BALLUFF

sensors worldwide

Vision Sensor BVS

... easy to use

"The Vision Sensor from Balluff increases your quality and productivity“

Mature technology, individual solutions – more efficiency!
Use Balluff expertise to optimize your production. With us you get the entire technological variety with all the essential operating principles. Whether it's displacement sensing and identification systems, electronic and mechanical sensors or high-performance connectivity, Balluff brings more efficiency. And not just in standard products, but exactly tailored to your requirements. Simply describe what you need to do. We'll have the answer – just the way you need it.

Balluff stands for comprehensive systems expertise from a single source, continuous innovation, the most modern technology, the highest quality and greatest reliability. And more than that: for distinct customer orientation, i.e. custom-tailored solutions, fast worldwide service and outstanding applications assistance. Use our know-how. And you profit from long years of experience.

More variable and flexible

- **Flexible mounting**
- **Industrial grade**
- **Simple to integrate**
- **Check variable parts positions**

more added value

– 100 % quality
– High efficiency
– Increased economy

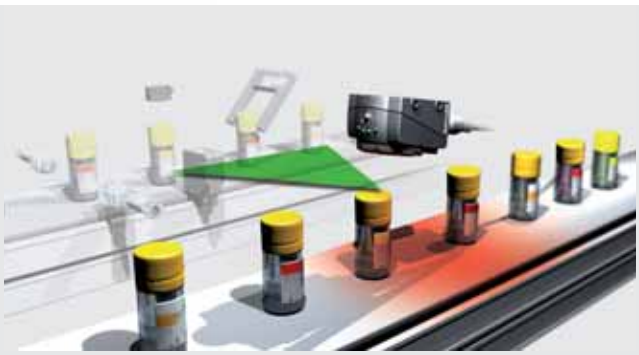
100 % quality – one sensor is all you need
With our BVS Vision Sensor you've chosen higher productivity, greater efficiency and 100 % quality. Use the Balluff BVS Vision Sensor wherever multiple monitoring functions are required at the same time or in rapid succession. Simply adapt the Vision Sensor to your requirements. Reconfigurations, even in-process, are always possible. So you always remain flexible. Monitor your production using the BVS with absolute reliability. One sensor is all you need for high efficiency.

The Balluff BVS Vision Sensor is available in two product lines: the BVS-E configured from a PC, and the BVS-C with separate configurator, with display and operating software already integrated. Simply choose the right one for your application and profit from a multi-talented sensor!

32 in one!

Replace up to 32 of the same sensors. Just one BVS-E is all you need to verify that a candy box is full.
It detects all the pieces at one time. With absolute reliability.

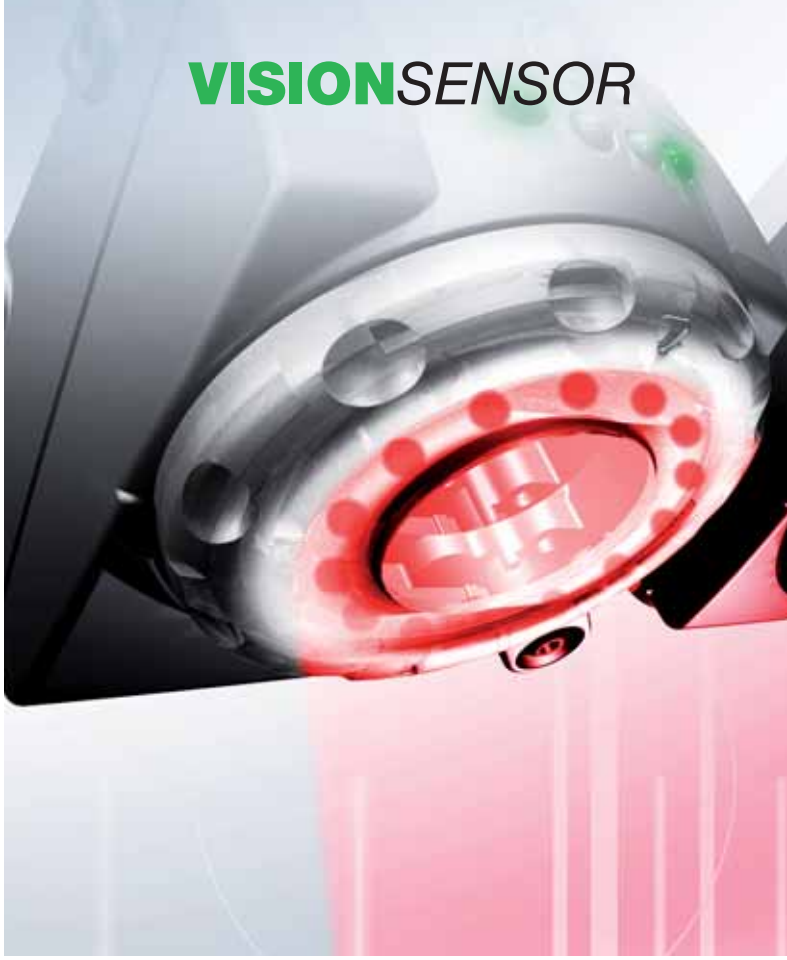
7 in one!



Replace up to seven different sensors. The BVS handles alternating tasks with ease. It carries out various functions in one pass: It checks brightness and contour, compares contrasts and width, detects patterns, counts edges and monitors the position. Precisely.

Vision Sensor BVS

Economical in every phase – cost reduction made easy



Your customers expect you to provide more reliable and higher-performance machines. Balluff supports you: with the BVS Vision Sensor.

Fast-running machines, frequent format changes or exact positions all require precise, reliable and adaptable sensors. No problem for Balluff. Which means no problem for you. With us you handle your growing requirements with ease.

