



- Designed to meet the needs of industry
- Easy to use
- Sturdy construction and high functionality
- High reliability and checking performance

Checkbox CHB

Key features

FESTO



Industrial design

- Compact integrated construction, protected against external light and maladjustment, IP54 protection class
- Flexible installation, thanks to a modular system concept

Easy to use

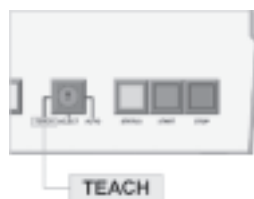
- Automatic Teach-in of new parts in seconds, no programming required
- Robust recognition algorithm based on part characteristics
- Up to 48 different parts can be saved to memory

Sturdy construction and high functionality

- High conveying performance thanks to variable belt speed (standard: 300 mm/s)
- Maintenance-free system
- Sturdy pneumatic components: Integrated valves and flow controls
- Long service life thanks to brushless DC servo motor

High reliability and checking performance

- Simple, sturdy optics with high-quality industrial line-scan camera and LED light strip
- Insensitive to extraneous light, with contour detection via back-lighting method
- High resolution: 0.02 mm or 0.1 mm



Checkbox CHB

Key features

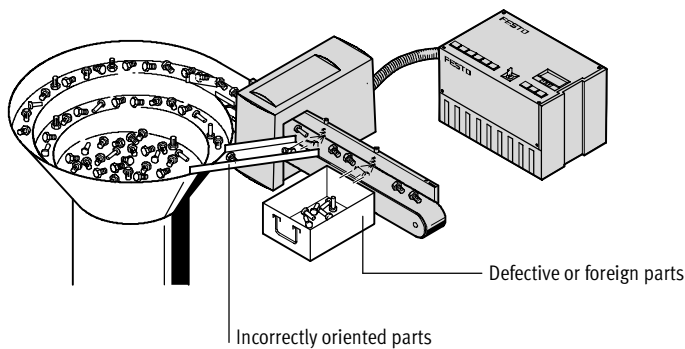
The Checkbox family CHB

The Checkbox is a system for the optical orientation detection and quality inspection of small parts. It consists of an optical unit, e.g. a conveying unit with integral camera and a control unit. The part to be inspected is fed past the camera on the conveyor belt. The

control unit analyses the contour of the part and distinguishes between good parts and those which are incorrectly oriented or defective and foreign parts. All Checkbox units feature a Teach-in function which allows them to “learn”

different parts automatically – without the need for programming. They are easy to use – the press of a button is all that is needed to change your feed system over from one part type to another. The Checkbox is used wherever small

parts need to be fed into assembly or machining units. This is where mechanical sorting devices reach their limits, especially where parts of complex shape or fast cycle times are involved. This calls for intelligent optical devices: The Checkbox family.



Identbox CHB-IB



The Identbox is the basic unit in the Checkbox family and is used to separate good parts, incorrectly-oriented parts and defective parts.

Countbox CHB-CB



The Countbox combines the features of the Identbox with a function for counting good parts with pre-selection of the desired quantity.

Sortbox CHB-SB



The Sortbox unites the functions of the Identbox and the Countbox in one unit and also conveys, sorts and compiles several different types of parts.

Checkbox CHB

Key features

Which parts are suitable?



Here is a small selection of the many possibilities:

- | | | |
|------------------------|---------------------|---------------------------|
| ■ Axes | ■ Lipstick casings | ■ Sockets |
| ■ Bolts | ■ Lock nuts | ■ Spring washers |
| ■ Brushes | ■ Mouldings | ■ Springs |
| ■ Buttons | ■ Mountings | ■ Stampings |
| ■ Ceramic seals | ■ Needles | ■ Switch contacts |
| ■ Curtain hangers | ■ O-rings | ■ Tablets |
| ■ Drill bits | ■ Pen tops | ■ Threaded pins |
| ■ Drills | ■ Plastic housings | ■ Toothbrush components |
| ■ Fuses | ■ Plug connectors | ■ Turned parts |
| ■ Game pieces | ■ Screws | ■ Wall plugs |
| ■ Glass ampoules | ■ Self-locking nuts | ■ Washers |
| ■ Inserts | ■ Sensor housings | ■ Wooden dowels |
| ■ Insulating terminals | ■ Shafts | ■ Zip-fastener components |
| ■ Lever stoppers | ■ Sleeves | |
| ■ Link plates | ■ Small wares | |

Which industries use the Checkbox family?

- | | |
|-----------------------------------|----------------------------------|
| ■ Metalworking industry | ■ Cosmetics industry |
| ■ Electrical engineering industry | ■ Jewellery industry |
| ■ Woodworking industry | ■ Textile and clothing industry |
| ■ Electroplating industry | ■ Assembly-systems industry |
| ■ Injection moulding industry | ■ Food industry |
| ■ Packaging industry | ■ Precision engineering industry |
| ■ Pharmaceutical industry | |

Checkbox CHB

Key features

Contour recognition using back-lighting method



What does the camera see?

