

Proximity switches SIES, inductive

FESTO

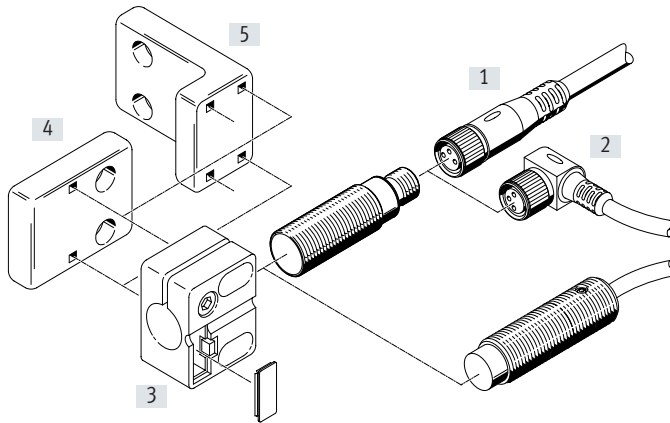


Product range overview

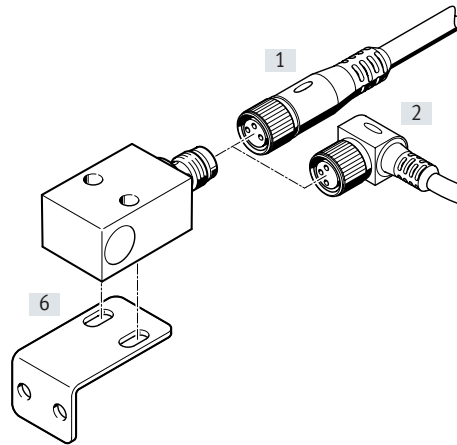
Design	Type	Operating voltage	Switching output/ analogue output	Type of installation	Size	→ Page
Reduction factor, material-specific						
Standard switching distance	SIEN Basic version	10 ... 30 V DC 15 ... 34 V DC	PNP NPN	Flush Not flush	Ø 4 mm, M5, Ø 6.5 mm, M8, M12, M18, M30	–
	SIEN-...-PA Polyamide housing	10 ... 30 V DC	PNP NPN	Flush Not flush	M12, M18, M30	–
	SIED Basic version	20 ... 265 V AC 20 ... 320 V DC	Contactless, 2-wire	Flush Not flush	M12, M18, M30	–
	SIED-...-PA Polyamide housing	20 ... 250 V AC 10 ... 300 V DC	Contactless, 2-wire	Flush Not flush	M12, M18, M30	–
	SIES Special design	10 ... 30 V DC	PNP NPN	Flush	5x5x25 mm ... 40x40x120 mm	5
Increased switching distance	SIEH Basic version	10 ... 30 V DC 15 ... 34 V DC	PNP NPN	Flush	Ø 3 mm, M12, M18	–
	SIEH-...-CR Stainless steel housing	10 ... 30 V DC	PNP NPN	Flush	M12, M18	–
Reduction factor 1 for all metals, welding-field-resistant						
Increased switching distance	SIEF Basic version	10 ... 65 V DC	PNP NPN	Flush Partially flush	M8, M12, M18, M30 40x40x65 mm	–
	SIEF-...-WA Housing resistant to welding spatter	10 ... 30 V DC	PNP NPN	Flush Partially flush	M12, M18, M30	–

Peripherals overview

SIE...



SIES-V3B



Mounting attachments and accessories		→ Page
[1]	Connecting cable, straight socket NEBU-M...G...	10
[2]	Connecting cable, angled socket NEBU-M...W...	10
[3]	Sensor bracket SIEZ-...B	10
[4]	Sensor bracket SIEZ-NB	10
[5]	Sensor bracket SIEZ-UH	10
[6]	Mounting bracket HV-M5	11
Mounting attachments and accessories		→ Page
–	Foot mounting HBN	10
–	Flange mounting FBN	10
–	Stop SDA	10

