

3D Sensor

MLAS201

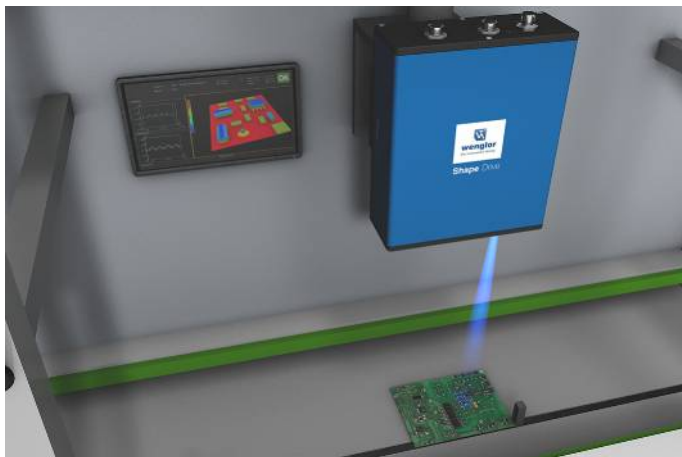
Part Number

ShapeDrive



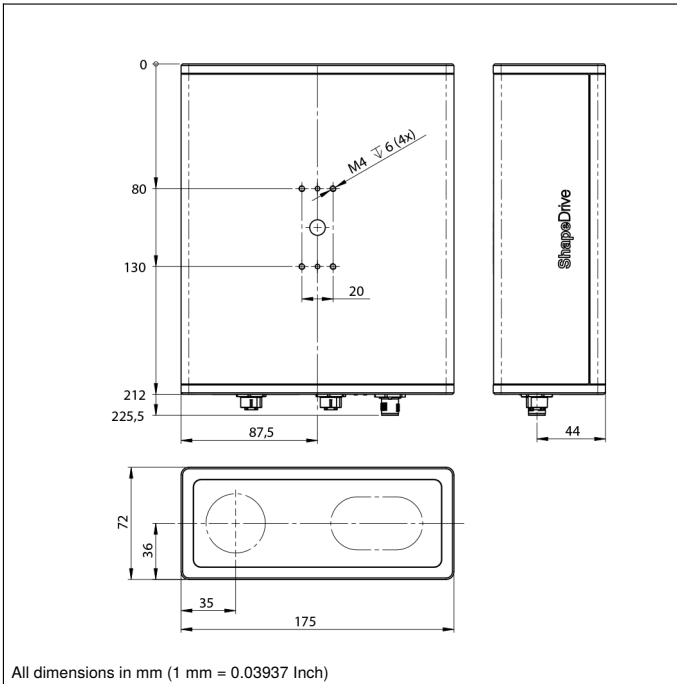
- 10 Gbit/s interface for high speed data transfer
- 12 MP resolution
- Short recording times of up to 0.188 s

ShapeDrive MLAS 3D Sensors are distinguished by high precision for minimal measuring volumes. The ten models in this series are available in two performance classes with camera resolutions of 5 and 12 megapixels. All ShapeDrive sensors are ideally suited for use in industrial environments thanks to the rugged IP65 housing. With its 10 Gigabit Ethernet interface and five measuring ranges in each performance class, ShapeDrive is also distinguished by great diversity and high speed.