Part to be checked
Brass sleeve



Camera image
Brass sleeve



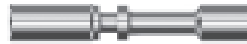
Part to be checked
Valve spring



Camera image
Valve spring



Part to be checked
Plug connector



Camera image
Plug connector



Part to be checked
Unmachined rod clevis



Camera image
Unmachined rod clevis



Part to be checked
Link plate



Camera image
Link plate



Part to be checked
Insulating terminal insert



Camera image
Insulating terminal insert



Checkbox CHB

Product range and peripherals overview

Possible combinations

Identbox CHB-IB

Countbox CHB-CB

Sortbox CHB-SB



Technical data → 5 / 4.2-10



Technical data → 5 / 4.2-10

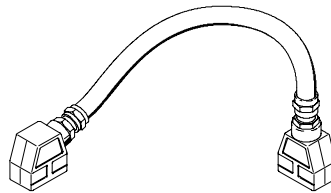


Technical data → 5 / 4.2-10

Connecting cable

Control unit/conveying unit

Cable lengths: 2 m
3 m
5 m



Optical orientation detection and quality inspection
Checkbox

4.2

Conveying unit

with reject positions and conveyor belt

Part Ø: 0.5 ... 10 mm
Part length: 3 mm and above



Part Ø: 3 ... 30 mm
Part length: 3 mm and above



Part Ø: 3 ... 80 mm
Part length: 5 mm and above



Tunnel version

without reject positions and conveyor belt

Part Ø: 3 ... 30 mm
Part length: 3 mm and above



Part Ø: 3 ... 80 mm
Part length: 5 mm and above



OEM version

without reject positions, conveyor belt and housing

Part Ø: 3 ... 30 mm
3 ... 80 mm
Part length: 3 mm and above



Checkbox CHB

Selection aid

| Product features | Identbox CHB-IB | Countbox CHB-CB | Sortbox CHB-SB |
|---|-----------------|-----------------|----------------|
| Performance characteristics | | | |
| Basic unit with full checking functionality | ■ | ■ | ■ |
| Up to 48 parts can be taught-in | ■ | ■ | ■ |
| Three feed paths: – Good parts → to the assembly station – Incorrectly oriented parts → back to the bowl feeder – Defective or foreign parts → to the reject bin | ■ | ■ | ■ |
| Automatic control of the bowl feeder | ■ | ■ | ■ |
| Monitoring of part buffer zones | ■ | ■ | ■ |
| Self-diagnosis | ■ | ■ | ■ |
| Can be remote-controlled | ■ | ■ | ■ |
| Integrated counting function: – 1 ... 10 million parts can be pre-selected – When desired quantity is reached → signal to downstream machine – Upon acknowledgement → start of next cycle – Continuous counting for production monitoring | | ■ | ■ |
| Simultaneous conveying of different part types and sorting into different buffer zones | | | ■ |
| Compiling of several parts | | | ■ |
| Sample applications | | | |
| Correctly oriented feeding at high cycle rates | ■ | ■ | ■ |
| Automatic rejection of defective or foreign parts | ■ | ■ | ■ |
| Quality inspection of turned and milled components for chips, burrs, etc. | ■ | ■ | ■ |
| Ejection of end pieces following automatic bar turning | ■ | ■ | ■ |
| Feeding of predetermined quantities of parts for packaging and compiling functions | | ■ | ■ |
| Set feeding of small parts on to assembly pallets | | ■ | ■ |
| Triggering of maintenance cycles | | ■ | ■ |
| Feeding to several buffer zones from one bowl feeder (space saving) | | | ■ |
| Packaging terminal: Fully-automated control and monitoring of compiling procedures with several parts and different numbers of items | | | ■ |
| Sorting of mixed parts (e.g. after galvanising or grinding) | | | ■ |

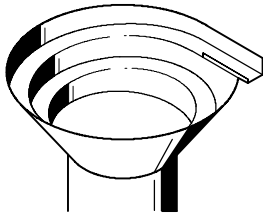
Checkbox CHB

Sample applications

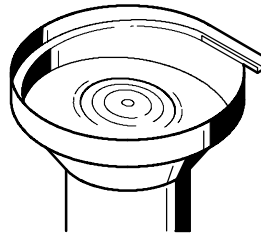


Feeding of parts

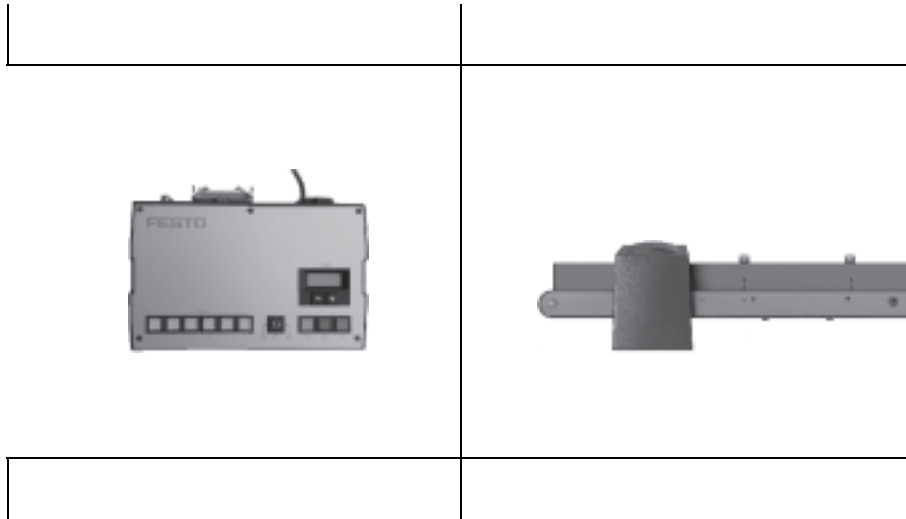
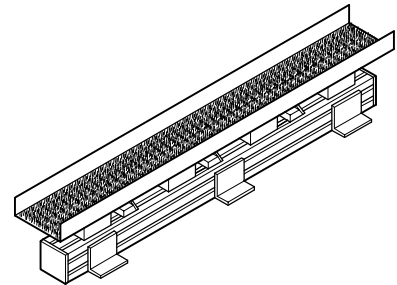
Vibratory bowl feeder



