

# 2D/3D Profile Sensor

## MLWL274 LASER

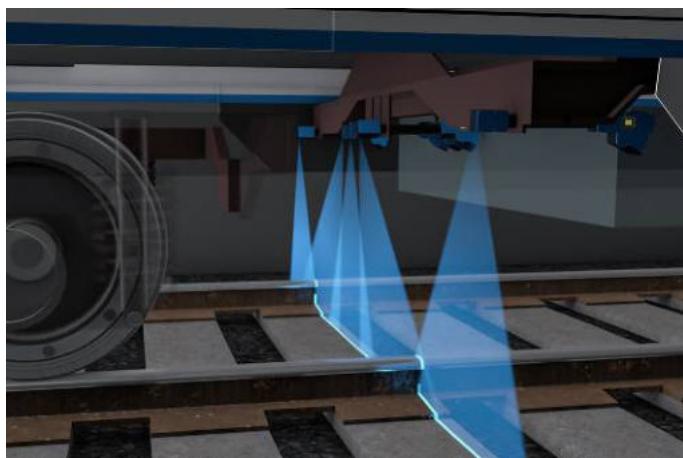
Part Number

weCat3D



- Blue light for applications on metal, organic or semi-transparent materials
- 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	600...2000 mm
Measuring range Z	1400 mm
Measuring range X	440...1300 mm
Linearity Deviation	350 µm
Resolution Z	39...289 µm
Resolution X	251...683 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 (Ub = 24 V)	1000 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	1710277-000

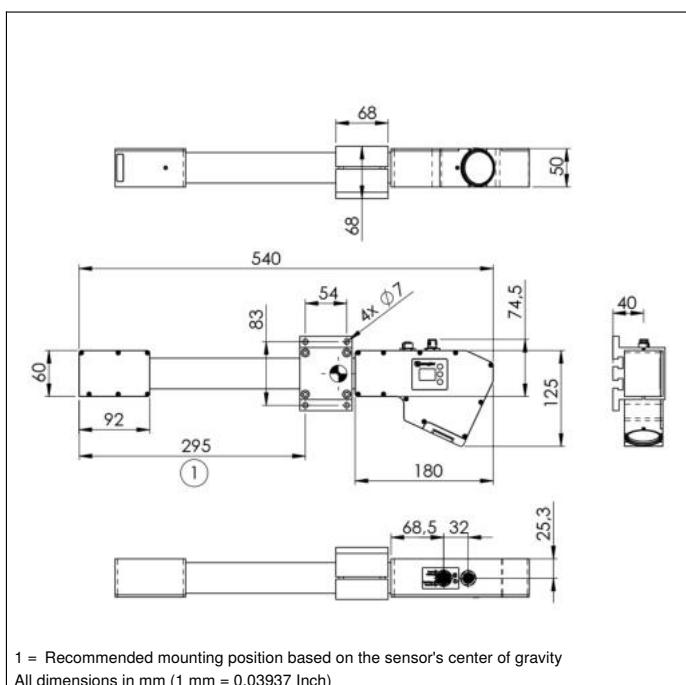
#### Mechanical Data

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	2350 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

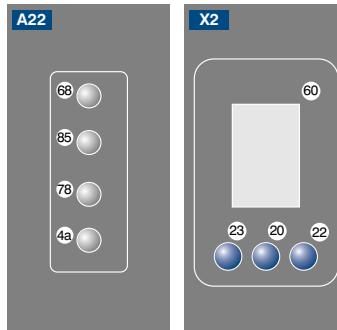
Display brightness may decrease with age. This does not result in any impairment of the sensor function.

### Complementary Products

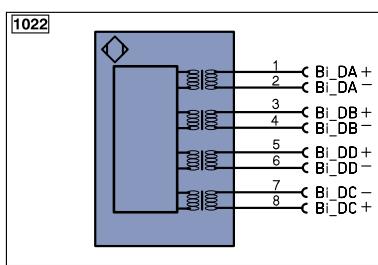
Control Unit
Cooling Unit ZLWK003
Protective Screen Retainer ZLWS003
Software
Switch EHSS001



### 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

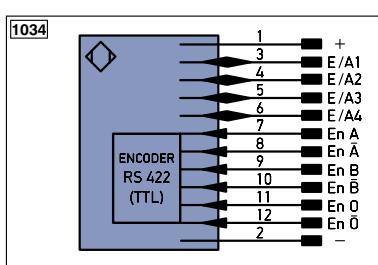


#### Legend

+	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-Link	IO-Link
PoE	Power over Ethernet
IN	Safety Input
SSD	Safety Output
Signal	Signal Output
BLD	Ethernet Gigabit bidirec. data line (A-D)
EN0RS422	Encoder 0-pulse 0-0 (TTL)

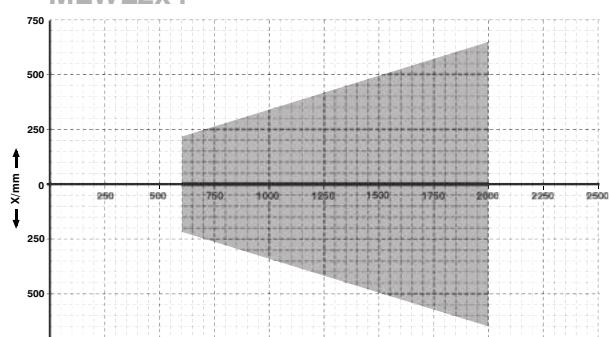
PT	Platinum measuring resistor
nc	not connected
U	Test Input
Ū	Test Input inverted
W	Trigger Input
W -	Ground for the Trigger Input
O	Analog Output
O -	Ground for the Analog Output
BZ	Block Discharge
AVV	Valve Output
a	Valve Control Output +
b	Valve Control Output 0 V
SY	Synchronization
SY -	Ground for 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

#### MLWL2x4



Z = Working distance

X = Measuring Range

