

Proximity sensors, round design

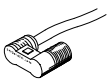
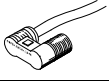
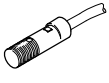
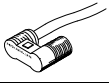
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Proximity sensors, round design

Product range overview

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Measuring principle	Version	Type	Assembly	Switching element function		Switch output	Electrical connection	
				N/O contact	N/C contact		Cable	Plug
Magneto-inductive	Operating voltage range 10 ... 30 V DC							
		SMTO-4U	Via accessories	■	-	PNP	3-wire	M8x1, 3-pin
				■	-	NPN	3-wire	M8x1, 3-pin
Magnetic reed	Operating voltage range 12 ... 30 V AC/DC							
		SMEO-4U	Via accessories	■	-	Contacting	3-wire	M8x1, 3-pin
		CRSMEO-4 Corrosion resistant	Via accessories	■	-	Contacting	3-wire	-
	Operating voltage range 12 ... 250 V AC/DC							
		SMEO-4U	Via accessories	■	-	Contacting	2-wire	-

Proximity sensors, round design

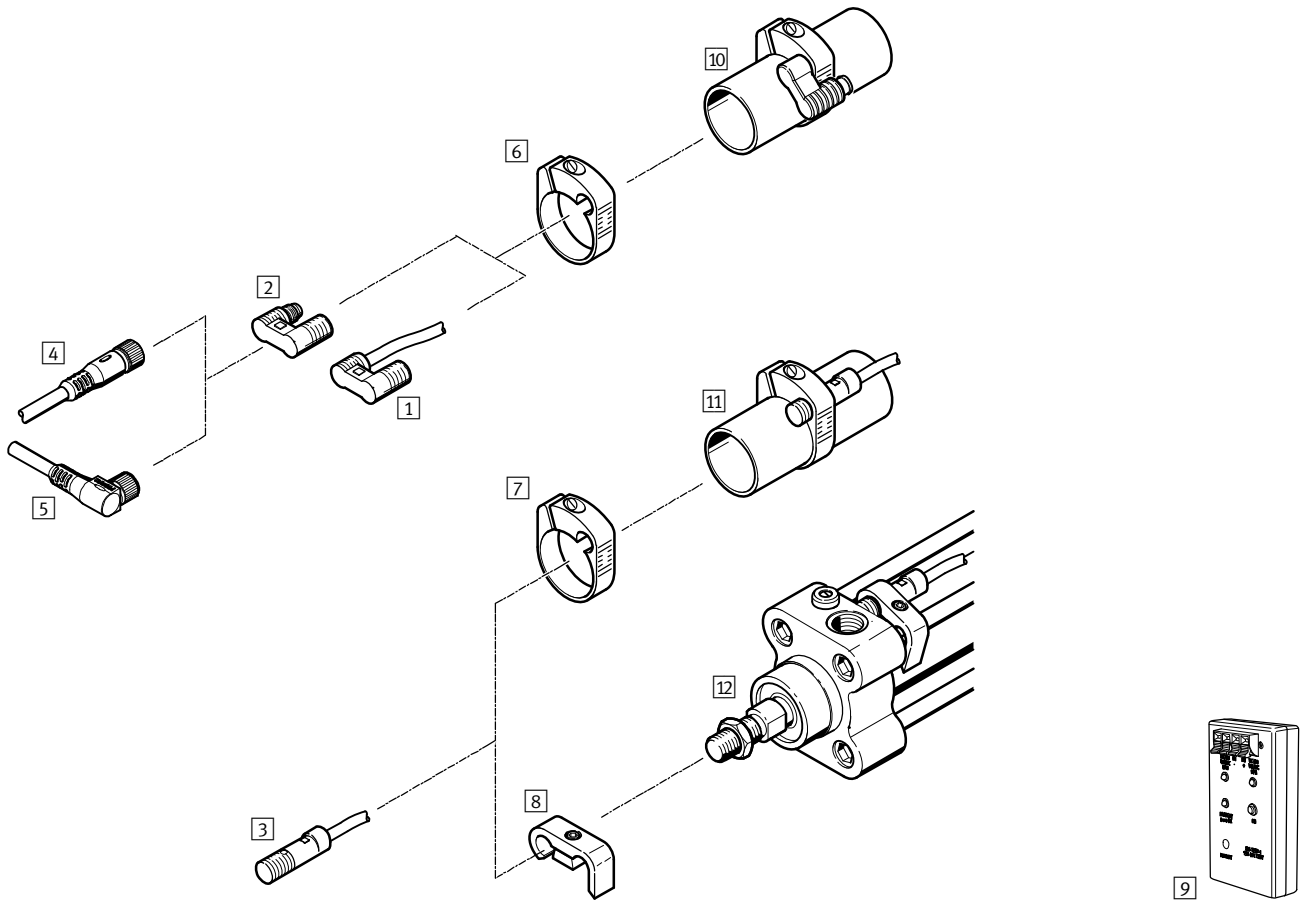
Product range overview

Type	Connection direction		Switching status display via LED	Free of copper and PTFE	→ Page/Internet
	In-line	Lateral			
Operating voltage range 10 ... 30 V DC					
SMTO-4U	■	-	■	■	6