Centrifugal bowl feeder

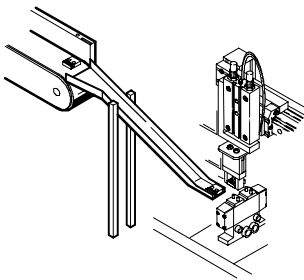


Linear conveyor

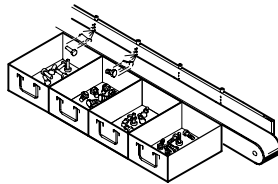


Transfer of parts

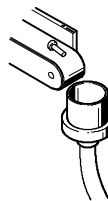
Slide into the processing centre



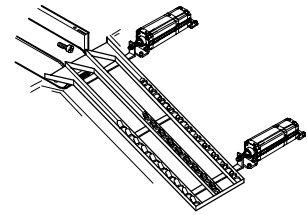
Chute



Downpipe



Triple buffer zone



Checkbox CHB

Type code

| | | CHB | - | SB | - | F30 | - | L4P | - | K20 | - | D | - | EC | - | V33 | - | VA | - | BTA | - | UE | - | MP |
|-----------------------------------|-----|---|---|---|---|-----|---|-----|---|-----|---|---|---|----|---|-----|---|----|---|-----|---|----|---|----|
| Basic function | | CHB | | Checkbox family | | | | | | | | | | | | | | | | | | | | |
| Control function | | IB | | Identbox | | | | | | | | | | | | | | | | | | | | |
| | CB | Countbox | | | | | | | | | | | | | | | | | | | | | | |
| | SB | Sortbox | | | | | | | | | | | | | | | | | | | | | | |
| Component size | | F10 | | for \varnothing 0.5 ... 10 mm | | | | | | | | | | | | | | | | | | | | |
| | F30 | for \varnothing 3 ... 30 mm | | | | | | | | | | | | | | | | | | | | | | |
| | F80 | for \varnothing 3 ... 80 mm | | | | | | | | | | | | | | | | | | | | | | |
| Transport function | | L2P | | 2 reject pos., belt transport dir.: to the left | | | | | | | | | | | | | | | | | | | | |
| | R2P | 2 reject pos., belt transport dir.: to the right | | | | | | | | | | | | | | | | | | | | | | |
| | L4P | 4 reject pos., belt transport dir.: to the left | | | | | | | | | | | | | | | | | | | | | | |
| | R4P | 4 reject pos., belt transport dir.: to the right | | | | | | | | | | | | | | | | | | | | | | |
| | L6P | 6 reject pos., belt transport dir.: to the left | | | | | | | | | | | | | | | | | | | | | | |
| | R6P | 6 reject pos., belt transport dir.: to the right | | | | | | | | | | | | | | | | | | | | | | |
| | TU | without reject positions and conveyor belt | | | | | | | | | | | | | | | | | | | | | | |
| | OEM | without reject positions, conveyor belt and housing | | | | | | | | | | | | | | | | | | | | | | |
| Connecting cable | | K20 | | 2 m long | | | | | | | | | | | | | | | | | | | | |
| | K30 | 3 m long | | | | | | | | | | | | | | | | | | | | | | |
| | K50 | 5 m long | | | | | | | | | | | | | | | | | | | | | | |
| User manual | | D | | German | | | | | | | | | | | | | | | | | | | | |
| | E | English | | | | | | | | | | | | | | | | | | | | | | |
| | F | French | | | | | | | | | | | | | | | | | | | | | | |
| | S | Spanish | | | | | | | | | | | | | | | | | | | | | | |
| | I | Italian | | | | | | | | | | | | | | | | | | | | | | |
| Additional function | | EC | | Encoder | | | | | | | | | | | | | | | | | | | | |
| Field of view | | V10 | | Adjustment to 10 mm | | | | | | | | | | | | | | | | | | | | |
| | V20 | Adjustment to 20 mm | | | | | | | | | | | | | | | | | | | | | | |
| | V33 | Adjustment to 33 mm | | | | | | | | | | | | | | | | | | | | | | |
| Guiding bar material | | VA | | Stainless steel | | | | | | | | | | | | | | | | | | | | |
| Alternative conveyor belts | | BTA | | with longitudinal ridges | | | | | | | | | | | | | | | | | | | | |
| | BTB | with longitudinal recesses | | | | | | | | | | | | | | | | | | | | | | |
| | BTD | with smooth surface, made of silicone | | | | | | | | | | | | | | | | | | | | | | |
| Belt end | | UE | | Guide roller unit with belt | | | | | | | | | | | | | | | | | | | | |
| Accessories | | MP | | Mounting plates | | | | | | | | | | | | | | | | | | | | |

Checkbox CHB

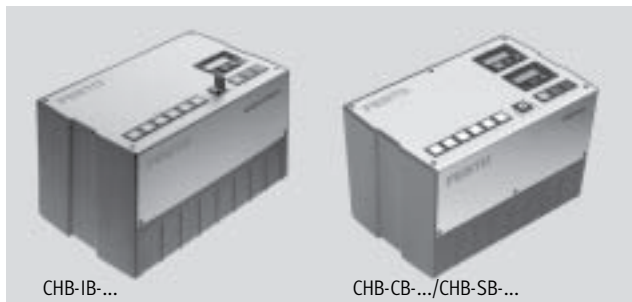
Technical data

FESTO

Identibox
CHB-IB

Countbox
CHB-CB

Sortbox
CHB-SB



| General technical data | | | |
|------------------------------|--|----------------------------------|---------------|
| For part sizes | ∅ 10 mm | ∅ 30 mm | ∅ 80 mm |
| Component ∅ | 0.5 ... 10 | 3 ... 30 | 3 ... 80 |
| Component length [mm] | 3 and above | 3 and above | 5 and above |
| Component range | Rotationally symmetrical parts and pre-oriented parts of any shape | | |
| Camera resolution [mm] | 0.02 | 0.1 | |
| Exposure time [µs] | 72 ... 8 192 | | 136 ... 8 192 |
| Number of part memories | 48 | | |
| Orientation | Max. 8 different orientations per part type | | |
| Belt speed [mm/s] | 200 (adjustable: 100 ... 250) | 300 (adjustable: 100 ... 400) | |
| Conveyor rate for good parts | Dependent on part size, as well as number and frequency of actual and required part orientation. Example: 4 screws (M3x25) per second, correctly oriented for assembly 4 shafts (∅ 18 x 5 mm) per second, for quality inspection | | |
| Only with CHB-CB and CHB-SB | | | |
| Quantity pre-selection | Required quantities can be pre-selected separately for all stored parts | | |
| Counting range | 1 ... 10 million per part type | | |

| Electrical connection technology | | | |
|--|--|---------|---------|
| For part sizes | ∅ 10 mm | ∅ 30 mm | ∅ 80 mm |
| Operating voltage [V AC] | 85 ... 264 (at 50/60 Hz), automatic detection | | |
| Max. power consumption [VA] | 100 | | |
| Nominal value for short-circuit protection [A] | 1, slow-blow, automatic circuit-breaker integrated into mains switch | | |

| Operating and environmental conditions | | | |
|--|--|---------|---------|
| For part sizes | ∅ 10 mm | ∅ 30 mm | ∅ 80 mm |
| Operating medium | Filtered, unlubricated compressed air | | |
| Operating pressure [bar] | 0 ... 6 | | |
| Temperature range [°C] | 10 ... 50 (non-condensing) | | |
| Protection class | IP54 | | |
| Installation site | Dry, screened from extreme external light sources, cleanest possible ambient air | | |

Checkbox CHB

Technical data

| Interfaces | | Ø 10 mm | Ø 30 mm | Ø 80 mm |
|----------------------|--|--|---------|---------|
| For part sizes | | | | |
| PLC coupling outputs | | The connection of an external power supply is recommended in order to achieve full electrical isolation. Load per output: < 100 mA, total load < 1 A | | |
| | | Ready for operation Error output Feeder control Conveyor belt control Part acceptable and correctly oriented Part acceptable but incorrectly oriented Wrong part | | |
| | Additionally with CHB-CB CHB-SB CHB-SB | Pre-selected counter reading reached 1 ... 6 (recognised type) | | |
| PLC coupling inputs | | External type select External start Buffer zone sensors External sensor | | |
| | Additionally with CHB-CB CHB-SB | Start new counting cycle | | |
| Diagnostic interface | | RS 232 interface for laptop connection (cable included in scope of delivery) | | |

| Weights [g] | | | |
|--|---------|---------|---------|
| For part sizes | Ø 10 mm | Ø 30 mm | Ø 80 mm |
| Control unit | 6 000 | | |
| Conveying unit with 2 reject positions | 4 000 | 7 000 | 12 000 |

