

1) Teach reference image 2) Power 3) Output 1 active 4) Output 2 active 5) Connection with PC 6) Sharpness

- BVS-E Universal
- Series Universal
- Focal distance 6.0 mm
- LED, red light



**General attributes**

|                                |   |
|--------------------------------|---|
| Adjuster                       | Adjusting ring (1x)<br>Key (1x)   |
| Approvals / Conformity         | CE<br>cULus   |
| Basic standard                 | IEC 60947-5-2<br>EN 62471:2008  |
| Duration of time function      | Impulse 1...1000 ms or infinite<br>Delay 0...1000 ms  |
| Enclosure Type per IEC 60529   | IP54  |
| Indicator                      | Connection with PC - LED GN<br>Output 1 active - LED OG<br>Output 2 active - LED OG<br>Power - LED GN |
| Input function                 | Trigger   |
| No. of charac. per inspec. max | 255   |
| Number of inspections max.     | 20  |
| Polarity reversal protected    | yes   |
| Series                         | Series Universal  |
| Setting                        | Image sharpness<br>Teach-in reference image   |
| Short circuit protected        | yes   |
| Time function                  | Turn-on and -off delay<br>Single pulse  |

**Electrical attributes**

|   |   |
|---|---|
| Auxiliary output                          | Trigger output PNP                                  |
| Connection type                           | Connector   |
| Eff. operating current Ie                 | 100 mA  |
| Eff. operating voltage Ue DC              | 24.0 V  |
| Interface                                 | RS232 (9.6...115.2 kBaud)<br>Ethernet 10/100 Base T |
| No-load current max. I <sub>o</sub> at Ue | 200 mA  |
| Operating voltage UB max. DC [V]          | 26.0 V  |
| Operating voltage UB min. DC [V]          | 22.0 V  |
| Ripple max. (% of Ue)                     | 10 %  |
| Switching function                        | NO  |
| Switching output                          | PNP (2x)  |
| Voltage drop Ud max. (at Ie)              | 1.8 V   |

**Mechanical attributes**

|                             |   |
|-----------------------------|---|
| Ambient temperature Ta max. | 55 °C   |
| Ambient temperature Ta min. | -10 °C  |
| Connector type              | M 12x1, 4 pole, A-coded<br>M12x1, 4 pole, D-coded |
| Far working distance Wh     | 1000 mm   |
| Housing material            | GD-AL, ABS  |
| Length 1                    | 51.5 mm   |
| Length 2                    | 40.0 mm   |
| Length 3                    | 70.0 mm   |
| Mounting type               | Screw M4  |
| Near working distance Wl    | 50 mm   |
| Sensing face material       | PMMA  |
| Style                       | Block, 90° connection                             |
| Surface protection          | painted   |
| Working range               | 50...1000 mm                                      |

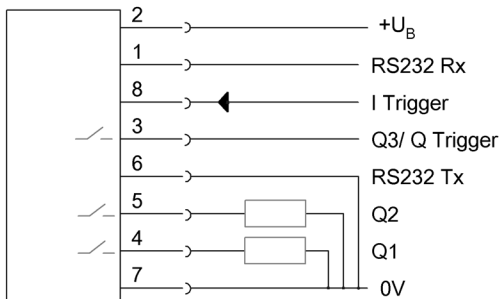
**Optical attributes**

|                                |                               |
|--------------------------------|-------------------------------|
| Detection rate typ.            | 3...40 Hz                     |
| Field of view max.             | 676 x 507 mm                  |
| Field of view min.             | 34 x 25 mm                    |
| Image resolution max.          | VGA 640 x 480 Pixel           |
| LED group acc. IEC 62471       | Exempt group                  |
| Lens                           | Focal distance 6.0 mm         |
| Light type                     | LED, red light                |
| Principle of optical operation | CMOS image sensor black-white |
| Wavelength                     | 870 nm                        |

**Additional text**

Detection rate is dependent on the evaluation function.  
 Use of external illumination recommended for working distances greater than 300 mm .  
 Only for NFPA 79 applications (machines with a supply voltage of maximum 600 volts).  
 Appropriate connectors can be obtained from Balluff.  
 When not in use, protect interface plug from penetration by dust and liquids. Protective cap is included in the scope of delivery.  
 Order accessories separately.  
 Do not press key using a pointed tool.  
 For additional information, refer to user's guide.

Conn. "PWR IO"



Conn. "To PC"