	■	-	■	-	
Operating voltage range 12 ... 30 V AC/DC					
SMEO-4U	■	-	■	■	9
Operating voltage range 12 ... 250 V AC/DC					
CRSMEO-4 Corrosion resistant	■	-	■	-	12
Operating voltage range 12 ... 250 V AC/DC					
SMEO-4U	■	-	■	-	9

Proximity sensors, round design

Peripherals overview

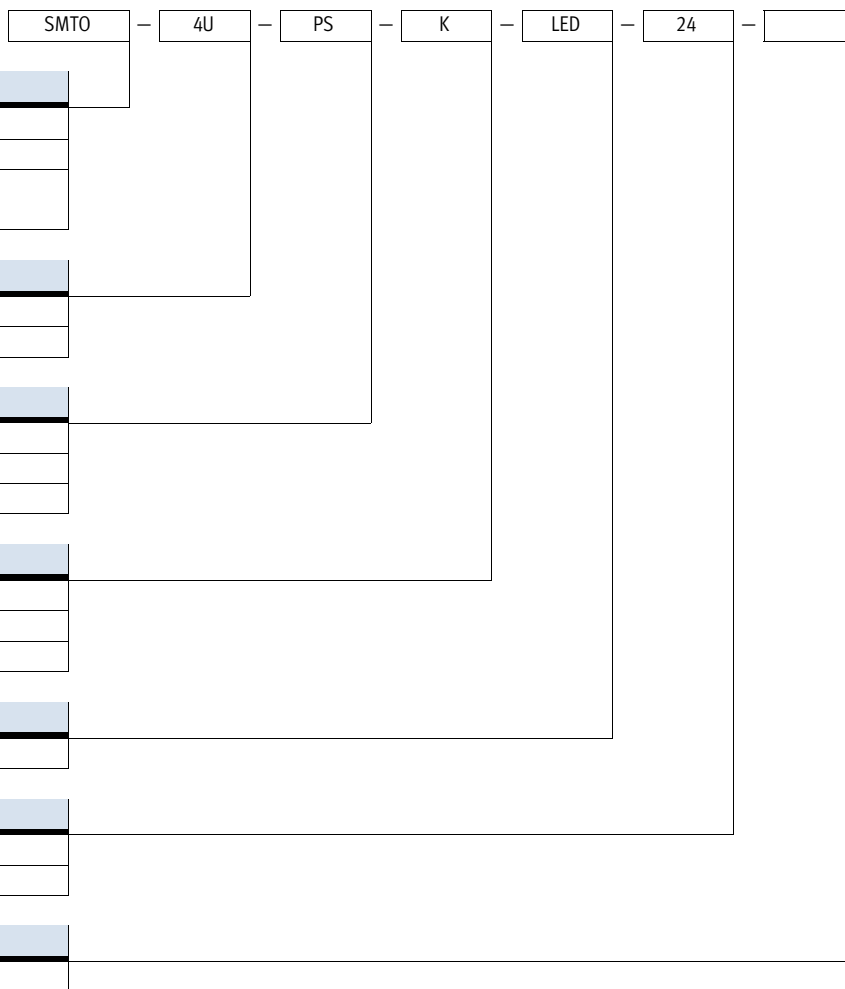
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Mounting attachments and accessories			
	Brief description	→ Page/Internet	
Proximity sensors			
1	SMT0-4U-K SME0-4U-K	Magneto-inductive, with cable Magnetic reed, with cable	6 9
2	SMT0-4U-S SME0-4U-S	Magneto-inductive, with plug M8x1 Magnetic reed, with plug M8x1	6 9
3	CRSMEO-4	Magnetic reed, corrosion resistant, with cable	12
Accessories			
4	Plug socket with cable NEBU-M83GD-...	Straight socket, M8x1, 3-pin	nebu
5	Plug socket with cable NEBU-M83WD-...	Angled socket, M8x1, 3-pin	
6	Mounting kit SMBR-...	For round cylinders	14
7	Mounting kit CRSMBR-...	Corrosion resistant, for round cylinders	14
8	Mounting kit CRSMB-...	Corrosion resistant	15
9	Sensor tester SM-TEST-1		sm-test-1
Drives			
10	Round cylinders	∅ 8 ... 25 mm	-
11	Round cylinders CRDSNU, stainless steel	∅ 12 ... 63 mm	
12	Standard cylinders CRDNG, CRDNGS, stainless steel	∅ 32 ... 125 mm	

