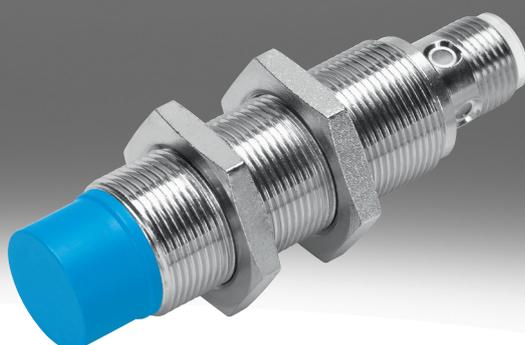


## Proximity switch SIED

**FESTO**



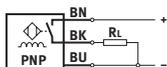
## Type code

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

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

# Datasheet

## General technical data



Size	M12	M18	M30
Design	Round		
Conforms to standard	EN 60947-5-2		
Approval	RCM trademark, c UL us listed (OL)		
CE mark (see declaration of conformity) <sup>1)</sup>	To EU EMC Directive, To EU Low Voltage Directive		
Note on materials	-		

1) For information about the area of use, see the declaration of conformity at: [www.festo.com/catalogue/sieh](http://www.festo.com/catalogue/sieh) → 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	-25 ... 85°C
---------------------	--------------

## Switching output

Size	M12	M18	M30
Switching output	Non-contacting, 2-wire		
Switching element function	N/O contact		
Rated operating distance	2 mm	5 mm	10 mm
Repetition accuracy	0.1 mm	0.15 mm	0.3 mm
Assured operating distance	1.62 mm	4.05 mm	8.1 mm
Reduction factors	Aluminium = 0.5	Aluminium = 0.4	
Hysteresis	0.02 ... 0.44 mm	0.04 ... 1.15 mm	0.05 ... 2.2 mm
Max. switching frequency DC	1,200 Hz	490 Hz	200 Hz
Max. output current	200 mA	300 mA	
Voltage drop	≤8 V		

## Switching output

Size	M12	M18	M30
Assured operating distance	3.24 mm	6.5 mm	12.15 mm
Switching output	Non-contacting, 2-wire		
Switching element function	N/O contact		
Rated operating distance	4 mm	8 mm	15 mm
Repetition accuracy	0.2 mm	0.4 mm	
Reduction factors	Aluminium = 0.6	Aluminium = 0.4	Aluminium = 0.5
Hysteresis	0.03 ... 0.88 mm	0.03 ... 1.9 mm	0.04 ... 3.3 mm
Max. switching frequency DC	900 Hz	340 Hz	220 Hz
Max. output current	200 mA	300 mA	
Voltage drop	≤8 V		

## Output, additional data

Size	M12	M18	M30
Short circuit current rating	no		

## Electronics

Size	M12	M18	M30
Operational voltage range DC	20 ... 320 V		
No-load supply current	≤1.5 mA		
Reverse polarity protection	For all electrical connections		

## Datasheet

## Electromechanics

Size	M12		M18		M30	
Electrical connection	2-wire, Cable	2-pin, M12x1, Plugs	2-wire, Cable	2-pin, M12x1, Plugs	2-wire, Cable	2-pin, M12x1, Plugs
Cable length	2.5 m	–	2.5 m	–	2.5 m	–
Material cable sheath	TPE-U(PUR)	–	TPE-U(PUR)	–	TPE-U(PUR)	–
Material insulating sheath	PVC	–	PVC	–	PVC	–

## Mechanical components

Size	M12		M18		M30	
Mounting type	Flush	Not flush	Flush	Not flush	Flush	Not flush
Type of mounting	Via lock nut					
Tightening torque	10 Nm		30 Nm			
Product weight	20 ... 90 g		50 ... 110 g		140 ... 190 g	
Material housing	Brass, PA, Nickel-plated					

## Display, operation

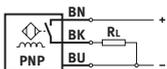
Switching status indication	Yellow LED
-----------------------------	------------

## Immission, emission

Size	M12	M18	M30
Ambient temperature with moving cable	-5 ... 50°C		
Degree of protection	IP67		
Corrosion resistance class CRC <sup>1)</sup>	1 - Low corrosion stress		
LABS (PWIS) conformity	VDMA24364-B2-L		

1) More information: [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

## General technical data CR



Size	M12	M18	M30
Design	Round		
Conforms to standard	EN 60947-5-2		
Approval	RCM trademark, c UL us listed (OL)		
CE mark (see declaration of conformity) <sup>1)</sup>	To EU EMC Directive, To EU Low Voltage Directive, In accordance with EU RoHS Directive		

1) For information about the area of use, see the declaration of conformity at: [www.festo.com/catalogue/sieh](http://www.festo.com/catalogue/sieh) → 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 CR

Ambient temperature	-25 ... 70°C
---------------------	--------------

## Switching output CR

Size	M12	M18	M30
Switching output	Non-contacting, 2-wire		
Switching element function	N/O contact		
Rated operating distance	2 mm	5 mm	10 mm
Assured operating distance	1.62 mm	4.05 mm	8.1 mm
Reduction factors	Aluminium = 0.35 - 0.5, Stainless steel St 18/8 = 0.6 - 1.0, Copper = 0.25 - 0.45, Brass = 0.35 - 0.5, Steel St 37 = 1.0		
Hysteresis	0.06 ... 0.3 mm	0.15 ... 0.75 mm	0.3 ... 1.5 mm
Max. switching frequency DC	20 Hz		
Max. output current	100 mA	300 mA	
Voltage drop	≤6 V		

