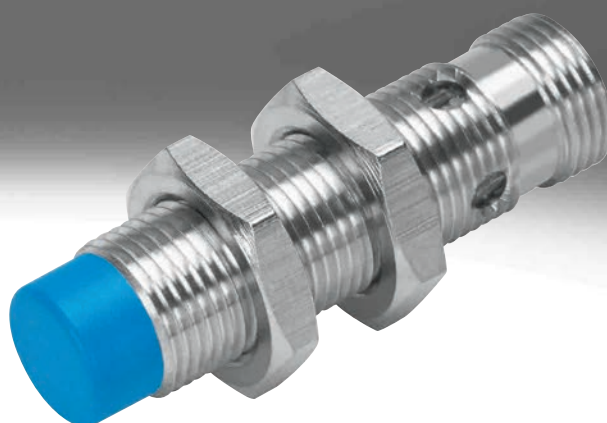


Proximity switches SIED, inductive

FESTO

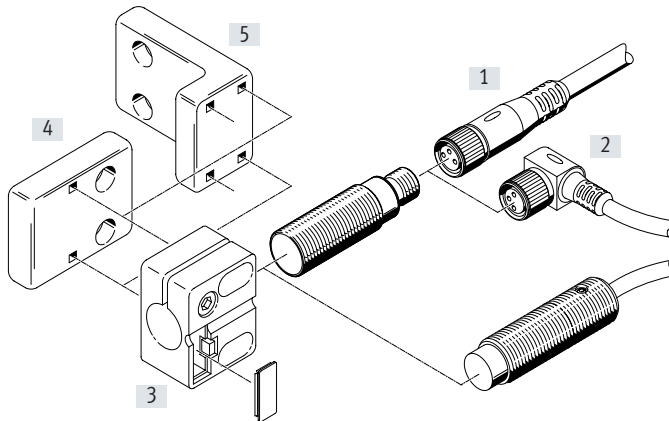


Product range overview

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	5
	SIED-...-PA Polyamide housing	20 ... 250 V AC 10 ... 300 V DC	Contactless, 2-wire	Flush Not flush	M12, M18, M30	11
	SIES Special design	10 ... 30 V DC	PNP NPN	Flush	5x5x25 mm ... 40x40x120 mm	–
	Increased switching distance					
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...



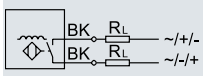
Mounting attachments and accessories		→ Page
[1]	Connecting cable, straight socket NEBU-M...G...	14
[2]	Connecting cable, angled socket NEBU-M...W...	14
[3]	Sensor bracket SIEZ-...B	14
[4]	Sensor bracket SIEZ-NB	14
[5]	Sensor bracket SIEZ-UH	14
–	Mounting bracket HV-M5	14
Mounting attachments and accessories		→ Page
–	Foot mounting HBN	14
–	Flange mounting FBN	14
–	Stop SDA	14

Type codes

001	Series	
SIED	Proximity sensor, inductive, for DC and AC voltage	
002	Design	
M12	Round, M12x1	
M18	Round, M18x1	
M30	Round, M30x1.5	
003	Mounting type	
B	Flush	
NB	Not flush	
004	Switching input/output	
Z	Contactless 2-wire	

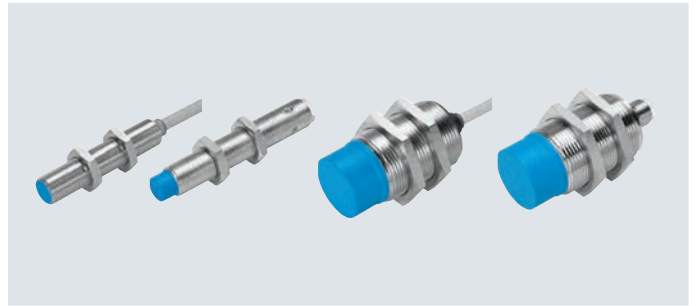
005	Switching element function	
O	N/C contact	
S	N/O contact	
006	Electrical connection	
K	Open end	
S	Plug M8x1, 4-pin	
007	Display	
L	Switching status	
008	Housing material	
	Standard	
PA	Polyamide housing	