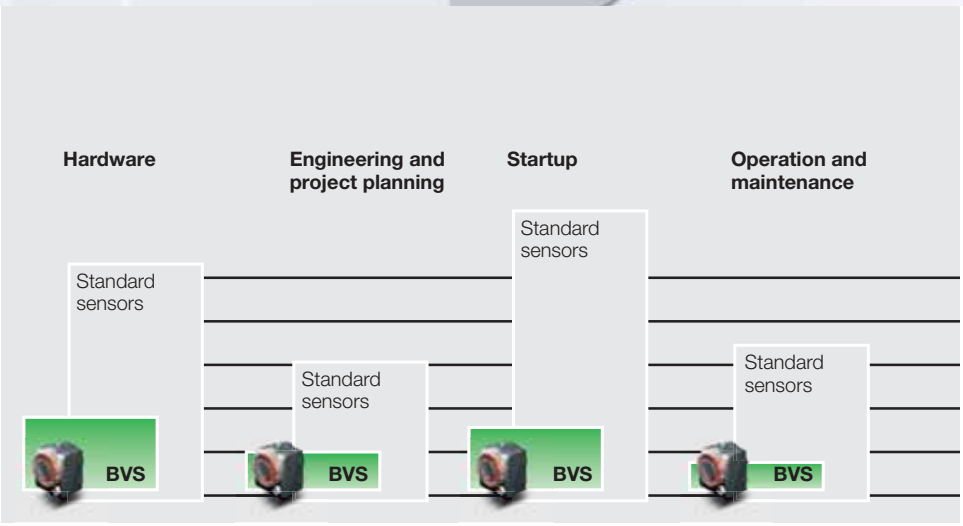
With the Balluff BVS Vision Sensor you increase your productivity and product quality. BVS Vision Sensors are easy to use and reliable to operate.

Improve quality
One Vision Sensor in credit card size with integrated processing electronics, illumination and digital outputs.
Once configured, the BVS Vision Sensor runs fully self-sufficiently. You get the results as digital signals on three outputs. And you can use the inputs to change the monitoring modes (inspections) even in-process.

The BVS Vision Sensor increases your productivity
- One sensor – with many functions
- One inspection – while monitoring up to 32 features
- Simple format changing – for short setup times

The BVS Vision Sensor increases your quality
- Each part is checked – for 100 % quality control
- Defect image memory on-board – find and eliminate defect causes faster
- Integrated quality inspection becomes possible – for optimized process control

Reduce costs
The Balluff Vision Sensor combines the functions of expensive vision systems with the ease of handling of photoelectric sensors.



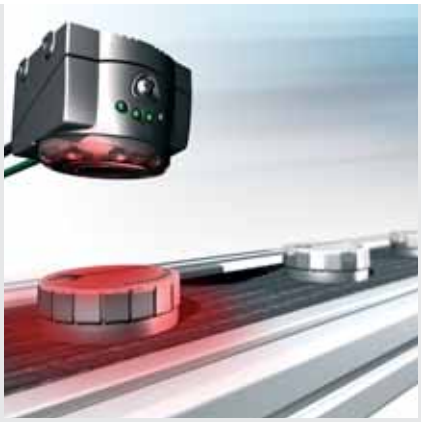
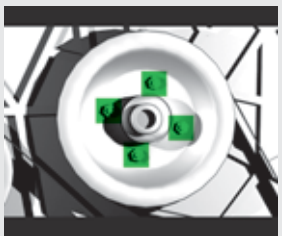
■ **Hardware**
Reduce hardware costs.
One BVS Vision Sensor can replace up to 32 standard sensors.

■ **Engineering and project planning**
One sensor instead of 32 – for even faster product selection. And you need only one sensor holder. Mounting becomes even simpler, especially since a mounting system exactly matched to the BVS is available.
Save time and reduce costs. With a multi-talented sensor.

■ **Startup**
Configuration is as easy as using a simple sensor: Operation of the BVS is entirely intuitive. Clear guidance eliminates the need to learn a programming language or undergo expensive training.

■ **Operation and maintenance**
Simply switch the BVS back and forth between different inspection tasks. No cumbersome realignment of various sensors.
Reduce both effort and stress. Shortened setup times increase your productivity.



Checking for presence
V-belt pulleys are attached using four nuts. The BVS checks for the presence of all the nuts at one time and ensures quality. Reliable inspection is guaranteed even if the location of the nuts varies.

Location
- Quality inspection of assemblies
- Inspection of hand-assembled units
- Product final inspection

Purpose
- Ensure completeness
- Checking for the presence of printing and labeling

Benefit
- Automated quality assurance around the clock
- Flexible inspection
- Check for multiple features at one time

Detecting location
In the feeder from an oscillating conveyor screws are provided for assembly. With the BVS you prevent problems, since incorrectly located screws or different screw types are immediately detected and shunted out.

Location
- Monitoring feed equipment
- Detecting parts location before processing stations

Purpose
- Avoid scrap
- Prevent tool damage
- Increase productivity

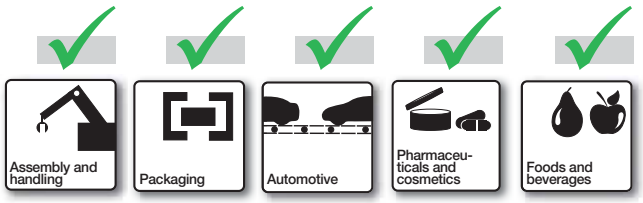
Benefit
- Easy to set up, no training
- Continuous location detection in-process, no stopping

Check labeling
Quality assurance requires that a can be checked for correct printing. The BVS provides you with seven different tools which can be combined with each other depending on the product line.

Location
- Quality assurance
- Product final inspection

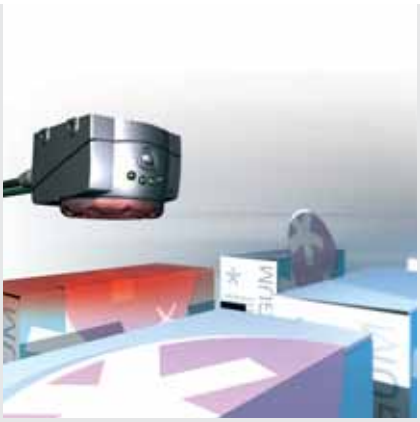
Purpose
- Ensure reliable labeling
- Monitor print quality
- Inspect batches

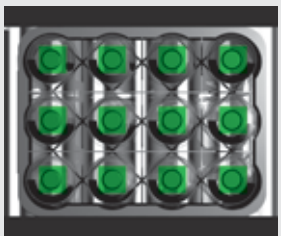
Benefit
- Multiple features are checked at the same time.
- The parts to be inspected are checked with a position tolerance.

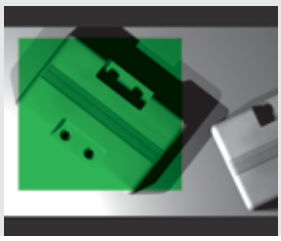


- **Robots and automation**
- **Assembly and handling**
- **Packaging and bottling**
- **Automotive**
- **Pharmaceuticals and cosmetics**
- **Foods and beverages**

Vision Sensor BVS
Applications –
Process reliability for automation





Checking for completeness
After manual assembly, the completeness of a product is checked. Three flexibly configurable outputs allow you for example to monitor the completeness of each series or special features.