## Datasheet

Switching output CR			
Size	M12	M18	M30
Switching output	Non-contacting, 2-wire		
Switching element function	N/O contact		
Rated operating distance	4 mm	8 mm	15 mm
Assured operating distance	3.24 mm	6.48 mm	12.15 mm
Reduction factors	Aluminium = 0.35 - 0.5, Stainless steel St 18/8 = 0.6 - 1.0, Copper = 0.25 - 0.45, Brass = 0.35 - 0.5, Steel St 37 = 1.0		
Hysteresis	0.12 ... 0.6 mm	0.24 ... 1.2 mm	0.45 ... 2.25 mm
Max. switching frequency DC	20 Hz		
Max. output current	100 mA	300 mA	
Voltage drop	≤6 V		

Output, further data CR			
Size	M12	M18	M30
Short circuit current rating	no		

Electronics CR			
Size	M12	M18	M30
Operational voltage range DC	10 ... 300 V		
No-load supply current	≤1.5 mA		
Reverse polarity protection	For all electrical connections		

Electromechanics CR			
Size	M12	M18	M30
Electrical connection	2-wire, Cable		
Material cable sheath	PVC		

Mechanical components CR			
Size	M12	M18	M30
Type of mounting	Via lock nut		
Mounting type	Flush, Not flush		
Tightening torque	1 Nm	2 Nm	5 Nm
Product weight	109 g	123 g	175 g
Material housing	PA-reinforced		

Display, operation CR	
Switching status indication	Yellow LED

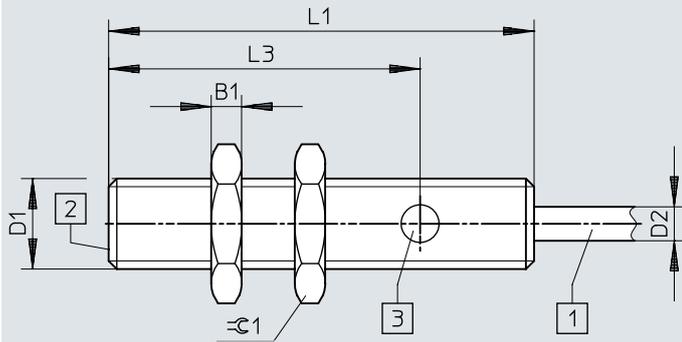
Immission, emission CR			
Size	M12	M18	M30
Ambient temperature with moving cable	0 ... 70°C		
Degree of protection	IP65, IP67		
LABS (PWIS) conformity	VDMA24364 zone III		
Corrosion resistance class CRC <sup>1)</sup>	4 - Very high corrosion stress		

1) More information: [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

## Dimensions

### Dimensions – M12, flush mounted, cable

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

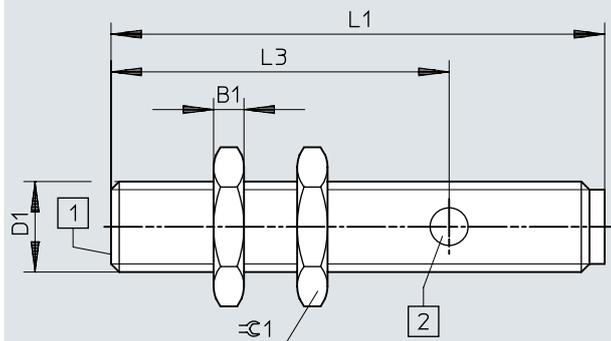


- [1] 3-core cable 2.5 m long
- [2] Active surface
- [3] 1 switching status indication, yellow

	B1 -0,3	D1	D2 $\varnothing$ $\pm 0,15$	L1	L3	$\pm 0,1$
SIED-M12B-Z...-K-L	4	M12x1	4,5	56	41	17

## Dimensions

## Dimensions – M12, flush mounted, plug

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

[1] Active surface

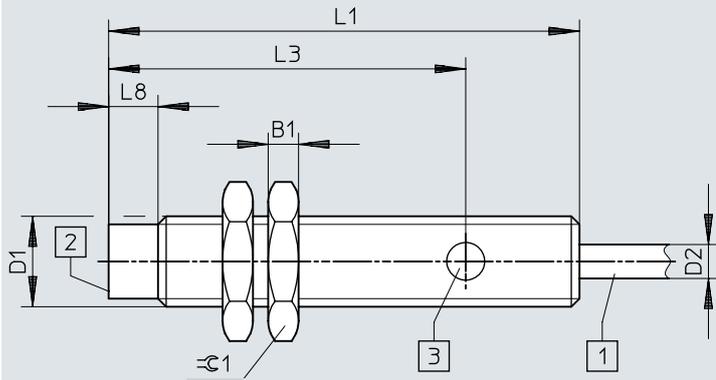
[2] 1 switching status indication, yellow

	B1 -0,3	D1	L1	L3	⌀1
SIED-M12B-Z-...-S-L	4	M12x1	65	44,5	17

## Dimensions

Dimensions – M12, not flush mounted, cable

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

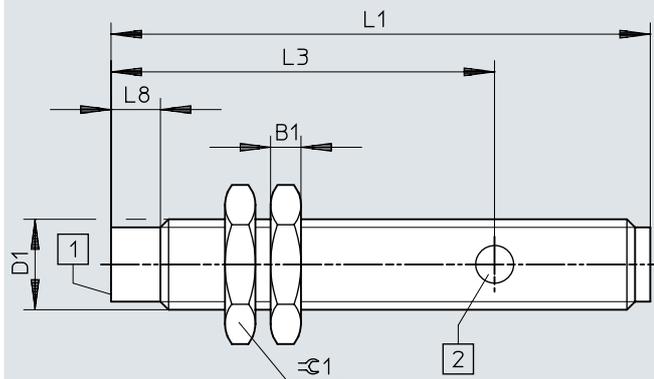


- [1] 3-core cable 2.5 m long
- [2] Active surface
- [3] 1 switching status indication, yellow

