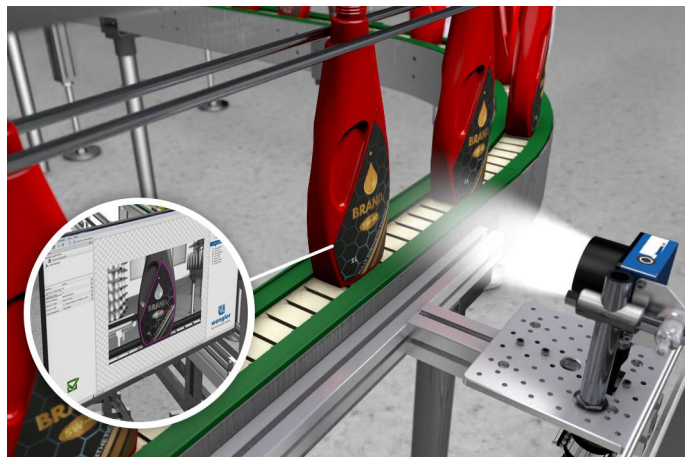


- **Computing power of vision system in sensor format**
- **Condition monitoring (including position monitoring via position sensor)**
- **Expandable, modular hardware design**
- **State-of-the-art communication interfaces incl. PoE functionality**
- **User-friendly vision tools**

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           |                   |
|------------------------|-------------------|
| Lens thread            | C-Mount           |
| Resolution             | 2448 × 2048 Pixel |
| Resolution             | 5 MP              |
| Image Chip             | color             |
| Image chip size        | 1/1,8"            |
| Pixel Size             | 2,74 × 2,74 μm    |
| Light Source           | External lighting |
| Optics                 | C mount           |
| Frame rate (fullframe) | ≤ 67 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) | 600 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                |

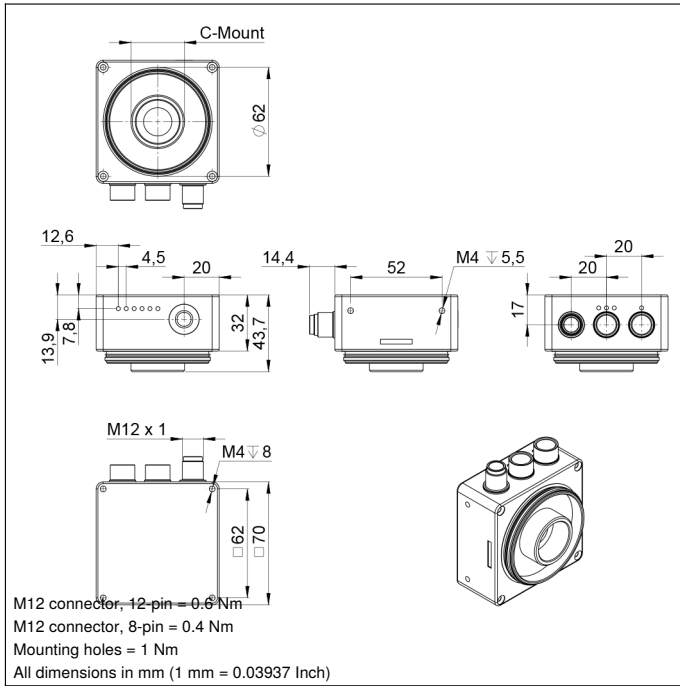
| Mechanical Data             |                              |
|-----------------------------|------------------------------|
| Setting Method              | Web server                   |
| Housing Material            | Aluminum, anodised           |
| Optic Cover                 | Glass                        |
| Degree of Protection        | IP67                         |
| UL Enclosure Type           | 1                            |
| Connection                  | M12 × 1; 12-pin              |
| Type of Connection Ethernet | M12 × 1, 8-pin, X-coded (2×) |

| Safety-relevant Data   |             |
|------------------------|-------------|
| MTTFd (EN ISO 13849-1) | 174,12 a    |
| Software               | uniVision 3 |
| License package        | uniVision   |

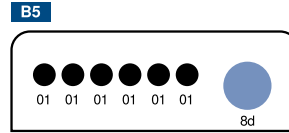
PNP NO

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

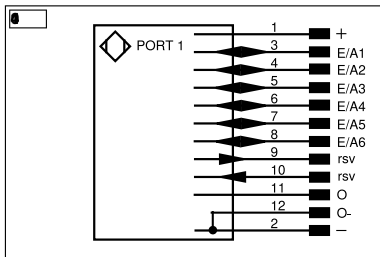
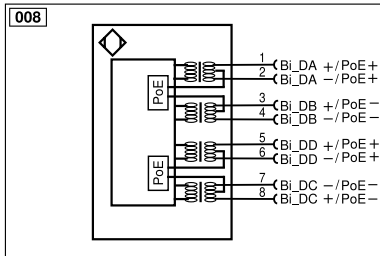
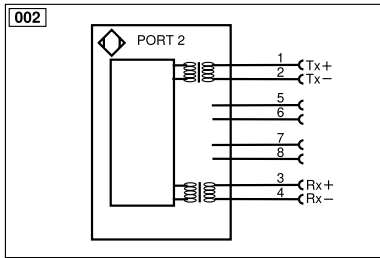
From revision E: 4 GB RAM and 32 GB memory; PoE Class 4



### Ctrl. Panel



01 = Switching Status Indicator  
 8d = button



| Legend    |  |       |                                |  |                     |
|-----------|--|-------|--------------------------------|--|---------------------|
| +         | Supply Voltage +                           | PT    | Platinum measuring resistor    | ENAR5422                               | Encoder A/Ā (TTL)   |
| -         | Supply Voltage 0 V                         | nc    | Not connected                  | ENBR5422                               | Encoder B/B̄ (TTL)  |
| ~         | Supply Voltage (AC Voltage)                | U     | Test Input                     | ENA                                    | Encoder A           |
| A         | Switching Output (NO)                      | Ū     | Test Input inverted            | ENB                                    | Encoder B           |
| Ā         | 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  |
| Ṽ         | 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 | 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              |
| QSSD      | 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                |
| ENo RS422 | Encoder 0-pulse 0/0 (TTL)                  | EDM   | Contacting Monitoring          | GNYE                                   | Green/Yellow        |

### Visual Field

| 2       | 1       | 100 mm   | 200 mm    | 400 mm     | 600 mm     |
|---------|---------|----------|-----------|------------|------------|
|         | ZVZG100 |          | 78x58 mm  | 161x120 mm | 326x245 mm |
| ZVZG101 |         | 57x43 mm | 119x89 mm | 243x183 mm | 368x276 mm |
| ZVZG102 |         | 36x27 mm | 78x58 mm  | 161x120 mm | 243x183 mm |
| ZVZG103 |         | 26x20 mm | 57x43 mm  | 119x89 mm  | 181x136 mm |
| ZVZG104 |         | 15x11 mm | 35x26 mm  | 75x56 mm   | 114x86 mm  |
| ZVZG105 |         | 9x7 mm   | 23x18 mm  | 52x39 mm   | 80x60 mm   |
| ZVZG106 |         | -        | 14x11 mm  | 35x26 mm   | 55x41 mm   |

1 = working distance

2 = lens