Technical data – Standard switching distance, for DC and AC voltage

Function¹⁾

1) e.g. N/O contact with cable

- Standard switching distance
- For DC and AC voltage
- Round design



General technical data

Design type	Round
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⁾ To EU Low Voltage Directive
Note on materials	Free of copper and PTFE

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

Ambient temperature	[°C]	-25 ... +85
---------------------	------	-------------

Output, general

Type of installation	Flush			Not flush		
Size	M12	M18	M30	M12	M18	M30
Repetition accuracy	[mm]	0.1	0.15	0.3	0.2	0.4

Switching output

Type of installation	Flush			Not flush			
Size	M12	M18	M30	M12	M18	M30	
Switching output	Contactless, 2-wire			Contactless, 2-wire			
Switching element function	N/O			N/O			
	N/C			N/C			
Rated operating distance	[mm]	2	5	10	4	8	15
Actual operating distance	[mm]	1.62	4.05	8.1	3.24	6.5	12.5

Reduction factors

Aluminium	0.5	0.4	0.4	0.6	0.4	0.5	
Stainless steel St 18/8	0.9	0.7	0.7	0.9	0.7	0.8	
Copper	0.4	0.3	0.3	0.5	0.3	0.4	
Brass	0.6	0.4	0.4	0.6	0.4	0.5	
Steel St 37	1.0	1.0	1.0	1.0	1.0	1.0	
Hysteresis	[mm]	0.02 ... 0.44	0.04 ... 1.15	0.05 ... 2.2	0.03 ... 0.88	0.03 ... 1.9	0.04 ... 3.3
Max. switching frequency AC	[Hz]	25			25		
Max. switching frequency DC	[Hz]	1 200	490	200	900	340	220
Max. output current	[mA]	200	300	300	200	300	300
Minimum load current	[mA]	5			5		
Voltage drop	[V]	≤ 8			≤ 8		

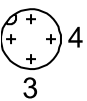
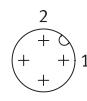
Technical data – Standard switching distance, for DC and AC voltage

Output, additional data										
Short circuit current rating			No							
Electronics										
Operating voltage range AC		[V AC]	20 ... 265							
Operating voltage range DC		[V DC]	20 ... 320							
No-load supply current		[mA]	≤ 1.5							
Reverse polarity protection			For all electrical connections							
Electromechanics										
Electrical connection			Cable			Plug				
Electrical connection			Cable, 2-wire			Plug, M12x1, 2-pin				
Cable length			[m]	2.5			–			
Information on materials: Cable sheath			TPE-U (PUR)							
Information on materials: Insulating sheath			PVC							
Mechanical system										
Size			M12		M18		M30			
Electrical connection			Cable	Plug	Cable	Plug	Cable	Plug		
Type of mounting			With lock nut		With lock nut		With lock nut			
Type of installation			Flush		Flush		Flush			
			Not flush		Not flush		Not flush			
Tightening torque			[Nm]	10		20		40		
Product weight			[g]	90		20	110	50	190	140
Information on materials: Housing			Nickel-plated brass, PA			Nickel-plated brass, PA		Nickel-plated brass, PA		
Display/operation										
Switching status indication			Yellow LED							
Immission/emission										
Electrical connection			Cable			Plug				
Ambient temperature with flexible cable installation			[°C]	–5 ... +50			–			
Degree of protection			IP67			IP67				
Corrosion resistance class CRC ¹⁾			1			1				

1) Corrosion resistance class CRC 1 to Festo standard FN 940070

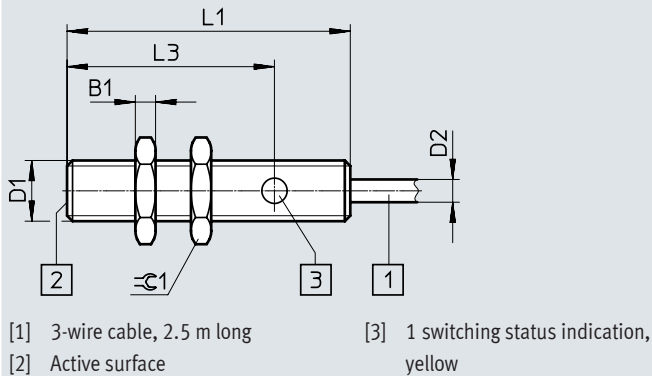
Low corrosion stress. Dry indoor application or transport and storage protection. Also applies to parts behind coverings, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