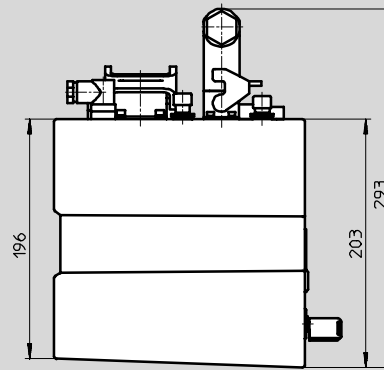
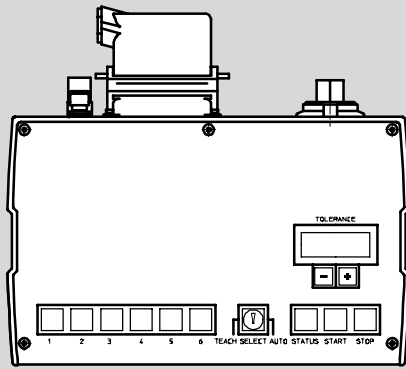
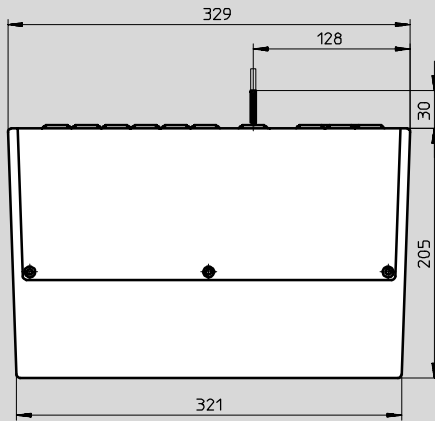
Checkbox CHB

Technical data

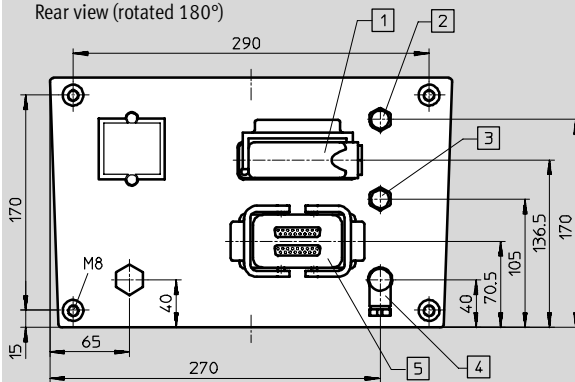
Dimensions

Download CAD data → www.festo.com/en/engineering

Control unit



Rear view (rotated 180°)



- 1 PLC coupling
- 2 RS 232 diagnostic interface
- 3 Small-parts conveyor control
- 4 Buffer zone sensors
- 5 Cable to conveying unit

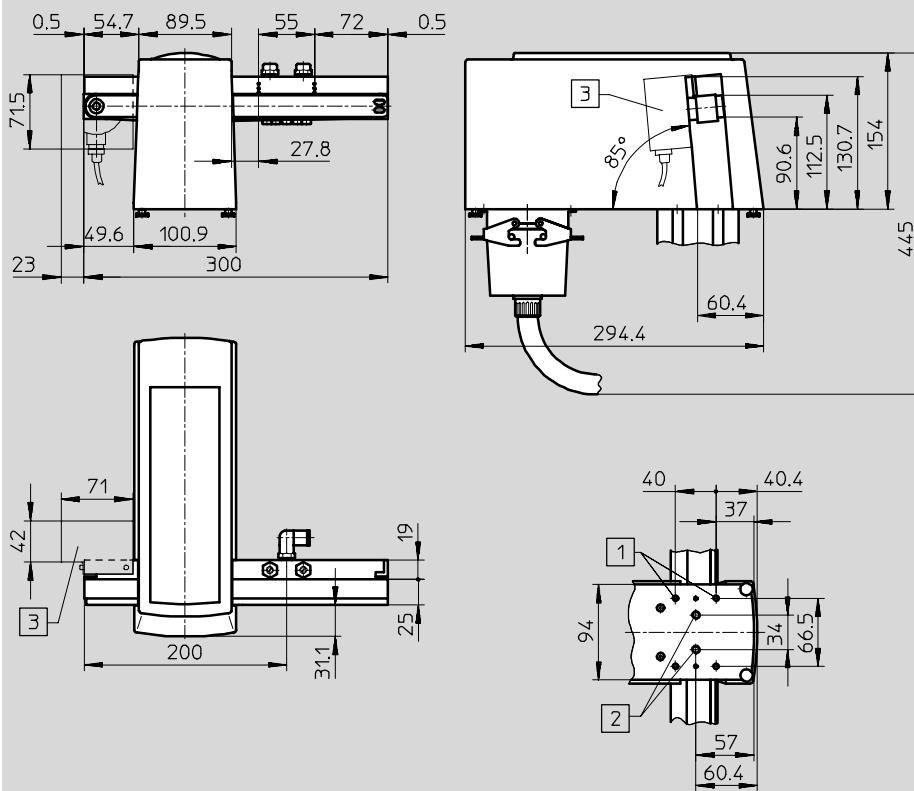
Checkbox CHB

Technical data

Dimensions – Conveying unit, part sizes up to $\varnothing 10$ mm

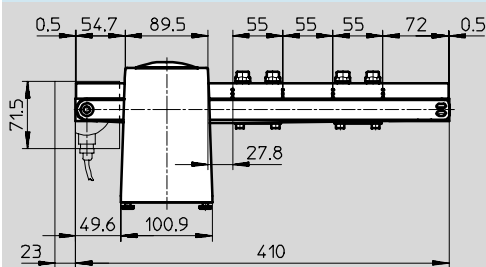
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2 reject positions

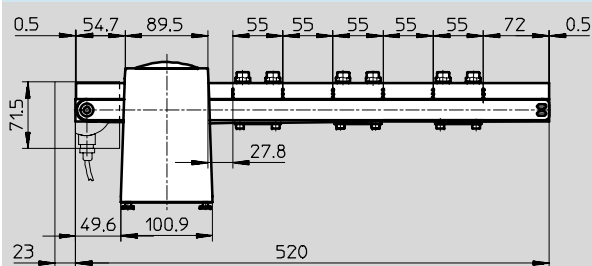


- 1 4x connecting thread M6 for 80x80 mm profile support
- 2 2x connecting thread M8 for 50x50 mm profile support
- 3 Encoder (optional)

