

# 2D/3D Profile Sensor

## MLSL245

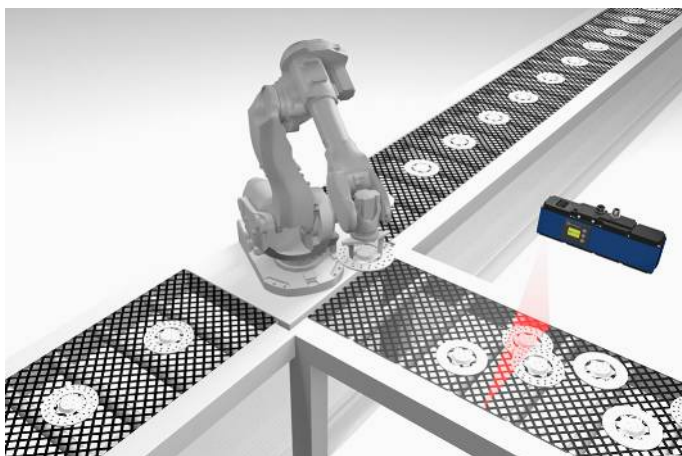
Part Number

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 $\mu$ m
Resolution Z	40...570 $\mu$ m
Resolution X	190...760 $\mu$ m
Light Source	Laser (red)
Wavelength	660 nm
Service Life (T = +25 °C)	20000 h
Laser Class (EN 60825-1)	3R

Environmental conditions	
Ambient temperature	0...45 °C
Storage temperature	-20...70 °C
Max. Ambient Light	5000 Lux
EMC	DIN EN 61000-6-2; 61000-6-4
Shock resistance per DIN IEC 68-2-27	30 g / 11 ms
Vibration resistance per DIN IEC 60068-2-6	6 g (10...55 Hz)
Atmospheric humidity	5...95%, non-condensing

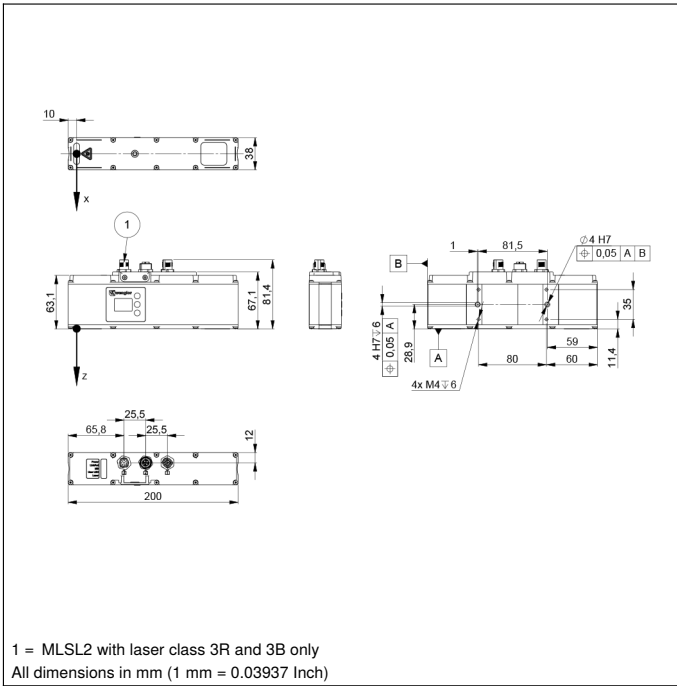
Electrical Data	
Supply Voltage	18...30 V DC
Current Consumption (U <sub>b</sub> = 24 V)	300 mA
Measuring Rate	200...4000 /s
Subsampling	800...4000 /s
Inputs/Outputs	4
Switching Output Voltage Drop	< 1,5 V
Switching Output/Switching Current	100 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Interface	Ethernet TCP/IP
Baud Rate	100/1000 Mbit/s
Protection Class	III
FDA Accession Number	1710963-000

