooling Unit ZLWK005
Protective Screen Retainer ZLWS005
Software
Switch EHSS001



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

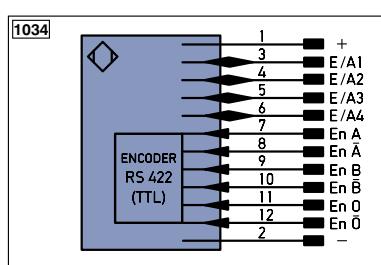
+	Supply Voltage +
-	Supply Voltage 0 V
~	Supply Voltage (AC Voltage)
A	Switching Output (NO)
Ā	Switching Output (NC)
V	Contamination/Error Output (NO)
Ā	Contamination/Error Output (NC)
E	Input (analog or digital)
T	Teach Input
Z	Time Delay (activation)
S	Shielding
RxD	Interface Receive Path
TxD	Interface Send Path
RDY	Ready
GND	Ground
CL	Clock
E/A	Output/Input programmable
IO	IO-Link
PoE	Power over Ethernet
IN	Safety Input
OSD	Safety Output
Signal	Signal Output
BL-D	Ethernet Gigabit bidirect. data line (A-D)
EN0RS422	Encoder 0-pulse 0-0 (TTL)

PT	Platinum measuring resistor
nc	not connected
U	Test Input
Ū	Test Input inverted
W	Trigger Input
W-	Ground for the Trigger Input
O	Analog Output
O-	Ground for the Analog Output
BZ	Block Discharge
Awv	Valve Output
a	Valve Control Output +
b	Valve Control Output 0 V
SY	Synchronization
SY-	Ground for the Synchronization
E+	Receiver-Line
S+	Emitter-Line
±	Grounding
SnR	Switching Distance Reduction
Rx+/-	Ethernet Receive Path
Tx+/-	Ethernet Send Path
Bus	Interfaces-Bus A(+)/B(-)
La	Emitted Light disengageable
Mag	Magnet activation
RES	Input confirmation
EDM	Contactor Monitoring

EN0RS422 Encoder A/Ā (TTL)
EN1RS422 Encoder B/Ā (TTL)
ENA Encoder A
ENB Encoder B
AMIN Digital output MIN
AMAX Digital output MAX
AOK Digital output OK
SY IN Synchronization IN
SY OUT Synchronization OUT
OLT Brightness output
M Maintenance
rsv reserved

Wire Colors according to IEC 60757

BK	Black
BN	Brown
RD	Red
OG	Orange
YE	Yellow
GN	Green
BU	Blue
VT	Violet
GY	Grey
WH	White
PK	Pink
GNYE	Green/Yellow



Measuring field X, Z

MLWL2x2