4 reject positions



6 reject positions



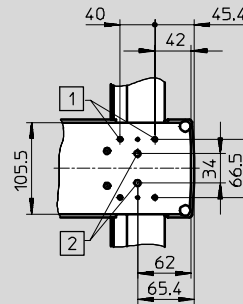
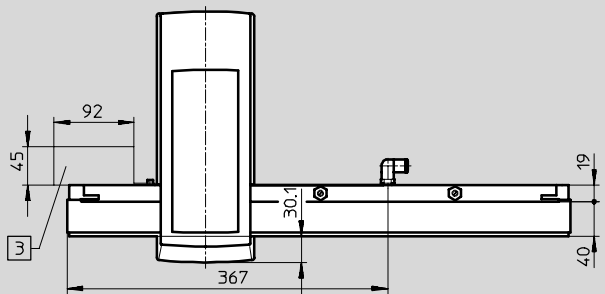
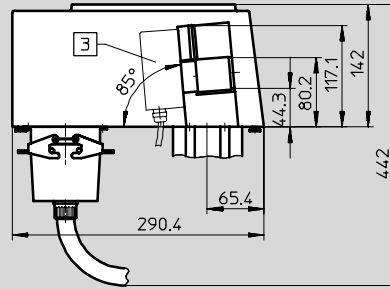
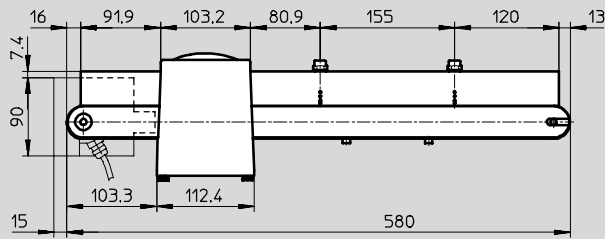
Checkbox CHB

Technical data

Dimensions – Conveying unit, part sizes up to $\varnothing 30$ mm

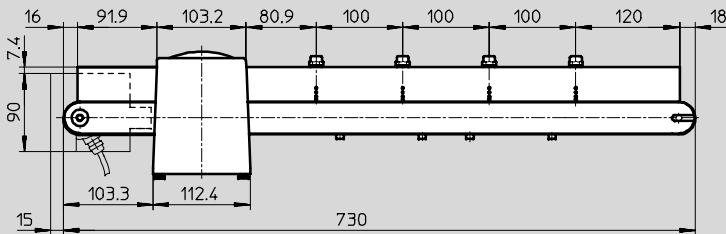
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2 reject positions

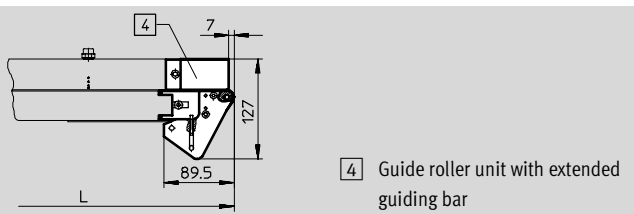
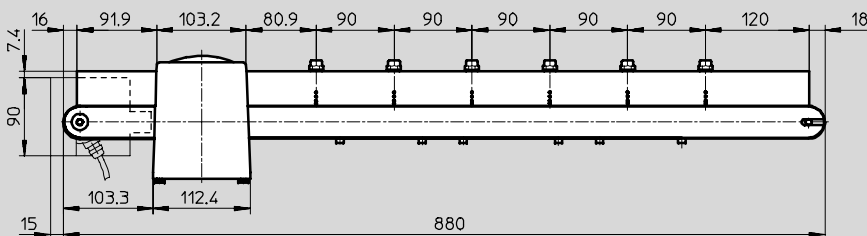


- 1 4x connecting thread M6 for 80x80 mm profile support
- 2 2x connecting thread M8 for 50x50 mm profile support
- 3 Encoder (optional)

4 reject positions



6 reject positions



| Guide roller unit | |
|-------------------|-----|
| Reject positions | L |
| 2 | 632 |
| 4 | 782 |
| 6 | 932 |

