



# CATALOGUE INDUCTIVE SENSORS



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## INDUCTIVE SENSORS

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# INDUCTIVE SENSORS

## TECHNOLOGY AND FUNCTION

The inductive sensors contain a transistor oscillator whose power consumption is influenced by the approach of metals and other electrically conductive materials. This effect can also be achieved through a non-conductive material. Depending on the type, the current change of the oscillator will be amplified to a streamlined output signal or output as a binary signal by a switching amplifier.

The output switching functions are NO (normally open), NC (normally closed) or change-over (antivalent), similar to mechanical switches. Electronic circuits, PLCs, relays or contactors can be activated directly with inductive sensors. The current change in the oscillator is caused without contact by the approach of the actuating material to the active area. The damping of the oscillator is possible between the active surface and specified maximum sensing distance (Sn) + 10 %. No mechanical force is exerted on the actuating material in the process, and no magnetic effect is caused by the high-frequency alternating field.

The inductive sensors can be used in machines, systems and vehicles as limit switches, contactless position switches for monitoring and positioning, as pulse generators for counting tasks, distance and speed measurements, and for many other applications.

## SENSING DISTANCE

The data of the nominal sensing distance are based on the measuring method according to standard Cenelec EN50010, using a plate in square in FE37 with a thickness of 1mm with a smoothed surface and earthed. The side lengths are equal to the diameter of the active area of the IAS.

Nominal sensing distance			Long distance version		
Diameter (mm)	Distance (mm)	Actuator FE37 (mm)	Diameter (mm)	Distance (mm)	Actuator FE37 (mm)
8	1	8(L)x8(W)x1(H)	8	3	9(L)x9(W)x1(H)
8	2	8(L)x8(W)x1(H)	8	6	9(L)x9(W)x1(H)
12	2	12(L)x12(W)x1(H)	12	6	18(L)x18(W)x1(H)
12	4	12(L)x12(W)x1(H)	12	10	30(L)x30(W)x1(H)
18	5	18(L)x18(W)x1(H)	18	12	36(L)x36(W)x1(H)
18	8	24(L)x24(W)x1(H)	18	20	60(L)x60(W)x1(H)
30	10	30(L)x30(W)x1(H)	30	22	66(L)x66(W)x1(H)
30	15	45(L)x45(W)x1(H)	30	40	120(L)x120(W)x1(H)

The possible sensing distance on a particular metal can be worked out by means of the typical reduction factors.

Sensing distance = Sn x reduction factor.

Material	FE360	St37	CrNi	V2A	V4A	Ms	Al	Cu	Au
Reduction factor approx.	1	1	0.85	0.75	0.70	0.45	0.40	0.30	0.24

## MINI INDUCTIVE SENSORS - FLUSH MOUNTABLE

<u>TYPE</u>	<u>ART. NO.</u>	<u>PAGE</u>
SM-10-6.5-S-L	SM105027	2
SM-10-6.5-O-L	SM105099	2
SM-20-6.5-S-L	SM205027	2
SM-10-6.5-S-L-D3	SM105022	3
SM-10-6.5-O-L-D3		3
SM-20-6.5-S-L-D3	SM211001	3
SM-10-6.5-S-L-CP5M	SM106019	4
SM-10-6.5-O-L-CP5M	SM105080	4
SM-20-6.5-S-L-CP5M		4
SM-10-6.5-S-Y7	SM105025	5
SM-10-6.5-O-Y7		5
SM-20-6.5-S-Y7	SM208003	5
SM-10-6.5-S-Y7-D3	SM107008	6
SM-10-6.5-O-Y7-D3		6
SM-20-6.5-S-Y7-D3		6
SM-10-M8-S-L	SM105005	7
SM-10-M8-O-L	SM106009	7
SM-20-M8-S-L	SM205006	7
SM-10-M8-S-L-D3	SM109002	8
SM-10-M8-O-L-D3	SM112004	8
SM-20-M8-S-L-D3	SM209002	8
SM-10-M8-S-Y7	SM105015	9
SM-10-M8-O-Y7		9
SM-20-M8-S-Y7	SM205012	9
SM-10-M8-S-Y7-D3	SM105036	10
SM-10-M8-O-Y7-D3	SM105031	10
SM-20-M8-S-Y7-D3	SM205003	10
SM-10-M8-S-100	SM106011	11
SM-10-M8-O-100		11
SM-20-M8-S-100		11
SM-10-M8-S-L-I0	SM105062	12
SM-10-M8-O-L-I0		12
SM-20-M8-S-L-I0		12
SM-10-M8-S-Y7-I0	SM105033	13
SM-10-M8-O-Y7-I0	SM109001	13
SM-20-M8-S-Y7-I0		13
SM-10-M8-S-L-CP	SM105077	14
SM-10-M8-O-L-CP		14
SM-20-M8-S-L-CP	SM205015	14
SM-10-M8-S-L-L33-D3	SM111008	15
SM-10-M8-O-L-L33-D3		15
SM-20-M8-S-L-L33-D3	SM208001	15

# INDUCTIVE SENSOR - Ø 6.5

**Standard mini version  
Cable connection  
PUR cable on request**

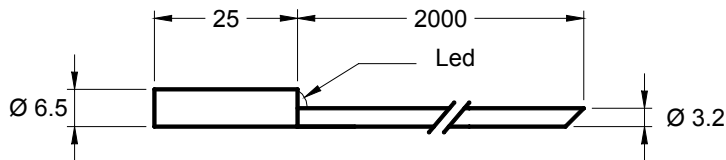
**TYPE - ART. NO.**

SM-10-6.5-S-L - SM105027  
SM-10-6.5-O-L - SM105099  
SM-20-6.5-S-L - SM205027

**DESCRIPTION**

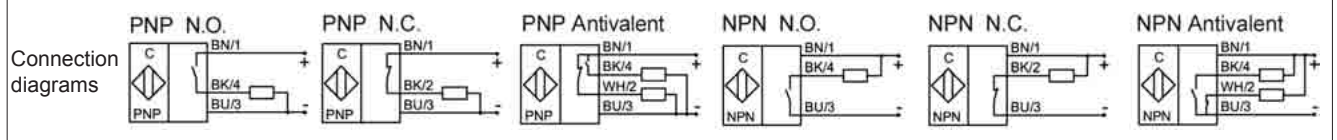
10 = PNP  
20 = NPN  
6.5 = Ø 6.5 - shielded  
S = normally open  
O = normally closed  
L = led

**DIMENSIONS AND TECHNICAL DATA**



Operating distance Sn	2 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 150mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 10mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	INOX 303
Active surface material	PVDF
Connection	cable 2m, PVC, 3x0.14mm <sup>2</sup>
Maximum torque	-