Location
- Quality inspection
- Feed monitoring in integrated production

Purpose
- Visual, 100 % reliable monitoring
- Flexible setup

Benefit
- The sensor inspects for several features at the same time and can output up to three independent signals.

Verify position
Each package requires a label. But sometimes the label is in the wrong place. With the BVS Vision Sensor you check exactly whether the label is present and whether it is properly applied.

Location
- Monitoring outgoing packages in shipping
- Assembly inspection

Purpose
- Control product flow correctly
- Ensure product labeling
- Ensure quality

Benefit
- Fast switching between eight different presets

Check contour
Injection molded parts need to be checked at the inspection station: Defective parts or parts with flashing are shunted out for special rework.

Location
- Processing inspection
- Feed processes
- Quality-selective process control

Purpose
- Check shape, height, absence of flashing
- Send back defective parts
- Nominal/Actual comparison

Benefit
- Greater value added (only defect-free parts are processed)
- Improved utilization through optimized material flow

Vision Sensor BVS

Evaluation tools – seven functions in one sensor

BVS-E and BVS-C have seven evaluation tools you can use to reliably monitor your production process.
Their greater bandwidth allows you to easily handle various tasks.

Both BVS product lines also include a special feature each. The BVS-E for example can reliably check contours. And the BVS-C compares characters (OCV) with high accuracy.

Simply concentrate on your task and make the decision according to your needs. Then you'll find the right version "automatically." The BVS offers the best solutions. For every situation.

Evaluation tool	Description	BVS-E	BVS-C
Check brightness	Checks whether the brightness (gray values) in the selected image area is greater than a configured threshold. Applications: ■ Identify different types and parts ■ Check illumination brightness ■ Detect the function of a display	■	■
Compare contrast	Detects whether a certain contrast is present in the image. Applications: ■ Monitor presence of labels ■ Detect a label ■ Check for completeness	■	■
Count edges	Counts the gray value edges in the image area. Applications: ■ Monitor the number of pins on ICs ■ Check threads for completeness ■ Monitor the quality of gear wheels	■	■
Compare width	Compares the absolute distance between two edges in an image. Applications: ■ Check for presence (e.g. lids) ■ Differentiate parts ■ Monitor location and orientation	■	■

Evaluation tool	Description	BVS-E	BVS-C
Detect patterns	Detects patterns and differentiates objects using image processing. Digital patterns are "extracted" from the objects which are compared with the pattern of the reference object. Applications: ■ Check parts quality ■ Differentiate types	■	■
Check contour	Checks the shape of an object. Applications: ■ Check for absence of burrs and flashing ■ Check stamped parts ■ Differential parts shapes ■ Nominal/actual comparison	■	
Verify position	Checks the relative object position in the image. Applications: ■ Monitor level ■ Position parts and products ■ Position labels	■	■
Compare characters (OCV)	Compares characters. Applications: ■ Check labels ■ Monitor printing (e.g. ensure correct dates for different lots) ■ Check logos		■

Vision Sensor BVS

Operation and setup – three steps and you're ready

Simple configuration of the Balluff BVS
Both product lines of the BVS are easy to configure. Use the ConVis® vision software with the BVS-E, or a separate configurator and integrated software with the BVS-C.

BVS-E – with Balluff BVS ConVis® – the "Easy to Use" software
Connect the BVS-E Vision Sensor to your PC over Ethernet. The built-in software wizard guides you to successful configuration in just three steps. Simply enter your desired inspection parts or features. And check your result on the screen which immediately displays your data. Slight changes and corrections are easily made. Clear guidance eliminates the need to learn a programming language or undergo expensive training.

Configuration and startup
With PC link and
BVS ConVis® ... easy to use

In-process
Without PC link
(stand alone)
... as simple as a sensor.

Step 1
Connect

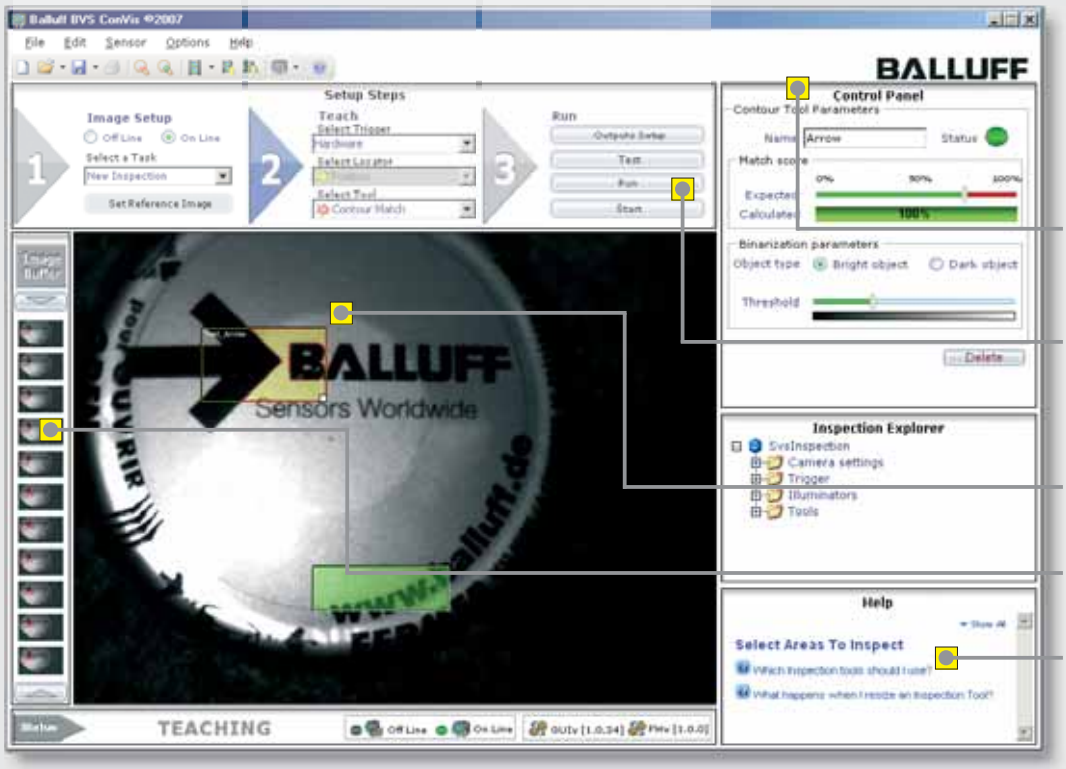
Connect the PC to the sensor via Ethernet and open the connection to the sensor.