Pin allocation to EN 60947-5-2

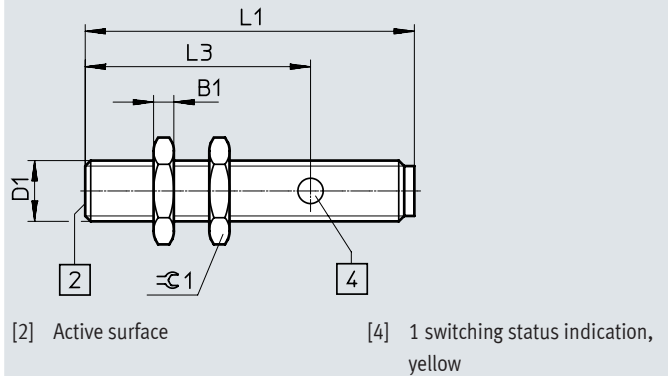
M12x1, 2-pin				N/C			
N/O				M12x1			
	Pin	Wire colour	Allocation		Pin	Wire colour	Allocation
	3	Black	/+/-		1	Black	/+/-
	4	Black	/-/+		2	Black	/-/+

Technical data – Standard switching distance, for DC and AC voltage

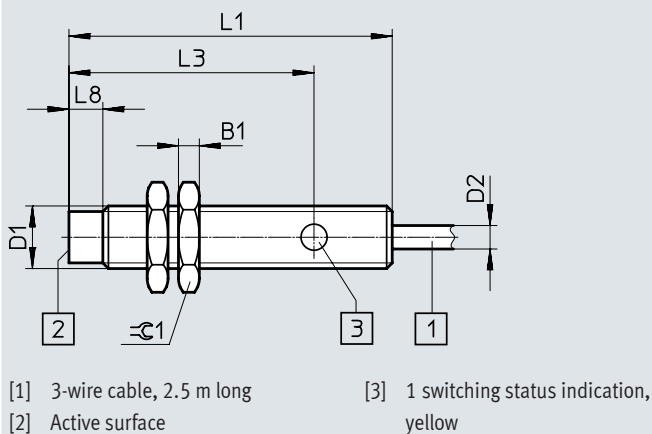
Dimensions – M12

Download CAD data → www.festo.comFlush installation
Cable

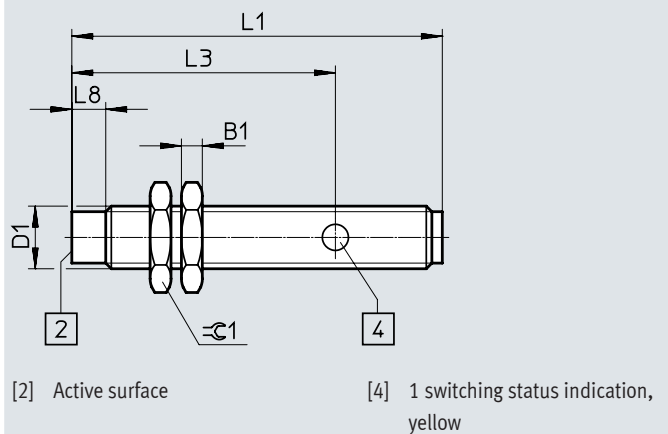
Plug



Type	B1 -0.3	D1	D2 Ø ±0.15	L1	L3	±1
SIED-M12B-Z-...-K-L	4	M12x1	4.5	56	41	17
SIED-M12B-Z-...-S-L	4	M12x1	–	65	44.5	17

Non-flush installation
Cable

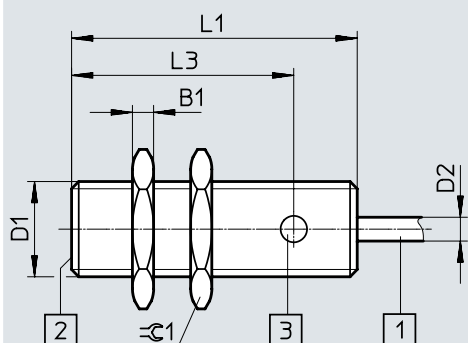
Plug



Type	B1 -0.3	D1	D2 Ø ±0.15	L1	L3	L8	±1
SIED-M12NB-Z-...-K-L	4	M12x1	4.5	62	47	6.5	17
SIED-M12NB-Z-...-S-L	4	M12x1	–	71	50.5	6.5	17

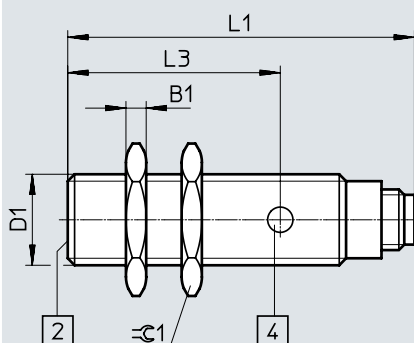
Technical data – Standard switching distance, for DC and AC voltage

Dimensions – M18

