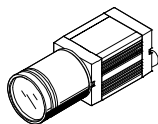


Compact Vision System SBOC-M-R1B-H

FESTO

Brief overview

SBOC-M-R1B-H



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[8113390]

Translation of the original instructions

Documentation on the product



For all available product documentation
→ www.festo.com/pk

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Compact Vision System SBOC-M-R1B-H



Note

This brief overview is part of the operator package of type GDCS-EPCP-SBOC-D2. It serves only as initial information and does **not** replace the complete documentation, which is included as a PDF file on the CD ROM supplied (see table).

- It is essential that you observe the information and the safety instructions in the complete manual for the Compact Vision System.
- Please consult your local Festo repair service or write to the following e-mail address if you have any technical problems: service_international@festo.com

CD ROM contents	Language	File name ¹⁾	
Description of the Compact Visual System SBOC-M-R1B-H – Assembly – Installation – Notes on commissioning – Diagnostics	German	8001258	d1
	English	8001260	g1
1) = <part number> + <language code>.			

Further information can be found in the help system of the configuration software Festo Configuration Tool (FCT):

- FCT Help: Functional description of the FCT
- SBO..-M-Help: Commissioning SBO..-M-...

Use for intended purpose

The Compact Vision System SBOC-M-R1B-H has been designed for installation into a machine or an automated system to visualize and analyse fast motion sequences, e.g. for error detection.

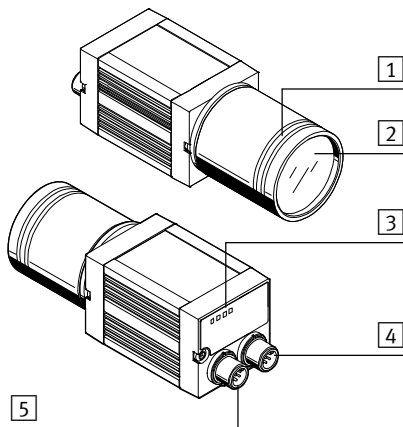
Several cameras can be networked and synchronised via the Ethernet interface, in order to record a movement sequence from several sides simultaneously. Recordings can be controlled via digital I/Os or a PC.

Commissioning and operation is carried out using the software package FCT (Festo Configuration Tool) in combination with the PlugIn for the Compact Vision System SBO..-M-... via the Ethernet interface.

1 Connection and display components

Type SBOC-M-R1B-H

- 1 Protective tube
- 2 Lens (accessories)
- 3 Status LEDs
- 4 Ethernet interface
- 5 Operating voltage supply and digital I/Os



Status LEDs		Status	Description
A	Ready status	Lights up green	Device is ready for operation
		Lights up red	Initialization is running
		Flashes red	Error
		Off	Undefined status, e.g. operating voltage not applied
B	Ethernet traffic	Flashes green	Ethernet data traffic
		Off	No Ethernet data traffic
C	Recording	Lights up red	Lights up at each recording for at least 250 ms
		Lights up yellow	Lights up for 250 ms when trigger signal is applied
D	Recording status	Flashes red	Recording data available in the memory
		Flashes yellow	Device is waiting for trigger signal (ready for recording)

2 Mounting and installation instructions



Warning

- Before mounting, installation and maintenance work, always switch off the power supply for the electronic components.
- Use only power sources which ensure reliable electrical isolation of the operating voltage as per EN 60204-1. Observe also the general requirements for PELV circuits as per EN 60204-1.
- Use screened plug connectors to ensure continuous contact between the screening/shield and the Compact Vision System.
- Connect the screening of the cables with low impedance to earth potential.
- The system contains electrostatically sensitive components. Therefore, do not touch any components. Observe the handling specifications for electrostatically sensitive devices.
- Do not open the housing.



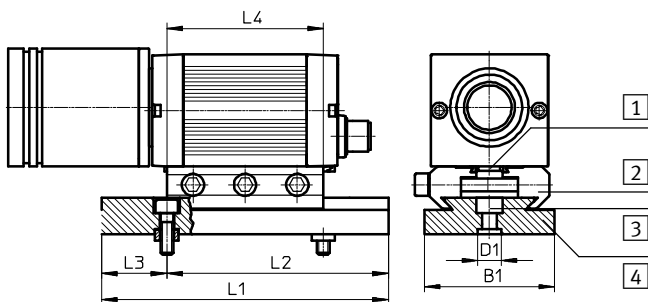
Caution

- Make sure that a tolerance of $\pm 10\%$ is maintained in the operating voltage supply.
- Protect the power supply for the Compact Vision System externally with a quick-acting miniature fuse, 2 A.