	B1 -0,3	D1	D2 ∅ ±0,15	L1	L3	L8	±0,1
SIED-M12NB-Z...-K-L	4	M12x1	4,5	62	47	6,5	17

## Dimensions

## Dimensions – M12, not flush mounted, plug

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

[1] Active surface

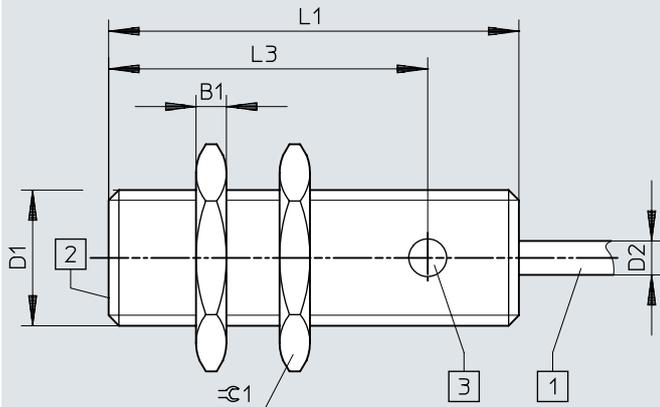
[2] 1 switching status indication, yellow

	B1 -0,3	D1	L1	L3	L8	±0,1
SIED-M12NB-Z-...-S-L	4	M12x1	71	50,5	6,5	17

## Dimensions

### Dimensions – M18, flush mounted, cable

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

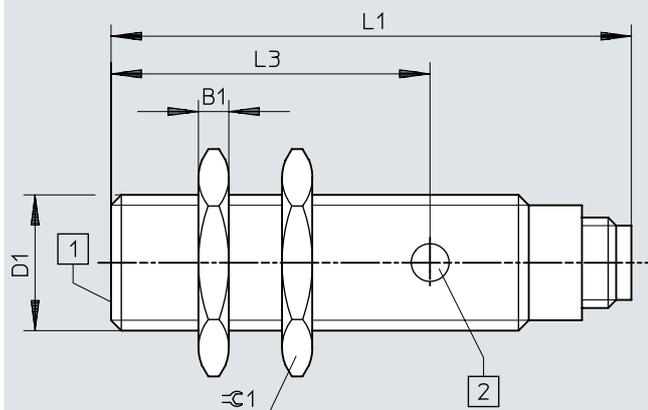


- [1] 3-core cable 2.5 m long
- [2] Active surface
- [3] 1 switching status indication, yellow

	B1 -0,3	D1	D2 $\varnothing$ $\pm 0,15$	L1	L3	$\varnothing 1$
SIED-M18B-Z...-K-L	4	M18x1	4,5	54	42	24

## Dimensions

## Dimensions – M18, flush mounted, plug

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

[1] Active surface

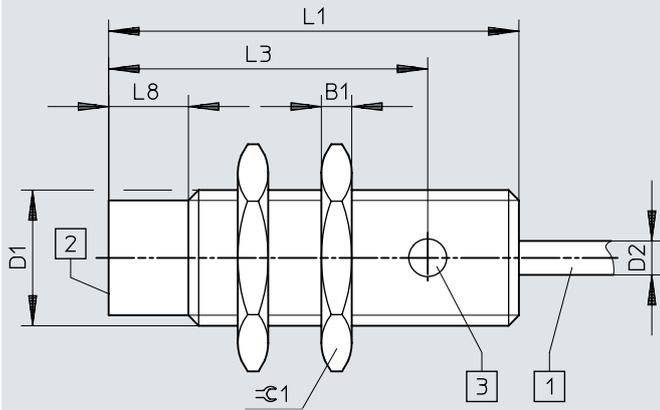
[2] 1 switching status indication, yellow

	B1 -0,3	D1	L1	L3	±0,1
SIED-M18B-Z...-S-L	4	M18x1	68,5	42	24

## Dimensions

### Dimensions – M18, not flush mounted, cable

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

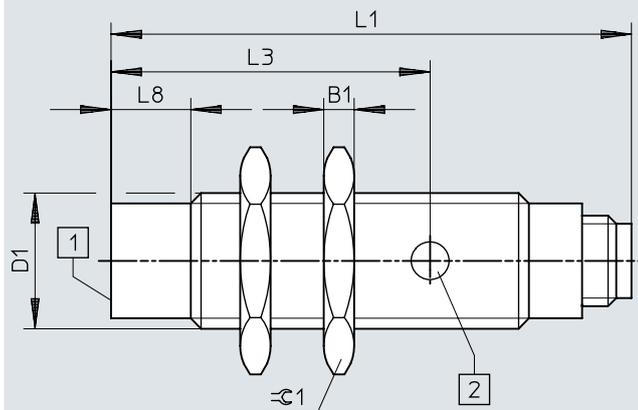


- [1] 3-core cable 2.5 m long
- [2] Active surface
- [3] 1 switching status indication, yellow

