

2D/3D Profile Sensor

MLSL246 LASER

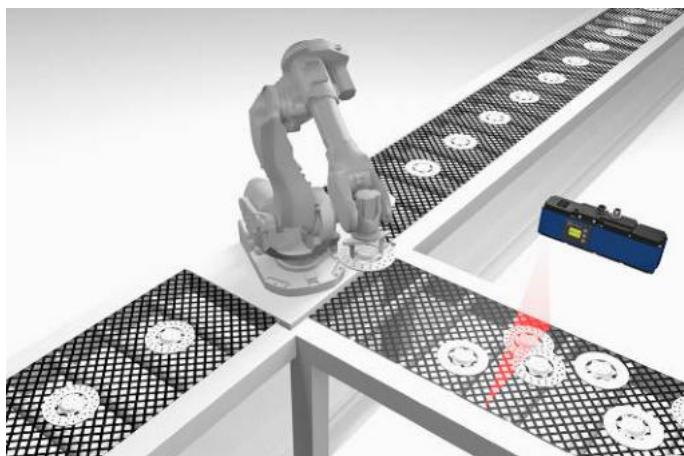
Part Number

weCat3D



- 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	300...1500 mm
Measuring range Z	1200 mm
Measuring range X	250...1350 mm
Linearity Deviation	600 µm
Resolution Z	60...990 µm
Resolution X	270...1170 µm
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	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	1710964-000

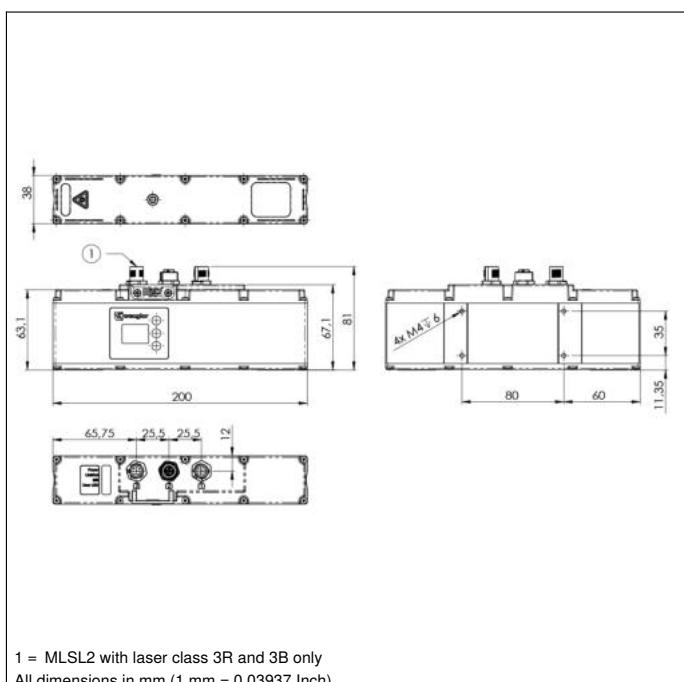
Mechanical Data

Housing Material	Aluminium; Plastic
Degree of Protection	IP67
Connection	M12 x 1; 12-pin
Type of Connection Ethernet	M12 x 1; 8-pin, X-cod.
Connection: external 24 V laser circuit	M12 x 1; 8-pin
Optic Cover	Plastic
Weight	550 g
Web server	yes
Configurable as PNP/NPN/Push-Pull	
Switchable to NC/NO	● ●
Connection Diagram No.	1022 1025 1034
Control Panel No.	X2 A26
Suitable Connection Equipment No.	50 87 89
Suitable Mounting Technology No.	343

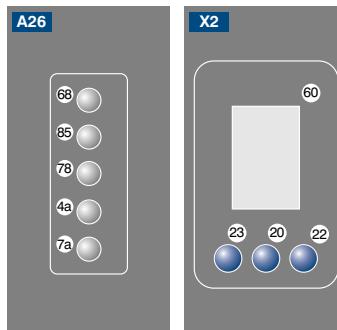
Display brightness may decrease with age. This does not result in any impairment of the sensor function.

Complementary Products

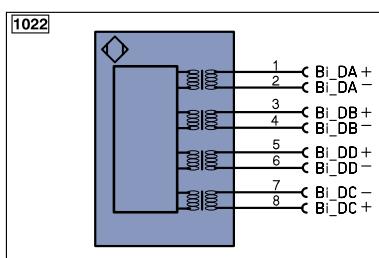
Control Unit
Cooling Unit ZLSK001
Protective Screen Retainer ZLSS002
Software
Switch EHSS001



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

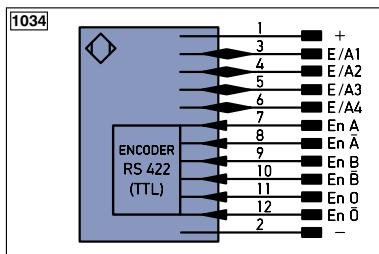
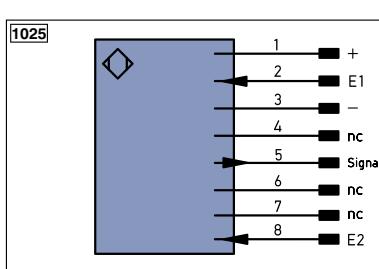


Legend

+	Supply Voltage +
-	Supply Voltage 0 V
~	Supply Voltage (AC Voltage)
A	Switching Output (NO)
Ā	Switching Output (NC)
V	Contamination/Error Output (NO)
ĀV	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
DSO	Safety Output
Signal	Signal Output
BL-D	Ethernet Gigabit bidirec. data line (A-D)
EN _{RS422}	Encoder 0-pulse 0-0 (TTL)

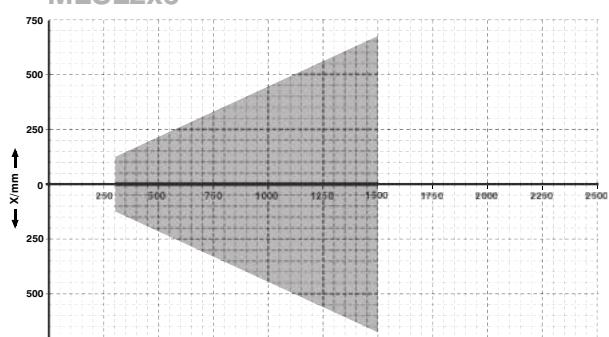
PT	Platinum measuring resistor
nc	not connected
U	Test Input
ĀU	Test Input inverted
W	Trigger Input
W-	Ground for the Trigger Input
O	Analog Output
O-	Ground for the Analog Output
BZ	Block Discharge
AVV	Valve Output
a	Valve Control Output +
b	Valve Control Output 0 V
SY	Synchronization
SY-	Ground for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

EN _{RS422}	Encoder A/Ā (TTL)
EN _{BR422}	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

MLSL2x6



Z = Working distance

X = Measuring Range