Mechanical Data	
Housing Material	Aluminum, powder-coated
Housing Material	Plastic, ABS
Degree of Protection	IP67
UL Enclosure Type	1
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, PMMA
Web server	yes

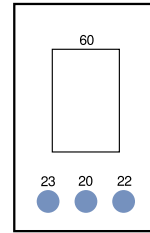
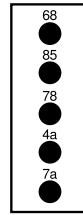
Push-Pull	●
Connection Diagram No.	1022   1025   1034
Control Panel No.	X2   A26
Suitable Connection Equipment No.	50   87   89
Suitable Mounting Technology No.	343

### Complementary Products

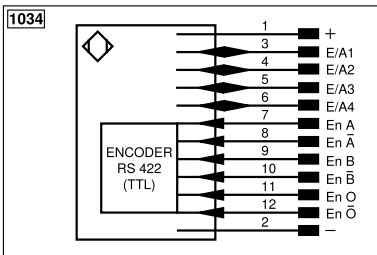
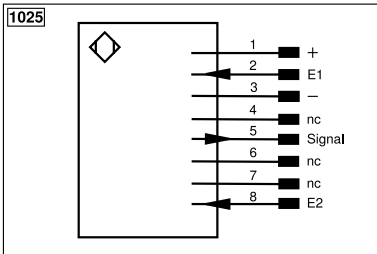
Connection cables
Control Unit
Cooling Unit ZLSK001
EHSS001 Switch
Machine Vision Controller MVC
Protective Screen Retainer ZLSS002
Software



### Ctrl. Panel

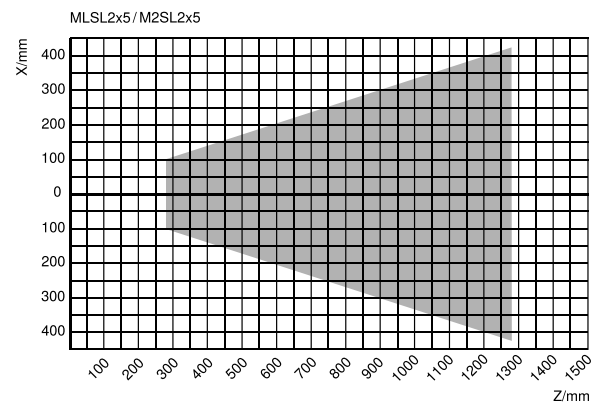
**A26**
**X2**


- 20 = Enter key
- 22 = Up key
- 23 = Down key
- 4a = User LED
- 60 = display
- 68 = supply voltage indicator
- 78 = Module status
- 7a = Laser (MSL2 with laser class 3R and 3B only)
- 85 = Link/Act LED



Legend			
+	Supply Voltage +	nc	Not connected
-	Supply Voltage 0 V	U	Test Input
~	Supply Voltage (AC Voltage)	Ü	Test Input inverted
A	Switching Output (NO)	W	Trigger Input
Ä	Switching Output (NC)	W-	Ground for the Trigger Input
V	Contamination/Error Output (NO)	O	Analog Output
V̄	Contamination/Error Output (NC)	O-	Ground for the Analog Output
E	Input (analog or digital)	BZ	Block Discharge
T	Teach Input	Amv	Valve Output
Z	Time Delay (activation)	a	Valve Control Output +
S	Shielding	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
PoE	Power over Ethernet	Rx+/-	Ethernet Receive Path
IN	Safety Input	Tx+/-	Ethernet Send Path
OSSD	Safety Output	Bus	Interfaces-Bus A(+)/B(-)
Signal	Signal Output	La	Emitted Light disengageable
BI_D+/-	Ethernet Gigabit bidirect. data line (A-D)	Mag	Magnet activation
ENo RS422	Encoder 0-pulse 0/0 (TTL)	RES	Input confirmation
PT	Platinum measuring resistor	EDM	Contact Monitoring
		ENARs422	Encoder A/Ä (TTL)
			Wire Colors according to DIN 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



Z = Working distance  
 X = Measuring Range