Download CAD data → www.festo.comFlush installation
Cable

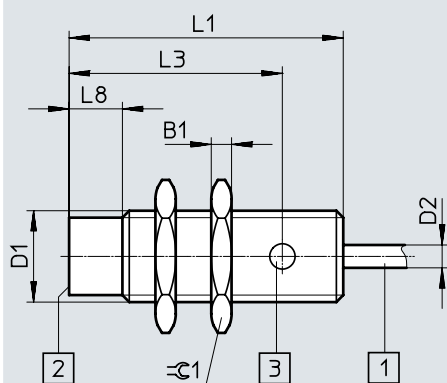
- [1] 3-wire cable, 2.5 m long
[2] Active surface
[3] 1 switching status indication, yellow

Plug



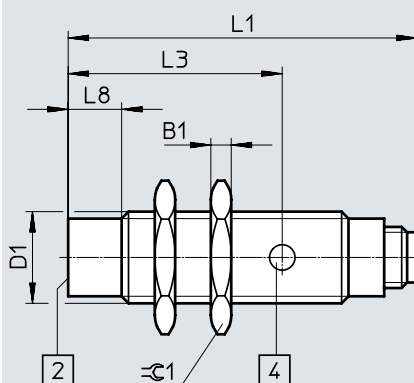
- [2] Active surface
[4] 1 switching status indication, yellow

Type	B1 -0.3	D1	D2 Ø ±0.15	L1	L3	≅ 1
SIED-M18B-Z-...-K-L	4	M18x1	4.5	54	42	24
SIED-M18B-Z-...-S-L	4	M18x1	–	68.5	42	24

Non-flush installation
Cable

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

Plug



- [2] Active surface
[4] 1 switching status indication, yellow

Type	B1 -0.3	D1	D2 Ø ±0.15	L1	L3	L8	≅ 1
SIED-M18NB-Z-...-K-L	4	M18x1	4.5	54	42	10.5	24
SIED-M18NB-Z-...-S-L	4	M18x1	–	68.5	42	10.5	24

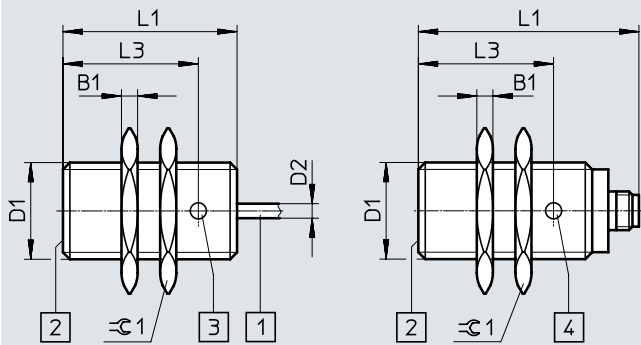
Technical data – Standard switching distance, for DC and AC voltage

Dimensions – M30

[Download CAD data → www.festo.com](http://www.festo.com)

