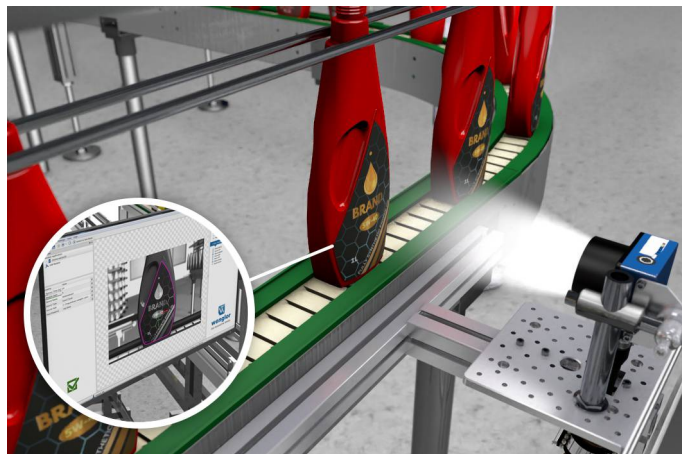


- Computing power of vision system in sensor format
- Condition monitoring (including position monitoring via position sensor)
- Expandable, modular hardware design
- State-of-the-art communication interfaces incl. PoE functionality
- User-friendly vision tools

The Smart Camera B60 offers the functionality and performance of a full-fledged image processing system and is therefore suitable for even complex image processing applications. Image recording and evaluation by the high-performance, easy-to-use uniVision image processing software are combined in a compact and robust modular housing. Additional software modules can be added at any time using upgrade licenses.



## Technical Data

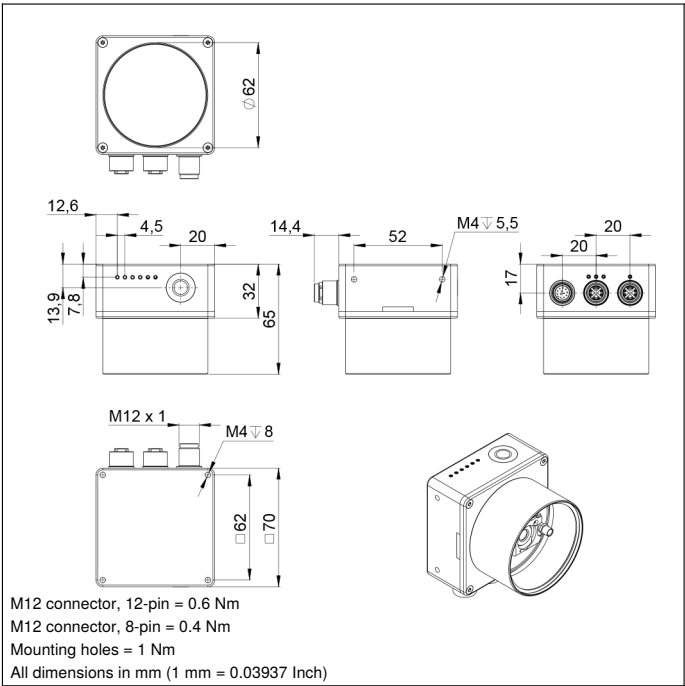
| Optical Data                                |                              |
|---------------------------------------------|------------------------------|
| Working Range                               | > 50 mm                      |
| Resolution                                  | 1440 × 1080 Pixel            |
| Resolution                                  | 1,6 MP                       |
| Focal distance                              | 6 mm                         |
| Image Chip                                  | color                        |
| Image chip size                             | 1/2,9"                       |
| Pixel Size                                  | 3,45 × 3,45 µm               |
| Light Source                                | Z60F illumination module     |
| Optics                                      | Auto-focus wide              |
| Laser Class (EN 60825-1)                    | 1                            |
| Frame rate (fullframe)                      | ≤ 60 fps                     |
| Environmental conditions                    |                              |
| Temperature Range                           | 0...40 °C                    |
| Storage temperature                         | 0...70 °C                    |
| Atmospheric humidity                        | 5...95%, non-condensing      |
| Shock resistance per DIN IEC 68-2-27        | 30 g / 11 ms                 |
| Vibration resistance per DIN EN 60068-2-64  | 6 g (10...55 Hz)             |
| Electrical Data                             |                              |
| Supply Voltage                              | 24 V DC                      |
| Current Consumption (U <sub>b</sub> = 24 V) | 700 mA                       |
| Inputs/Outputs                              | 6                            |
| Switching Output Voltage Drop               | < 2,5 V                      |
| Switching Output/Switching Current          | 100 mA                       |
| Short Circuit Protection                    | yes                          |
| Reverse Polarity Protection                 | yes                          |
| Interface                                   | Ethernet                     |
| Baud Rate Ethernet                          | 1 Gbit/s                     |
| Baud Rate PROFINET                          | 100 Mbit/s                   |
| Industry protocols                          | EtherCAT                     |
| Industry protocols                          | EtherNet/IP™                 |
| Industry protocols                          | PROFINET Class B             |
| General protocols                           | FTP                          |
| General protocols                           | sFTP                         |
| General protocols                           | TCP/IP                       |
| General protocols                           | UDP                          |
| Protection Class                            | III                          |
| RAM                                         | 4 GB                         |
| Storage Capacity                            | 32 GB                        |
| PoE Class                                   | 4                            |
| Mechanical Data                             |                              |
| Setting Method                              | Web server                   |
| Minimum object distance                     | 50 mm                        |
| Housing Material                            | Aluminum, anodised           |
| Optic Cover                                 | Plastic, PMMA                |
| Degree of Protection                        | IP67                         |
| UL Enclosure Type                           | 1                            |
| Connection                                  | M12 × 1; 12-pin              |
| Type of Connection Ethernet                 | M12 × 1, 8-pin, X-coded (2x) |
| Safety-relevant Data                        |                              |
| MTTFd (EN ISO 13849-1)                      | 149,4 a                      |
| Function                                    |                              |
| Multizone Distance Sensor                   | yes *                        |
| Software                                    | uniVision 3                  |
| License package                             | uniVision                    |