	B1 -0,3	D1	D2 ∅ ±0,15	L1	L3	L8	≈ 1
SIED-M18NB-Z....K-L	4	M18x1	4,5	54	42	10,5	24

## Dimensions

## Dimensions – M18, not flush mounted, plug

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

[1] Active surface

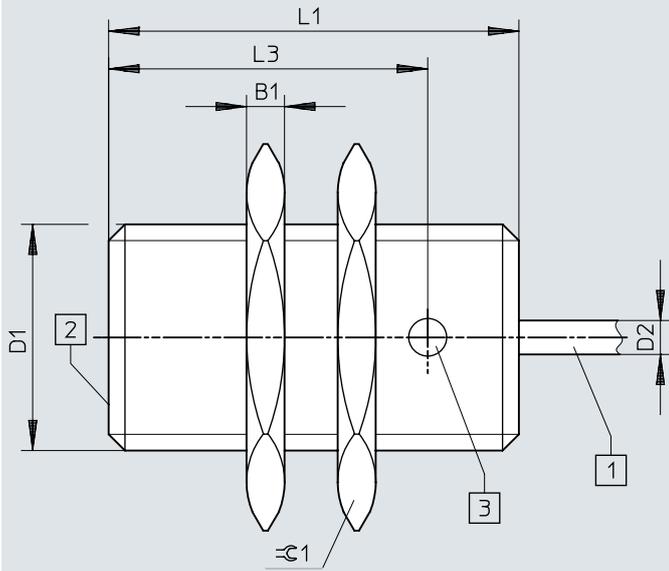
[2] 1 switching status indication, yellow

	B1 -0,3	D1	L1	L3	L8	⌀1
SIED-M18NB-Z...-S-L	4	M18x1	68,5	42	10,5	24

## Dimensions

Dimensions – M30, flush mounted, cable

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

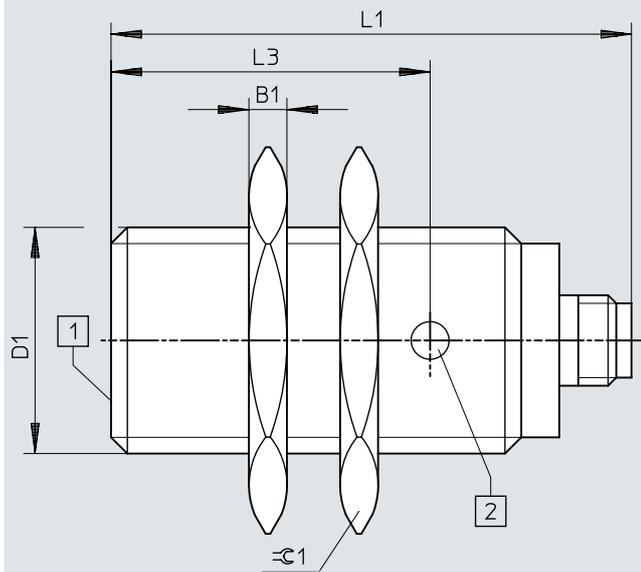


- [1] 2-core cable 2.5 m long
- [2] Active surface

	B1 -0,3	D1	D2 $\varnothing$ $\pm 0,15$	L1	L3	$\approx 1$
SIED-M30B-Z...-K-L	5	M30x1,5	4,5	54	42	36

## Dimensions

## Dimensions – M30, flush mounted, plug

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

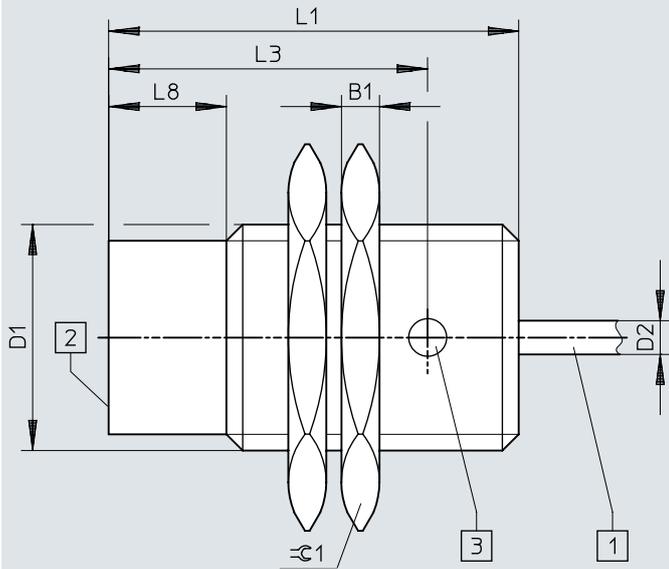
[1] 1 switching status indication, yellow