Ed. E/12 - All specifications are subject to change without notice



# INDUCTIVE SENSOR - Ø 6.5

**Special mini version: long distance  
Cable connection  
PUR cable on request**

**TYPE - ART. NO.**

SM-10-6.5-S-L-D3 - SM105022

SM-10-6.5-O-L-D3

SM-20-6.5-S-L-D3 - SM211001

**DESCRIPTION**

10 = PNP

20 = NPN

6.5 = Ø 6.5 - shielded

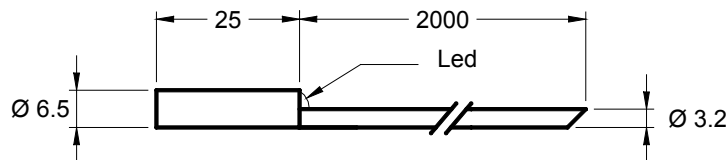
S = normally open

O = normally closed

L = led

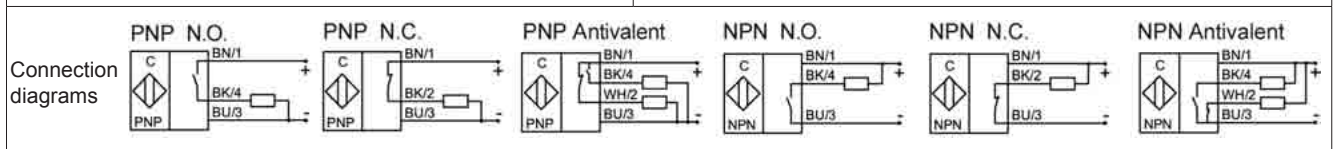
D3 = Sn 3mm

**DIMENSIONS AND TECHNICAL DATA**



Operating distance Sn	3 mm
Flush mounting	yes, related to the housing
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 150mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 10mA
Frequency of operating cycles	max. 1 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-10...+60°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	INOX 303
Active surface material	PVDF
Connection	cable 2m, PVC, 3x0.14mm <sup>2</sup>
Maximum torque	-

Ed. E/12 - All specifications are subject to change without notice



# INDUCTIVE SENSOR - Ø 6.5

**Special mini version  
PUR cable connection**

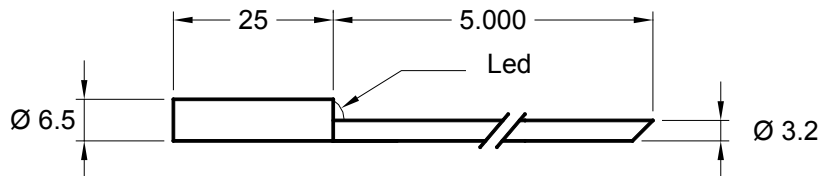
**TYPE - ART. NO.**

SM-10-6.5-S-L-CP5M - SM106019  
 SM-10-6.5-O-L-CP5M - SM105080  
 SM-20-6.5-S-L-CP5M

**DESCRIPTION**

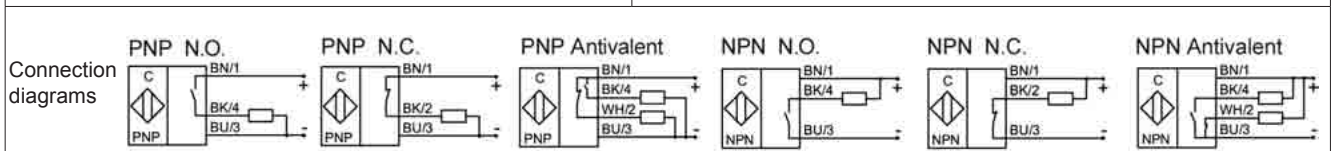
10 = PNP  
 20 = NPN  
 6.5 = Ø 6.5 - shielded  
 S = normally open  
 O = normally closed  
 L = led  
 CP5M = 5m PUR cable

**DIMENSIONS AND TECHNICAL DATA**



Operating distance Sn	2 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 150mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 10mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	INOX 303
Active surface material	PVDF
Connection	cable 5m, PUR, 3x0.14mm <sup>2</sup>
Maximum torque	-

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# INDUCTIVE SENSOR - Ø 6.5

**Standard mini version  
Plug connection**

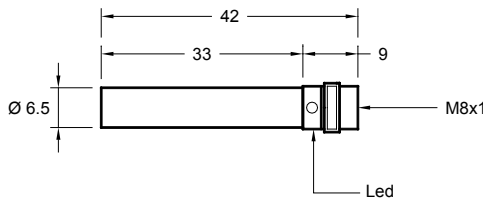
**TYPE - ART. NO.**

SM-10-6.5-S-Y7 - SM105025  
 SM-10-6.5-O-Y7  
 SM-20-6.5-S-Y7 - SM208003

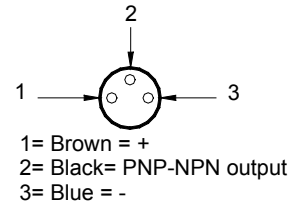
**DESCRIPTION**

10 = PNP  
 20 = NPN  
 6.5 = Ø 6.5 - shielded  
 S = normally open  
 O = normally closed  
 Y7 = metal connector M8x1

**DIMENSIONS AND TECHNICAL DATA**

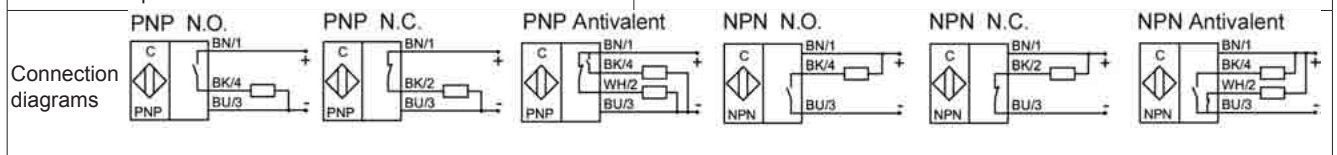


Connector Y7  
for sensors 6,5-M8



Operating distance Sn	2 mm
Flush mounting	yes
Electrical version	3 pins DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 150mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 10mA
Frequency of operating cycles	max. 1 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	INOX 303
Active surface material	PVDF
Connection	metal connector 3 pins, M8x1
Maximum torque	-

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# INDUCTIVE SENSOR - Ø 6.5

**Mini special version: long distance  
Plug connection**

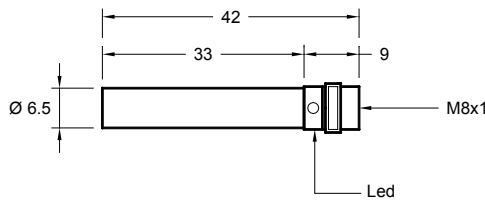
**TYPE - ART. NO.**

SM-10-6.5-S-Y7-D3 - SM107008  
 SM-10-6.5-O-Y7-D3  
 SM-20-6.5-S-Y7-D3

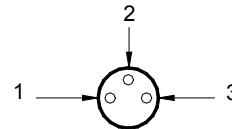
**DESCRIPTION**

10 = PNP  
 20 = NPN  
 6.5 = Ø 6.5 - shielded  
 S = normally open  
 O = normally closed  
 Y7 = metal connector M8x1  
 D3 = Sn 3mm