Proximity sensors, round design

Type codes

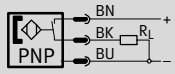


Proximity sensors SMT0-4U, round design, magneto-inductive

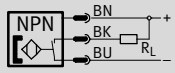
Technical data

Function

e.g. PNP, N/O contact, with plug



e.g. NPN, N/O contact, with plug



- Magneto-inductive measuring principle



General technical data

Design	Round
Certification	RCM trademark
CE marking (see declaration of conformity)	To EU EMC Directive ¹⁾
Note on materials	Free of copper and PTFE

- 1) For information about the applicability of the component see the manufacturer's EC declaration of conformity at: www.festo.com/sp → User documentation.
If the component is subject to restrictions on usage in residential, office or commercial environments or small businesses, further measures to reduce the emitted interference may be necessary.

Input signal/measuring element

Measuring principle	Magneto-inductive
Ambient temperature [°C]	-25 ... +70

Switching output

Type	SMT0-4U-...-K	SMT0-4U-...-S
Switching output	NPN PNP	NPN PNP
Switching element function	N/O contact	N/O contact
Reproducibility of switching point ¹⁾ [mm]	±0.1	±0.1
Switch-on time [ms]	0 ... 5	0.5
Switch-off time [ms]	0 ... 5	0.5
Max. output current [mA]	200	200
Max. contact rating DC [W]	6	6
Voltage drop [V]	2	0 ... 2
Residual current [mA]	0 ... 0.01	0 ... 0.01

- 1) Only applicable to drives secured against rotation.

Output, additional data

Protection against short circuit	Pulsed
Protection against overloading	Yes

Electronic components

Operating voltage range DC [V]	10 ... 30
Reverse polarity protection	For all electrical connections

Proximity sensors SMT0-4U, round design, magneto-inductive

Technical data

Electromechanical components		
Type	SMT0-4U-...-K	SMT0-4U-...-S
Electrical connection	Cable, 3-wire	Plug M8x1, 3-pin
Connection direction	In-line	-
Max. tightening torque, plug [Nm]	-	0.3
Cable length [m]	2.5	-
Cable characteristics	Standard	-
Cable sheath materials	PVC	-

Mechanical components		
Type	SMT0-4U-...-K	SMT0-4U-...-S
Type of mounting	Via accessories	
Max. tightening torque [Nm]	0.8	0.8
Product weight [g]	70	6
Housing materials	PET	PET
	-	PA
	-	PUR

Display/operation	
Switching status display	Yellow LED

Immissions/emissions		
Type	SMT0-4U-...-K	SMT0-4U-...-S
Ambient temperature with flexible cable installation [°C]	-5 ... +70	-
Protection class	IP67	
Corrosion resistance class CRC ¹⁾	2	

1) Corrosion resistance class CRC 2 to Festo standard FN 940070
 Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

Dimensions Download CAD data → www.festo.com

Cable

1 2-wire cable, 3-wire cable for SMEO-4U-K-LED-220
2 Yellow LED for switching status