Flush installation
Cable

Plug

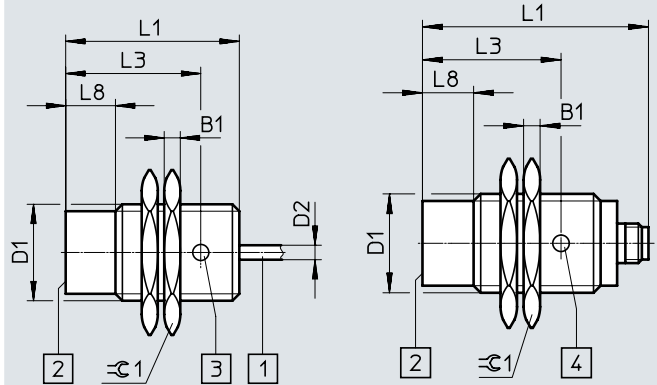


[1] 2-wire cable, 2.5 m long
[2] Active surface

[3] 1 switching status indication, yellow

Non-flush installation
Cable

Plug



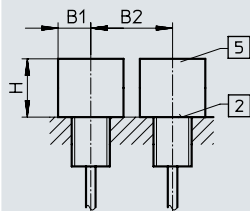
[1] 2-wire cable, 2.5 m long
[2] Active surface

[3] 1 switching status indication, yellow

Type	B1 -0.3	D1	D2 Ø ±0.15	L1	L3	L8	⌀ 1
SIED-M30B-Z...-K-L	5	M30x1.5	4.5	54	42	–	36
SIED-M30B-Z...-S-L	5	M30x1.5	–	68.5	42	–	36
SIED-M30NB-Z...-K-L	5	M30x1.5	4.5	54	42	15.5	36
SIED-M30NB-Z...-S-L	5	M30x1.5	–	68.5	42	15.5	36

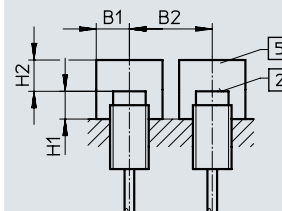
Fitting instructions

Flush installation



[2] Active surface
[5] Metal-free zone

Non-flush installation

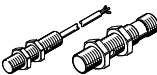
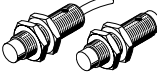


[2] Active surface
[5] Metal-free zone

Size	B1	B2	H
M12	6	12	6
M18	11	30	10
M30	25	37	16

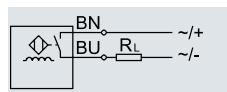
Size	B1	B2	H1	H2
M12	15	27	8	8
M18	20	50	15	15
M30	30	80	15	25

Technical data – Standard switching distance, for DC and AC voltage

Ordering data								
Size	S _n ¹⁾ [mm]	Type of installation	Switching output	Switching element function	Electrical connection			
					Cable		Plug	
					Part No.	Type	Part No.	Type
M12								
	2.0	Flush	Contactless, 2-wire	N/O	538272	SIED-M12B-ZS-K-L	538271	SIED-M12B-ZS-S-L
				N/C	538274	SIED-M12B-ZO-K-L	538273	SIED-M12B-ZO-S-L
	4.0	Not flush	Contactless, 2-wire	N/O	538268	SIED-M12NB-ZS-K-L	538267	SIED-M12NB-ZS-S-L
				N/C	538270	SIED-M12NB-ZO-K-L	538269	SIED-M12NB-ZO-S-L
M18								
	5.0	Flush	Contactless, 2-wire	N/O	538280	SIED-M18B-ZS-K-L	538279	SIED-M18B-ZS-S-L
				N/C	538282	SIED-M18B-ZO-K-L	538281	SIED-M18B-ZO-S-L
	8.0	Not flush	Contactless, 2-wire	N/O	538276	SIED-M18NB-ZS-K-L	538275	SIED-M18NB-ZS-S-L
				N/C	538278	SIED-M18NB-ZO-K-L	538277	SIED-M18NB-ZO-S-L
M30								
	10.0	Flush	2-wire, contactless	N/O	538288	SIED-M30B-ZS-K-L	538287	SIED-M30B-ZS-S-L
				N/C	538290	SIED-M30B-ZO-K-L	538289	SIED-M30B-ZO-S-L
	15.0	Not flush	2-wire, contactless	N/O	538284	SIED-M30NB-ZS-K-L	538283	SIED-M30NB-ZS-S-L
				N/C	538286	SIED-M30NB-ZO-K-L	538285	SIED-M30NB-ZO-S-L