Step 2
Configure

Specify the image section, image brightness and select your tools.

Step 3
Run

Evaluate the results and configure the output signals.



Tool Box
All the properties at a glance

Software wizard
Configuration of the sensor in three easy steps

ROI – Region of Interest
for the nominal/actual comparison

Frame buffer
for tracking

Built-in help function
for quick program overview

BVS-C – especially easy to set up using the configurator
Configuring the BVS-C is even more convenient. The software is already integrated into the separate configurator with keypad. Once the configurator and Vision Sensor are connected, simply select the tool for your application and define image settings such as image section. Then set your tool parameters and test your inspection. That's it.

Making corrections in-process is also easy. Because the display provides continuous status monitoring in-place, so that you are continually checking the sensor function and can immediately correct deviations. Product defects are detected directly.

1 Step 1
Connect

Connect the sensor to the monitor.

2 Step 2
Configure

Select the appropriate tool and define image settings including image section.

3 Step 3
Run

Set the tool parameters and test your inspection.

Vision Sensor BVS
The possibilities at a glance

Optimize your process control with the BVS Vision Sensor. Profit from high efficiency while ensuring greater economy. Regardless of which version your application calls for, with the BVS you ensure 100 % quality.

To use the right Vision Sensor for your particular application, use this handy overview. At a glance you can see the various functionalities, the accessories for simple integration, and you have the particular advantages of each version right in front of you. Make your decision for the best solution and greater productivity.

The Vision Sensor at a glance

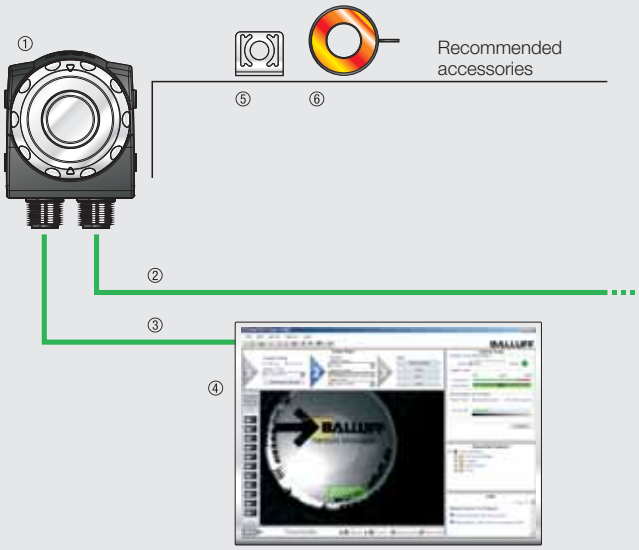
	BVS-E	BVS-C
Tools	7	7
Features per inspection	up to 32	1
Inspections	8	8
Connection	Multiple sensors in the network	One sensor on a configurator
Bus interface	Ethernet	

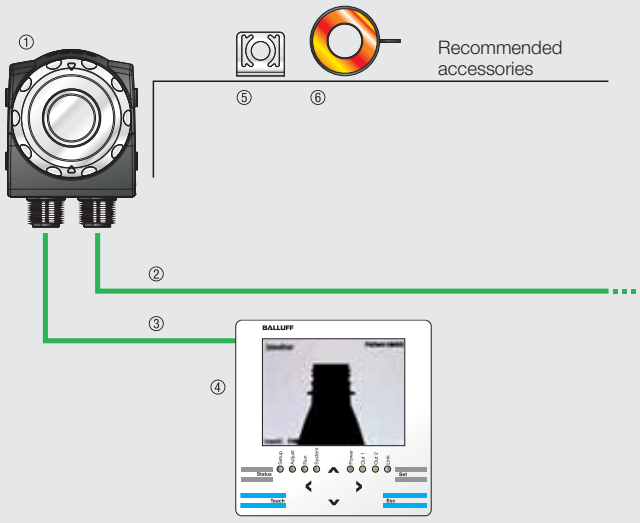
Advantages of the BVS-E Vision Sensor
- Short setup times and convenient format changing on the PC
- Flexible adaptation to your process through simple switching of the monitoring modes
- Simultaneous checking for many features

Special benefit of the BVS-C
- Easy to retrofit into your equipment
- Configurator for fast startup
- Simple to make corrections in-process and in-place
- Continuous status monitoring on the display

BVS-E

BVS-C





①	Vision Sensor BVS-E	p. 14
②	Connection cable for BVS-E	p. 20
③	Configuration cable (BVS/Laptop)	p. 20
④	BVS ConVis® software	p. 10
⑤	Mounting brackets and installation	p. 22
⑥	Lighting	p. 18

①	Vision Sensor BVS-C	p. 16
②	Connection cable for BVS-C	p. 20
③	Configurator cable	p. 20
④	Configurator	p. 16
⑤	Mounting brackets and installation	p. 22
⑥	Lighting	p. 18

Vision Sensor BVS-E

For maximum quality, optimized process control and increased productivity

VISIONSENSOR

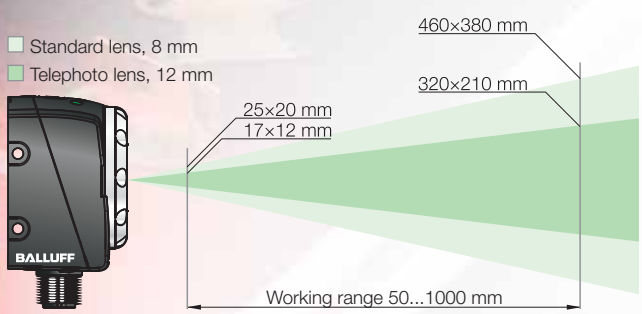
The Balluff BVS-E Vision Sensor combines the functions of expensive vision systems with the ease of handling of photoelectric sensors. Use the credit card size sensor with integrated processing electronics for optimized process control.
The BVS-E monitors your production around the clock. Reliably and precisely. Equipped with a light source and digital outputs, it provides 100 % inspection of each part.

Once you have configured the Vision Sensor on the PC in three easy steps, it runs fully automatically. It even checks up to 32 different features in one pass. And you can combine all seven tools in any way you like.

Make use of the ability to switch over the BVS-E during the process. With the advantage of eliminating a separate teach-in process. Use the inputs to set the monitoring modes and the Vision Sensor takes on different tasks automatically. Adapt it simply to the application and control your processes with ease. This saves you time and lowers your costs. And your production runs even more efficiently.

