

# 2D/3D Profile Sensor

## MLSL225 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	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 (red)
Wavelength	660 nm
Laser Class (EN 60825-1)	2M
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	1710956-000

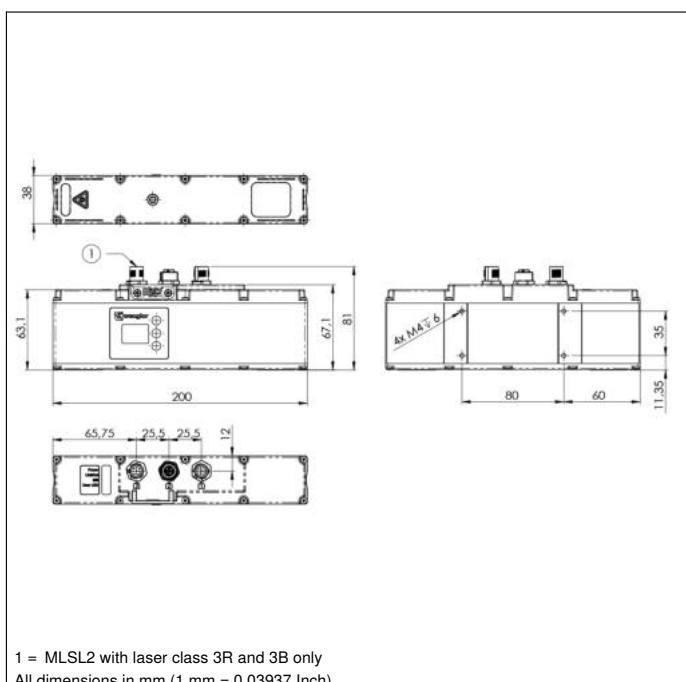
#### Mechanical Data

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.
Optic Cover	Plastic
Weight	550 g
Web server	yes
Configurable as PNP/NPN/Push-Pull	●
Switchable to NC/NO	●
Connection Diagram No.	1022   1034
Control Panel No.	X2   A26
Suitable Connection Equipment No.	50   87
Suitable Mounting Technology No.	343

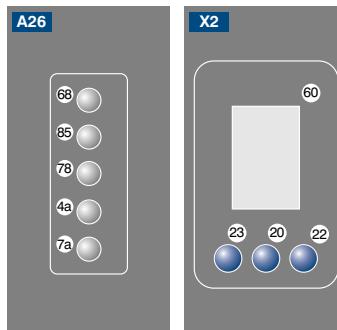
Display brightness may decrease with age. This does not result in any impairment of the sensor function.

### Complementary Products

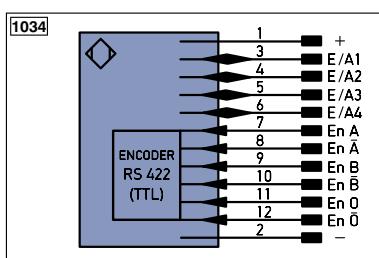
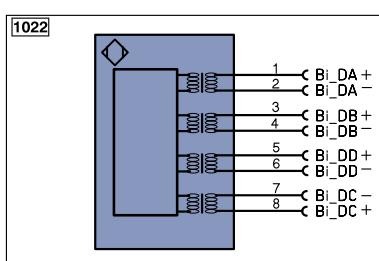
Control Unit
Cooling Unit ZLSK001
Protective Screen Retainer ZLSS002
Software
Switch EHSS001



### 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



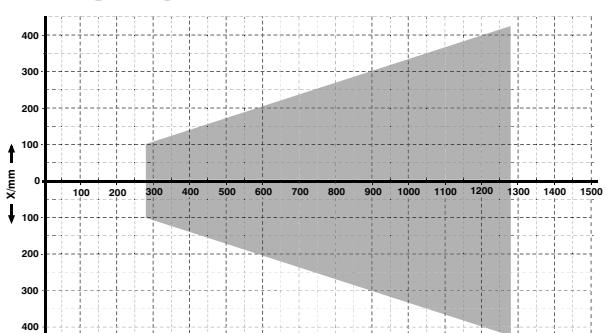
### Legend

+	Supply Voltage +	PT	Platinum measuring resistor
-	Supply Voltage 0 V	nc	not connected
~	Supply Voltage (AC Voltage)	U	Test Input
A	Switching Output (NO)	Ü	Test Input inverted
Å	Switching Output (NC)	W	Trigger Input
V	Contamination/Error Output (NO)	W-	Ground for the Trigger Input
Å	Contamination/Error Output (NC)	O	Analog Output
E	Input (analog or digital)	O-	Ground for the Analog Output
T	Teach Input	BZ	Block Discharge
Z	Time Delay (activation)	Awv	Valve Output
S	Shielding	a	Valve Control Output +
		b	Valve Control Output 0 V
RxD	Interface Receive Path	SY	Synchronization
TxD	Interface Send Path	SY-	Ground for the Synchronization
RDY	Ready	E+	Receiver-Line
GND	Ground	S+	Emitter-Line
CL	Clock	±	Grounding
E/A	Output/Input programmable	SnR	Switching Distance Reduction
IO-Link		Rx+/-	Ethernet Receive Path
PoE	Power over Ethernet	Tx+/-	Ethernet Send Path
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(-)
SSO	Safety Output	La	Emitted Light disengagable
Signal	Signal Output	Mag	Magnet activation
BL-D	Ethernet Gigabit bidirec. data line (A-D)	RES	Input confirmation
EN0RS422	Encoder 0-pulse 0-0 (TTL)	EDM	Contactor Monitoring

EN0RS422	Encoder A/Å (TTL)
EN0RS422	Encoder B/Å (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

#### MLSL2x5



Z = Working distance

X = Measuring Range