**DIMENSIONS AND TECHNICAL DATA**



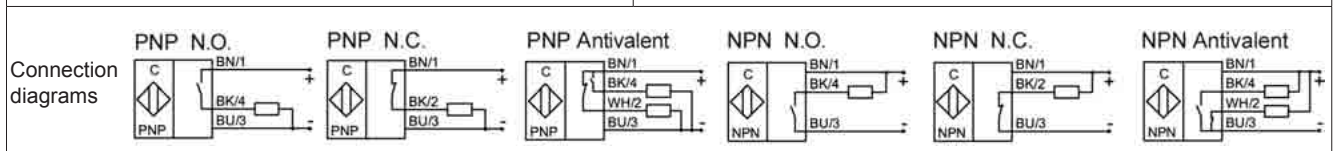
Connector Y7  
for sensors 6,5-M8



1= Brown = +  
 2= Black= PNP-NPN output  
 3= Blue = -

Operating distance Sn	3 mm
Flush mounting	yes, related to the housing
Electrical version	3 pins DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 150mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 10mA
Frequency of operating cycles	max. 1 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-10...+60°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	INOX 303
Active surface material	PVDF
Connection	metal connector 3 pins, M8x1
Maximum torque	-

Ed. E/12 - All specifications are subject to change without notice



# INDUCTIVE SENSOR - M8

**Standard mini version  
Cable connection**

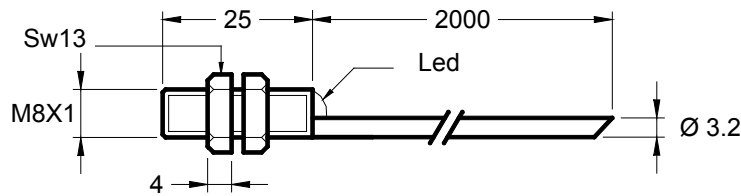
**TYPE - ART. NO.**

SM-10-M8-S-L - SM105005  
 SM-10-M8-O-L - SM106009  
 SM-20-M8-S-L - SM205006

**DESCRIPTION**

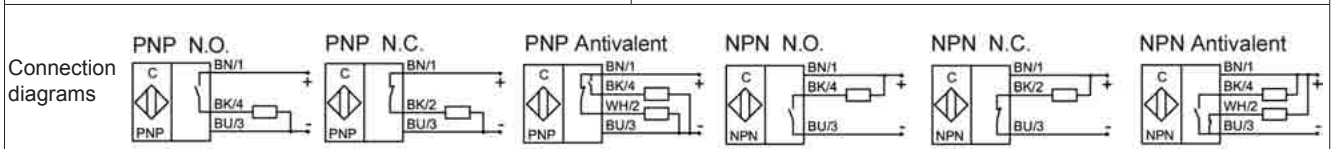
10 = PNP  
 20 = NPN  
 M8 = Ø M8x1.5 - shielded  
 S = normally open  
 O = normally closed  
 L = led

**DIMENSIONS AND TECHNICAL DATA**



Operating distance Sn	2 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 150mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 10mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	INOX 303
Active surface material	PVDF
Connection	cable 2m, PVC, 3x0.14mm <sup>2</sup>
Maximum torque	4.5

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# INDUCTIVE SENSOR - M8

**Special mini version: long distance  
Cable connection - PUR cable on request  
Housing length 33 or 45 mm**

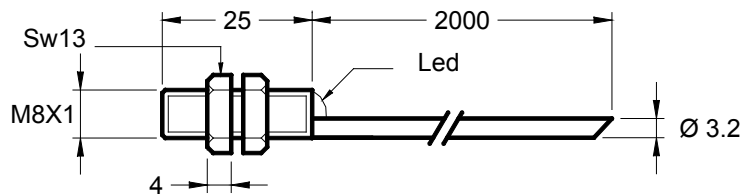
**TYPE - ART. NO.**

SM-10-M8-S-L-D3 - SM109002  
SM-10-M8-O-L-D3 - SM112004  
SM-20-M8-S-L-D3 - SM209002

**DESCRIPTION**

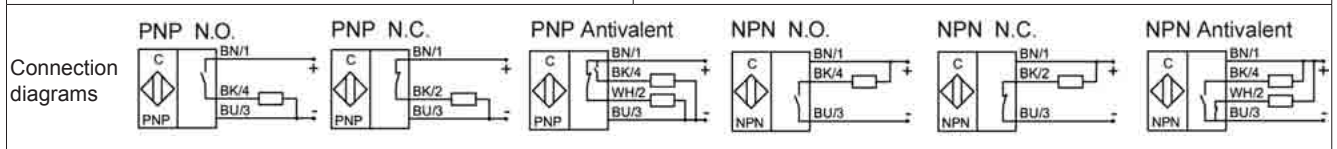
10 = PNP  
20 = NPN  
M8 = Ø M8x1.5 - shielded  
S = normally open  
O = normally closed  
L = led  
D3 = Sn 3mm

**DIMENSIONS AND TECHNICAL DATA**



Operating distance Sn	3 mm
Flush mounting	yes, related to the housing
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 150mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 10mA
Frequency of operating cycles	max. 1 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-10...+60°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	INOX 303
Active surface material	PVDF
Connection	cable 2m, PVC, 3x0.14mm <sup>2</sup>
Maximum torque	4.5

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# INDUCTIVE SENSOR - M8

**Standard mini version  
Plug connection**

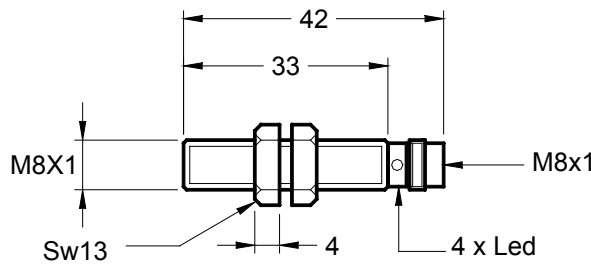
**TYPE - ART. NO.**

SM-10-M8-S-Y7 - SM105015  
 SM-10-M8-O-Y7  
 SM-20-M8-S-Y7 - SM205012

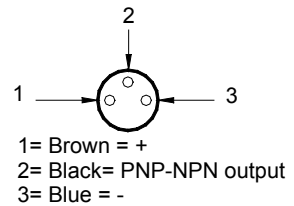
**DESCRIPTION**

10 = PNP  
 20 = NPN  
 M8 = Ø M8x1.5 - shielded  
 S = normally open  
 O = normally closed  
 Y7 = metal connector M8x1

**DIMENSIONS AND TECHNICAL DATA**

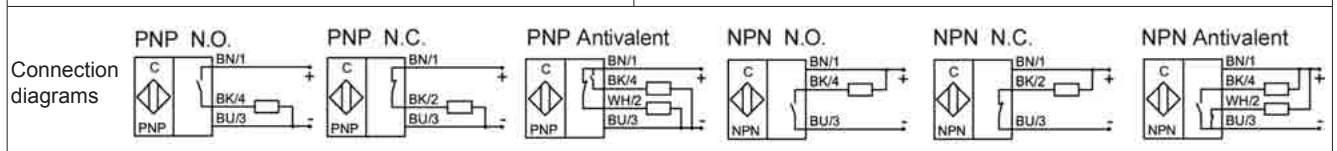


Connector Y7  
for sensors 6,5-M8



Operating distance $S_n$	2 mm
Flush mounting	yes
Electrical version	3 pins DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 10mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	INOX 303
Active surface material	PVDF
Connection	metal connector M8x1
Maximum torque	4.5