Series	
Series	
Lens, focal length	
Ordering code	
Supply voltage U_S	
Switching inputs	
Switching outputs	
Output current	
Configuration interface	
PNP	
NPN	
Parameter setting	
typ. detection rate	
Image sensor	
Working range	
Field of view	Working distance
(horizontal×vertical)	Field of view
Lighting	
Alignment aid	
Dimensions	
Connection	
Degree of protection per IEC 60529	
Ambient temperature range T_a	

Working distance and field of view



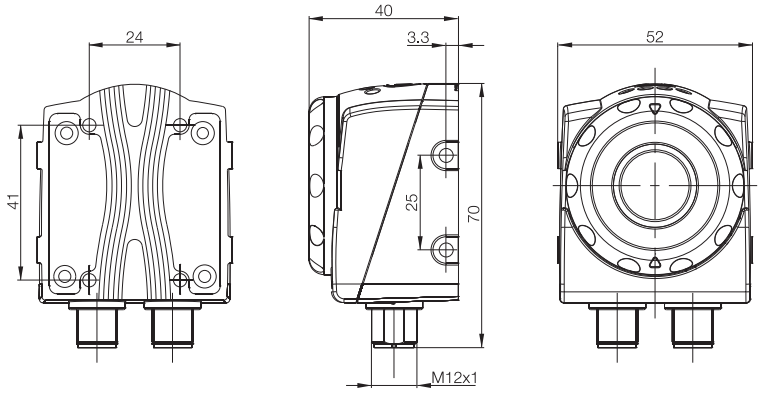
Bring your working range up close with the telephoto lens.
Or take advantage of the larger field of view at the same working distance offered by the standard lens. Use the distance computer:
www.balluff.de/vision

Vision Sensor BVS-E

For maximum quality, optimized process control and increased productivity




	Vision sensor	Vision sensor	Vision sensor	Vision sensor
	BVS-E	**BVS-E**	**BVS-E**	**BVS-E**
	Standard lens, 8 mm	Standard lens, 8 mm	Telephoto lens, 12 mm	Telephoto lens, 12 mm
	BVS OI-3-001-E	BVS OI-3-002-E	BVS OI-3-003-E	BVS OI-3-004-E
	24 V DC ±10 %	24 V DC ±10 %	24 V DC ±10 %	24 V DC ±10 %
	1× Trigger, 1× Select	1× Trigger, 1× Select	1× Trigger, 1× Select	1× Trigger, 1× Select
	1× lighting synchronization, 3× PNP/NPN configurable	1× lighting synchronization, 3× PNP/NPN configurable	1× lighting synchronization, 3× PNP/NPN configurable	1× lighting synchronization, 3× PNP/NPN configurable
	100 mA	100 mA	100 mA	100 mA
	Ethernet 10/100 Base T	Ethernet 10/100 Base T	Ethernet 10/100 Base T	Ethernet 10/100 Base T
	■		■	
		■		■
	ConVis® for Windows XP	ConVis® for Windows XP	ConVis® for Windows XP	ConVis® for Windows XP
	3...15 Hz (depending on evaluation function)	3...15 Hz (depending on evaluation function)	3...15 Hz (depending on evaluation function)	3...15 Hz (depending on evaluation function)
	CMOS–SW–VGA 640×480	CMOS–SW–VGA 640×480	CMOS–SW–VGA 640×480	CMOS–SW–VGA 640×480
	50...1000 mm	50...1000 mm	50...1000 mm	50...1000 mm
	50 mm 1000 mm	50 mm 1000 mm	50 mm 1000 mm	50 mm 1000 mm
	25×20 mm 460×380 mm	25×20 mm 460×380 mm	17×12 mm 320×210 mm	17×12 mm 320×210 mm
	LED, incident light (red), deselectable	LED, incident light (red), deselectable	LED, incident light (red), deselectable	LED, incident light (red), deselectable
	4 LED green, deselectable	4 LED green, deselectable	4 LED green, deselectable	4 LED green, deselectable
	58×52×40 mm	58×52×40 mm	58×52×40 mm	58×52×40 mm
	2 connectors M12 (8- and 4-pin)	2 connectors M12 (8- and 4-pin)	2 connectors M12 (8- and 4-pin)	2 connectors M12 (8- and 4-pin)
	IP 54	IP 54	IP 54	IP 54
	–10...+55 °C	–10...+55 °C	–10...+55 °C	–10...+55 °C



Starter kit for BVS-E
(Ordering code BVS Z-SK-OI-01)
includes Vision Sensor, mounting bracket, installation accessories, connector, software and quick guide

Vision Sensor BVS

The complete solution including configurator

VISIONSENSOR

For fast and simple retrofitting of machines and equipment, you can also get the BVS Vision Sensor with a separate configurator including display and software.

The advantage: Both teach-in and correction are possible on-location.

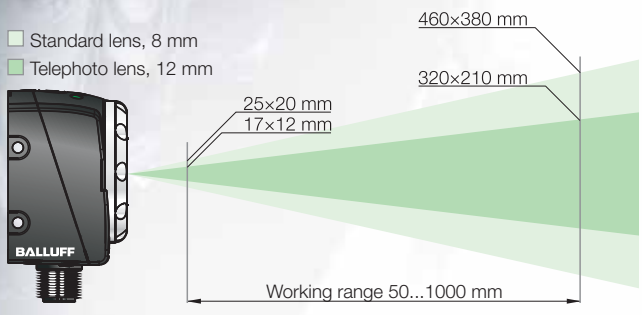
Simply set up the Vision Sensor using the configurator. The color 3.5" display and convenient operating keys enable fast navigating and convenient parameter setting. In-process correction is also simple. Continuous status monitoring using the display allows you to detect and immediately eliminate defects on-location. Even hookup is super easy, since the Vision Sensor itself provides the supply voltage.

Use the BVS-C for the greatest possible security, especially since you can protect your entries with a password. Conveniently select from among eight different parts inspection functions. And profit from the BVS-C especially when more than one part needs to be inspected at frequent change intervals.