	B1 -0,3	D1	L1	L3	±0,1
SIED-M30B-Z...S-L	5	M30x1,5	68,5	42	36

## Dimensions

Dimensions – M30, not flush mounted, cable

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

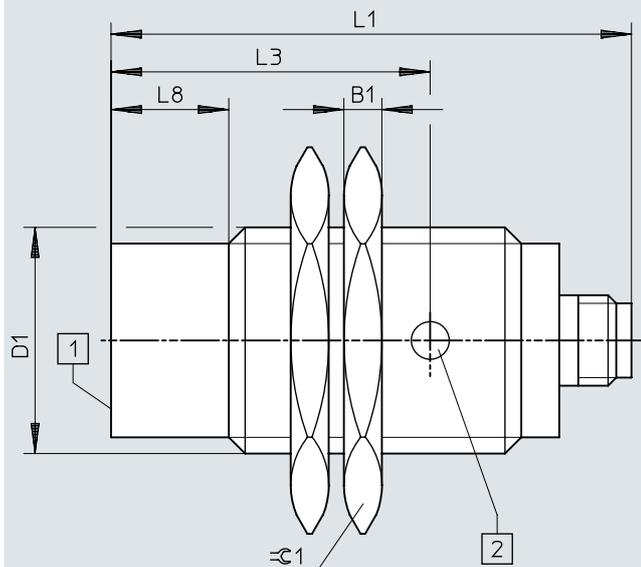


- [1] 2-core cable 2.5 m long
- [2] Active surface

	B1 -0,3	D1	D2 $\varnothing$ $\pm 0,15$	L1	L3	L8	$\approx 1$
SIED-M30NB-Z-...-K-L	5	M30x1,5	4,5	54	42	15,5	36

## Dimensions

## Dimensions – M30, not flush mounted, plug

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

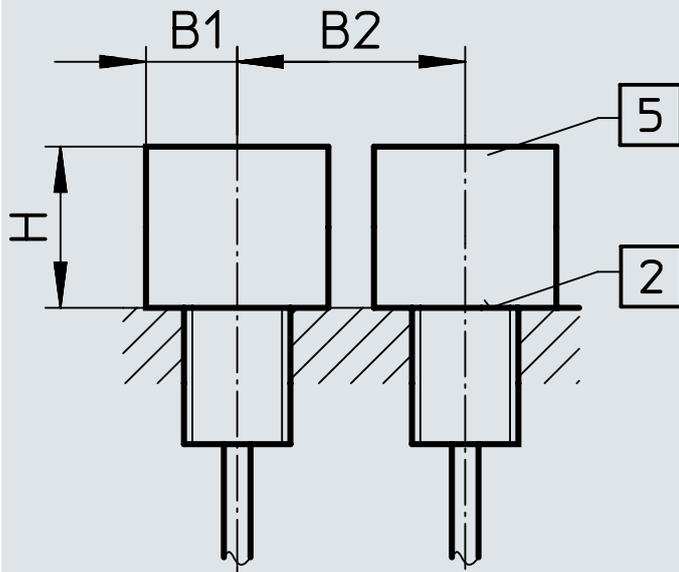
[1] 1 switching status indication, yellow

	B1 -0,3	D1	L1	L3	L8	$\varnothing$ 1
SIED-M30NB-Z...-S-L	5	M30x1,5	68,5	42	15,5	36

## Dimensions

Dimensions – Installation note, flush mounted

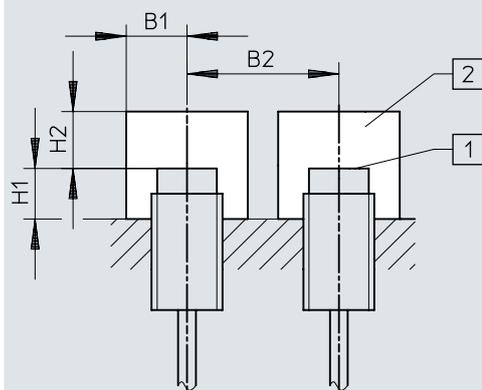
Download CAD data [www.festo.com](http://www.festo.com)



	B1	B2	H
SIED-M12B-ZS-S-L	6	12	6
SIED-M12B-ZO-S-L			
SIED-M18B-ZS-S-L	11	30	10
SIED-M18B-ZO-S-L			
SIED-M30B-ZS-S-L	25	37	16
SIED-M30B-ZO-S-L			

## Dimensions

Dimensions – Installation note, not flush mounted

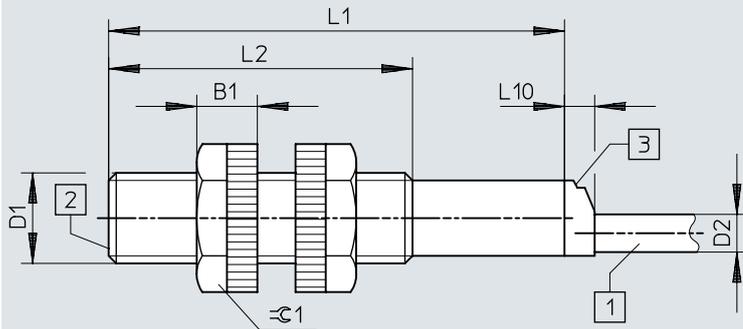
Download CAD data [www.festo.com](http://www.festo.com)

	B1	B2	H1	H2
SIED-M12NB-ZS-S-L	15	27	8	8
SIED-M12NB-ZO-S-L				
SIED-M18NB-ZS-S-L	20	50	15	15
SIED-M18NB-ZO-S-L				
SIED-M30NB-ZS-S-L	30	80	15	25
SIED-M30NB-ZO-S-L				

## Dimensions

### Dimensions – SIED-M12-...-PA

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

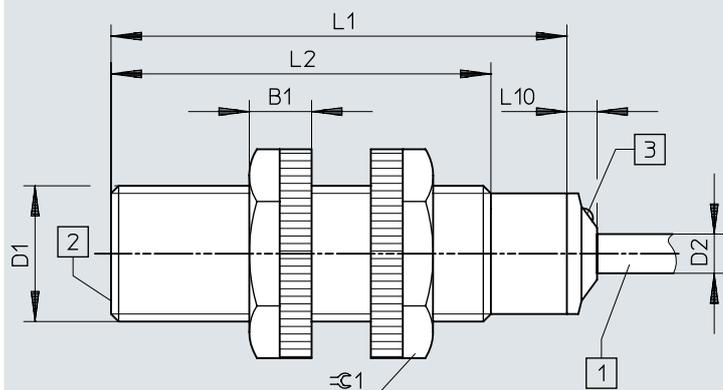


- [1] 2-core cable 2.5 m long
- [2] Active surface
- [3] 1 switching status indication, yellow