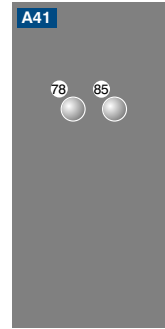
Technical Data

| Optical Data | |
|--------------------------------------|------------------------|
| Working range Z | 160...170 mm |
| Measuring range Z | 10 mm |
| Measuring range X | 30 mm |
| Measuring range Y | 22 mm |
| Resolution Z | 3 µm |
| Resolution X/Y | 7 µm |
| Camera Resolution | 4096 × 3000 Pixel |
| Light Source | LED (blue) |
| Wavelength | 460 nm |
| Service Life (T = +25 °C) | 20000 h |
| Risk Group (EN 62471) | 2 |
| Max. Ambient Light | 5000 Lux |
| Electrical Data | |
| Supply Voltage | 18...30 V DC |
| Max. Current Consumption (Ub = 24 V) | 3,5 A |
| Recording duration | 0,188...0,61 s |
| Temperature Range | 0...35 °C |
| Storage temperature | -5...70 °C |
| Short Circuit Protection | yes |
| Reverse Polarity Protection | yes |
| Interface | Ethernet TCP/IP |
| Baud Rate | 100 Mbit/s |
| Baud Rate (10 GbE) | 10 Gbit/s |
| Protection Class | III |
| Mechanical Data | |
| Housing Material | Aluminium; Plastic |
| Degree of Protection | IP65 |
| Connection | M12 × 1; 12-pin |
| Type of Connection Ethernet | M12 × 1; 8-pin, X-cod. |
| Optic Cover | Plastic |
| Weight | 2500 g |
| Web server | yes |
| Connection Diagram No. | 238 1022 |
| Control Panel No. | A41 |
| Suitable Connection Equipment No. | 50 87 |
| Suitable Mounting Technology No. | 343 |

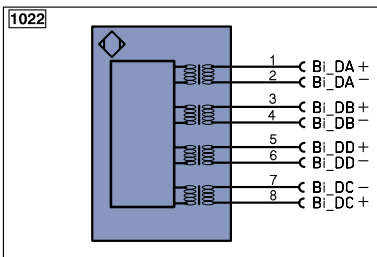
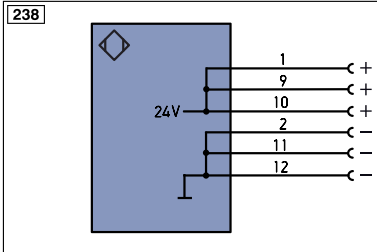


All dimensions in mm (1 mm = 0.03937 Inch)

Ctrl. Panel



78 = Module status
 85 = Link/Act LED



Legend

| | | | | | |
|----------|--|----------|------------------------------|--------|---------------------|
| + | Supply Voltage + | PT | Platinum measuring resistor | ENa | Encoder A |
| - | Supply Voltage 0 V | nc | not connected | ENb | Encoder B |
| ~ | Supply Voltage (AC Voltage) | U | Test Input | AMIN | Digital output MIN |
| A | Switching Output (NO) | U | Test Input inverted | AMAX | Digital output MAX |
| Ā | Switching Output (NC) | W | Trigger Input | AOK | Digital output OK |
| V | Contamination/Error Output (NO) | O | Analog Output | SY In | Synchronization In |
| ṽ | Contamination/Error Output (NC) | O- | Ground for the Analog Output | SY OUT | Synchronization OUT |
| E | Input (analog or digital) | BZ | Block Discharge | Ort | Brightness output |
| T | Teach Input | AWv | Valve Output | M | Maintenance |
| Z | Time Delay (activation) | a | Valve Control Output + | rsv | reserved |
| S | Shielding | b | Valve Control Output 0 V | | |
| RxD | Interface Receive Path | SY | Synchronization | | |
| TxD | Interface Send Path | E+ | Receiver-Line | | |
| RDY | Ready | S+ | Emitter-Line | | |
| GND | Ground | ≡ | Grounding | | |
| CL | Clock | SnR | Switching Distance Reduction | | |
| E/A | Output/Input programmable | Rx+/- | Ethernet Receive Path | | |
| IO-Link | IO-Link | Tx+/- | Ethernet Send Path | | |
| PoE | Power over Ethernet | Bus | Interfaces-Bus A(+)/B(-) | | |
| IN | Safety Input | La | Emitted Light disengageable | | |
| OSSD | Safety Output | Mag | Magnet activation | | |
| Signal | Signal Output | RES | Input confirmation | | |
| Bi_D+/- | Ethernet Gigabit bidirect. data line (A-D) | EDM | Contactur Monitoring | | |
| EN0r5422 | Encoder 0-pulse 0-0 (TTL) | ENAr5422 | Encoder A/Ā (TTL) | | |
| | | ENBr5422 | Encoder B/B̄ (TTL) | | |

Wire Colors according to DIN IEC 757

| | |
|------|--------------|
| 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 Volume

