# VE202G1A
# Image Processing  –  Smart Camera
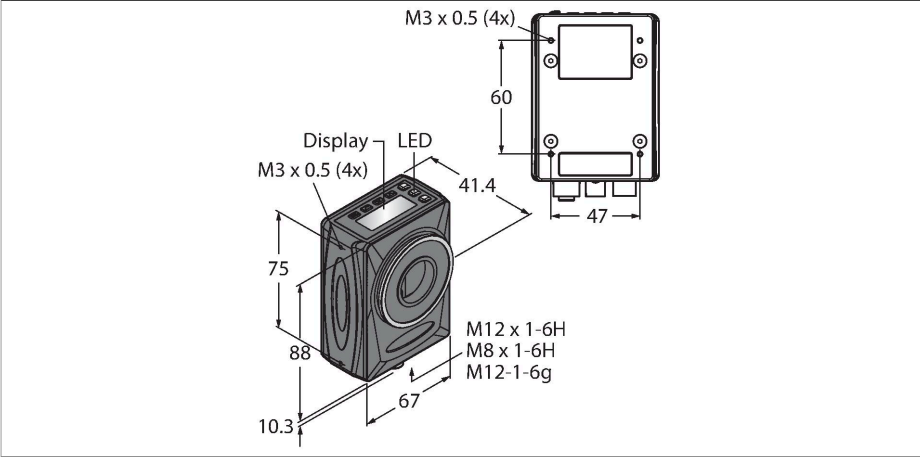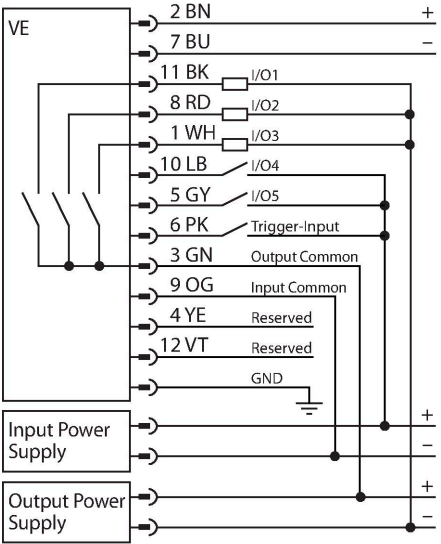




## Technical data

| Type | VE202G1A |
|---|---|
| ID | 3094843 |
| **Camera data** | |
| Function | Multifunctional |
| Image sensor | 1/1.8" CMOS, grayscale value |
| Resolution | 1600 × 1200 pixels |
| Pixel size | 4.5  µm |
| Frame rate | 50  fps |
| Exposure time | 0.02…500 ms |
| Internal memory | 500  MB |
| Number of inspections | ≤ 999 |
| Lens | C-Mount |
| **Electrical data** | |
| Operating voltage $U_B$ | 12…30  VDC |
| DC rated operating current $I_e$ | ≤ 400 mA |
| Short-circuit protection | yes |
| Reverse polarity protection | yes |
| Communication protocol | EtherNet/IP<br>FTP<br>Modbus TCP<br>PCCC<br>PROFINET<br>RS232 |
| Output function | Input/output programmable, 5 × PNP/NPN optically decoupled |
| Power on display | LED, Green |
| Switching state | LED, Yellow |
| Error indication | LED, red |

## Features

- Image processing tools: grayscale value, object, edge and positioning functions; pattern, blob, blemish and bead detection
- Analysis tools: mathematical operations and measuring function
- Vision manager software with intuitive user interface
- 1/1.8" CMOS, 2 MP image sensor
- 2-line, 8-segment LCD display with push-buttons
- 5 x PNP/NPN, input/output
- External trigger input
- Connection for external lighting
- Supports Ethernet protocol PROFINET, EtherNet/IP and Modbus/TCP)
- Protection class IP20, IP67 with lens cover (sold separately)
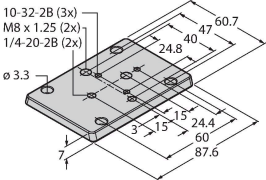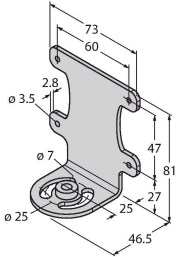- C-mount lens (sold separately)

## Wiring diagram

## Technical data

### Mechanical data

| | |
|---|---|
| Design | Rectangular, VE |
| Dimensions | 88 x 67 x 41.4  mm |
| Housing material | Aluminium, AL |
| Electrical connection | Connector, M12 × 1, 12-wire |
| Ambient temperature | 0…+50  °C |
| Protection class | IP20<br>IP67 |

### Tests/approvals

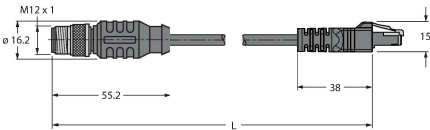| | |
|---|---|
| Approvals | CE, cULus list |

## Functional principle

The VE smart camera has a 2-megapixel CMOS image sensor and combines the ease of use and configuration (similar to the iVu image sensor) with the powerful complexity and multifunctionality (similar to the PresensePlus P4) of an image processing system. The vision manager software is an intuitive user interface. It has a variety of editing options, great flexibility in the creation and editing of inspections, as well as the possibility to simulate inspections with an emulator in the course of an application analysis.
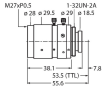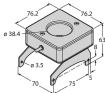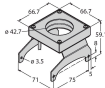
## Accessories

| SMBVEMP | 3800293 | SMBVERA | 3097185 |
|---|---|---|---|
| Mounting panel | | Bracket for mounting on right side | |

## Accessories

| Dimension drawing | Type | ID | |
|---|---|---|---|
| | MQDC2S-1206 | 3011420 | Power supply, M12 × 1 female connector, 12-pin, cable length: 1.83 m |
| | RKS12T-2/TXL | 6626917 | Connection cable, M12 female connector, straight, 12-pin, shielding on coupling nut; cable length: 2 m, jacket material: PUR, black; cULus approval |
| | RSS RJ45S 841-2M | U8626-2 | Extension cable for Industrial Ethernet, M12 male connector to RJ45 male connector, 8-pin, cable length: 2 m, jacket material: TPE, green, shielded, stranded wires, twisted pair |

# Accessories

| Dimension drawing | Type | ID | |
|---|---|---|---|
| | LCF12LEVMP | 3097347 | C-mount lens, 12 mm focal distance |
| | VELC60-PC | 3097182 | Lens cover, length: 60 mm, Window material: Polycarbonate |
| Kein Maßbild vorhanden/ No dimension drawing available | FLTR635-27 | 3097530 | Bandpass filter red, 27 mm diameter suitable for LCFxxLEVMP lenses |
| | LEDRRV70XD5-PM | 3097364 | High-intensity LED ring light, adjustable via potentiometer, for installation and control on a VE smart camera, light color: red |
| | LEDRRV62X62M | 3097378 | LED ring light for installation and control on a VE smart camera, light color: red |