Type codes

001	Series	
SIES	Proximity sensor, inductive, special design	

002	Design	
Q	Cube 12x26 mm	
Q5	Cube 5 mm	
Q8	Cube 8 mm	
Q40	Cube 40 mm	
V3	Cube 15x 20 mm	

003	Mounting type	
B	Flush	

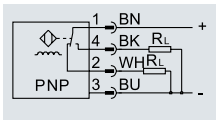
004	Switching input/output	
N	NPN	
P	PNP	

005	Switching element function	
A	Antivalent	
O	N/C contact	
S	N/O contact	

006	Electrical connection	
K	Open end	
S	Plug M8x1, 4-pin	
X	Screw terminals	

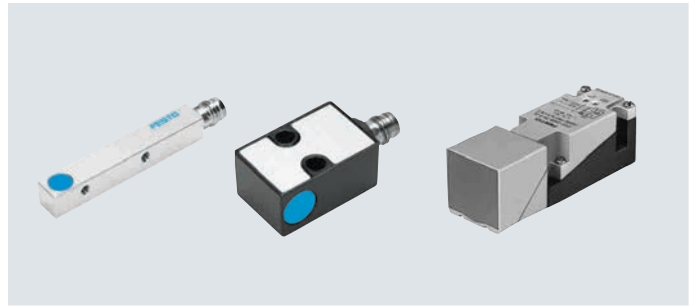
007	Display	
L	Switching status	
2L	Switching status and ready status	

Technical data – Standard switching distance, special design

Function¹⁾

1) e.g. antivalent with PNP output and terminal

- Standard switching distance
- For DC voltage
- Cuboid-shaped design



General technical data	SIES-Q5	SIES-Q8	SIES-V3	SIES-QB	SIES-Q40
Conforms to standard	EN 60947-5-2				
Certification	c UL us Listed (OL) RCM				
CE marking (see declaration of conformity)	To EU EMC Directive ¹⁾				
Note on materials	Free of copper and PTFE				
	–			RoHS-compliant	–

1) For information about the area of use, see the EC declaration of conformity at: www.festo.com/catalogue/SIES → Support/Downloads.

If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary.

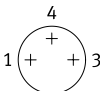
Input signal/measuring element						
Type		SIES-Q5	SIES-Q8	SIES-V3	SIES-QB	SIES-Q40
Size	[mm]	5x5x25	8x8x40	15x20x30	12x26x40	40x40x120
Ambient temperature	[°C]	-25 ... +70		-25 ... +85		

Output, general						
Type		SIES-Q5	SIES-Q8	SIES-V3	SIES-QB	SIES-Q40
Size	[mm]	5x5x25	8x8x40	15x20x30	12x26x40	40x40x120
Repetition accuracy	[mm]	0.04	0.07	0.1	0.1	0.75

Switching output						
Type		SIES-Q5	SIES-Q8	SIES-V3	SIES-QB	SIES-Q40
Size	[mm]	5x5x25	8x8x40	15x20x30	12x26x40	40x40x120
Switching output		PNP		PNP		PNP
		NPN		NPN	–	–
Switching element function		N/O		N/O		Antivalent
		N/C		–	N/C	
Rated operating distance	[mm]	0.8	1.5	2	15	
Actual operating distance	[mm]	0.64	1.2	1.6	12	

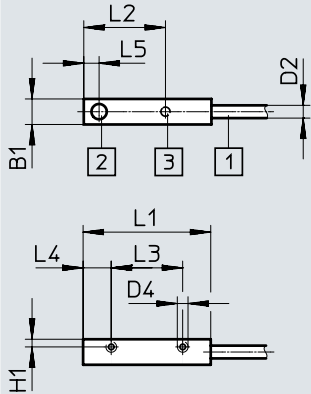
Reduction factors					
Aluminium	0.4	0.45	0.45		0.3
Stainless steel St 18/8	0.7	0.8	0.7	0.8	0.7
Copper	0.3	0.4	0.3	0.35	0.25
Brass	0.4	0.55	0.5		0.3
Steel St 37	1.0	1.0		1.0	
Max. switching frequency DC	[Hz]	3000	3500	1200	100
Max. output current	[mA]	200	–		–
Max. output current at ≤ 50°C	[mA]	–		200	200
Max. output current at ≤ 85°C	[mA]	–		150	150
Voltage drop	[V]	≤ 2		≤ 3.2	≤ 3.5