Optical orientation detection and quality inspection
Checkbox
4.2

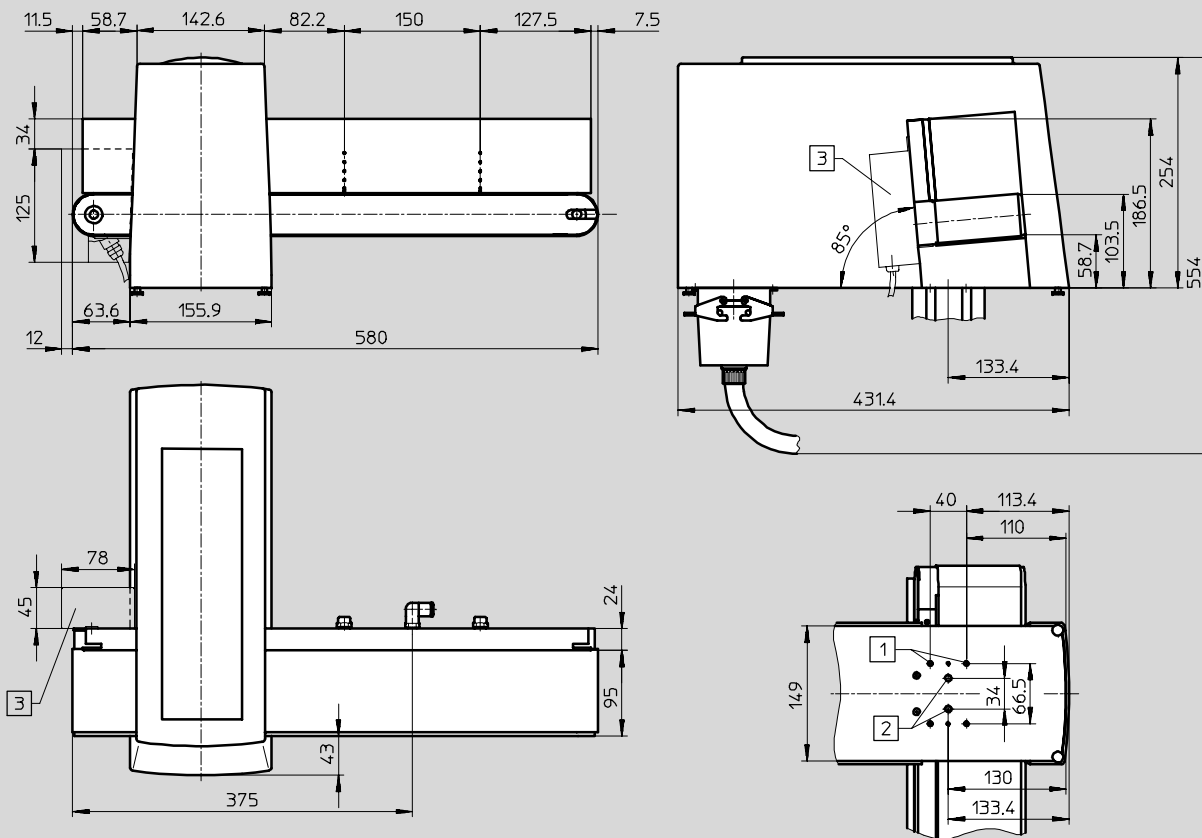
Checkbox CHB

Technical data

Dimensions – Conveying unit, part sizes up to $\varnothing 80$ mm

Download CAD data → www.festo.com/en/engineering

2 reject positions



1 4x connecting thread M6 for 80x80 mm profile support

2 2x connecting thread M8 for 50x50 mm profile support

3 Encoder (optional)

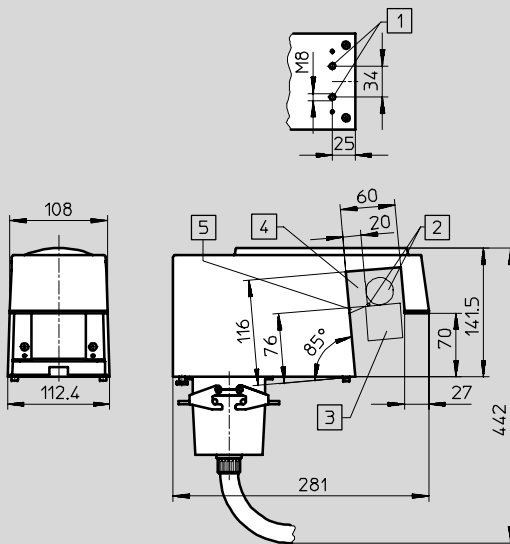
Checkbox CHB

Technical data

Dimensions – Tunnel variant, for part sizes up to $\varnothing 30$ mm

Download CAD data → www.festo.com/en/engineering

Without reject positions and conveyor belt

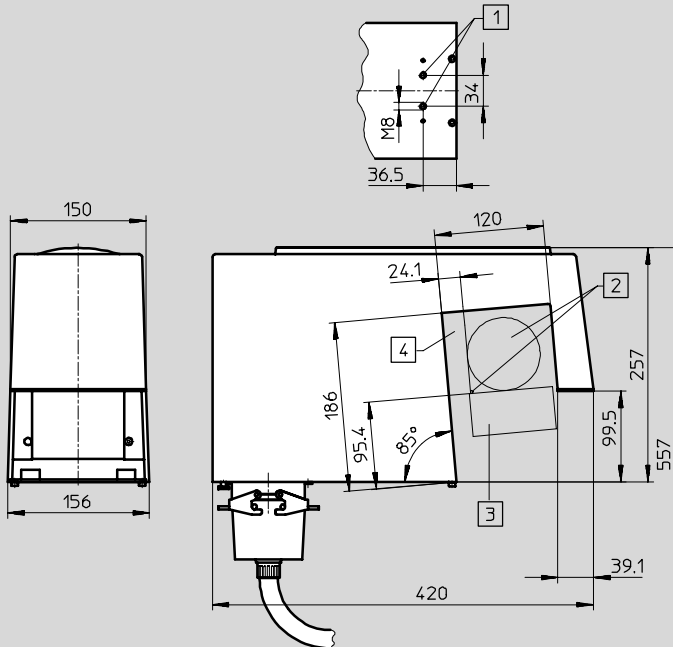


- 1 2x connecting thread M8 for 50x50 mm profile support
- 2 Part sizes $\varnothing 3 \dots \varnothing 30$ mm
- 3 Conveyor belt
- 4 Guiding bar
- 5 Provide cutout for camera light beam (approx. 5°)

Dimensions – Tunnel variant, for part sizes up to $\varnothing 80$ mm

Download CAD data → www.festo.com/en/engineering

Without reject positions and conveyor belt



- 1 2x connecting thread M8 for 50x50 mm profile support
- 2 Part sizes $\varnothing 3 \dots \varnothing 80$ mm
- 3 Conveyor belt
- 4 Guiding bar

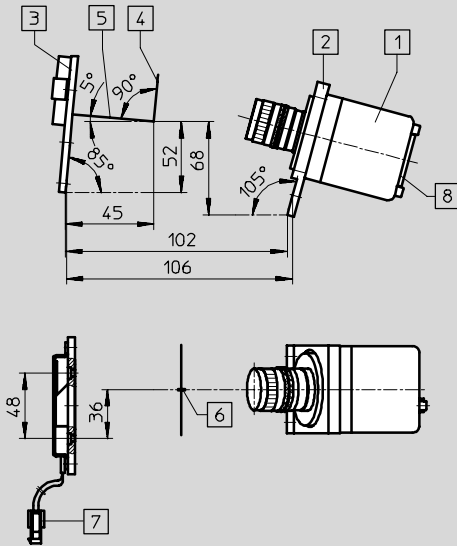
Checkbox CHB

Technical data

Dimensions – OEM variant, for part sizes up to $\varnothing 30$ mm

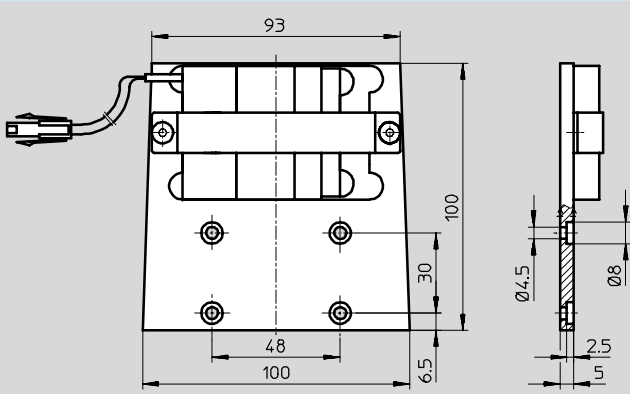
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Without reject positions, conveyor belt and housing

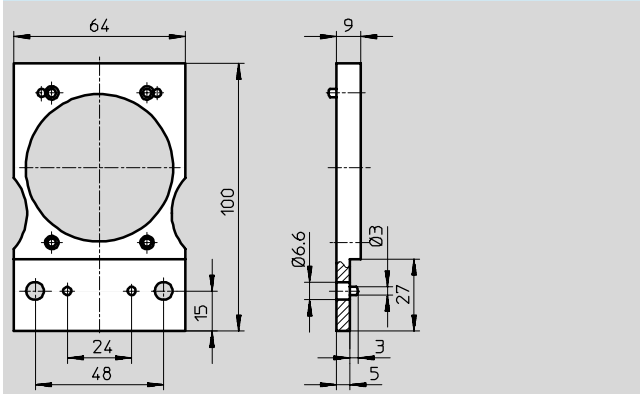


- 1 Camera with adapter, lens and extension tube
- 2 Camera bracket
- 3 Lighting bracket
- 4 Guiding bar for part guide
- 5 Parts conveyor
- 6 Viewing slot, 1 mm wide
- 7 Connection for light
- 8 Connection for camera