Ed. E/12 - All specifications are subject to change without notice



# INDUCTIVE SENSOR - M8

**Special mini version: long distance  
Plug connection**

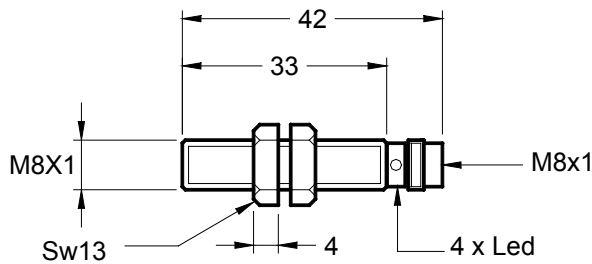
**TYPE - ART. NO.**

- SM-10-M8-S-Y7-D3 - SM105036
- SM-10-M8-O-Y7-D3 - SM105031
- SM-20-M8-S-Y7-D3 - SM205003

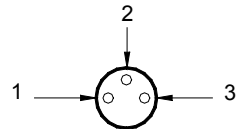
**DESCRIPTION**

- 10 = PNP
- 20 = NPN
- M8 = Ø M8x1.5 - shielded
- S = normally open
- O = normally closed
- Y7 = metal connector M8x1
- D3 = Sn 3 mm

**DIMENSIONS AND TECHNICAL DATA**



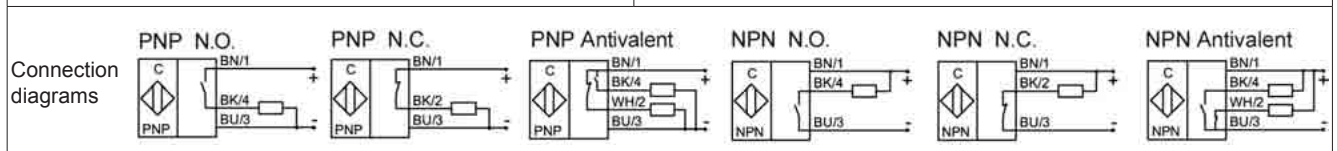
Connector Y7 for sensors 6,5-M8



- 1= Brown = +
- 2= Black= PNP-NPN output
- 3= Blue = -

Operating distance Sn	3 mm
Flush mounting	yes, related to the housing
Electrical version	3 pins DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 10mA
Frequency of operating cycles	max. 1 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-10...+60°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	INOX 303
Active surface material	PVDF
Connection	metal connector M8x1
Maximum torque	4.5

Ed. E/12 - All specifications are subject to change without notice



# INDUCTIVE SENSOR - M8

**Special mini version**  
**Suitable for applications with high temperatures up to +100°C**  
**Cable connection**

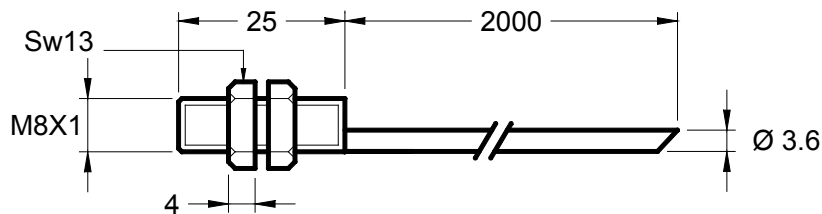
**TYPE - ART. NO.**

SM-10-M8-S-100 - SM106011  
 SM-10-M8-O-100  
 SM-20-M8-S-100

**DESCRIPTION**

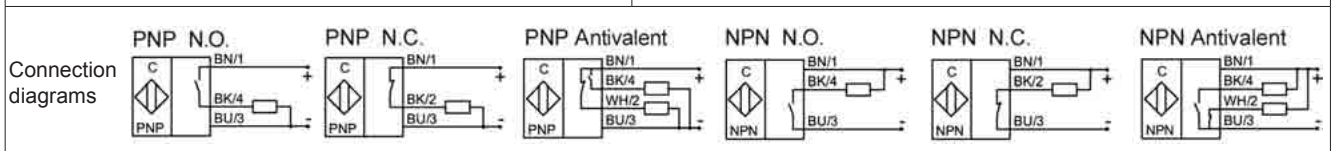
10 = PNP  
 20 = NPN  
 M8 = Ø M8x1.5 - shielded  
 S = normally open  
 O = normally closed  
 100 = 100°C

**DIMENSIONS AND TECHNICAL DATA**



Operating distance Sn	1.5 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 10mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-25...+100°C
Temperature drift	< 10 %
Led display	-
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	INOX 303
Active surface material	PTFE
Connection	cable 2 m, TEEE/SPR, 3x0.22mm <sup>2</sup>
Maximum torque	4.5

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# INDUCTIVE SENSOR - M8

**Special mini version: zero hysteresis  
Cable connection**

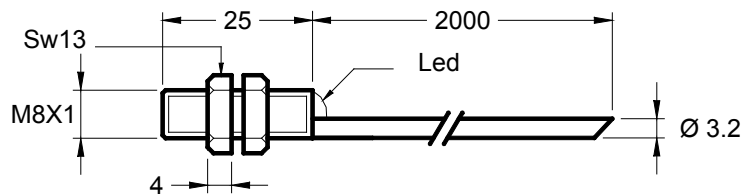
**TYPE - ART. NO.**

SM-10-M8-S-L-I0 - SM105062  
SM-10-M8-O-L-I0  
SM-20-M8-S-L-I0

**DESCRIPTION**

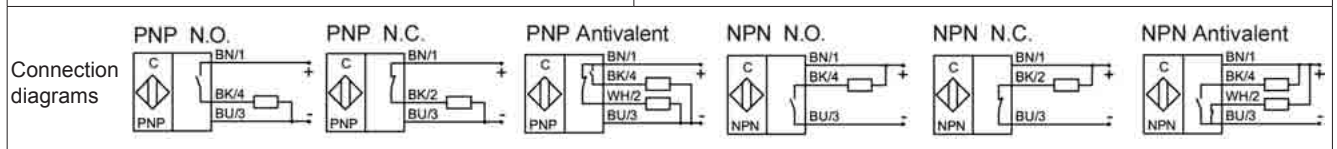
10 = PNP  
20 = NPN  
M8 = Ø M8x1.5 - shielded  
S = normally open  
O = normally closed  
L = led  
I0 = zero hysteresis

**DIMENSIONS AND TECHNICAL DATA**



Operating distance Sn	1 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 150mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 10mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 0 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	INOX 303
Active surface material	PVDF
Connection	cable 2m, PVC, 3x0.14mm <sup>2</sup>
Maximum torque	4.5

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# INDUCTIVE SENSOR - M8

**Special mini version: zero hysteresis  
Plug connection**

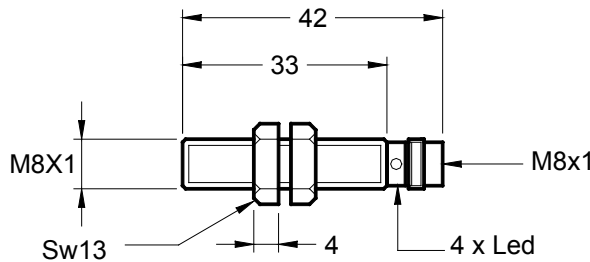
**TYPE - ART. NO.**

SM-10-M8-S-Y7-I0 - SM105033  
 SM-10-M8-O-Y7-I0 - SM109001  
 SM-20-M8-S-Y7-I0

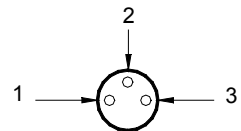
**DESCRIPTION**

10 = PNP  
 20 = NPN  
 M8 = Ø M8x1.5 - shielded  
 S = normally open  
 O = normally closed  
 Y7 = metal connector M8x1  
 I0 = zero hysteresis