Technical data – Standard switching distance, special design

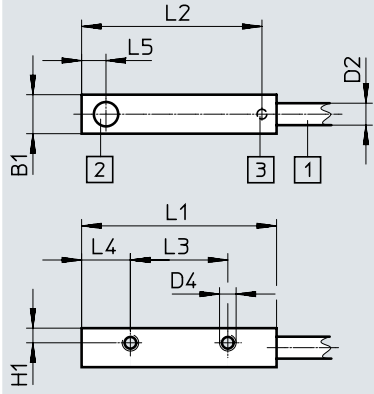
Output, additional data						
Short circuit current rating		Pulsed				
Electronics						
Type		SIES-Q5	SIES-Q8	SIES-V3	SIES-QB	SIES-Q40
Size	[mm]	5x5x25	8x8x40	15x20x30	12x26x40	40x40x120
Operating voltage range		[V DC] 10 ... 30				10 ... 34
Residual ripple		[%] 10				
No-load supply current		[mA] ≤ 10		≤ 30		≤ 40
Reverse polarity protection		For all electrical connections				
Electromechanics						
Electrical connection		Cable			Plug	
Type		SIES-Q5	SIES-Q8	SIES-QB	SIES-Q8	SIES-V3
Size	[mm]	5x5x25	8x8x40	12x26x40	8x8x40	15x20x30
Electrical connection		Cable, 3-wire			Plug, M8x1, 3-pin	
Cable length		[m] 2.5			–	
Information on materials: Cable sheath		TPE-U (PUR)			–	
Mechanical system						
Type		SIES-Q5	SIES-Q8	SIES-V3	SIES-QB	SIES-Q40
Size	[mm]	5x5x25	8x8x40	15x20x30	12x26x40	40x40x120
Type of mounting		With female thread			Via through-hole	
Type of installation		Flush			Flush	
Product weight		[g] 22	15	120	170	230
Information on materials: Housing		Nickel-plated brass	Chrome-plated die-cast zinc	Die-cast zinc	PBT-reinforced	PBT, PA
Display/operation						
Type		SIES-Q5	SIES-Q8	SIES-V3	SIES-QB	SIES-Q40
Size	[mm]	5x5x25	8x8x40	15x20x30	12x26x40	40x40x120
Ready status indication		–				Green LED
Switching status indication		Yellow LED				Yellow LED
Immission/emission						
Type		SIES-Q5	SIES-Q8	SIES-V3	SIES-QB	SIES-Q40
Size	[mm]	5x5x25	8x8x40	15x20x30	12x26x40	40x40x120
Degree of protection		IP67				IP65
Pin allocation to EN 60947-5-2						
M8x1, 3-pin						
N/O contact / N/C contact						
		Pin	Wire colour		Allocation	
	1	Brown		+		
	3	Blue		–		
	4	Black		Output		

Technical data – Standard switching distance, special design

Dimensions

SIES-Q5B
Cable

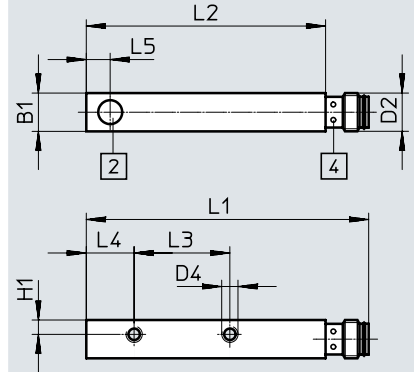
- [1] 3-wire cable, 2.5 m long
 [2] Active surface
 [3] 1 switching status indication, yellow

SIES-Q8B
Cable

- [1] 3-wire cable, 2.5 m long
 [2] Active surface
 [3] 1 switching status indication, yellow