	L1	L2	D1	D2	D3	H1
SMT0-4U-...-K-LED-24	19	15.5	9.4	9	4.2	23

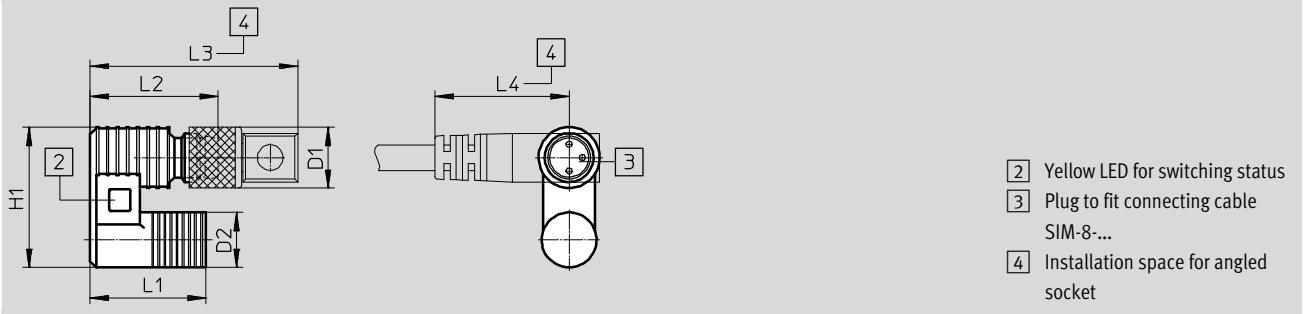
Proximity sensors SMT0-4U, round design, magneto-inductive

Technical data

Dimensions

Download CAD data → www.festo.com

Plug M8x1



	L1	L2	L3	L4	D1	D2	H1
SMT0-4U- ... -S-LED-24	19	21	~34	~22	10 ∅	9 ∅	23

Ordering data

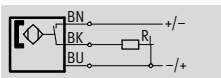
	Switching output	Electrical connection		Cable length [m]	Part No.	Type
		Cable	Plug M8x1			
	N/O contact					
	PNP	3-wire	-	2.5	152836	SMT0-4U-PS-K-LED-24
		-	3-pin	-	152742	SMT0-4U-PS-S-LED-24
	NPN	3-wire	-	2.5	152837	SMT0-4U-NS-K-LED-24
-		3-pin	-	152743	SMT0-4U-NS-S-LED-24	

Proximity sensors SMEO-4U, round design, magnetic reed

Technical data

Function

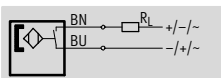
e.g. N/O contact, 3-wire, with cable



- Magnetic reed measuring principle



e.g. N/O contact, 2-wire, with cable



General technical data

Type	SMEO-4U-...-24	SMEO-4U-...-230
Design	Round	Round
Conforms to	–	EN 60947-5-2
Certification	RCM trademark	RCM trademark
CE marking (see declaration of conformity)	To EU EMC Directive ¹⁾ –	To EU EMC Directive ¹⁾ To EU Low Voltage Directive
Note on materials	Free of copper and PTFE	Free of copper and PTFE

1) For information about the applicability of the component see the manufacturer's EC declaration of conformity at: www.festo.com/sp → User documentation.
If the component is subject to restrictions on usage in residential, office or commercial environments or small businesses, further measures to reduce the emitted interference may be necessary.

Input signal/measuring element

Measuring principle	Magnetic reed
Ambient temperature [°C]	–20 ... +60

Switching output

Type	SMEO-4U-...-24	SMEO-4U-...-230
Switching output	Contacting, bipolar –	Contacting, bipolar Without LED function
Switching element function	N/O contact	N/O contact
Reproducibility of switching point ¹⁾ [mm]	±0.1	±0.1
Switch-on time [ms]	0 ... 0.5	0 ... 2
Switch-off time [ms]	0.03	0.05
Max. switching frequency [Hz]	–	500
Max. output current [mA]	500	500
Max. output current DC [mA]	–	120
Max. output current AC [mA]	–	250
Max. contact rating DC [W]	10	10
Max. contact rating AC [VA]	–	10
Voltage drop [V]	–	0 ... 4.5

1) Only applicable to drives secured against rotation.

