

2D/3D Profile Sensor

MLSL245S40

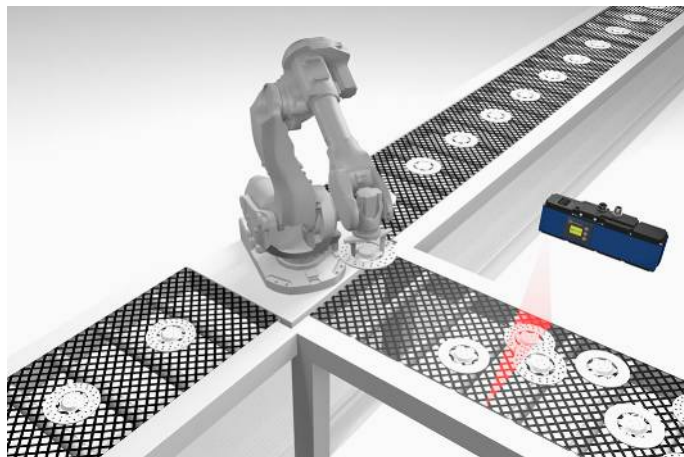
Part Number

weCat3D



- Compact, lightweight design – even suitable for robot applications
- Complies with EN ISO 13849-1:2016
- Safe laser shutdown in accordance with the Machinery Directive
- Up to 4,000 profiles/s with up to 1,280 points/profile

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)	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)

Electrical Data	
Supply Voltage	18...30 V DC
Current Consumption (U _b = 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
Transmission rate	100/1000 Mbit/s
Protection Class	III
FDA Accession Number	1710963-000

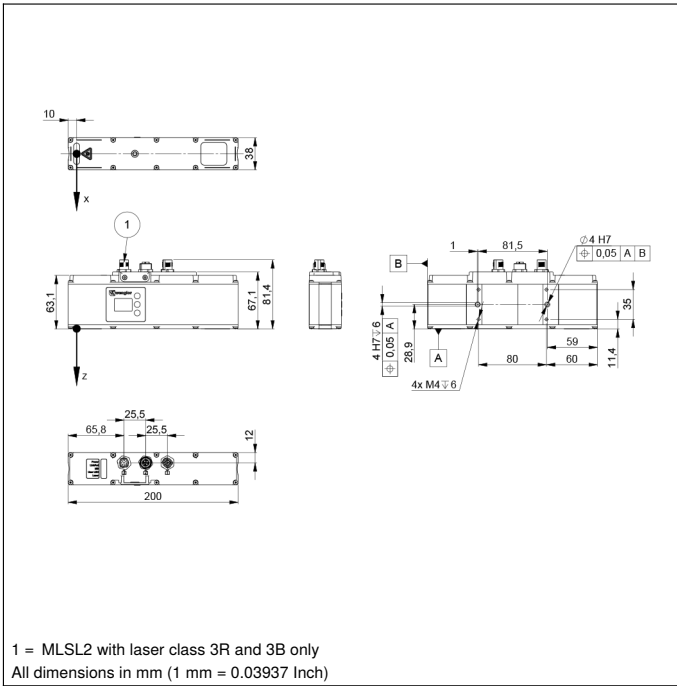
Mechanical Data	
Housing Material	Aluminum, powder-coated
Housing Material	Plastic, ABS
Degree of Protection	IP67
Connection	M12 × 1; 12-pin
Type of Connection Ethernet	M12 × 1; 8-pin, X-cod.
Connection: external 24 V laser circuit	M12 × 1; 8-pin
Optic Cover	Plastic, PMMA

Safety-relevant Data	
Performance Level (EN ISO 13849-1)	Cat. 4 PL e
Web server	yes

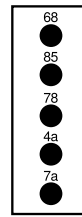
Push-Pull	●
Control Panel No.	X2 A26
Suitable Connection Equipment No.	50 87 90
Suitable Mounting Technology No.	343