CE

Series		
Series		
Lens, focal length		
Ordering code		
Supply voltage U_S		
Switching inputs		
Switching outputs		
Output current		
PNP		
Parameter setting		
typ. detection rate		
Image sensor		
Working range		
Field of view	Working distance	
(horizontal×vertical)	Field of view	
Lighting		
Dimensions		
Connection		
Degree of protection per IEC 60529		
Ambient temperature range T_a		
Display		

Working distance and field of view

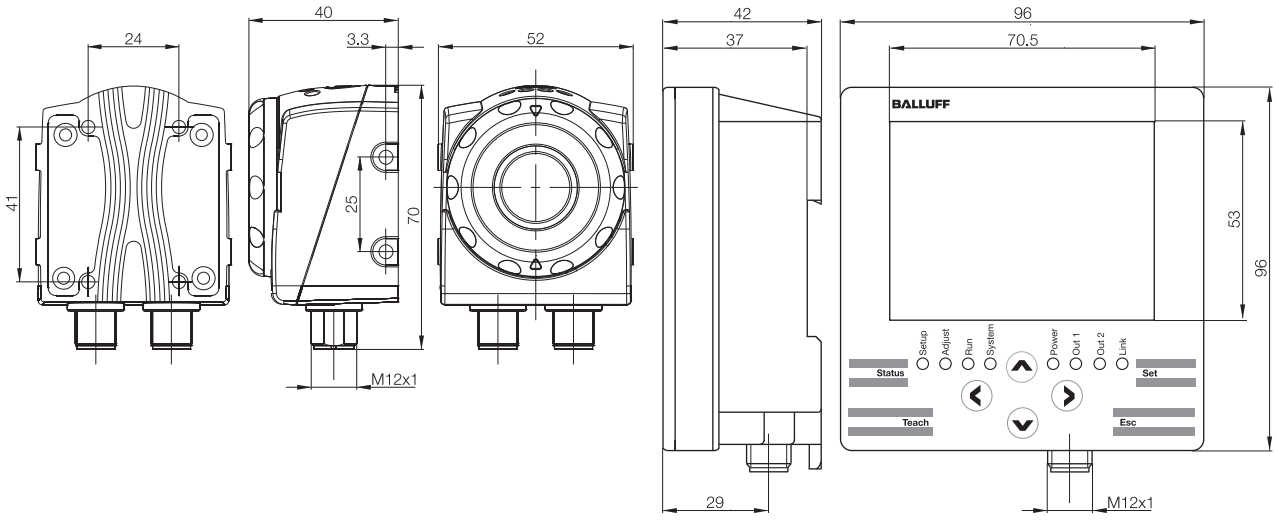


Bring your working range up close with the telephoto lens. Or take advantage of the larger field of view at the same working distance offered by the standard lens. Use the distance computer: **www.balluff.de/vision**

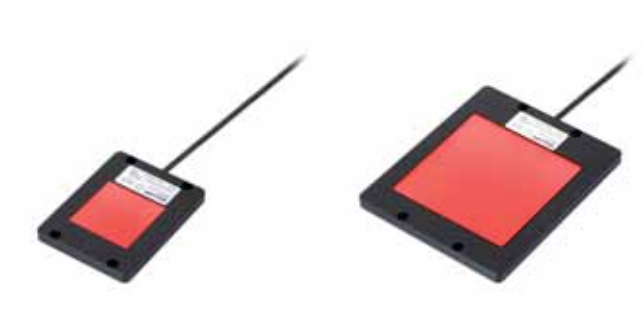
Vision Sensor BVS

The complete solution including configurator

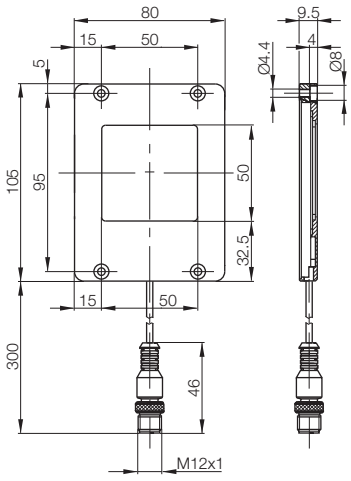
Vision sensor		Vision sensor	Configurator with display
BVS-C		**BVS-C**	**BVS-C**
Standard lens, 8 mm		Telephoto lens, 12 mm	
BVS OI-3-011-C		BVS OI-3-013-C	BAE PD-VS-001-C
24 V DC ±10 %		24 V DC ±10 %	24 V DC ±10 %
1× Trigger, 1× Select		1× Trigger, 1× Select	
1× lighting synchronization, 3× PNP/NPN configurable		1× lighting synchronization, 3× PNP/NPN configurable	
100 mA		100 mA	
■		■	
Configurator		Configurator	
3...15 Hz (depending on evaluation function)		3...15 Hz (depending on evaluation function)	
CMOS–SW–VGA 640×480		CMOS–SW–VGA 640×480	
50...1000 mm		50...1000 mm	
50 mm	1000 mm	50 mm	1000 mm
25×20 mm	460×380 mm	17×12 mm	320×210 mm
LED, incident light (red), deselectable		LED, incident light (red), deselectable	
58×52×40 mm		58×52×40 mm	96×96×42.4 mm
2 connectors M12 (8-pin)		2 connectors M12 (8-pin)	1 connector M12 (8-pin)
IP 54		IP 54	IP 40
–10...+55 °C		–10...+55 °C	–10...+55 mm
			3.5“ color LCD

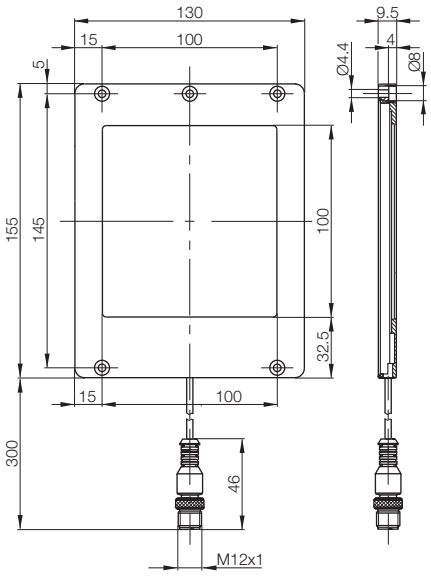


Starter kit for BVS-C
(Ordering code BVS Z-SK-OI-02)
includes Vision Sensor, configurator, mounting bracket, installation accessories, connector, software and quick guide



Series	BAE LX-VS	BAE LX-VS
Version	Background light	Background light
Ordering code	BAE-LX-VS-HR050	BAE-LX-VS-HR100
Supply voltage U_S	24 V DC	24 V DC
Operating current	< 250 mA	< 400 mA
Trigger		
Light field size	50×50 mm	100×100 mm
Emitter, light type	LED, red light	LED, red light
Wavelength	617 nm	617 nm
Dimension	105×80×9.5 mm	155×130×9.5 mm
Mounting	M4 screws	M4 screws
Connection	M12 connector, 4-pin	M12 connector, 4-pin
Housing material	Anodized aluminum	Anodized aluminum
Optical surface	PMMA	PMMA
Weight	155 g	340 g
Enclosure rating	IP 54	IP 54
polarity reversal protected	yes	yes
Short circuit protected	yes	yes
Ambient temperature range T_a	–10...+55°C	–10...+55°C
Storage temperature	–25...+75 °C	–25...+75 °C

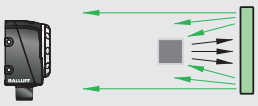




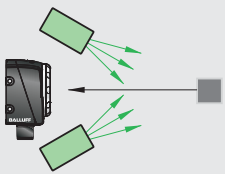
Only ideal light can provide ideal conditions for your inspection. This is why Balluff offers various types of light sources. Select the best solution for your task and profit from our mature technology.

