

1) Teach-in reference image, 2) Operating voltage, 3) Output 1 active, 4) Output 2 active, 5) Connection with PC, 6) Focus



## Basic features

<b>Application</b>	Multi-Code-Reading Verifying character strings
<b>Approval/Conformity</b>	cULus CE EAC WEEE
<b>Style</b>	Square Connection 90°

## Display/Operation

<b>Adjuster</b>	Adjusting ring button
<b>Setting</b>	Teach-in reference image Image sharpness

## Electrical connection

<b>Connection 1</b>	M12x1-Male, 8-pin, A-coded
<b>Connection 2</b>	M12x1-Male, 4-pin, D-coded
<b>Contact, surface protection</b>	Gold plated
<b>Polarity reversal protected</b>	yes
<b>Short-circuit protection</b>	yes

## Electrical data

<b>Input function</b>	Trigger
<b>No-load current <math>I_0</math> max. at <math>U_e</math></b>	200 mA
<b>Operating voltage <math>U_b</math></b>	22...26 VDC
<b>Rated operating current <math>I_e</math></b>	100 mA
<b>Rated operating voltage <math>U_e</math> DC</b>	24 V
<b>Ready delay <math>t_v</math> max.</b>	10 ms
<b>Ripple max. (% of <math>U_e</math>)</b>	10 %
<b>Voltage drop <math>U_d</math> max. at <math>I_e</math></b>	1.8 V

## Environmental conditions

<b>Ambient temperature</b>	-10...55 °C
<b>EN 60068-2-27, Shock</b>	Half-sinus, 100 gn, 2 ms, 3x8000 Half-sinus, 30 gn, 11 ms, 3x6
<b>EN 60068-2-6, Vibration</b>	55 Hz, amplitude 1 mm, 3x30 min 10...2000 Hz, amplitude 1 mm, 30 gn, 3x5 h
<b>IP rating</b>	IP54

**Optical Identification**  
**BVS ID-3-101-E**  
**Order Code: BVS0019**



**Functional Characteristics**

<b>2D codes</b>	Data Matrix ECC 200 QR code Mini QR
<b>Barcodes</b>	Interleaved 2-of-5, Code 39, Code 128, Pharmacode, Codabar, EAN 8, EAN 13, UPC-E, UPC-A
<b>Features per inspection, number max.</b>	255
<b>Inspections, number max.</b>	20
<b>Stacked codes</b>	PDF417

**Functional safety**

<b>MTTF (40 °C)</b>	195 a
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**Interface**

<b>Duration of time function</b>	Impulse 1...1000 ms or infinite
<b>Interface</b>	Ethernet 10/100 Base T RS232 (9.6...115.2 kBaud)
<b>Supplementary output</b>	Trigger output PNP
<b>Switching output</b>	3x PNP normally open (NO)
<b>Time function</b>	On/off delay Single pulse

**Material**

<b>Housing material</b>	Aluminium, Die casting, Painted ABS
<b>Material sensing surface</b>	PMMA
<b>Surface protection</b>	Painted

**Mechanical data**

<b>Dimension</b>	51.5 x 70 x 40 mm
<b>Mounting part</b>	Screw M4

**Optical features**

<b>Field of view max.</b>	480 x 360 mm
<b>Field of view min.</b>	24 x 18 mm
<b>Focal length</b>	8.0 mm
<b>Frame rate</b>	3...40 Hz
<b>Image resolution</b>	0.3 MP (640 x 480 pixels)
<b>LED group per IEC 62471</b>	Exempt Group
<b>Light type</b>	Infrared
<b>Sensor type Vision</b>	CMOS image sensor black-white
<b>Special optical feature</b>	Incident light, can be disabled Infrared transmission filter, 830 nm
<b>Wave length</b>	870 nm

**Range/Distance**

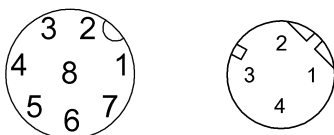
<b>Operating Distance</b>	50...1000 mm
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**Remarks**

Do not press key using a pointed tool.  
 Order accessories separately.  
 For additional information, refer to user's guide.  
 Only for applications per NFPA 79 (machines with a supply voltage of maximum 600 V). Appropriate connectors can be obtained from Balluff.  
 Use of external illumination recommended for working distances greater than 300 mm .  
 Detection rate is dependent on the evaluation function.  
 Interface plug, if n.c. protect against ingress of dust, dirt and liquids. Cover cap included.  
 For more information about MTTF and B10d see MTTF / B10d Certificate

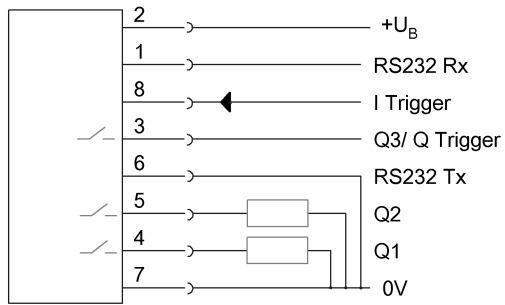
Indication of the MTTF- / B10d value does not represent a binding composition and/or life expectancy assurance; these are simply experiential values with no warranty implications. These declared values also do not extend the expiration period for defect claims or affect it in any way.

**Connector Drawings**



## Wiring Diagrams

Conn. "PWR IO"



Conn. "To PC"