Output, additional data

Protection against short circuit	No
Protection against overloading	No

Electronic components

Type	SMEO-4U-...-24	SMEO-4U-...-230
Operating voltage range DC [V]	12 ... 27	12 ... 250
Operating voltage range AC [V]	–	12 ... 250
Reverse polarity protection	No	No

Proximity sensors SMEO-4U, round design, magnetic reed

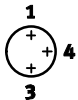
Technical data

Electromechanical components			
Type	SMEO-4U-K-...-24	SMEO-4U-S-...-24	SMEO-4U-K-...-230
Electrical connection	Cable, 3-wire	Plug M8x1, 3-pin	Cable, 2-wire
Connection direction	-	-	In-line
Cable length [m]	2.5	-	2.5
	5		-
Cable sheath materials	TPE-U(PUR)	-	TPE-U(PUR)

Mechanical components		
Type	SMEO-4U-...-24	SMEO-4U-...-230
Type of mounting	Via accessories	
Tightening torque [Nm]	-	0.8
Housing materials	PET	PET
	-	TPE-O

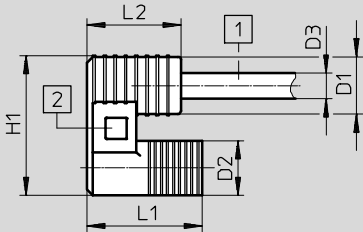
Display/operation	
Switching status display	Yellow LED

Immissions/emissions			
Type	SMEO-4U-K-...-24	SMEO-4U-S-...-24	SMEO-4U-...-230
Ambient temperature with flexible cable installation [°C]	-5 ... +60	-	-
Protection class	IP67		
Surge capacity [kV]	-	-	4
Degree of contamination	-	-	3

Pin allocation to EN 60947-5-2			
M8x1, 3-pin			
N/O contact			
	Pin	Wire colour	Allocation
	1	Brown	+
	3	Blue	-
	4	Black	Output

Dimensions Download CAD data → www.festo.com

SMEO-4U-S – Plug M8x1



- 1 2-wire cable, 3-wire cable for SMEO-4U-K-LED-220
- 2 Yellow LED for switching status

	L1	L2	D1	D2	D3	H1
SMEO-4U- ... -K-LED-24	19	15.5	∅ 9.4	∅ 9	∅ 4.2	23

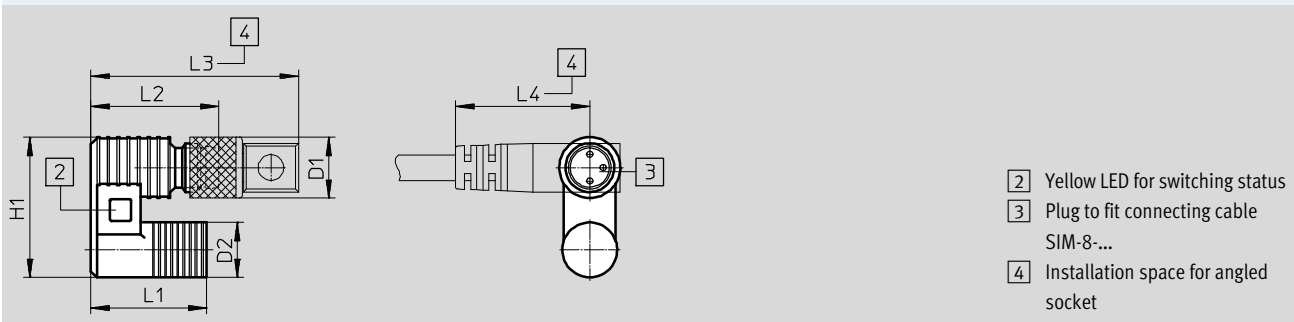
Proximity sensors SMEO-4U, round design, magnetic reed