**DIMENSIONS AND TECHNICAL DATA**



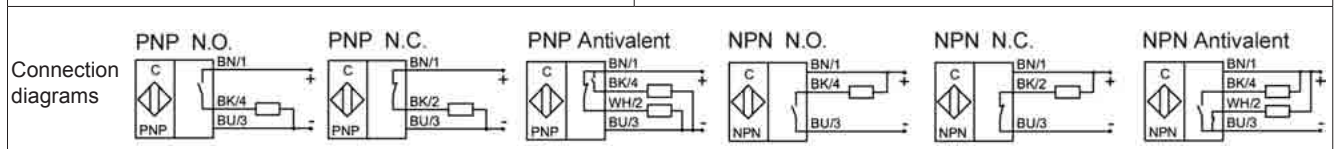
Connector Y7 for sensors 6,5-M8



1= Brown = +  
 2= Black= PNP-NPN output  
 3= Blue = -

Operating distance $S_n$	1 mm
Flush mounting	yes
Electrical version	3 pins DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 10mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 0 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	INOX 303
Active surface material	PVDF
Connection	metal connector M8x1
Maximum torque	4.5

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# INDUCTIVE SENSOR - M8

**Standard mini version  
PUR cable connection**

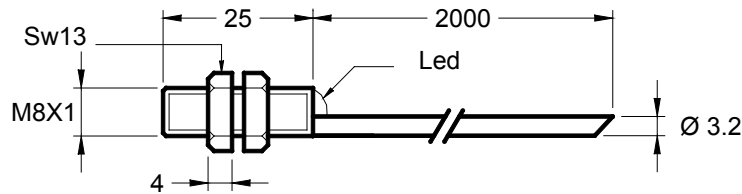
**TYPE - ART. NO.**

SM-10-M8-S-L-CP - SM105077  
 SM-10-M8-O-L-CP  
 SM-20-M8-S-L-CP - SM205015

**DESCRIPTION**

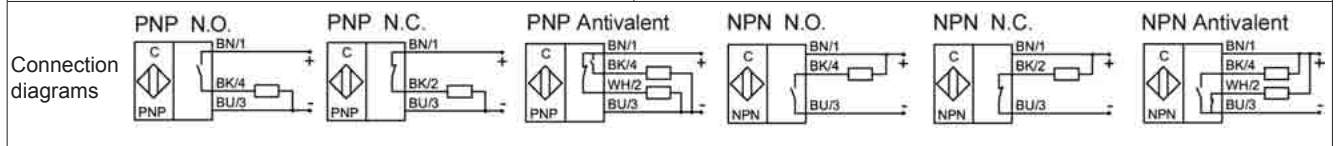
10 = PNP  
 20 = NPN  
 M8 = Ø M8x1.5 - shielded  
 S = normally open  
 O = normally closed  
 L = Led  
 CP = PUR cable

**DIMENSIONS AND TECHNICAL DATA**



Operating distance Sn	2 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 150mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 10mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	INOX 303
Active surface material	PVDF
Connection	cable 2m, PUR, 3x0.14mm <sup>2</sup>
Maximum torque	4.5

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# INDUCTIVE SENSOR - M8

**Special mini version: long distance  
Cable connection**

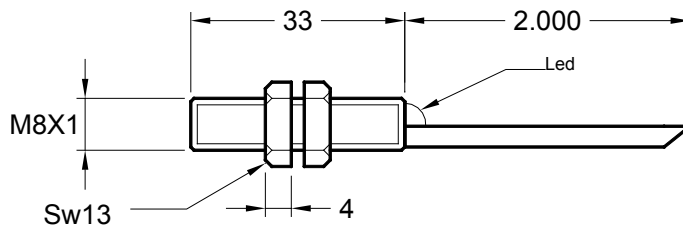
**TYPE - ART. NO.**

SM-10-M8-S-L-L33-D3 - SM111008  
 SM-10-M8-O-L-L33-D3  
 SM-20-M8-S-L-L33-D3 - SM208001

**DESCRIPTION**

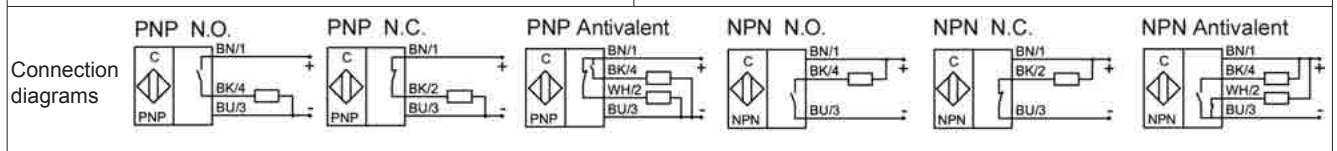
10 = PNP  
 20 = NPN  
 M8 = Ø M8x1.5 - shielded  
 S = normally open  
 O = normally closed  
 L = Led  
 D3 = Sn 3mm

**DIMENSIONS AND TECHNICAL DATA**



Operating distance Sn	3 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 150mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 10mA
Frequency of operating cycles	max. 1 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-10...+60°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	INOX 303
Active surface material	PVDF
Connection	cable 2m, PUR, 3x0.14mm <sup>2</sup>
Maximum torque	4.5

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**INDUCTIVE SENSORS - RECTANGULAR HOUSING**

<u>TYPE</u>	<u>ART. NO.</u>	<u>PAGE</u>
VM-10-S-C	SM105001	2
VM-10-O-C	SM105029	2
VM-20-S-C	SM205009	2
VM-10-S-C-D5	SM107004	3
VR-10-S	SM105042	4
VR-10-O		4
VR-20-S	SM205028	4
VR-10-S-D4	SM105018	5
VR-10-O-D4		5
VR-20-S-D4	SM205029	5
VR-10-S-A	SM105004	6
VR-10-O-A		6
VR-20-S-A	SM205030	6
VR-10-S-A-D4	SM105090	7
VR-10-O-A-D4		7
VR-20-S-A-D4		7
VR-10-S-A-D8		8
VR-10-O-A-D8		8
VR-20-S-A-D8		8
VR-10-S-B	SM105053	9
VR-10-O-B		9
VR-20-S-B	SM205021	9
VR-10-S-B-D4	SM105021	10
VR-10-O-B-D4	SM107001	10
VR-20-S-B-D4	SM205019	10
VR-20-O-B-D4	SM205020	10
VR-10-S-B-D8	SM105075	11
VR-10-O-B-D8		11
VR-20-S-B-D8		11
VR-10-S-C	SM105100	12
VR-10-O-C		12
VR-20-S-C	SM205031	12
VR-10-S-C-D4	SM105046	13
VR-10-O-C-D4	SM107003	13
VR-20-S-C-D4		13
VR-20-O-C-D4	SM207002	13
VR-10-S-C-D8		14
VR-10-O-C-D8		14
VR-20-S-C-D8		14
SMFLAT-10-D25-A	SM111001	15

