

2D/3D Profile Sensor

MLSL246S40

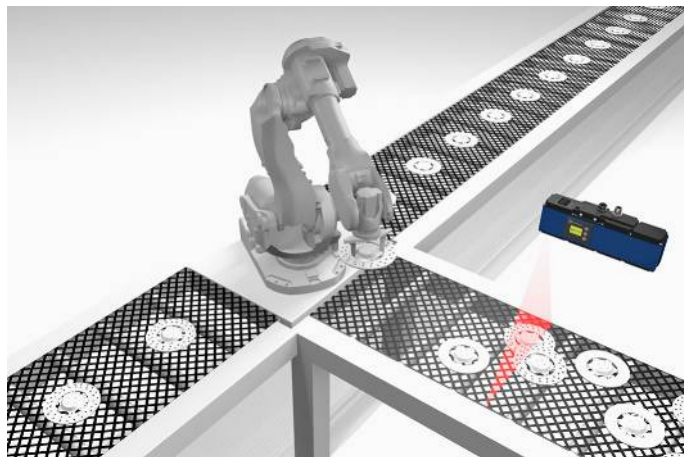
Part Number

weCat3D



- Compact, lightweight design – even suitable for robot applications
- Complies with EN ISO 13849-1:2015 (Cat. 4, PL e)
- 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 | 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 |

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 (Ub = 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 | 1710964-000 |

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.

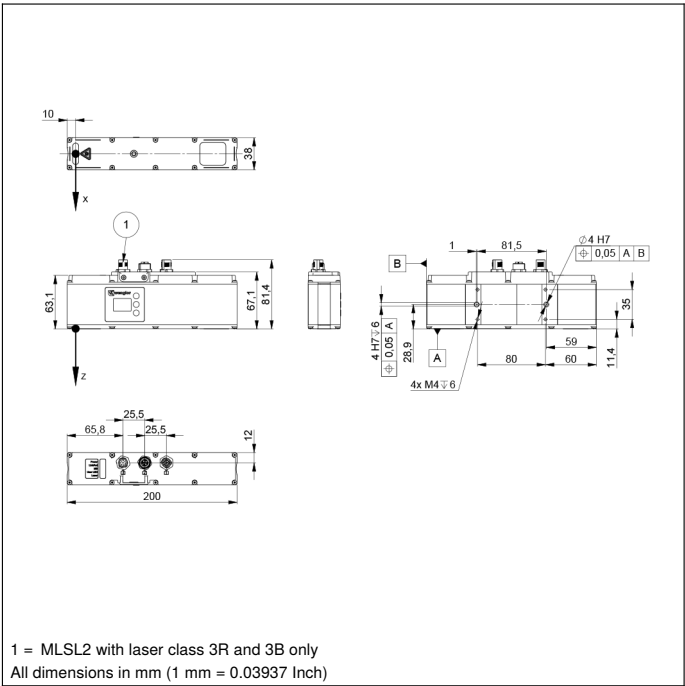
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Suitable Mounting Technology No.

343

Complementary Products

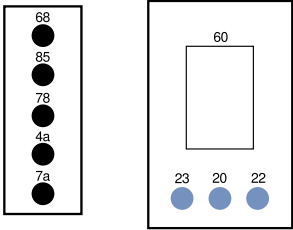
| |
|------------------------------------|
| Control Unit |
| Cooling Unit ZLSK001 |
| Protective Screen Retainer ZLSS002 |
| Software |
| Switch EHSS001 |



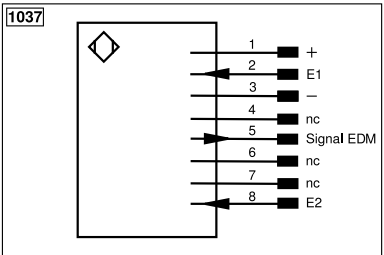
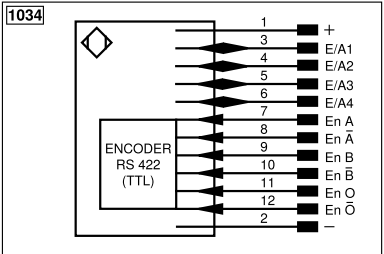
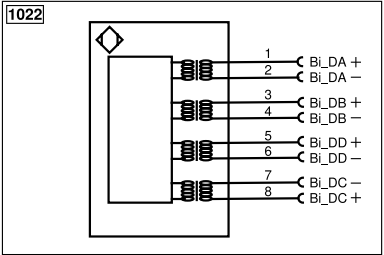
Ctrl. Panel

A26

X2

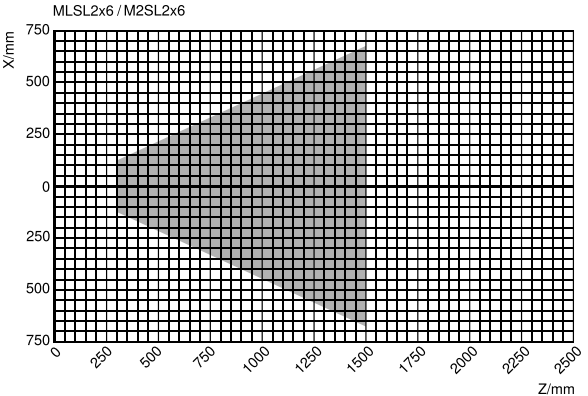


- 20 = Enter key
- 22 = Up key
- 23 = Down key
- 4a = User LED
- 60 = display
- 68 = supply voltage indicator
- 78 = Module status
- 7a = Laser (MSL2 with laser class 3R and 3B only)
- 85 = Link/Act LED



| 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 |
| IO-Link | IO-Link | Rx+/- | Ethernet Receive Path |
| PoE | Power over Ethernet | Tx+/- | Ethernet Send Path |
| IN | Safety Input | Bus | Interfaces-Bus A(+)/B(-) |
| OSSD | Safety Output | La | Emitted Light disengageable |
| Signal | Signal Output | Mag | Magnet activation |
| BL_D+/- | Ethernet Gigabit bidirect. data line (A-D) | RES | Input confirmation |
| ENo RS422 | Encoder 0-pulse 0/Ü (TTL) | EDM | Contact Monitoring |
| PT | Platinum measuring resistor | ENARs422 | Encoder A/Ä (TTL) |
| | | ENBRs422 | Encoder B/B̄ (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 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