Technical data

Dimensions

Download CAD data → www.festo.com

SMEO-4U-S – Plug M8x1



	L1	L2	L3	L4	D1 ∅	D2 ∅	H1
SMEO-4U- ... -S-LED-24	19	21	~34	~22	10	9	23

Ordering data

	Electrical connection		Cable length [m]	Switching status display	Product weight [g]	Part No.	Type
	Cable	Plug M8x1					
	N/O contact						
	Operating voltage range 12 ... 27 V DC						
	3-wire	–	2.5	■	70	36198	SMEO-4U-K-LED-24
			5	■	130	175401	SMEO-4U-K5-LED-24
	–	3-pin	–	■	6	151526	SMEO-4U-S-LED-24-B
	Operating voltage range 12 ... 250 V AC/DC						
2-wire	–	2.5	■	70	150011	SMEO-4U-K-LED-230	

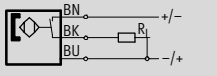
Proximity sensors CRSMEO-4, round design, magnetic reed

Technical data

Function

e.g. N/O contact, 3-wire, with cable

- Corrosion-resistant
- Magnetic reed measuring principle



General technical data	
Design	Round
Certification	C-Tick
CE marking (see declaration of conformity)	To EU EMC Directive ¹⁾
Note on materials	Free of copper and PTFE

1) For information about the applicability of the component see the manufacturer's EC declaration of conformity at: www.festo.com/sp → User documentation.
If the component is subject to restrictions on usage in residential, office or commercial environments or small businesses, further measures to reduce the emitted interference may be necessary.

Input signal/measuring element	
Measuring principle	Magnetic reed
Ambient temperature	[°C] -20 ... +60

Switching output	
Switching output	Contacting, bipolar
Switching element function	N/O contact
Reproducibility of switching point	[mm] ±0.1
Switch-on time	[ms] 0 ... 0.5
Switch-off time	[ms] 0.03
Max. output current	[mA] 500
Max. contact rating DC	[W] 10

Output, additional data	
Protection against short circuit	No

Electronic components	
Operating voltage range DC	[V] 12 ... 30
Reverse polarity protection	No

Electromechanical components	
Electrical connection	Cable, 3-wire
Cable length	[m] 2.5
Cable sheath materials	TPE-O

Mechanical components	
Type of mounting	Via accessories
Product weight	[g] 70
Housing	PP

Display/operation	
Switching status display	Yellow LED

Proximity sensors CRSMEO-4, round design, magnetic reed

Technical data

Immissions/emissions	
Ambient temperature with flexible cable installation	[-5 ... +60] °C
Protection class	IP67

Dimensions Download CAD data → www.festo.com

1 Connecting cable
2 Yellow LED
3 Clamping range

	D1	D2	L1	L2	L3
	∅	∅		±0.2	±0.2
CRSMEO-4-K-...-K-LED-24	4.2	9.4	30.8	27.8	10.8

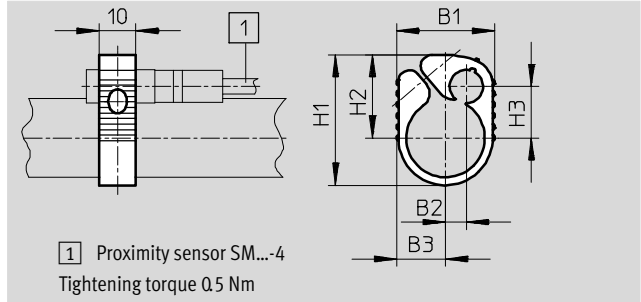
Ordering data				
	Electrical connection	Cable length [m]	Part No.	Type
	N/O contact			
	Corrosion-resistant			
	Cable, 3-wire	2.5	161775	CRSMEO-4-K-LED-24

Proximity sensors, round design

Accessories

Mounting kit SMBR

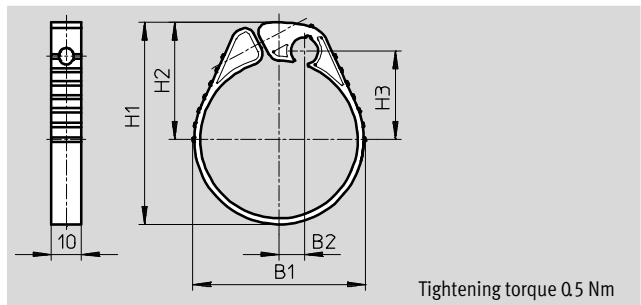
Material:
Polyacetate



Dimensions and ordering data								
For piston \varnothing	B1	B2	B3	H1	H2	H3	Part No.	Type
8	21	–	14	23.5	16.5	9	19272	SMBR-8
10	22	0.5	14	26	18.5	10	19273	SMBR-10
12	22	4	11	28.5	20	10.2	19274	SMBR-12
16	22.5	4	11.5	33.5	22.5	12.4	19275	SMBR-16
20	26.5	5.5	13.5	35.5	22.5	14	19276	SMBR-20
25	31.5	7.5	16	40.5	25	16	19277	SMBR-25

