

3D Sensor

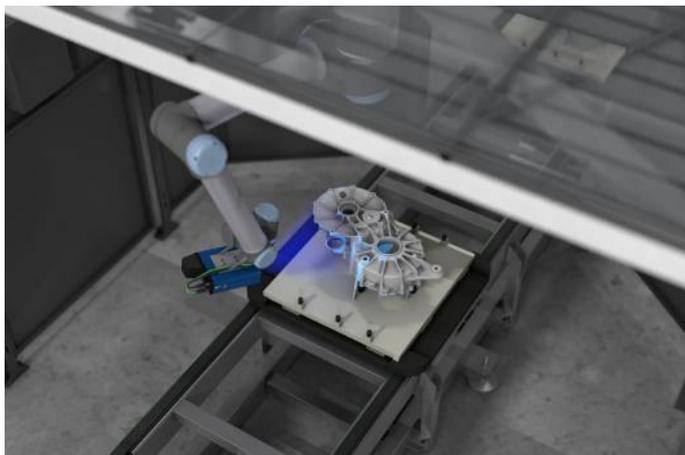
MLAS212

Part Number



- 12 MP resolution
- Easy integration via SDK or GigE Vision
- High point cloud quality with up to four 3D point clouds per second
- Integrated 3D point cloud calculation

ShapeDrive MLAS 3D sensors are distinguished by high precision for minimal measuring volumes. The six variants included in the ShapeDrive MLAS series are available in two performance classes with camera resolutions of 5 and 12 megapixels. The robust design makes the MLAS sensors suitable for use in industrial environments. With its fast Ethernet interface and three measuring ranges in each performance class, ShapeDrive G4 is distinguished by great diversity and high speed.

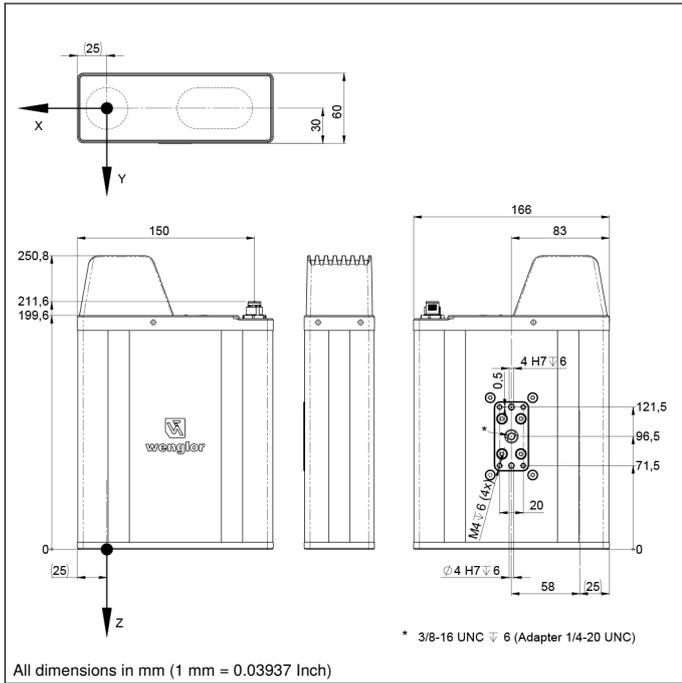


Technical Data

| Optical Data | |
|--|--------------------------------|
| Working range Z | 255...295 mm |
| Measuring range Z | 40 mm |
| Measuring range X | 60 mm |
| Measuring range Y | 40 mm |
| Resolution Z | 1...2 μ m |
| Resolution X/Y | 18...20 μ m |
| Camera Resolution | 12,3 MP |
| Light Source | LED (blue) |
| Wavelength | 457 nm |
| Service Life (T = +25 °C) | 20000 h |
| Risk Group (EN 62471) | 2 |
| Environmental conditions | |
| Ambient temperature | 0...40 °C |
| Storage temperature | -5...70 °C |
| Max. Ambient Light | 5000 Lux |
| EMC | DIN EN 61000-6-2; 61000-6-4 |
| Atmospheric humidity | 5...95%, non-condensing |
| Electrical Data | |
| Supply Voltage | 18...30 V DC |
| Max. Current Consumption (U _b = 24 V) | 2,5 A |
| Acquisition time | 0,4...0,9 s |
| Inputs/Outputs | 4 |
| Short Circuit Protection | yes |
| Reverse Polarity Protection | yes |
| Interface | Ethernet TCP/IP |
| Protection Class | III |
| Mechanical Data | |
| Housing Material | Aluminum, anodised |
| Housing Material | Aluminum, powder-coated |
| Housing Material | Plastic, PA6 |
| Degree of Protection | IP67 |
| Connection | M12 × 1; 12-pin |
| Type of Connection Ethernet | M12 × 1; 8-pin, X-cod. |
| Optic Cover | Plastic, PMMA |
| Safety-relevant Data | |
| MTTFd (EN ISO 13849-1) | 71,35 a |
| Web server | yes |
| Connection Diagram No. | 251 1022 |
| Control Panel No. | A22 |
| Suitable Connection Equipment No. | 50 87 |
| Suitable Mounting Technology No. | 343 |

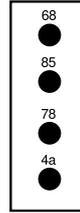
Complementary Products

ZNNC002 Adapter

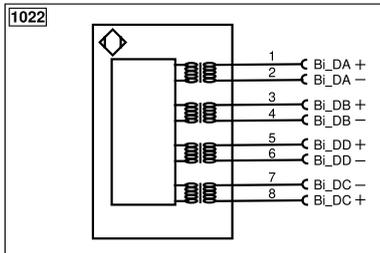
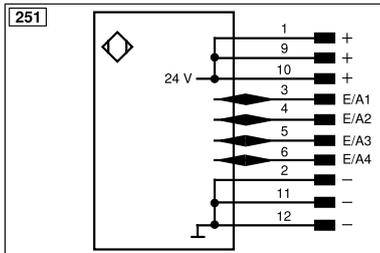


Ctrl. Panel

A22



4a = User LED
 68 = Power LED
 78 = Module status
 85 = Link/Act LED



| Legend | | | | | |
|---------------------|--|---------------------|--------------------------------|--|---------------------|
| + | Supply Voltage + | nc | Not connected | EN _{RS422} | 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 | 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 _{RS422} | Encoder 0-pulse 0/0̄ (TTL) | EDM | Contact Monitoring | GNYE | Green/Yellow |
| PT | Platinum measuring resistor | EN _{RS422} | Encoder A/Ā (TTL) | | |

