# MLBS103

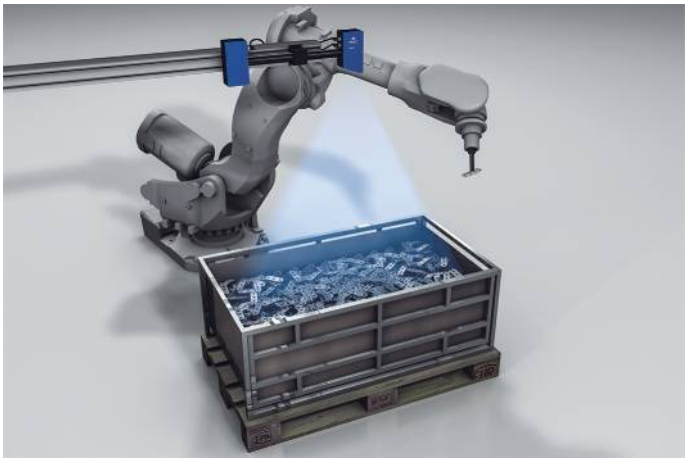
Part Number

**Shape**Drive



- **10 Gbit/s interface for high speed data transfer**
- **5 MP resolution**
- **Large measuring volumes (up to 1300 × 1000 × 800 mm)**
- **Short recording times of up to 0.35 s**

ShapeDrive MLBS 3D Sensors are ideally suited for applications with large measuring volumes. The six models in this series are available in two performance classes with camera resolutions of 5 and 12 megapixels. Thanks to the rugged IP67 housing, all ShapeDrive sensors are ideally suited for use in industrial environments. With its 10 Gigabit Ethernet interface and three measuring ranges in each performance class, ShapeDrive is also distinguished by great diversity and high speed.

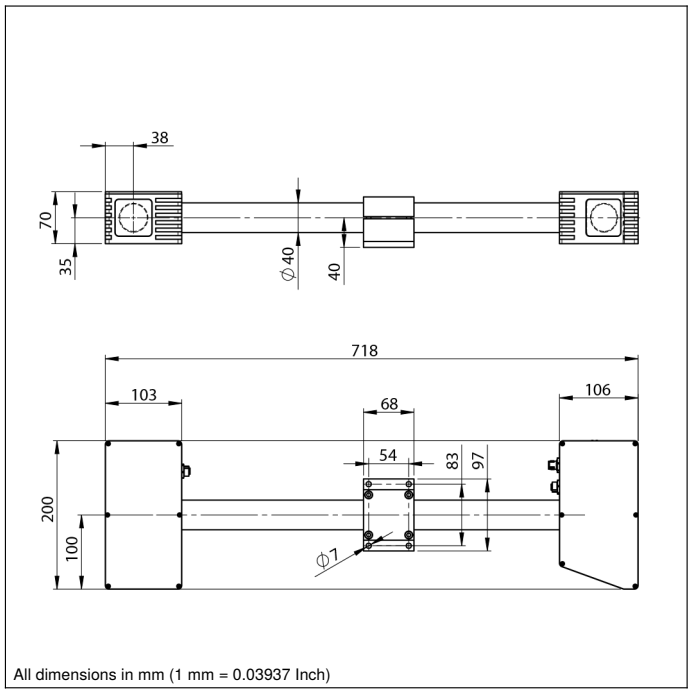


## Technical Data

| | |
|---|---|
| **Optical Data** | |
| Working range Z | 1500...2300 mm |
| Measuring range Z | 800 mm |
| Measuring range X | 1300 mm |
| Measuring range Y | 1000 mm |
| Resolution Z | 80 µm |
| Resolution X/Y | 783 µm |
| Camera Resolution | 2448 × 2048 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) | 5 A |
| Recording duration | 0,35...2,15 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 | IP67 |
| Connection | M12 × 1; 12-pin |
| Type of Connection Ethernet | M12 × 1; 8-pin, X-cod. |
| Optic Cover | Plastic |
| Weight | 4500 g |
| Web server | yes |
| Connection Diagram No. | 238, 1022 |
| Control Panel No. | A41 |
| Suitable Connection Equipment No. | 50, 87 |

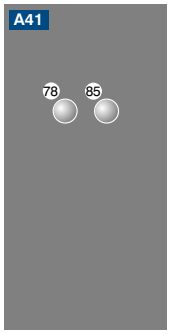
## Complementary Products

| |
|---|
| Cooling Unit ZLBK001 |
| Cooling Unit ZLBK002 |

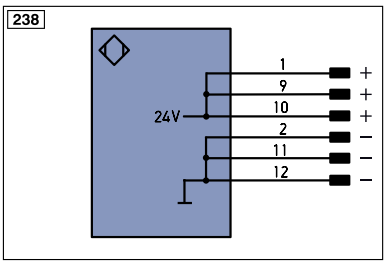


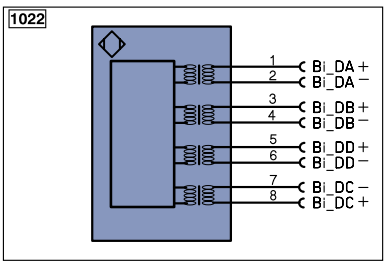

All dimensions in mm (1 mm = 0.03937 Inch)

## Ctrl. Panel




78 = Module status
85 = Link/Act LED



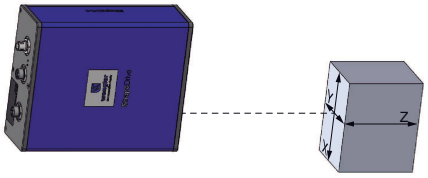

Legend

| | |
|---|---|
| + | Supply Voltage + |
| – | Supply Voltage 0 V |
| ~ | Supply Voltage (AC Voltage) |
| A | Switching Output (NO) |
| Ā | Switching Output (NC) |
| V | Contamination/Error Output (NO) |
| V̄ | Contamination/Error Output (NC) |
| E | Input (analog or digital) |
| T | Teach Input |
| Z | Time Delay (activation) |
| S | Shielding |
| RxD | Interface Receive Path |
| TxD | Interface Send Path |
| RDY | Ready |
| GND | Ground |
| CL | Clock |
| E/A | Output/Input programmable |
| | IO-Link |
| PoE | Power over Ethernet |
| IN | Safety Input |
| OSSD | Safety Output |
| Signal | Signal Output |
| Bl_D+/- | Ethernet Gigabit bidirect. data line (A-D) |
| EN RS422 | Encoder 0-pulse 0-0̄ (TTL) |
| PT | Platinum measuring resistor |
| nc | not connected |
| U | Test Input |
| Ū | Test Input inverted |
| W | Trigger Input |
| W– | Ground for the Trigger Input |
| O | Analog Output |
| O– | Ground for the Analog Output |
| BZ | Block Discharge |
| AW | Valve Output |
| a | Valve Control Output + |
| b | Valve Control Output 0 V |
| SY | Synchronization |
| SY– | Ground for the Synchronization |
| E+ | Receiver-Line |
| S+ | Emitter-Line |
| ⏚ | Grounding |
| SnR | Switching Distance Reduction |
| Rx+/– | Ethernet Receive Path |
| Tx+/– | Ethernet Send Path |
| Bus | Interfaces-Bus A(+)/B(–) |
| La | Emitted Light disengageable |
| Mag | Magnet activation |
| RES | Input confirmation |
| EDM | Contactor Monitoring |
| EN RS422 | Encoder A/Ā (TTL) |
| EN RS422 | Encoder B/B̄ (TTL) |
| EN A | Encoder A |
| EN B | 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 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 Volume




Specifications are subject to change without notice