Mounting kit CRSMBR

Material:
Polypropylene



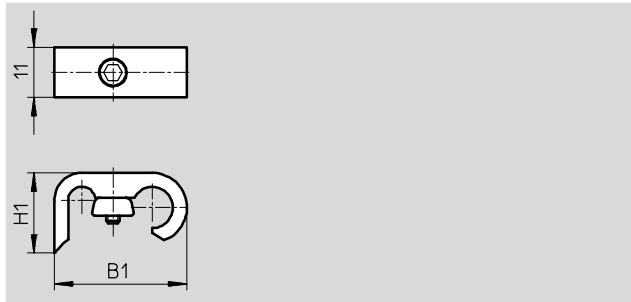
Dimensions and ordering data								
For piston \varnothing	B1	B2	H1	H2	H3	Part No.	Type	
12	22	4.1	28.6	20	10.2	164581	CRSMBR-12	
16	22.3	4	33.2	22.5	12.4	164582	CRSMBR-16	
20	26.5	5.6	35.25	22.5	14	164583	CRSMBR-20	
25	31.5	7.4	40.2	25	16	164584	CRSMBR-25	
32	38.6	7.9	47.8	29	19.7	163888	CRSMBR-32	
40	46.6	8.1	55.8	33	23.8	163889	CRSMBR-40	
50	57.4	8.2	67.2	39	29.5	163890	CRSMBR-50	
63	70.4	8.2	80.8	45.9	36.2	163891	CRSMBR-63	

Proximity sensors, round design

Accessories

Mounting kit CRSMB

Material:
High-alloy stainless steel



Dimensions and ordering data				
For piston \varnothing	B1		H1	Part No. Type
32	29		17.6	161763 CRSMB-32
40	29		15.1	161764 CRSMB-40
50	31.1		17.4	161765 CRSMB-50
63	31.1		18.1	161766 CRSMB-63
80	33		24.2	161767 CRSMB-80
100	33		27.5	161768 CRSMB-100
125	36.5		31.1	185365 CRSMB-125

Product Range and Company Overview

A Complete Suite and Company Overview

Our experienced engineers provide complete support at every stage of your development process, including: conceptualization, analysis, engineering, design, assembly, documentation, validation, and production.



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Festo North America



**1 Festo Canada
Headquarters
Festo Inc.**
5300 Explorer Drive
Mississauga, ON
L4W 5G4

2 Montréal
5600, Trans-Canada
Pointe-Claire, QC
H9R 1B6

3 Québec City
2930, rue Watt#117
Québec, QC
G1X 4G3



**4 Festo United States
Headquarters
Festo Corporation**
395 Moreland Road
Hauppauge, NY
11788

5 Appleton
North 922 Tower View Drive, Suite N
Greenville, WI
54942

7 Detroit
1441 West Long Lake Road
Troy, MI
48098

6 Chicago
85 W Algonquin - Suite 340
Arlington Heights, IL
60005

8 Silicon Valley
4935 Southfront Road, Suite F
Livermore, CA
94550

Festo Regional Contact Center

Canadian Customers

Commercial Support:
Tel: 1 877 GO FESTO (1 877 463 3786)
Fax: 1 877 FX FESTO (1 877 393 3786)
Email: festo.canada@ca.festo.com

Technical Support:

Tel: 1 866 GO FESTO (1 866 463 3786)
Fax: 1 877 FX FESTO (1 877 393 3786)
Email: technical.support@ca.festo.com

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Commercial Support:
Tel: 1 800 99 FESTO (1 800 993 3786)
Fax: 1 800 96 FESTO (1 800 963 3786)
Email: customer.service@us.festo.com

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Tel: 1 866 GO FESTO (1 866 463 3786)
Fax: 1 800 96 FESTO (1 800 963 3786)
Email: product.support@us.festo.com