On the bottom of the Compact Vision System there is a mounting profile with dovetail guide. The following adapter kits can be used for mounting:

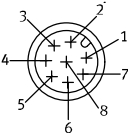
Adapter kit	Description
SBOA-HMSV-39	For mounting with screw-on adapter plate (contained in the adapter kit)
SBOA-HMSV-40	For mounting with screw-on adapter plate, e.g. adapter plate type HMSV-11 (not contained in the adapter kit)
SBOA-HMSV-41	For mounting on conventional photo/video tripods (adapter with female thread G 1/4")

The following figure shows mounting with the adapter kit SBOA-HMSV-39:



- 1 Dovetail of the Compact Vision System
- 2 Clamping components
- 3 Hole for socket head screw M5x16 with centring sleeve
- 4 Adapter plate

Type	B1	D1 \varnothing	L1	L2	L3	L4
SBO-C-M-R1B-H	50	9	110	85	25	60

M12 plug	Pin	Description	1)
	1	I0 (trigger I0): Trigger input I0	White
	2	+24 V DC (tolerance: ±10%)	Brown
	3	Reserved (do not connect)	Green
	4	O1 (Record ready): – 1-signal: Device is waiting for trigger signal	Yellow
	5	I1 (trigger I1): Trigger input I1	Grey
	6	O0 (Ready): – 1-signal: Device ready for operation – 0-signal: Device not yet ready for operation (e.g. initialization running, system error)	Pink
	7	0 V	Blue
	8	O2 (Recording available): Supplies a 1-signal when recording data is available in the memory of the Compact Vision System.	Red
	Metal covering: Screening (shield) ²⁾		
<p>1) Wire colours of the cable with socket SIM-M12-8GD-...-PU</p> <p>2) Connect the cable screening with low impedance to the earth potential</p>			

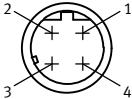


Note

Electromagnetic interference can cause malfunctions. To ensure electromagnetic compatibility in accordance with the EMC directives:

- Use only the original cable with socket SIM-M12-8GD-2-PU or SIM-M12-8GD-5-PU from Festo to connect the operating voltage supply and inputs and outputs.
- Connect the screening of the cable with socket on the side opposite the Compact Vision System to the earth potential with low impedance.

Ethernet: Ethernet interface

M12 plug ¹⁾	Pin	Signal	Description
	1	TD+	Transmitted data+
	2	RD+	Received data+
	3	TD-	Transmitted data-
	4	RD-	Received data-
	Metal covering		Screening (shield)

¹⁾ d-coded

**Note**

Electromagnetic interference can cause malfunctions. To ensure electromagnetic compatibility in accordance with the EMC directives:

- Use a screened plug connector to ensure continuous contact between the screening/shield and the Compact Vision System.
- Connect the screening of the Ethernet cable on the side opposite the vision system to the earth potential with low impedance.

3 Notes on commissioning and operation

Carry out commissioning with the FCT software package (see FCT help system).

3.1 Installing and starting the Festo Configuration Tool



Administrator rights are required for installing the FCT.

The FCT is installed on your PC with an installation program. The PlugIn for the Compact Vision System is installed on your PC together with the installation program of the FCT.

The FCT is installed from the CD-ROM as follows:

1. Close all programs.
2. Insert the Festo Configuration Tool CD in your CD-ROM drive. If Auto-Run is activated on your system, the installation starts automatically and you can skip steps 3 and 4.
3. Select [Execute] in the Start menu.
4. Enter D:\setup (if necessary replace D by the letter of your CD-ROM drive).
5. Follow the instructions on the screen.

3.2 Setting the lens



Caution

Electro-static discharge on the lens or protective tube can cause operative malfunctions.

- Discharge yourself of static electricity before touching the device.
- Do not touch the protective tube and/or lens with the recording mode activated.
- Touch the protective tube and/or lens only with the recording mode inactive, when necessary (e.g. to set the aperture or focus).

Focusing object – with standard lens from Festo

- Loosen the locking screw on the lens.
- To focus the object, turn the focusing ring.
- Tighten the locking screw again slightly.

Setting aperture – with standard lens from Festo

- Loosen the locking screw on the lens.
- To set the aperture, turn the aperture ring.
- Tighten the locking screw again slightly.

3.3 Trigger signal

The trigger signal is applied through one of the two inputs (I0 or I1). Trigger input and trigger condition are adjustable via the configuration software Festo Configuration Tool (FCT). The trigger condition is either a positive or a negative edge on the selected trigger input.

When the system is ready for recording and is waiting for the trigger signal, the recording status LED (D) flashes yellow. If the trigger signal is present, the recording LED (C) will light up yellow for 250 ms.



Further information on operating the Compact Vision System can be found in the help system of the configuration software Festo Configuration Tool (FCT).