Complementary Products

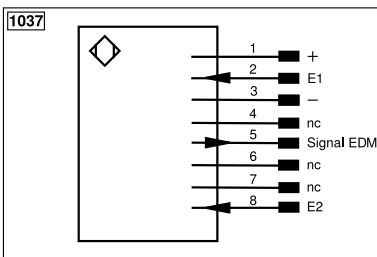
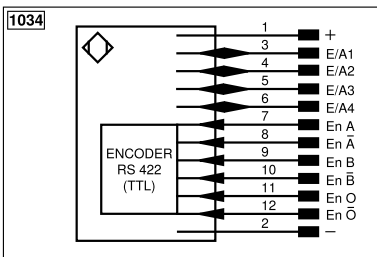
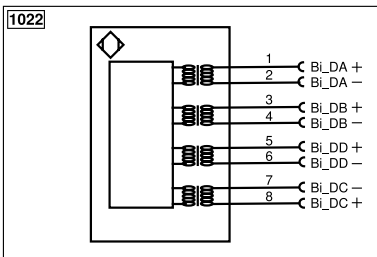
Control Unit
Cooling Unit ZLSK001
EHSS001 Switch
Machine Vision Controller MVC
Protective Screen Retainer ZLSS002
Software



Ctrl. Panel

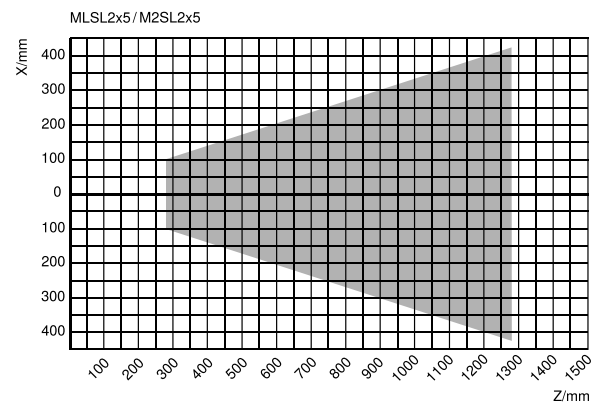
A26
X2


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



Legend					
+	Supply Voltage +	nc	Not connected	EN _{BRS422}	Encoder B/B̄ (TTL)
-	Supply Voltage 0 V	U	Test Input	ENA	Encoder A
~	Supply Voltage (AC Voltage)	Ū	Test Input inverted	EN _B	Encoder B
A	Switching Output (NO)	W	Trigger Input	AMIN	Digital output MIN
Ā	Switching Output (NC)	W-	Ground for the Trigger Input	AMAX	Digital output MAX
V	Contamination/Error Output (NO)	O	Analog Output	AOK	Digital output OK
V̄	Contamination/Error Output (NC)	O-	Ground for the Analog Output	SY In	Synchronization In
E	Input (analog or digital)	BZ	Block Discharge	SY OUT	Synchronization OUT
T	Teach Input	Amv	Valve Output	OLT	Brightness output
Z	Time Delay (activation)	a	Valve Control Output +	M	Maintenance
S	Shielding	b	Valve Control Output 0 V	rsv	Reserved
RxD	Interface Receive Path	SY	Synchronization	Wire Colors according to DIN IEC 60757	
TxD	Interface Send Path	SY-	Ground for the Synchronization	BK	Black
RDY	Ready	E+	Receiver-Line	BN	Brown
GND	Ground	S+	Emitter-Line	RD	Red
CL	Clock	±	Grounding	OG	Orange
E/A	Output/Input programmable	SnR	Switching Distance Reduction	YE	Yellow
IO-Link		Rx+/-	Ethernet Receive Path	GN	Green
PoE	Power over Ethernet	Tx+/-	Ethernet Send Path	BU	Blue
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(-)	VT	Violet
OSSD	Safety Output	La	Emitted Light disengageable	GY	Grey
Signal	Signal Output	Mag	Magnet activation	WH	White
BI_D+/-	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation	PK	Pink
EN _o RS422	Encoder 0-pulse 0/0̄ (TTL)	EDM	Contacting Monitoring	GNYE	Green/Yellow
PT	Platinum measuring resistor	EN _A RS422	Encoder A/Ā (TTL)		

Measuring field X, Z



Z = Working distance
 X = Measuring Range

