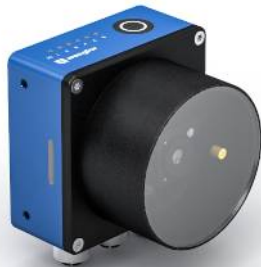


# Smart Camera

## B60P112

Part Number



- 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 paired with individual programming

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. Thanks to the uniVision Script license package, users can switch flexibly between parametrization and programming solutions. Seamless integration of HALCON scripts enables secure and flexible data exchange.

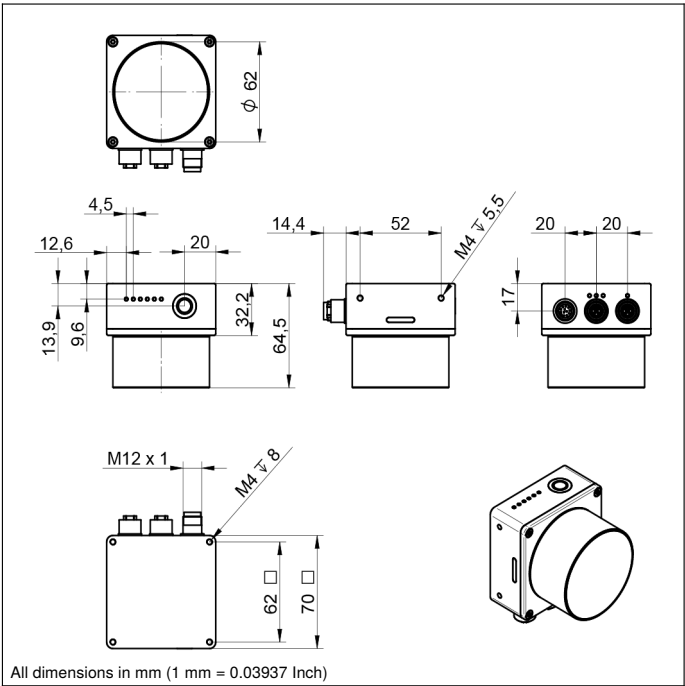


### Technical Data

| Optical Data                               |                              |
|--------------------------------------------|------------------------------|
| Working Range                              | > 100 mm                     |
| Resolution                                 | 1440 × 1080 Pixel            |
| Resolution                                 | 1,6 MP                       |
| Focal distance                             | 12 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 narrow            |
| Laser Class (EN 60825-1)                   | 1                            |
| Frame Rate                                 | ≤ 40 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 (Ub = 24 V)            | < 500 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                         | PROFINET Class B             |
| General protocols                          | FTP                          |
| General protocols                          | sFTP                         |
| General protocols                          | TCP/IP                       |
| General protocols                          | UDP                          |
| Protection Class                           | III                          |
| RAM                                        | 2 GB                         |
| Storage Capacity                           | 16 GB                        |
| Mechanical Data                            |                              |
| Minimum object distance                    | 100 mm                       |
| Housing Material                           | Aluminum, anodised           |
| Optic Cover                                | Plastic, PMMA                |
| Degree of Protection                       | IP67                         |
| Connection                                 | M12 × 1; 12-pin              |
| Type of Connection Ethernet                | M12 × 1, 8-pin, X-coded (2×) |
| Web server                                 | yes                          |
| License package                            | uniVision Script             |
| PNP NO                                     | ●                            |
| Control Panel No.                          | B5                           |

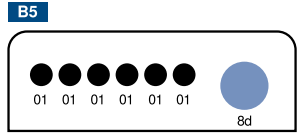
### Complementary Products

|                                    |
|------------------------------------|
| Connection cables                  |
| Filter                             |
| Heat sink                          |
| License B60 uniVision Robot Vision |
| Z60F lighting module               |
| ZVZJ calibration plate             |

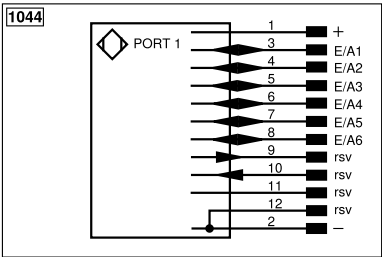
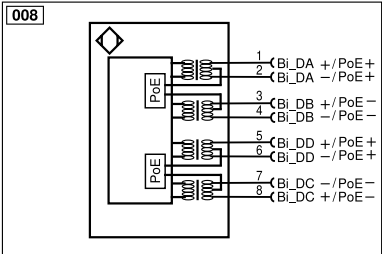
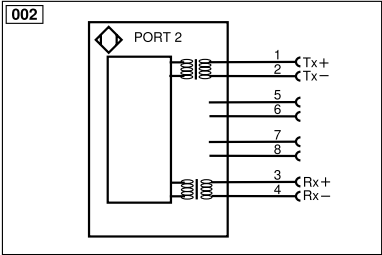


All dimensions in mm (1 mm = 0.03937 Inch)

### Ctrl. Panel



01 = Switching Status Indicator  
8d = button



| Legend    |                                            |                                        |                                |
|-----------|--------------------------------------------|----------------------------------------|--------------------------------|
| +         | Supply Voltage +                           | nc                                     | Not connected                  |
| -         | Supply Voltage 0 V                         | U                                      | Test Input                     |
| ~         | Supply Voltage (AC Voltage)                | Ū                                      | Test Input inverted            |
| A         | Switching Output (NO)                      | W                                      | Trigger Input                  |
| Ā         | Switching Output (NC)                      | W-                                     | Ground for the Trigger Input   |
| V         | Contamination/Error Output (NO)            | O                                      | Analog Output                  |
| Ȳ         | Contamination/Error Output (NC)            | O-                                     | Ground for the Analog Output   |
| E         | Input (analog or digital)                  | BZ                                     | Block Discharge                |
| T         | Teach Input                                | Amv                                    | Valve Output                   |
| Z         | Time Delay (activation)                    | a                                      | Valve Control Output +         |
| S         | Shielding                                  | b                                      | Valve Control Output 0 V       |
| RxD       | Interface Receive Path                     | SY                                     | Synchronization                |
| TxD       | Interface Send Path                        | SY-                                    | Ground for the Synchronization |
| RDY       | Ready                                      | E+                                     | Receiver-Line                  |
| GND       | Ground                                     | S+                                     | Emitter-Line                   |
| CL        | Clock                                      | ±                                      | Grounding                      |
| E/A       | Output/Input programmable                  | SnR                                    | Switching Distance Reduction   |
| IO-Link   |                                            | Rx+/-                                  | Ethernet Receive Path          |
| PoE       | Power over Ethernet                        | Tx+/-                                  | Ethernet Send Path             |
| IN        | Safety Input                               | Bus                                    | Interfaces-Bus A(+)/B(-)       |
| OSSD      | Safety Output                              | La                                     | Emitted Light disengageable    |
| Signal    | Signal Output                              | Mag                                    | Magnet activation              |
| Bi_D+/-   | Ethernet Gigabit bidirect. data line (A-D) | RES                                    | Input confirmation             |
| ENo RS422 | Encoder 0-pulse 0/Ū (TTL)                  | EDM                                    | Contact Monitoring             |
| PT        | Platinum measuring resistor                | ENARs422                               | Encoder A/Ā (TTL)              |
|           |                                            | Wire Colors according to DIN 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                   |