PNP NO

\* When using a lighting module

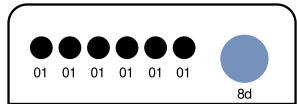
Current peaks of up to 800 mA may occur during start-up

From revision C: 4 GB RAM and 32 GB memory; PoE Class 4

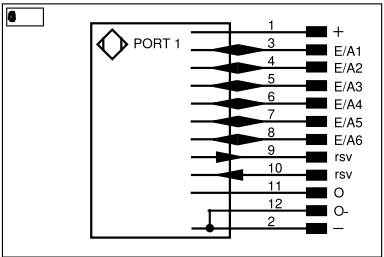
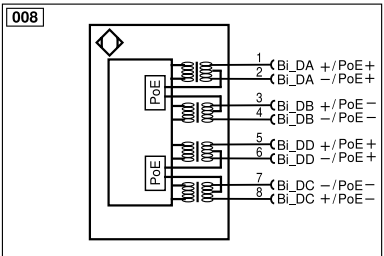
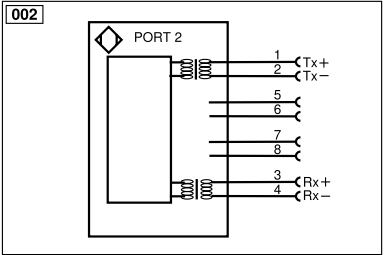


## Ctrl. Panel

B5



01 = Switching Status Indicator  
8d = button



| Legend    |                                            |       |                                |                                        |                     |
|-----------|--------------------------------------------|-------|--------------------------------|----------------------------------------|---------------------|
| +         | Supply Voltage +                           | PT    | Platinum measuring resistor    | ENARs422                               | Encoder A/Ä (TTL)   |
| -         | Supply Voltage 0 V                         | nc    | Not connected                  | ENBRs422                               | Encoder B/ß (TTL)   |
| ~         | Supply Voltage (AC Voltage)                | U     | Test Input                     | ENa                                    | Encoder A           |
| A         | Switching Output (NO)                      | Ü     | Test Input inverted            | ENb                                    | Encoder B           |
| Ä         | Switching Output (NC)                      | W     | Trigger Input                  | AMIN                                   | Digital output MIN  |
| V         | Contamination/Error Output (NO)            | W-    | Ground for the Trigger Input   | AMAX                                   | Digital output MAX  |
| Ÿ         | Contamination/Error Output (NC)            | O     | Analog Output                  | AOK                                    | Digital output OK   |
| E         | Input (analog or digital)                  | O-    | Ground for the Analog Output   | SY In                                  | Synchronization In  |
| T         | Teach Input                                | BZ    | Block Discharge                | SY OUT                                 | Synchronization OUT |
| R         | Reset 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 |                                        |                     |
| RDY       | Ready                                      | E+    | Receiver-Line                  | BK                                     | Black               |
| GND       | Ground                                     | S+    | Emitter-Line                   | BN                                     | Brown               |
| CL        | Clock                                      | ≡     | Grounding                      | RD                                     | Red                 |
| E/A       | Output/Input programmable                  | SnR   | Switching Distance Reduction   | OG                                     | Orange              |
| IO-Link   | IO-Link                                    | Rx+/- | Ethernet Receive Path          | YE                                     | Yellow              |
| PoE       | Power over Ethernet                        | Tx+/- | Ethernet Send Path             | GN                                     | Green               |
| IN        | Safety Input                               | Bus   | Interfaces-Bus A(+)/B(-)       | BU                                     | Blue                |
| QSSD      | Safety Output                              | La    | Emitted Light disengageable    | VT                                     | Violet              |
| Signal    | Signal Output                              | Mag   | Magnet activation              | GY                                     | Grey                |
| BI_D+/-   | Ethernet Gigabit bidirect. data line (A-D) | RES   | Input confirmation             | WH                                     | White               |
| ENo RS422 | Encoder 0-pulse 0/0 (TTL)                  | EDM   | Contact Monitoring             | PK                                     | Pink                |
|           |                                            |       |                                | GNYE                                   | Green/Yellow        |