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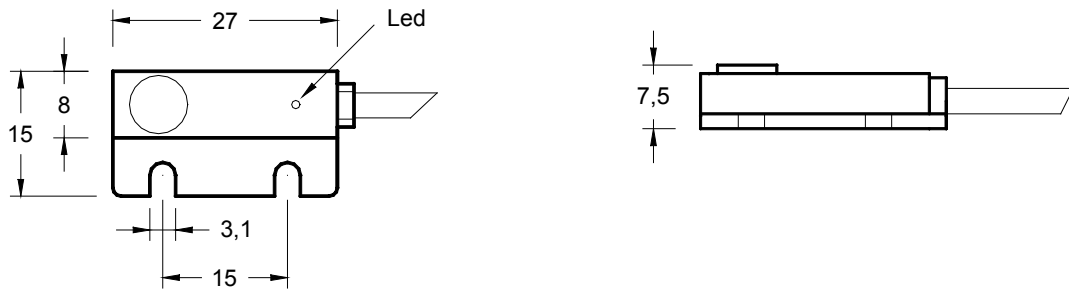
# INDUCTIVE SENSOR - VM

**Mini rectangular housing  
Cable output  
Mounting bracket C type**

**TYPE - ART. NO.**  
**VM-10-S-C - SM105001**  
**VM-10-O-C - SM105029**  
**VM-20-S-C - SM205009**

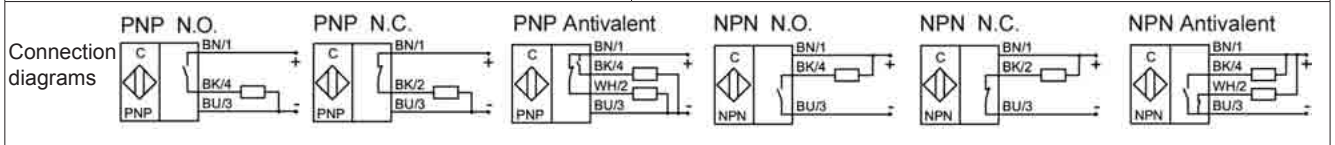
**DESCRIPTION**  
**10 = PNP**  
**20 = NPN**  
**S = normally open**  
**O = normally closed**  
**C = bracket version**

## DIMENSIONS AND TECHNICAL DATA



Operating distance $S_n$	1.5 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage $U_b$	10...35 Vdc
Output current max. $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 10%
No load current $I_o$	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	$< 10$ %
Repeat accuracy	$< 1$ %
Permitted ambient temperature	-20...+70°C
Temperature drift	$< 10$ %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	PA
Active surface	PA
Connection	cable 2m, PVC, 3x0.14mm <sup>2</sup>
Maximum torque Nm	-

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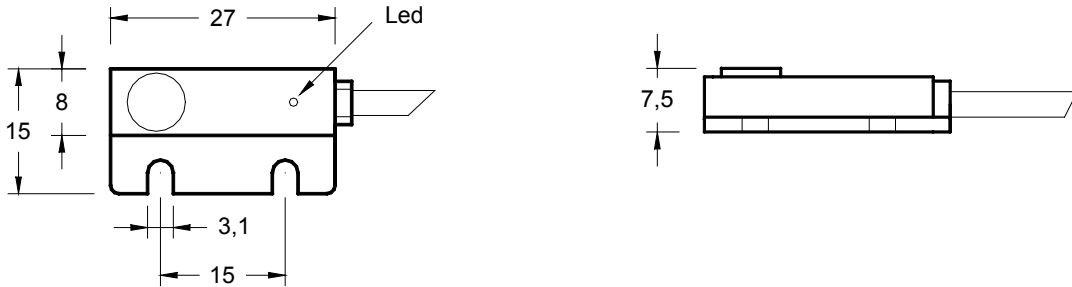
# INDUCTIVE SENSOR - VM

**Mini rectangular housing - Long distance version  
Cable output  
Mounting bracket C type**

**TYPE - ART. NO.**  
VM-10-S-C-D5 - SM107004

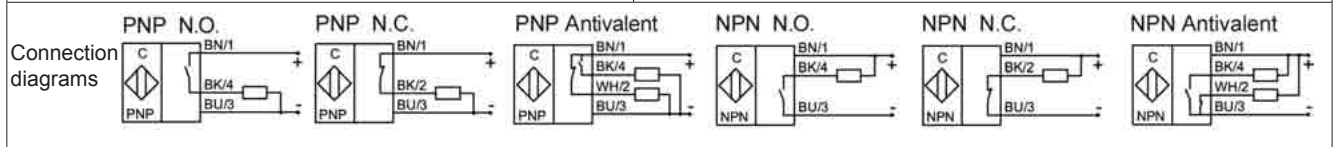
**DESCRIPTION**  
10 = PNP  
20 = NPN  
S = normally open  
O = normally closed  
D5 = Sn 5 mm  
C = bracket version

## DIMENSIONS AND TECHNICAL DATA



Operating distance Sn	5 mm
Flush mounting	no
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current max. Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 10%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 500 Hz
Hysteresis	< 15 %
Repeat accuracy	< 5 %
Permitted ambient temperature	-20...+70°C
Temperature drift	< 15 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	PA
Active surface	PA
Connection	cable 2m, PVC, 3x0.14mm <sup>2</sup>
Maximum torque Nm	-

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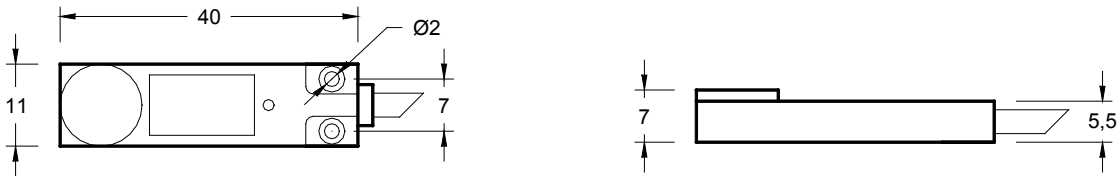
# INDUCTIVE SENSOR - VR

**Rectangular housing  
Cable output**

**TYPE - ART. NO.**  
 VR-10-S - SM105042  
 VR-10-O  
 VR-20-S - SM205028

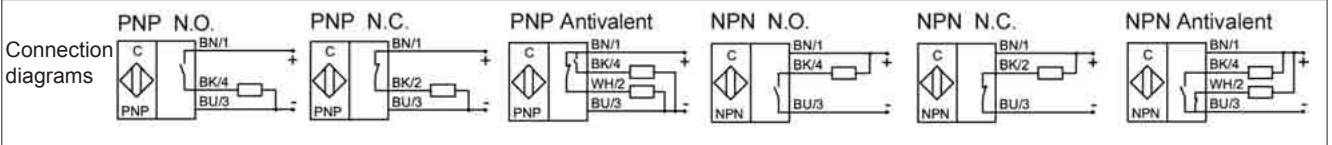
**DESCRIPTION**  
 10 = PNP  
 20 = NPN  
 S = normally open  
 O = normally closed

## DIMENSIONS AND TECHNICAL DATA



Operating distance Sn	2 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current max. Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 10%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	PA
Active surface	PA
Connection	cable 2m, PVC, 3x0.14mm <sup>2</sup>
Maximum torque Nm	-