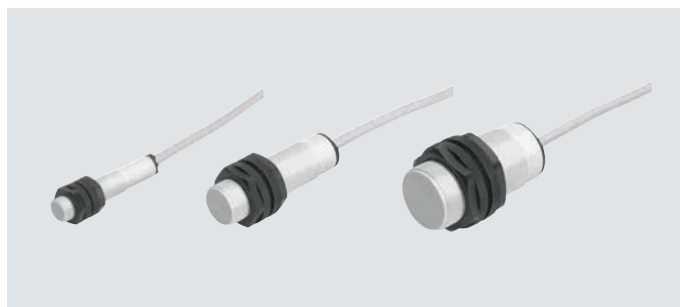
1) S_n Rated operating distance [mm]

Technical data – Standard switching distance, polyamide housing, for DC and AC voltage

Function¹⁾

1) e.g. N/O contact with cable

- Standard switching distance
- Corrosion-resistant
- Polyamide housing
- For DC and AC voltage
- Round design



General technical data

Design type	Round
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⁾ To EU Low Voltage Directive
Note on materials	Free of copper and PTFE

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

Ambient temperature	[°C]	-25 ... +70
---------------------	------	-------------

Output, general

Type of installation	Flush			Not flush		
Size	M12	M18	M30	M12	M18	M30
Repetition accuracy [mm]	0.04	0.1	0.2	0.08	0.16	0.3

Switching output

Type of installation	Flush			Not flush		
Size	M12	M18	M30	M12	M18	M30
Switching output	Contactless, 2-wire			Contactless, 2-wire		
Switching element function	N/O			N/O		
Rated operating distance [mm]	2	5	10	4	8	15
Actual operating distance [mm]	1.62	4.05	8.1	3.24	6.48	12.15

Reduction factors

Resistance factors							
Aluminium		0.35 ... 0.5			0.35 ... 0.5		
Stainless steel St 18/8		0.06 ... 0.1			0.06 ... 0.1		
Copper		0.25 ... 0.45			0.25 ... 0.45		
Brass		0.35 ... 0.5			0.35 ... 0.5		
Steel St 37		1.0			1.0		
Hysteresis	[mm]	0.06 ... 0.3	0.15 ... 0.75	0.3 ... 1.5	0.12 ... 0.6	0.24 ... 1.2	0.45 ... 2.25
Max. switching frequency AC	[Hz]	20			20		
Max. switching frequency DC	[Hz]	60			60		
Max. output current	[mA]	100	300	300	100	300	300
Minimum load current	[mA]	3			3		
Voltage drop	[V]	≤ 6			≤ 6		

Output, additional data

Short circuit current rating	No
------------------------------	----

Technical data – Standard switching distance, polyamide housing, for DC and AC voltage

Electronics			
Operating voltage range AC	[V AC]	20 ... 250	
Operating voltage range DC	[V DC]	10 ... 300	
No-load supply current	[mA]	≤ 1.5	
Reverse polarity protection		For all electrical connections	
Electromechanics			
Electrical connection		Cable, 2-wire	
Cable length	[m]	2.5	
Information on materials: Cable sheath		PVC	
Information on materials: Insulating sheath		PVC	
Mechanical system			
Size		M12	M18
Type of mounting		With lock nut	
Type of installation		Flush	
Tightening torque	[Nm]	1	2
Product weight	[g]	109	123
Information on materials: Housing		PA-reinforced	
Display/operation			
Switching status indication		Yellow LED	
Immission/emission			
Ambient temperature with flexible cable installation	[°C]	0 ... +70	
Degree of protection		IP65, IP67	
Corrosion resistance class CRC ¹⁾		4	