Lighting bracket



Camera bracket



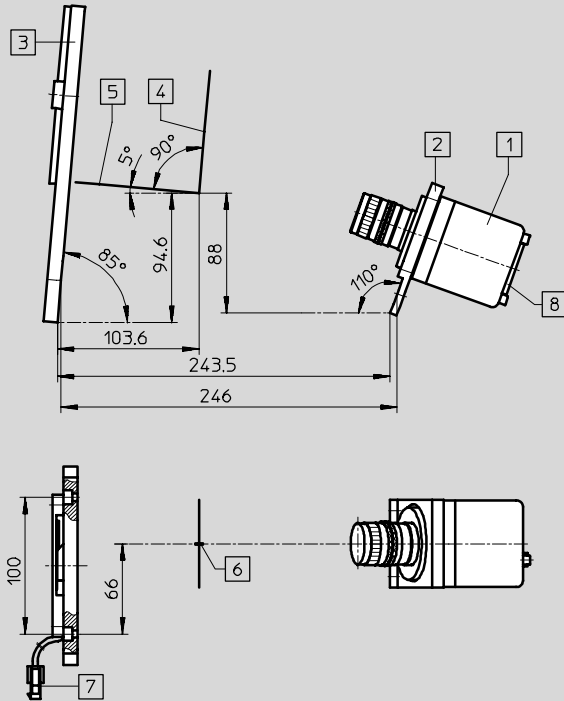
Checkbox CHB

Technical data

Dimensions – OEM variant, for part sizes up to $\varnothing 80$ mm

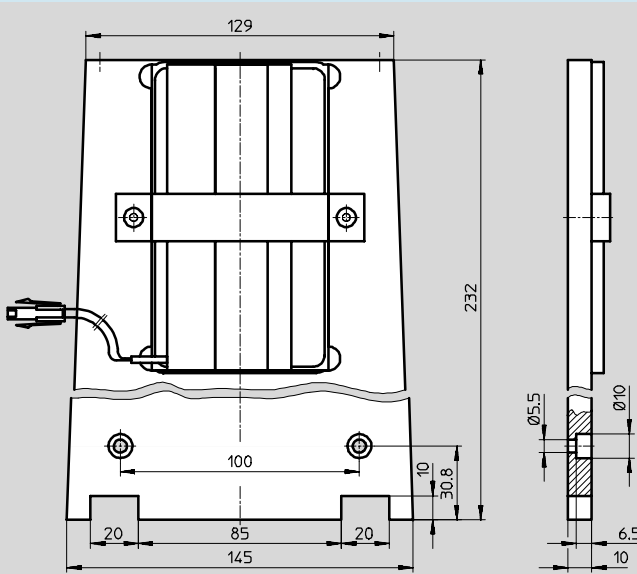
Download CAD data → www.festo.com/en/engineering

Without reject positions, conveyor belt and housing

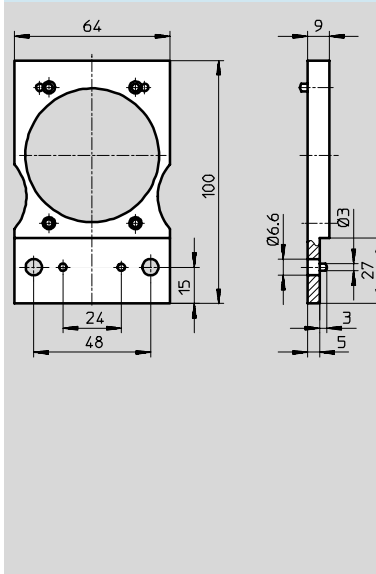


- 1 Camera with adapter, lens and extension tube
- 2 Camera bracket
- 3 Lighting bracket
- 4 Guiding bar for part guide
- 5 Parts conveyor
- 6 Viewing slot, 1 mm wide
- 7 Connection for light
- 8 Connection for camera

Lighting bracket



Camera bracket



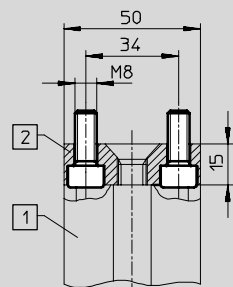
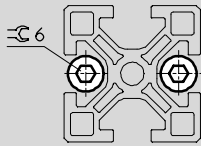
Checkbox CHB

Accessories

Dimensions – Mounting options

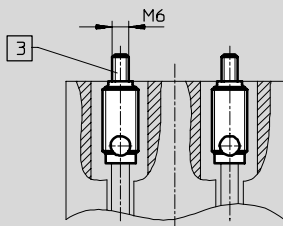
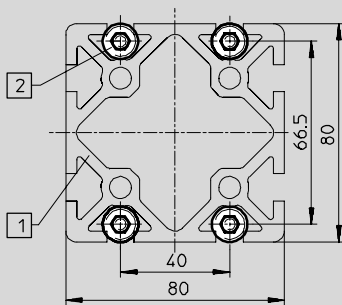
Download CAD data → www.festo.com/en/engineering

50x50 mm profile support



- 1 50x50 mm profile support
- 2 Profile connector HV-50 as adapter

80x80 mm profile support



- 1 80x80 mm profile support
- 2 Automatic profile connector
- 3 4 socket head screws M6x40 DIN 912

Checkbox CHB

Ordering data – Modular products

M Mandatory data →

| Module No. | Basic function | Control function | Component size | Transport function | Connecting cable | User manual |
|-------------------------|----------------|------------------|-------------------|---|-------------------|-----------------------|
| 197 890 | CHB | IB CB SB | F10 F30 F80 | L2P R2P L4P R4P L6P R6P TU OEM | K20 K30 K50 | D E F S I |
| Ordering example | | | | | | |
| 197 890 | CHB | - SB | - F30 | - L4P | - K20 | - D |

| Ordering table | | Condi- tions | Code | Enter code |
|---------------------|--|-----------------|-------------|---------------|
| M Module No. | 197 890 | | | |
| Basic function | Checkbox family | | CHB | CHB |
| Control function | Identbox | | -IB | |
| | Countbox | | -CB | |
| | Sortbox | | -SB | |
| Component size | Part size Ø 0.5 ... 10 mm, part length 3 mm and above | | -F10 | |
| | Part size Ø 3 ... 30 mm, part length 3 mm and above | | -F30 | |
| | Part size Ø 3 ... 80 mm, part length 5 mm and above | 1 | -F80 | |
| Transport function | 2 reject positions, belt transport direction: to the left | | -L2P | |
| | 2 reject positions, belt transport direction: to the right | | -R2P | |
| | 4 reject positions, belt transport direction: to the left | 2 | -L4P | |
| | 4 reject positions, belt transport direction: to the right | 2 | -R4P | |
| | 6 reject positions, belt transport direction: to the left | 2 | -L6P | |
| | 6 reject positions, belt transport direction: to the right | 2 | -R6P | |
| | No reject positions and conveyor belt | 3 | -TU | |
| | No reject positions, conveyor belt and housing | 3 | -OEM | |
| Connecting cable | Cable length 2 m | | -K20 | |
| | Cable length 3 m | | -K30 | |
| | Cable length 5 m | | -K50 | |
| User manual | German | | -D | |
| | English | | -E | |
| | French | | -F | |
| | Spanish | | -S | |
| | Italian | | -I | |