Download CAD data → www.festo.com

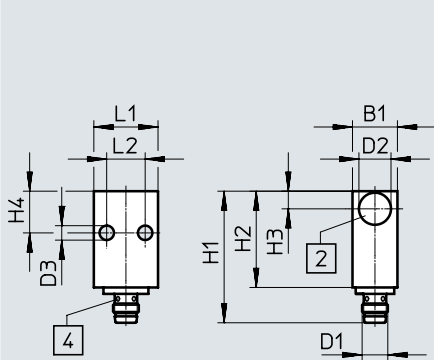
Plug



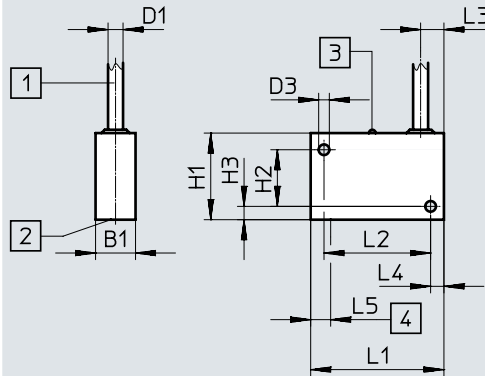
- [2] Active surface
 [4] 4 switching status indications, yellow

Type	B1	D2 ø	D2	D4	H1	L1	L2	L3	L4	L5
SIES-Q5B-...-K-L	5	2.5	–	M1.6	1.5	25	16	14	5.5	3
SIES-Q8B-...-K-L	8	3.5	–	M3	3	40	37	20	10	5
SIES-Q8B-...-S-L	8	–	M8x1	M3	3	59	50	20	10	5

Dimensions

SIES-V3B
Plug

- [2] Active surface
 [4] 4 switching status indications, yellow

SIES-QB
Cable

- [1] 3-wire cable, 2.5 m long
 [2] Active surface
 [3] 1 switching status indication, yellow
 [4] Sensor centre

Download CAD data → www.festo.com

Type	B1	D1 ø	D1	D2 ø	D3 ø	H1	H2	H3	H4	L1	L2	L3	L4	L5
SIES-V3B-...-S-S-L	15	–	M8x1	10	4.5	42	30	5.5	13	20	12	–	–	–
SIES-QB-P-...-K-L	12	4.5	–	–	3.2	26	17	4	–	40	32	6.5	4	6

Technical data – Standard switching distance, special design

Dimensions

SIES-Q40B

Plug

Technical drawing of the SIES-Q40B plug. The top view shows dimensions B1, B2, D2, L4, L3, L2, L1, L5, L6, D1, and B3. The side view shows dimensions H1, H2, and callouts 2 and 5. Callout 1 points to the operating status indicator, callout 3 points to the switching status indication LED, and callout 5 points to the mounting screw.

[1] Operating status indicator, green

[2] Sensing face at front as supplied: sensor head can be adjusted into a total of 5 sensing directions

[3] Switching status indication LED, yellow

[5] M20x1.5, suitable for cable diameter 7.5 mm to 12.5 mm

Type	B1	B2	B3	D1 ∅	D2 ∅	H1	H2	L1	L2	L3	L4	L5	L6
SIE-Q40B-PA-X-2L	40	30	7	5.3	5.3	40	16	120	60	45	40	20	7.3

Fitting instructions

Flush installation

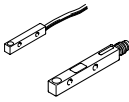
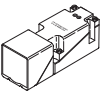
Technical drawing of the SIES-Q40B plug showing the active surface (2) and metal-free zone (5). The drawing includes dimensions B1, B2, and H.

[2] Active surface

[5] Metal-free zone

Size	B1	B2	H
5x5x25	2.5	5	2
8x8x40	4	12	3
15x20x30	6	12	5
12x26x40	6	12	5
40x40x120	25	75	30

Technical data – Standard switching distance, special design

Ordering data								
Size	S _n ¹⁾	Type of installation	Switching output	Switching element function	Electrical connection			
[mm]	[mm]				Cable		Plug	
					Part No.	Type	Part No.	Type
5x5x25								
	0.8	Flush	PNP	N/O	178291	SIES-Q5B-PS-K-L	–	
				N/C	174549	SIES-Q5B-PO-K-L		
			NPN	N/O	178290	SIES-Q5B-NS-K-L		
				N/C	174548	SIES-Q5B-NO-K-L		
8x8x40								
	1.5	Flush	PNP	N/O	178294	SIES-Q8B-PS-K-L	178295	SIES-Q8B-PS-S-L
				N/C	174552	SIES-Q8B-PO-K-L	174553	SIES-Q8B-PO-S-L
			NPN	N/O	178292	SIES-Q8B-NS-K-L	178293	SIES-Q8B-NS-S-L
				N/C	174550	SIES-Q8B-NO-K-L	174551	SIES-Q8B-NO-S-L
15x20x30								
	2.0	Flush	PNP	N/O	–		150491	SIES-V3B-PS-S-L
			NPN				150490	SIES-V3B-NS-S-L
12x26x40								
	2.0	Flush	PNP	N/O	150488	SIES-QB-PS-K-L	–	
				N/C	150489	SIES-QB-PO-K-L		
40x40x120								
	15.0	Flush	PNP	Antivalent	–		150492	SIES-Q40B-PA-X-2L ²⁾