The following variants are available for your Vision Sensor: Spot, background and ring lighting.

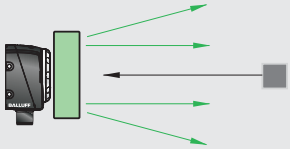
For the best possible contour detection, choose the **background light**, which as an area light provides the ideal results for your application



With the **spot** – in red and white light – you place the light exactly where you need it.

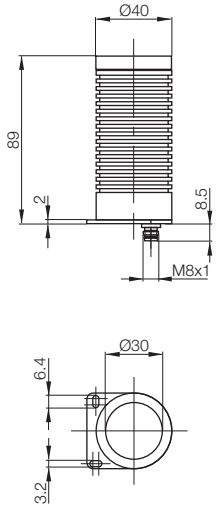


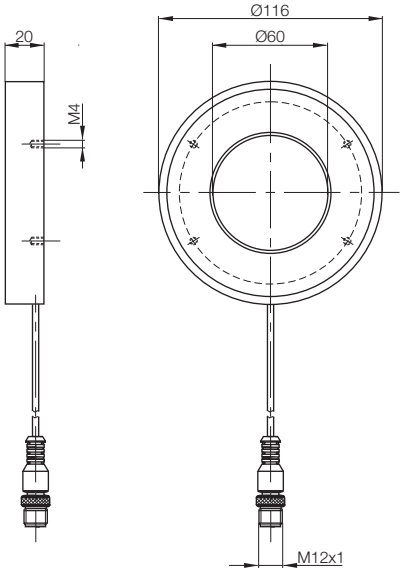
For shadow-free illumination, select the **ring light**. You can also decide whether to use red light or invisible infrared light.






	BAE LX-VS	BAE LX-VS	BAE LX-VS	BAE LX-VS
	Spot	Spot	Ring light	Ring light
	BAE LX-VS-SR030-S75	BAE LX-VS-SW030-S75	BAE-LX-VS-RR100	BAE-LX-VS-RI100
	24 V DC	24 V DC	24 V DC	24 V DC
	< 100 mA	< 100 mA	< 800 mA < 1300 mA (in max. operation)	< 800 mA < 1300 mA (in max. operation)
	5...24 V DC	5...24 V DC	5...24 V DC	5...24 V DC
	Ø 30 mm	Ø 30 mm	Ø 100/60 mm	Ø 100/60 mm
	LED, red light	LED, white light	LED, red light	LED, infrared
	630 nm		617 nm	875 nm
	Ø40×89 mm	Ø40×89 mm	Ø116×20.5 mm	Ø116×20.5 mm
	M3 screws	M3 screws	M4 screws	M4 screws
	M8 connector, 4-pin	M8 connector, 4-pin	M12 connector, 4-pin	M12 connector, 4-pin
	Anodized aluminum	Anodized aluminum	Anodized aluminum	Anodized aluminum
	PMMA	PMMA	Glass	Glass
	160 g	160 g	360 g	360 g
	IP 65	IP 65	IP 54	IP 54
	yes	yes	yes	yes
	yes	yes	yes	yes
	–10...+40°C	–10...+40°C	–10...+55°C	–10...+55°C
	–25...+70 °C	–10...+70 °C	–25...+75 °C	–25...+75 °C





Light accessories
For connectors see page 21. Information about mounting and brackets for ring and background lights on request. Mounting brackets are for direct attachment or compatible with the Balluff BMS Mounting System.

The **diffuser (BAM OF-VS-001-D-RX100)** ensures even light without disturbing reflections in applications with reflective surfaces.
The diffuser is made of high-quality glass and can be installed directly on the light.

Vision Sensor BVS
Connectors – for quick connecting

Use the variety of Balluff connectors and cables with your BVS in every area of automation. Without the need for detailed planning you automatically have the right components available. Whether cable or connector, everything is precisely matched to the performance of the BVS. So you can fully exploit its potential. While conforming with occupational safety regulations.

Simply leave the questions of optimum electronic integration of your Vision Sensor to us. And you'll gain time for what's really important to you.

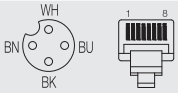
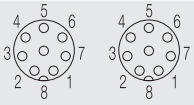
CE

Connector	
Version	
Use	
Ordering code	
Supply voltage U_S	
Cable	
No. of wires × cross-section	
Degree of protection per IEC 60529	
Ambient temperature range T_a	
View of female side	

More about our cables and connectivity products can be found in our brochures or online at:
www.balluff.com



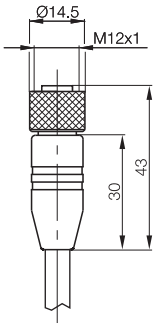


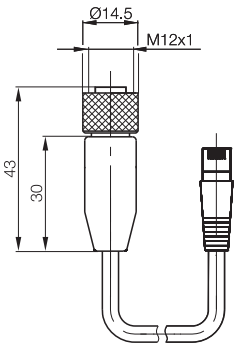
	BKS-S139	BKS AD-05RJ45	BCC M418	BKS-S 19	BKS-S 74
	Straight female	Straight female/RJ45	Straight female/straight female	Straight female	Straight female
	Connection cable BVS-E and BVS-C	Configuration cable for BVS-E	Connection cable for configurator	Connection cable for background and ring light	Connection cable for spot light
	BKS-S139-PU-05*	BKS AD-05RJ45/GS180-05	BCC M418-M418-5A-044-PX025-050	BKS-S 19-3-PU-03	BKS-S 74-3-03
	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
	5 m molded-on PUR	5 m molded-on PUR	5 m molded-on PUR	3 m molded PUR	3 m molded PVC
	8×0.25 mm²	4×0.34 mm²	8×0.25 mm²	4×0.34 mm²	4×0.34 mm²
	IP 67	IP 65	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 67
	–25...+90 °C	–25...+70 °C	–25...+85 °C	–25...+70 °C	–25...+90 °C
					

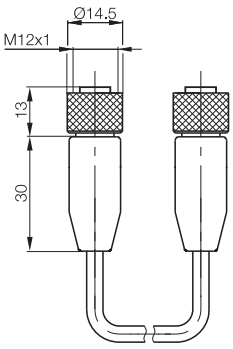
*Knurled ring used for shielding!