1 F80 Not in combination with field of view V10 and V20.

3 TU, OEM Not in combination with component size F10.

2 L4P, R4P, L6P, R6P
Not in combination with component size F80.

Transfer order code

197 890 CHB - - - - -

Checkbox CHB

Ordering data – Modular products

| Options | | | | | |
|---------------------|-------------------|----------------------|---------------------------|----------|-------------|
| Additional function | Field of view | Guiding bar material | Alternative conveyor belt | Belt end | Accessories |
| EC | V10 V20 V33 | VA | BTA BTB BTD | UE | MP |
| - EC | - V33 | - VA | - BTA | - UE | - MP |

| Ordering table | | | | | |
|----------------|------------------------------|---|-----------------|------|---------------|
| | | | Condi- tions | Code | Enter code |
| ↓ | Additional function | Encoder | | -EC | |
| 0 | Field of view | Adjustment of field of view to 10 mm | 4 | -V10 | |
| | | Adjustment of field of view to 20 mm | 4 | -V20 | |
| | | Adjustment of field of view to 33 mm | 5 | -V33 | |
| | Guiding bar material | Stainless steel | | -VA | |
| | Alternative conveyor belt | Conveyor belt with longitudinal ridges | 6 | -BTA | |
| | | Conveyor belt with longitudinal recesses | 6 | -BTB | |
| | | Conveyor belt with smooth surface, made of silicone | 7 | -BTD | |
| | Belt end | Guide roller unit with belt | 8 | -UE | |
| | Accessories (supplied loose) | Mounting plates | | -MP | |

- | | | | |
|--|---|---------------------------------------|---|
| <input type="checkbox"/> 4 V10, V20 | Not in combination with component size F10, F80. | <input type="checkbox"/> 7 BTD | Not in combination with belt end UE. |
| <input type="checkbox"/> 5 V33 | Not in combination with component size F10. | <input type="checkbox"/> 8 UE | Not in combination with component size F30. |
| <input type="checkbox"/> 6 BTA, BTB | Not in combination with component size F80. Not in combination with belt end UE. | | |

Transfer order code

- - - - - -

Checkbox CHB

Accessories

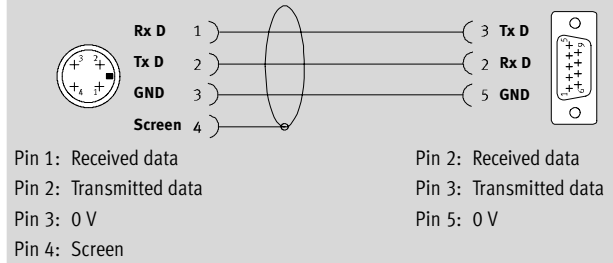
FESTO

Programming cable KDI

Material:
Cable sheath: Polyvinyl chloride
Round connector:
Polybutylenterephthalate
Socket: Steel



Terminal allocation



| Ordering data | | | | | |
|------------------|------------|--------|------------|----------|---------------|
| Cable length [m] | Plug | Socket | Weight [g] | Part No. | Type |
| 5 | M12, 4-pin | 9-pin | 181 | 150 268 | KDI-SB202-BU9 |

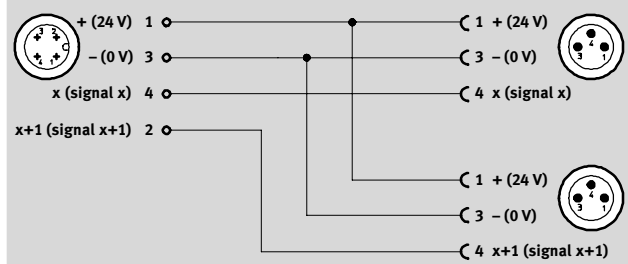
DUO cable KM12-DUO

for buffer zone sensors

Material:
Cable sheath: Polyurethane
Plug, socket: Polyurethane
Knurled screw, locknut: Brass



Terminal allocation



| Ordering data | | | | | |
|------------------|------------|-----------|------------|----------|------------------|
| Cable length [m] | Plug | Socket | Weight [g] | Part No. | Type |
| 0.6 | M12, 4-pin | M8, 3-pin | 58.2 | 18 685 | KM12-DUO-M8-GDGD |

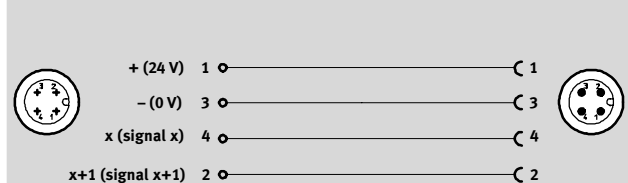
Connecting cable KM12-M12

for buffer zone sensors

Material:
Cable sheath: Polyurethane
Plug, socket: Polyurethane
Knurled screw, locknut: Brass



Terminal allocation



| Ordering data | | | | | |
|------------------|------------|------------|------------|----------|-------------------|
| Cable length [m] | Plug | Socket | Weight [g] | Part No. | Type |
| 2.5 | M12, 4-pin | M12, 4-pin | 100.32 | 18 684 | KM12-M12-GSGD-2,5 |
| 5 | | | 173.17 | 18 686 | KM12-M12-GSGD-5 |

Checkbox CHB

Accessories



Software to meet individual requirements

CheckKon



Performance characteristics

Using this software the processes within the Checkbox can be displayed, logged and adapted from the camera image evaluation through to the I/O parameters.

This means:

- Transfer of new programs to the Checkbox
- Display and editing of system parameters
- Display of the evaluation of the last inspected parts recorded
- Display and logging of part contour and characteristics derived
- Display and print-out of system configuration

CheckOpti



Performance characteristics

“CheckOpti” is used in cases where the standard Checkbox learning program reaches its limits due to the fact that contour differences are too small, meaning that part orientation or quality features cannot be reliably recognised.

“CheckOpti” facilitates a complete analysis of the Checkbox recognition processes based upon contour data for the parts to be checked.

Additional, high performance test features can be defined and optimised if necessary. The new configuration can be subsequently transferred to the Checkbox.

| Ordering data | | | |
|--------------------------------|----------|----------|-----------------|
| Version | Language | Part No. | Type |
| CheckKon software with manual | German | 194 496 | P.SW-CB-KON-DE |
| | English | 194 497 | P.SW-CB-KON-EN |
| CheckOpti software with manual | German | 192 144 | P.SW-CB-OPTI-DE |
| | English | 192 145 | P.SW-CB-OPTI-EN |