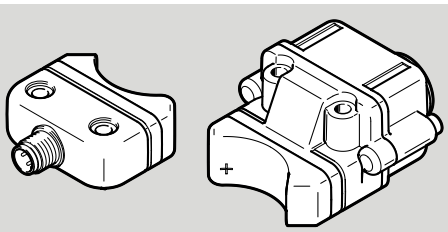
SRBI
Limit switch box



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Operating instructions

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[8143659]

Translation of the original instructions

1 Applicable Documents

All available documents for the product ➔ www.festo.com/sp.

2 Safety

2.1 Safety instructions

- Only use the product in original status without unauthorised modifications.
- Only use the product if it is in perfect technical condition.
- Observe labelling on the product.
- The protective caps fitted on delivery are for transport purposes only and must be replaced with cable connectors or blanking plugs that are suitable for the application.
- Take into consideration the ambient conditions at the location of use.
- This product can generate high frequency malfunctions, which may make it necessary to implement interference suppression measures in residential areas.

2.2 Intended use

The limit switch box SRBI in combination with the position indicator SASF-S3-... is intended for detection, electrical feedback and visual indication of the end-position of drives. The system is suitable for anti-clockwise and clockwise rotating drives with a rotation angle of 90°.

2.3 Training of qualified personnel

Work on the product should only be conducted by qualified personnel.

2.4 UL/CSA Certification

In combination with the UL inspection mark on the product, the information in this section must also be observed in order to comply with the certification conditions of Underwriters Laboratories Inc. (UL) for USA and Canada.

UL/CSA Certification	
Product category code	NRKH, NRKH7
File number	E232949
Considered standards	UL 60947-1, UL 60947-5-2 CSA-C22.2 No. 60947-1, CSA-C22.2 No. 60947-5-2
UL mark	c UL US LISTED

Tab. 1 UL/CSA Certification

Only for connection to a NEC/CEC Class 2 supply.

3 Further information

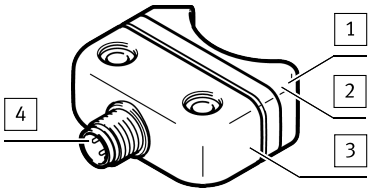
- Accessories ➔ www.festo.com/catalogue.
- Spare parts ➔ www.festo.com/spareparts.

4 Service

Contact your regional Festo contact person if you have technical questions ➔ www.festo.com.

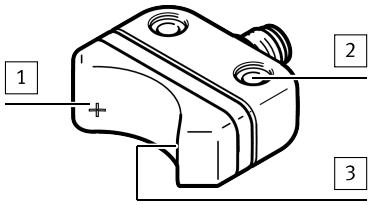
5 Product design

5.1 SRBI-...-M12



1 LED yellow: Switching status indication
2 LED green: Power supply indicator
3 Housing
4 M12x1, plug 4-pin

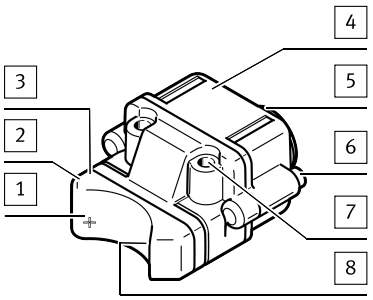
Fig. 1 SRBI-...-M12



1 Inductive sensor Target position 1
2 Hole for M5 screw
3 Inductive sensor Target position 2

Fig. 2 SRBI-...-M12

5.2 SRBI-...-C2



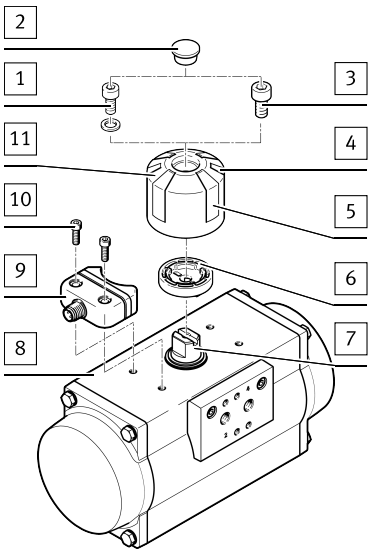
1 Inductive sensor Target position 1
2 LED yellow: Switching status indication
3 LED green: Power supply indicator
4 Housing cover
5 Cable entry M20x1.5
6 Screw M4
7 Hole for M5 screw
8 Inductive sensor Target position 2

Fig. 3 SRBI-...-C2

6 Function

The inductive sensors of the limit switch box detect the metal actuating cups on the position indicator without contact. An overlap function (redundancy) can be achieved with a second limit switch box at the opposite mounting interface.