	B1	D1	D2 ∅	L1	L2	L10	≙ 1
SIED-M12-...-B-ZS-...-K-L-PA	8	M12x1	5	60	40	4	17

## Dimensions

## Dimensions – SIED-M18-...-PA

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

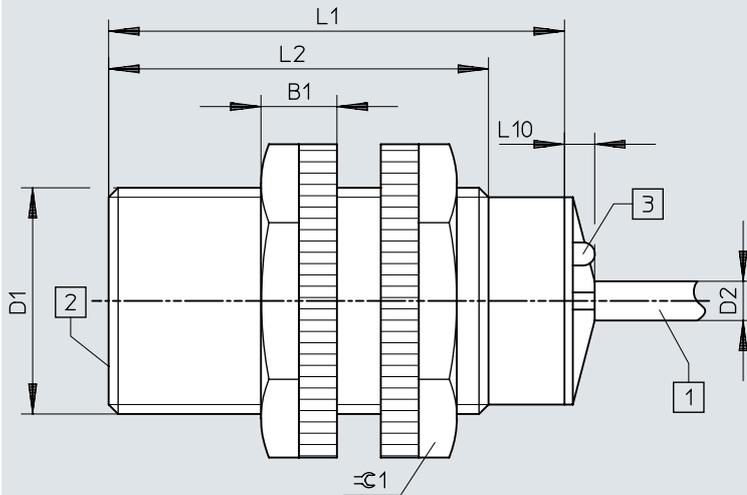
- [1] 2-core cable 2.5 m long
- [2] Active surface
- [3] 1 switching status indication, yellow

	B1	D1	D2 ∅	L1	L2	L10	$\pm 0.1$
SIED-M18-...-B-ZS-...-K-L-PA	8,2	M18x1	5,2	60	50	4	24

## Dimensions

Dimensions – SIED-M30-...-PA

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

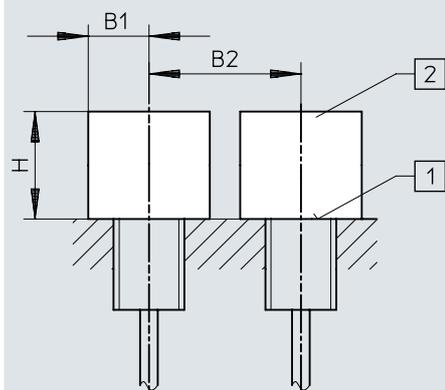


- [1] 2-core cable 2.5 m long
- [2] Active surface
- [3] 1 switching status indication, yellow

	B1	D1	D2 ∅	L1	L2	L10	±0.1
SIED-M30-...-B-ZS-...-K-L-PA	10	M30x1,5	5	60	50	4	36

## Dimensions

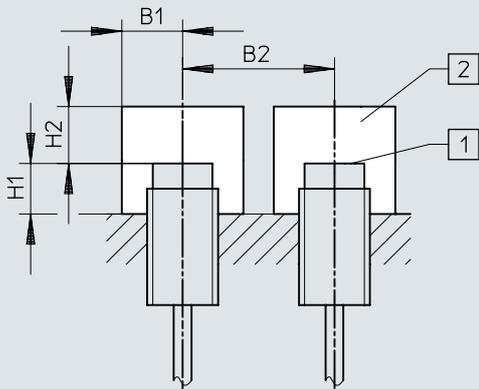
Dimensions – Installation note, flush mounted

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

	B1	B2	H
SIED-M12B-ZS-K-L-PA	18	24	6
SIED-M18B-ZS-K-L-PA	27	36	15
SIED-M30B-ZS-K-L-PA	45	60	30

## Dimensions

Dimensions – Installation note, not flush mounted

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

	B1	B2	H1	H2
SIED-M12NB-ZS-K-L-PA	18	36	8	12
SIED-M18NB-ZS-K-L-PA	27	54	16	24
SIED-M30NB-ZS-K-L-PA	45	90	30	45

## Ordering data

Ordering data M12						
	Size	Rated operating distance	Mounting type	Switching output	Part no.	Type
	M12	2 mm	Flush	Non-contacting, 2-wire	538272	SIED-M12B-ZS-K-L
					538271	SIED-M12B-ZS-S-L
	4 mm	Not flush	538268		SIED-M12NB-ZS-K-L	
					538267	SIED-M12NB-ZS-S-L

Ordering data M18						
	Size	Rated operating distance	Mounting type	Switching output	Part no.	Type
	M18	5 mm	Flush	Non-contacting, 2-wire	538279	SIED-M18B-ZS-S-L
					538280	SIED-M18B-ZS-K-L
	8 mm	Not flush	538276		SIED-M18NB-ZS-K-L	
					538275	SIED-M18NB-ZS-S-L

Ordering data M30						
	Size	Rated operating distance	Mounting type	Switching output	Part no.	Type
	M30	10 mm	Flush	Non-contacting, 2-wire	538287	SIED-M30B-ZS-S-L
					538288	SIED-M30B-ZS-K-L
	15 mm	Not flush	538284		SIED-M30NB-ZS-K-L	
					538283	SIED-M30NB-ZS-S-L

