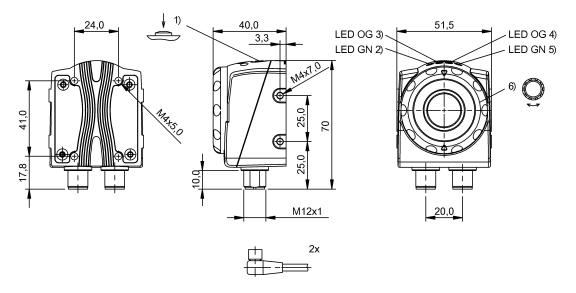Machine Vision
BVS UR-3-107-E
Order Code: BVS001K

BALLUFF

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

Basic features

Application	360° detection
	Barcode-, 2D-, OCR identification
Approval/Conformity	CE
	cULus
	EAC
	WEEE
Frame rate	3…40 Hz
Image resolution	640 x 480 pixels
Pixel size	6.0 x 6.0 µm
Sensor type Vision	CMOS image sensor black-white
Style	Square
	Connection 90°

Display/Operation

Adjuster	Adjusting ring
	button
Setting	Image sharpness
	Teach-in reference image

Electrical connection

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

Electrical data

Input function	Trigger
Line-induced noise	3A
No-load current Io max. at Ue	200 mA
Operating voltage Ub	22...26 VDC
Rated operating current Ie	100 mA
Rated operating voltage Ue DC	24 V
Ready delay tv max.	10 ms
Voltage drop Ud max. at Ie	1.8 V

Environmental conditions

Ambient temperature	-10...55 °C
EN 60068-2-27, Shock	Half-sinus, 100 gn, 2 ms, 3x8000
	Half-sinus, 30 g_n, 11 ms, 3x6
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
	$_{10}$…2000 Hz, amplitude 1 mm, 30 gn, 3x5 h
IP rating	IP54

Internet   www.balluff.com

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Machine Vision
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Functional Characteristics

2D codes	Data Matrix ECC 200 QR code Mini QR
Barcodes	Interleaved 2-of-5,Code 39, Code 128, Pharmacode,Codabar, EAN 8, EAN 13, UPC-E, UPC-A
Features per inspection, number max.	255
Field of view max.	240 x 180 mm
Field of view min.	55 x 42 mm
Focal length	16.0 mm
Inspections, number max.	20
LED group per IEC 62471	Exempt Group
Light type	Infrared
MTTF (40 °C)	195 a
Special optical feature	Incident light, can be disabled Infrared transmission filter,830 nm
Wave length	870 nm

Interface

Duration of time function	Impulse 1…1000 ms or infinite
Interface	RS232 (9.6...115.2 kBaud)
Supplementary output	Trigger output PNP
Switching output	3x PNP normally open (NO)
Time function	On/off delay Single pulse

Material

Housing material	Aluminum, Die casting, Painted ABS
Material sensing surface	PMMA
Surface protection	Painted

Mechanical data

Dimension	51.5 x 70 x 40 mm
Mounting part	Screw M4

Range/Distance

Operating Distance	230...1000 mm

Remarks

Detection rate is dependent on the evaluation function.

Use of external illumination recommended for working distances greater than 300 mm .

Only for applications per NFPA 79 (machines with a supply voltage of maximum 600 V). Appropriate connectors can be obtained from Balluff.

Interface plug, if n.c. protect against ingress of dust, dirt and liquids. Cover cap included.
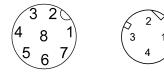
Order accessories separately.

Do not press key using a pointed tool.

For additional information, refer to user's guide.

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

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Wiring Diagrams

Conn. "PWR IO"

2	+U$_B$
1	RS232 Rx
8	I Trigger
3	Q3/ Q Trigger
6	RS232 Tx
5	Q2
4	Q1
7	0V

Conn. "To PC"

1	Rx +
2	Tx +
3	Rx -
4	Tx -

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