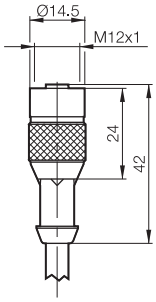
Additional cable lengths on request: 1.5 m, 3 m, 10 m, 15 m, 20 m

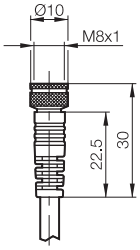
Additional cable lengths on request: 10 m, 15 m, 20 m











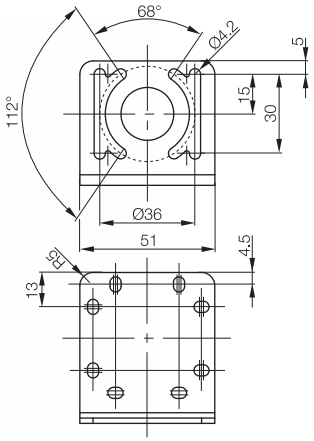
Vision Sensor BVS

Mechanical accessories – for easy installation

Mounting is part of optimal integration of the BVS Vision Sensor. The variety of different mounting types and elements allows you to integrate your BVS ideally into your equipment. Simply select the right mounting bracket, cross-connector, base holder or clamping cylinder. Balluff accessories are perfectly matched to our sensors.

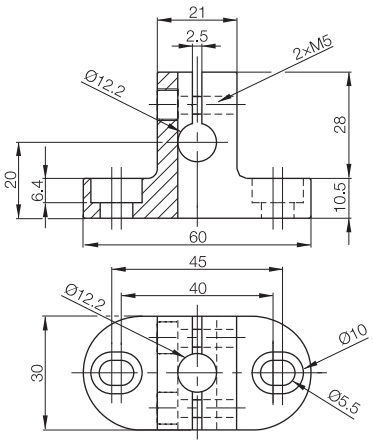
With flexible Balluff accessories you can position the BVS precisely. With no tedious pre-work or time-consuming planning. Even under challenging mounting conditions. By using the right mounting element you save material and energy. And meet all the requirements for occupational safety.

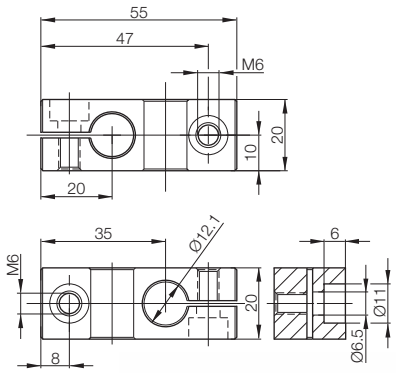
Description	Mounting bracket	
Version	For Vision Sensors and clamping cylinders	
Use	Holding Vision Sensors for mounting on base plates or using BMS Mounting System	
Ordering code	BVS Z-MB-01	
Material	GD-Zn	

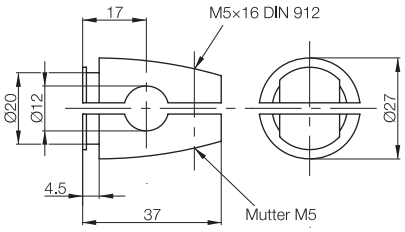


Use the Balluff BMS Mounting System
Optimized for tubular and block-style sensors, with the BMS Mounting System you can attach your Vision Sensor perfectly on base plates and on all commonly available profiles. Gain a high degree of flexibility and cover virtually any required spatial angle with the variable accessories kit. Simplify your installation with supplementary accessories such as reflector holders or adapter plates.

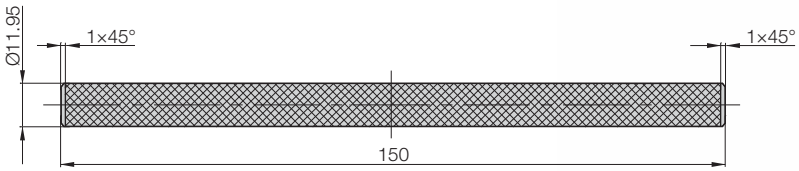
	Base holder	Cross-connector	Clamping cylinder
	for 1 rod Ø 12 mm (vertical or horizontal)	for 2 rods Ø 12 mm	
	for mounting on base plates or extrusions	Connecting element for 2 rods Ø 12 mm	Accommodates all holders, sensors and reflectors
	BMS CU-M-D12-A040-00	BMS CC-M-D12-B-00	BMS CS-M-D12-IZ
	Anodized aluminum	Anodized aluminum	GD-Zn



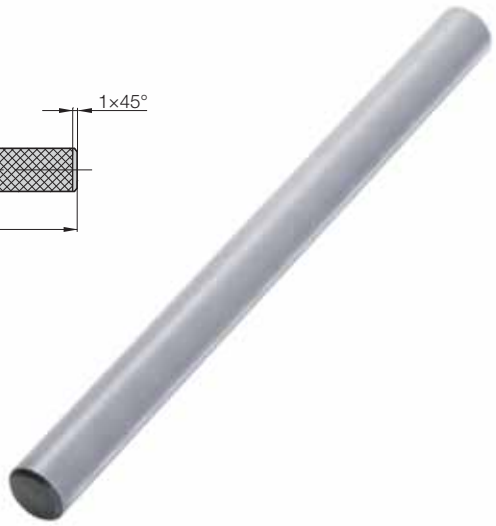




Mounting rods Ø 12 mm, anodized aluminum,
BMS RS-M-D12-0150-00 = 150 mm
BMS RS-M-D12-0250-00 = 250 mm
BMS RS-M-D12-1000-00 = 1000 mm (for user assembly)



The mounting rods are knurled full-length.
This prevents any position change.



More mounting accessories can be found in our brochures or online at: **www.balluff.com**

BALLUFF

sensors worldwide

Object Detection

Linear Position Sensing

Industrial Identification

Industrial Networking and Connectivity

Mechanical Accessories

More about our broad product range
can be found in our brochures, on CD-ROM,
DVD-ROM or online!

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No. 858278 E · Edition 0809; Subject to modification. Replaces edition 0709.