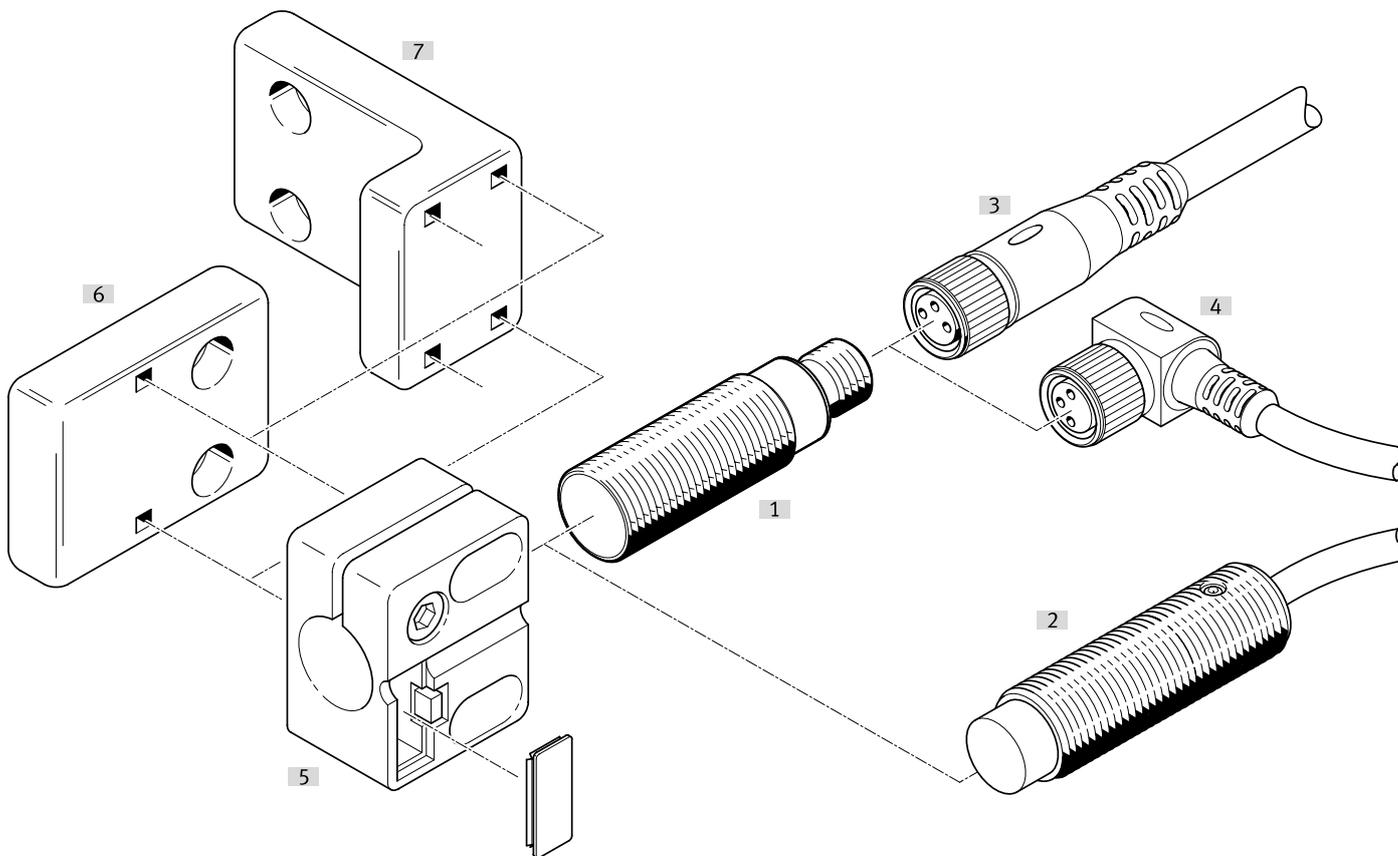
Ordering data M12, polyamide housing						
	Size	Rated operating distance	Mounting type	Switching output	Part no.	Type
	M12	2 mm	Flush	Non-contacting, 2-wire	538336	SIED-M12B-ZS-K-L-PA
		4 mm	Not flush		538335	SIED-M12NB-ZS-K-L-PA

Ordering data M18, polyamide housing						
	Size	Rated operating distance	Mounting type	Switching output	Part no.	Type
	M18	5 mm	Flush	Non-contacting, 2-wire	538338	SIED-M18B-ZS-K-L-PA
		8 mm	Not flush		538337	SIED-M18NB-ZS-K-L-PA

Ordering data M30, polyamide housing						
	Size	Rated operating distance	Mounting type	Switching output	Part no.	Type
	M30	10 mm	Flush	Non-contacting, 2-wire	538340	SIED-M30B-ZS-K-L-PA
		15 mm	Not flush		538339	SIED-M30NB-ZS-K-L-PA

