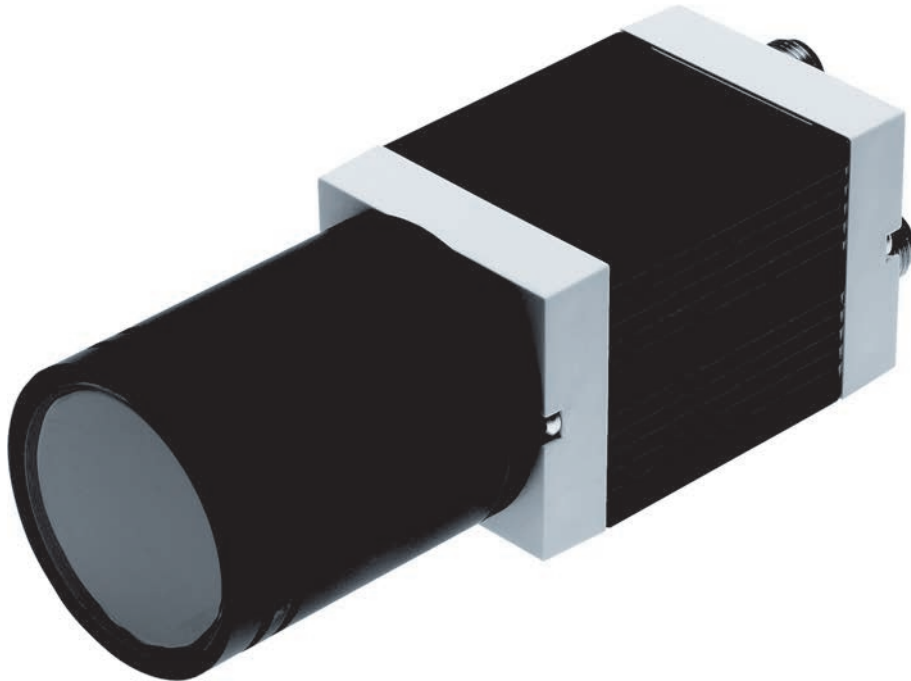
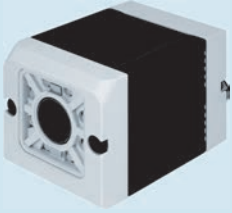


11 Image processing systems



- + Vision sensors for reading 1D bar codes and 2D matrix codes or for simply quality inspection
- + Compact vision system SBOx-M:
Intelligent compact vision systems for diagnostics and monitoring of fast motion sequences
- + Compact vision systems SBOx-Q:
Intelligent cameras for precise positioning of axes, type identification, position detection and 2D quality inspection of moving and stationary parts

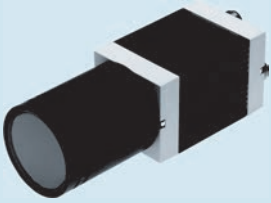
Highlights



SBSI
Code reader / Object sensor

- + Vision sensor with integrated lighting/lens
- + Enables reading of 1D/2D codes or quality inspection of parts

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SBOC-M
Compact vision system


- + High-speed camera for diagnostics and for function monitoring of fast motion sequences
- + Electronics integrated in the camera

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Vision sensors

	
Type	Code reader, object sensor SBSI-B, SBSI-Q
Sensor resolution	736 x 480 pixels (wide VGA)
Working distance	6 mm ... infinite, 30 mm ... infinite
Field of view	Min. 5x4 mm, min. 8x6 mm
Frame rate (full image)	50 fps
Max. number of test programs/ jobs	8
Focal length	6 ... 12 mm
Description	<ul style="list-style-type: none"> Vision sensor with integrated lighting/lens Enables reading of 1D/2D codes or quality inspection of parts Intuitive software for simple parameter setting All-in-one device with integrated lens, lighting, evaluation and communication
→ Page/online	sbsi

Diagnostics for fast processes

		
Type	Compact vision system SBOA-M	Compact vision system SBOC-M
Sensor resolution	640 x 480 pixels (VGA)	640 x 480 pixels (VGA)
Working distance	Depends on the lens chosen	Depends on the lens chosen
Field of view	Depends on the lens chosen	Depends on the lens chosen
Frame rate (full image)	27 ... 241 fps	27 ... 241 fps
Exposure time	1 ... 1000000 µs	1 ... 1000000 µs
Description	<ul style="list-style-type: none"> Systainer with compact vision system SBOC-M 	<ul style="list-style-type: none"> High-speed camera for diagnostics and commissioning as well as for function monitoring of fast motion sequences Recording and storage electronics integrated in the camera For standard lens with C mount connection Can be networked via Ethernet Compact dimensions, low weight
→ Page/online	sbox	sbox

Orientation and quality inspection

			
Type	Compact vision system SBOC-Q	Compact vision system SBOI-Q	Vision system CHB-C-N
Sensor resolution	1280 x 1024 pixels (SXGA), 640x480 pixels (VGA), 752 x 480 pixels (WideVGA)	640 x 480 pixels (VGA), 752 x 480 pixels (WideVGA)	2048 pixels/line
Working distance	Depends on the selected lens	20 ... 1000 mm	
Field of view	Depends on the selected lens	14x10mm ... 250x390mm, 7.9x5.5mm ... 195x125 mm	
Frame rate (full image)	27 ... 241 fps	60 ... 150 fps	
Exposure time	1 ... 1000 ms	18 ... 1000 ms	
Description	<ul style="list-style-type: none"> Intelligent field-based camera For 2D quality inspection, position and rotary orientation sensing, reading of 1D and 2D codes, reading of optical characters (OCR) Integrated full PLC (CODESYS) Ethernet and CAN for communicating with higher-order controllers 	<ul style="list-style-type: none"> Intelligent field-based camera For 2D quality inspection, position and rotary orientation sensing, reading of 1D and 2D codes, reading of optical characters (OCR) Integrated full PLC (CODESYS) Ethernet and CAN for communicating with higher-order controllers 	<ul style="list-style-type: none"> Intelligent line-scan camera For orientation recognition and quality inspection of small moving parts Encoder connection
→ Page/online	sbox	sbox	chb-c