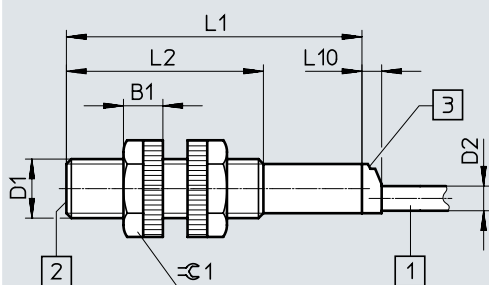
1) Corrosion resistance class CRC 4 to Festo standard FN 940070

Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

Dimensions

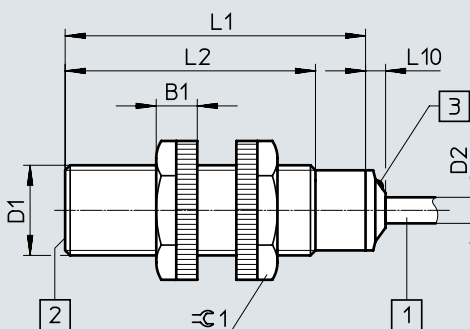
Download CAD data → www.festo.com

M12



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

M18



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

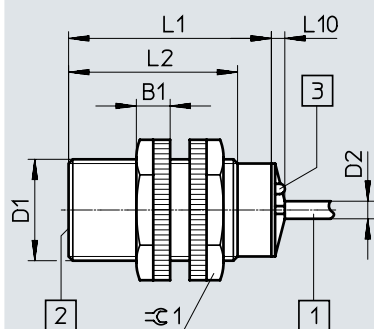
Type	B1	D1	D2 ø	L1	L2	L10	≈ 1
SIED-M12-...-B-ZS-...-K-L-PA	8	M12x1	5	60	40	4	17
SIED-M18-...-B-ZS-...-K-L-PA	8.2	M18x1	5.2	60	50	4	24

Technical data – Standard switching distance, polyamide housing, for DC and AC voltage

Dimensions

Download CAD data → www.festo.com

M30

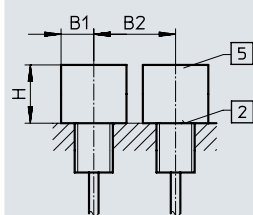


- [1] 2-wire cable, 2.5 m long
- [2] Active surface
- [3] 1 switching status indication, yellow

Type	B1	D1	D2 ∅	L1	L2	L10	⌀ 1
SIED-M30-...-B-ZS-...-K-L-PA	10	M30x1.5	5	60	50	4	36

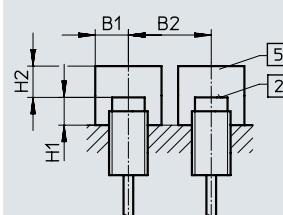
Fitting instructions

Flush installation



- [2] Active surface
- [5] Metal-free zone

Non-flush installation

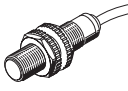
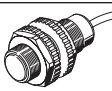


- [2] Active surface
- [5] Metal-free zone

Size	B1	B2	H
M12	18	24	6
M18	27	36	15
M30	45	60	30

Size	B1	B2	H1	H2
M12	18	36	8	12
M18	27	54	16	24
M30	45	90	30	45

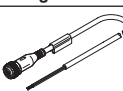
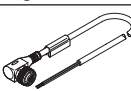
Ordering data

Size	S _n ¹⁾ [mm]	Type of installation	Switching output	Switching element function	Electrical connection	
					Cable	Type
	2.0	Flush	Contactless, 2-wire	N/O	538336	SIED-M12B-ZS-K-L-PA
	4.0	Not flush			538335	SIED-M12NB-ZS-K-L-PA
	5.0	Flush	Contactless, 2-wire	N/O	538338	SIED-M18B-ZS-K-L-PA
	8.0	Not flush			538337	SIED-M18NB-ZS-K-L-PA
	10.0	Flush	Contactless, 2-wire	N/O	538340	SIED-M30B-ZS-K-L-PA
	15.0	Not flush			538339	SIED-M30NB-ZS-K-L-PA

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			Part No.	Type
	For size			
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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