## Peripherals

### Peripherals overview



Accessories			→ Link
Type/order code	Description		
[1] Proximity switch SIED-M12B	Flush		<a href="#">sied</a>
[2] Proximity switch SIED-M12NB	Not flush		<a href="#">sied</a>
[3] Connecting cables NEBA-M...G...	Straight socket		<a href="#">27</a>
[4] Connecting cables NEBA-M...W...	Angled socket		<a href="#">27</a>
[5] Sensor bracket SIEZ-...-B	-		<a href="#">28</a>
[6] Sensor bracket SIEZ-NB	-		<a href="#">28</a>
[7] Sensor bracket SIEZ-UH	-		<a href="#">28</a>
[8] Mounting bracket HV-M5	-		<a href="#">28</a>
[9] Foot mounting HBN	-		<a href="#">28</a>
[10] Flange mounting FBN	-		<a href="#">28</a>
[11] Stop SDA	-		<a href="#">29</a>

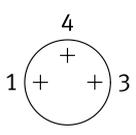
## Accessories

Connecting cables, M12 socket, 5-pin, without switching status indicator						
Electrical connection 1, cable outlet <sup>1)</sup>	Electrical connection 2, connector system	Electrical connection 2, number of connections/cores	Cable length	Product weight	Part no.	Type
Straight	M12x1, A-coded to EN 61076-2-101	5	0.5 m	34 g	8078274	NEBA-M12G5-U-0.5-N-M12G5
			1 m	47 g	8078275	NEBA-M12G5-U-1-N-M12G5
			2.5 m	87 g	8078276	NEBA-M12G5-U-2.5-N-M12G5
			5 m	153 g	8078277	NEBA-M12G5-U-5-N-M12G5
			Open end	3	2.5 m	55 g
5 m	102 g	8078237			NEBA-M12G5-U-5-N-LE3	
10 m	194 g	8078238			NEBA-M12G5-U-10-N-LE3	
Angled	3	2.5 m			56 g	8078245
		5 m	103 g	8078246	NEBA-M12W5-U-5-N-LE3	
		10 m	195 g	8078247	NEBA-M12W5-U-10-N-LE3	

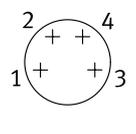
1) Observe the voltage

Connecting cables M12 socket, 5-pin, without switching status indication							
Electrical connection 1, connection type	Electrical connection 1, connector system	Electrical connection 2, number of connections/cores	Electrical connection 2, connection type	Electrical connection 2, connector system	Product weight	Part no.	Type
Socket	M12x1, A-coded to EN 61076-2-101	4	Cable	Screw terminal	24 g	8162290	NECB-M12G4-C2
					25 g	8162292	NECB-M12W4-C2

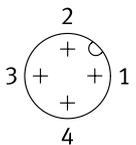
## M8 plug, 3-pin

	Cable outlet	Electrical connection 2, connection type	Cable diameter	Product weight	Part no.	Type
	Straight	Cable	2.1 ... 5 mm	5 g	8162298	NECB-S-M8G3-C2

## M8 plug, 4-pin

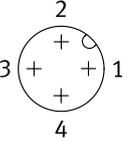
	Cable outlet	Electrical connection 2, connection type	Cable diameter	Product weight	Part no.	Type
	Straight	2x cable	2 ... 3.8 mm	8 g	8162300	NECB-S-M8G4-C2-D
		Cable	2.1 ... 5 mm	5 g	8162299	NECB-S-M8G4-C2

## M12 plug, 4-pin

	Cable outlet	Electrical connection 2, connection type	Cable diameter	Product weight	Part no.	Type
	Straight	2x cable	2.1 ... 5.6 mm	24 g	8162295	NECB-S-M12G4-C2-D

## Accessories

## M12 plug, 4-pin

	Cable outlet	Electrical connection 2, connection type	Cable diameter	Product weight	Part no.	Type
	Straight	Cable	2.1 ... 7 mm	18 g	<b>8162294</b>	<b>NECB-S-M12G4-C2</b>

## Sensor bracket with stop for flush installation

Size	Type of mounting	Ambient temperature	Product weight	Part no.	Type
M8	With through-hole	-25 ... 80 °C	3.5 g	<b>538346</b>	<b>SIEZ-B-8</b>
M12			20 g	<b>538348</b>	<b>SIEZ-B-12</b>
M18			21 g	<b>538350</b>	<b>SIEZ-B-18</b>
M30			36 g	<b>538352</b>	<b>SIEZ-B-30</b>

## Sensor bracket without stop

Size	Type of mounting	Ambient temperature	Product weight	Part no.	Type
	With through-hole	-25 ... 80 °C	25 g	<b>538354</b>	<b>SIEZ-UH</b>
4 mm			14 g	<b>538343</b>	<b>SIEZ-NB-4</b>
6.5 mm			9 g	<b>538344</b>	<b>SIEZ-NB-6,5</b>
M8			3.5 g	<b>538345</b>	<b>SIEZ-NB-8</b>
M12			20 g	<b>538347</b>	<b>SIEZ-NB-12</b>
M18			21 g	<b>538349</b>	<b>SIEZ-NB-18</b>
M30			36 g	<b>538351</b>	<b>SIEZ-NB-30</b>

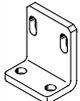
## Foot mounting

	Size	Product weight	Part no.	Type
	8/10	22 g	<b>5123</b>	<b>HBN-8/10X1</b>

## Flange mounting

	Size	Product weight	Part no.	Type
	32	103 g	<b>195855</b>	<b>FBN-32</b>

## Mounting bracket HV-M5

	Material bracket	Product weight	Part no.	Type
	Steel, Galvanised	11 g	<b>9634</b>	<b>HV-M5</b>

## Stop

	Size	Part no.	Type
	M8	<b>11542</b>	<b>SDA-8X1-B</b>

## Accessories

Stop	Size	Part no.	Type
	M12	11541	SDA-12X1-B