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# INDUCTIVE SENSOR - VR

**Rectangular housing  
Long distance version  
Cable output**

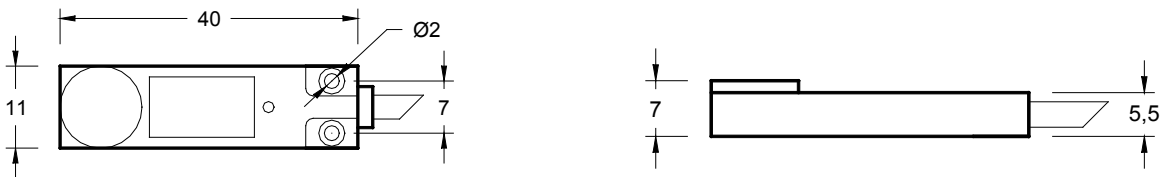
**TYPE - ART. NO.**

VR-10-S-D4 - SM105018  
VR-10-O-D4  
VR-20-S-D4 - SM205029

**DESCRIPTION**

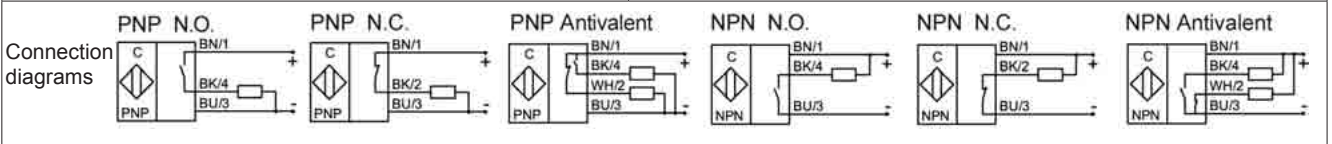
10 = PNP  
20 = NPN  
S = normally open  
O = normally closed  
D4 = Sn 4mm

## DIMENSIONS AND TECHNICAL DATA



Operating distance Sn	4 mm
Flush mounting	no
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current max. Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 10%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	PA
Active surface	PA
Connection	cable 2m, PVC, 3x0.14mm <sup>2</sup>
Maximum torque Nm	-

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# INDUCTIVE SENSOR - VR

**Rectangular housing  
Cable output  
Mounting bracket A type**

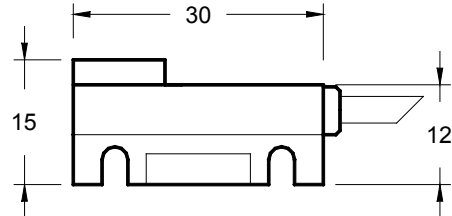
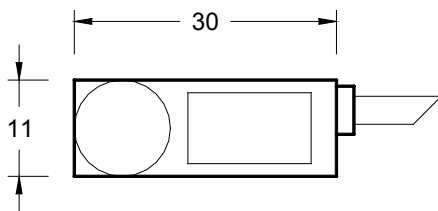
**TYPE - ART. NO.**

VR-10-S-A - SM105004  
VR-10-O-A  
VR-20-S-A - SM205030

**DESCRIPTION**

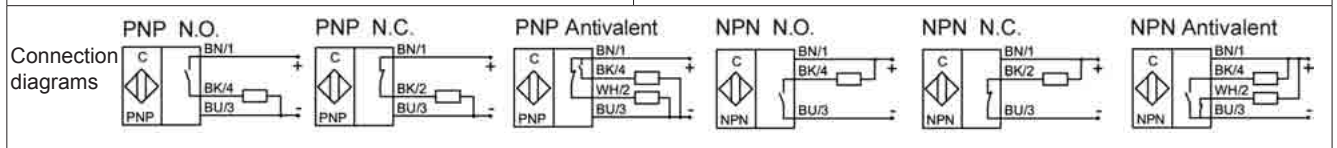
10 = PNP  
20 = NPN  
S = normally open  
O = normally closed  
A = bracket version

**DIMENSIONS AND TECHNICAL DATA**



Operating distance Sn	2 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current max. Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 10%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	PA
Active surface	PA
Connection	cable 2m, PVC, 3x0.14mm <sup>2</sup>
Maximum torque Nm	-

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# INDUCTIVE SENSOR - VR

**Rectangular housing - Long distance version  
Cable output  
Mounting bracket A type**

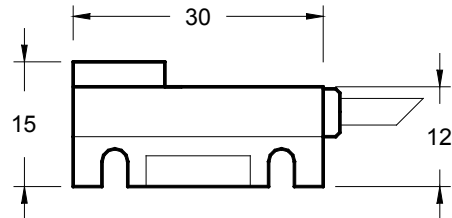
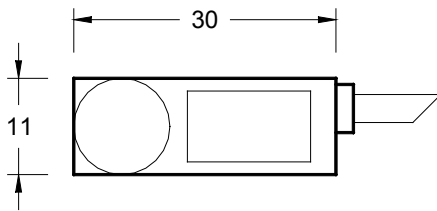
**TYPE - ART. NO.**

VR-10-S-A-D4 - SM105090  
VR-10-O-A-D4  
VR-20-S-A-D4

**DESCRIPTION**

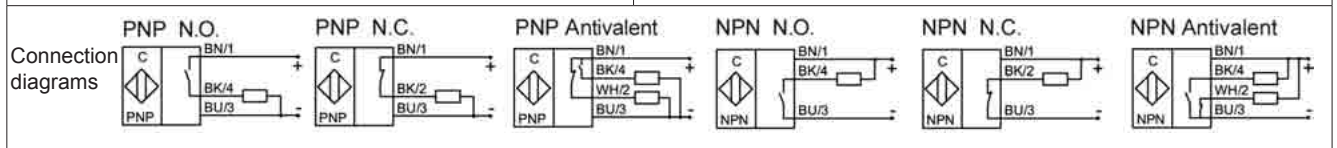
10 = PNP  
20 = NPN  
S = normally open  
O = normally closed  
A = bracket version  
D4 = Sn 4mm

**DIMENSIONS AND TECHNICAL DATA**



Operating distance Sn	4 mm
Flush mounting	no
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current max. Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 10%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	PA
Active surface	PA
Connection	cable 2m, PVC, 3x0.14mm <sup>2</sup>
Maximum torque Nm	-

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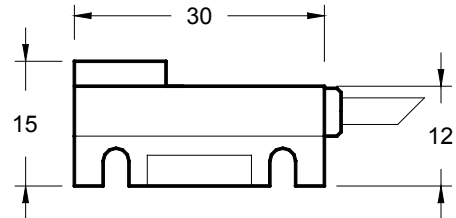
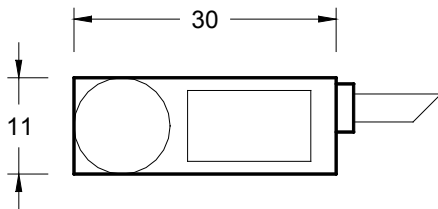
# INDUCTIVE SENSOR - VR