1) S_n Rated operating distance [mm]

2) Electrical connection via screw terminals

Accessories

Ordering data – Connecting cables M8x1			Technical data → Internet: nebu	
	Number of wires	Cable length [m]	Part No.	Type
Straight socket				
	3	2.5	★ 541333	NEBU-M8G3-K-2.5-LE3
		5	★ 541334	NEBU-M8G3-K-5-LE3
Angled socket				
	3	2.5	★ 541338	NEBU-M8W3-K-2.5-LE3
		5	★ 541341	NEBU-M8W3-K-5-LE3
Straight socket, straight plug				
	4	2.5	554037	NEBU-M8G3-K-2.5-M8G4 ¹⁾

1) For connecting proximity switches SIEA-M8B to signal converter SVE4-US.

Ordering data – Connecting cables M12x1			Technical data → Internet: nebu	
	Number of wires	Cable length [m]	Part No.	Type
Straight socket				
	3	2.5	★ 541363	NEBU-M12G5-K-2.5-LE3
		5	★ 541364	NEBU-M12G5-K-5-LE3
	4	2.5	★ 550326	NEBU-M12G5-K-2.5-LE4 ¹⁾
		5	★ 541328	NEBU-M12G5-K-5-LE4 ¹⁾
Angled socket				
	3	2.5	541367	NEBU-M12W5-K-2.5-LE3
		5	541370	NEBU-M12W5-K-5-LE3
	4	2.5	550325	NEBU-M12W5-K-2.5-LE4 ¹⁾
		5	541329	NEBU-M12W5-K-5-LE4 ¹⁾
Straight socket, straight plug				
	4	2.5	554036	NEBU-M12G5-K-2.5-M8G4 ²⁾

1) For connecting proximity switches SIE...-M12/M18/M30 in N/C contact version with plug.

2) For connecting proximity switches SIEA-M...B to the signal converter SVE4.

Ordering data – Mounting components			
	For size	Part No.	Type
Sensor bracket with stop for flush mounting			
	M8	538346	SIEZ-B-8
	M12	538348	SIEZ-B-12
	M18	538350	SIEZ-B-18
	M30	538352	SIEZ-B-30
Sensor bracket without stop			
	4	538343	SIEZ-NB-4
	6.5	538344	SIEZ-NB-6.5
	M8	538345	SIEZ-NB-8
	M12	538347	SIEZ-NB-12
	M18	538349	SIEZ-NB-18
	M30	538351	SIEZ-NB-30
	M12, M18	538354	SIEZ-UH

Accessories

Ordering data – Mounting components		Part No.	Type
	For size		
Foot mounting			
	M12	5123	HBN-8/10X1
Flange mounting			
	M30	195855	FBN-32
Mounting bracket			
	SIES-V3B	9634	HV-M5
Stop			
	M8	11542	SDA-8x1-B
	M12	11541	SDA-12x1-B

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

Festo Customer Interaction Center
Tel: 1 877 463 3786
Fax: 1 877 393 3786
Email: customer.service.ca@festo.com



2 Festo Pneumatic
Av. Ceylán 3,
Col. Tequesquináhuac
54020 Tlalnepantla,
Estado de México

Multinational Contact Center
01 800 337 8669
ventas.mexico@festo.com



3 Festo Corporation
1377 Motor Parkway
Suite 310
Islandia, NY 11749

Festo Customer Interaction Center
1 800 993 3786
1 800 963 3786
customer.service.us@festo.com



4 Regional Service Center
7777 Columbia Road
Mason, OH 45040

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