7 Assembly



1 Screw M5 with washer
2 Sealing plug
3 Screw M6
4 Actuating cup
5 Identification stopper
6 Spacer disc
7 Drive shaft
8 Mounting interface (ISO 5211)
9 Limit switch box
10 Screw M5
11 Position indicator SASF-S3-...

Fig. 4 Assembly

1. Mount the limit switch box 9 on the mounting interface (ISO 5211) 8 of the the semi-rotary drive with the M5 screws with washer 1. Tightening torque: 2.7 Nm ± 10%
   The limit switch box does not need to be adjusted after mounting.
2. Select a suitable position indicator depending on the height dimension of the drive shaft.

Height of drive shaft	Position indicator
20 mm	Position indicator SASF-S3-...-A20
30 mm	Position indicator SASF-S3-...-A30

Tab. 2 Height of drive shaft

3. Mount position indicator.
   – M5 screw with washer or M6 screw
   – Tightening torque: 1.5 Nm ± 10%
4. Attach sealing plug and identification stopper to the position indicator.

8 Installation

8.1 Electrical installation

Connect SRBI-...-M12

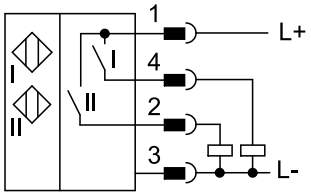


Fig. 5 Connection SRBI-...-M12

- Connect a suitable connecting cable to M12x1, plug connector 4-pin [4].

Connect SRBI-...-C2

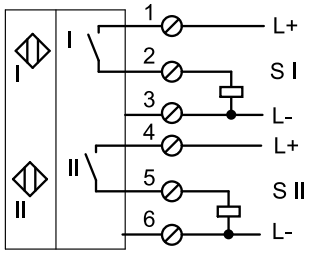


Fig. 6 Connection SRBI-...-C2

1. Loosen the 2 M4 screws [6] on the housing cover [4]. Remove the housing cover.
2. Screw the cable connector into the cable entry M20x1.5 [5]. Guide the electrical connecting cable through the cable connector to the terminal strip.
   – Connectable conductor cross section:
     – flexible: 0.2 mm²... 1.5 mm²
     – rigid: 0.2 mm²... 2.5 mm²
3. Wire connections.
4. Replace the housing cover and tighten the 2 M4 screws. Tightening torque: 2 Nm

9 Maintenance and Care

If used as intended, the product is maintenance-free.

10 Disposal

ENVIRONMENT!

Dispose of the product and packaging according to the applicable provisions of environmentally sound recycling.

11 Technical data

SRBI-...		
Mounting position		any
Degree of protection		IP67
Sensor connection SRBI-...-M12		M12x1, plug 4-pin
Cable entry SRBI-...-C2		M20x1.5, cable connector
Certification		cULus Listed, RCM Mark
Temperature		
Ambient temperature	[°C]	–25 ... +70
Storage temperature	[°C]	–40 ... +85
Material		
Housing		PBT
M12x1, plug 4-pin		High-alloy stainless steel
Screws		
Note on materials		Contains paint-wetting impairment substances[1]
Electrical data		
Switching output		PNP
Switching element function		Normally open contact (N/O)
Switching frequency	[Hz]	0 ... 1000
No-load supply current	[mA]	≤ 22.5
Operating voltage range	[V DC]	10 ... 30
Output current DC	[mA]	0 ... 200
Voltage drop	[V]	≤ 2.5
Residual current	[mA]	0 ... 0.5
SRBI-...		
Reverse polarity protection		for all electrical connections

1) PWIS = paint-wetting impairment substances

Tab. 3 Technical data SRBI-...

SASF-S3-...		SASF-S3-B-F-A20	SASF-S3-B-F-A30
Ambient temperature	[°C]	–25 ... +70	
Dimensions			
Circlip diameter	[mm]	≤ 34	
Circlip height	[mm]	≤ 3	
Shaft diameter[1]	[mm]	≤ 34	
Shaft height	[mm]	20	30
Mounting hole pattern	[mm]	30x80	
Materials			
Housing		PP	
Identification strips yellow and black			
Sealing plug		PE	
Spacer disc		PP	
Screw M5x12		V2A	
Screw M6x12			
Washer 10.4x5.2			

1) If the ring on the drive shaft of the semi-rotary drive is higher than 3 mm, the snap ring diameter is not the decisive factor but the snap ring height is

Tab. 4 Technical data SASF-S3-...