**Rectangular housing - Long distance version  
Cable output  
Mounting bracket A type**

**TYPE - ART. NO.**  
 VR-10-S-A-D8  
 VR-10-O-A-D8  
 VR-20-S-A-D8

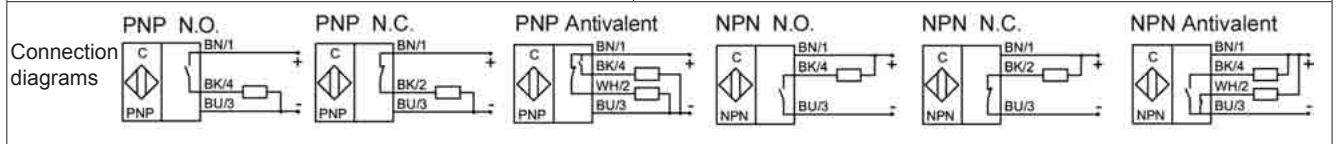
**DESCRIPTION**  
 10 = PNP  
 20 = NPN  
 S = normally open  
 O = normally closed  
 A = bracket version  
 D8 = Sn 8mm

## DIMENSIONS AND TECHNICAL DATA



Operating distance Sn	8 mm
Flush mounting	no
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current max. Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 10%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 500 Hz
Hysteresis	< 15 %
Repeat accuracy	< 5 %
Permitted ambient temperature	-10...+60°C
Temperature drift	< 15 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	PA
Active surface	PA
Connection	cable 2m, PVC, 3x0.14mm <sup>2</sup>
Maximum torque Nm	-

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# INDUCTIVE SENSOR - VR

**Rectangular housing  
Cable output  
Mounting bracket B type**

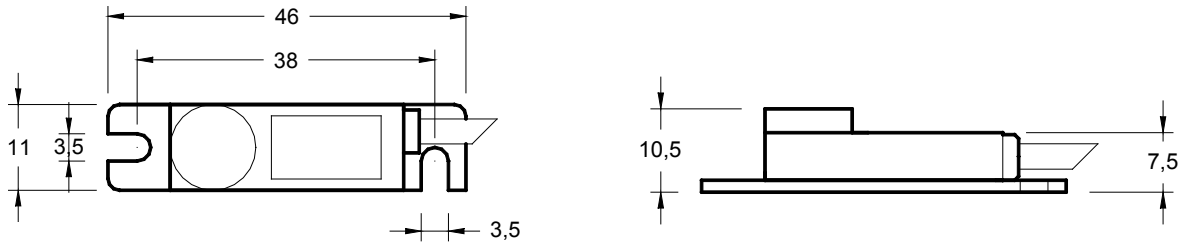
**TYPE - ART. NO.**

VR-10-S-B - SM105053  
VR-10-O-B  
VR-20-S-B - SM205021

**DESCRIPTION**

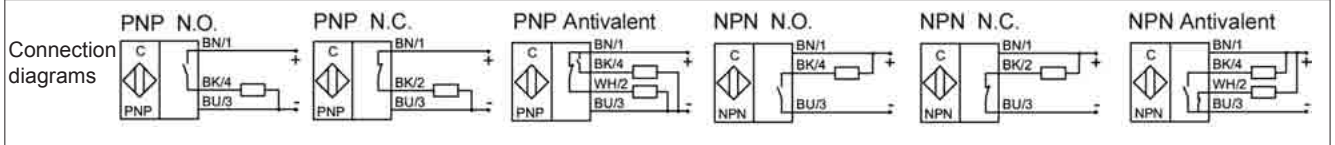
10 = PNP  
20 = NPN  
S = normally open  
O = normally closed  
B = bracket version

**DIMENSIONS AND TECHNICAL DATA**



Operating distance Sn	2 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current max. Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 10%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	PVDF
Active surface	PVDF
Connection	cable 2m, PVC, 3x0.14mm <sup>2</sup>
Maximum torque Nm	-

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# INDUCTIVE SENSOR - VR

**Rectangular housing - Long distance version  
Cable output  
Mounting bracket B type**

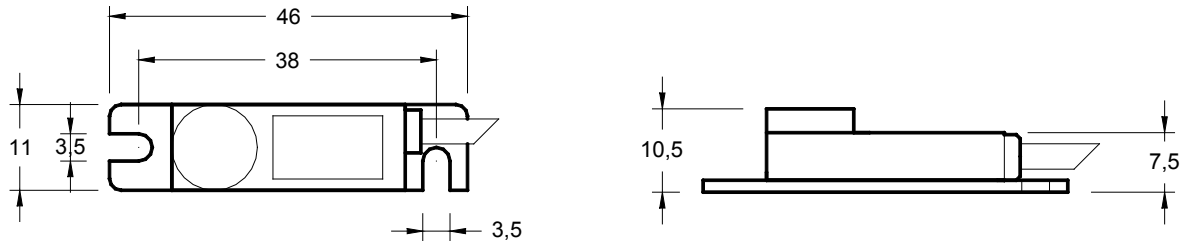
**TYPE - ART. NO.**

- VR-10-S-B-D4 - SM105021
- VR-10-O-B-D4 - SM107001
- VR-20-S-B-D4 - SM205019
- VR-20-O-B-D4 - SM205020

**DESCRIPTION**

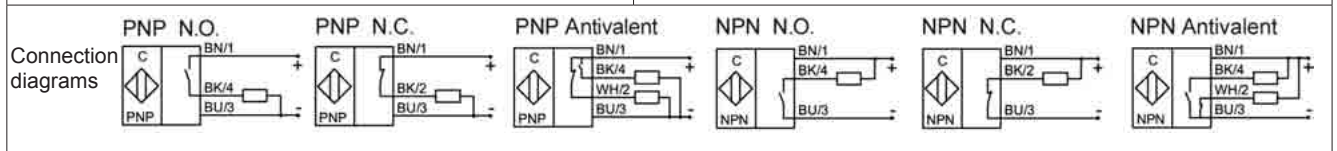
- 10 = PNP
- 20 = NPN
- S = normally open
- O = normally closed
- B = bracket version
- D4 = Sn 4mm

**DIMENSIONS AND TECHNICAL DATA**



Operating distance Sn	4 mm
Flush mounting	no
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current max. Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 10%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	PVDF
Active surface	PVDF
Connection	cable 2m, PVC, 3x0.14mm <sup>2</sup>
Maximum torque Nm	-

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# INDUCTIVE SENSOR - VR

**Rectangular housing - Long distance version**  
**Cable output**  
**Mounting bracket B type**

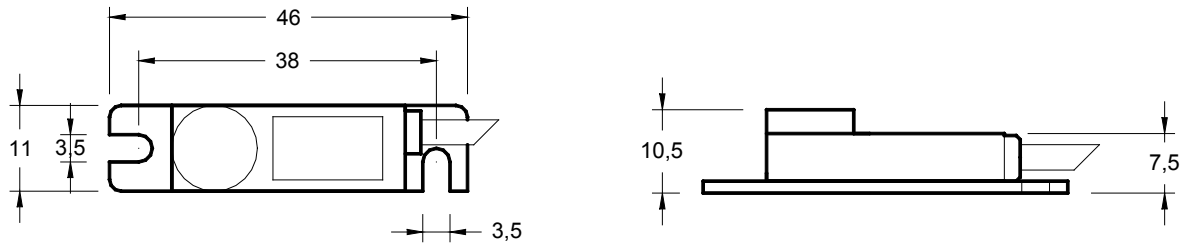
**TYPE - ART. NO.**

VR-10-S-B-D8 - SM105075  
 VR-10-O-B-D8  
 VR-20-S-B-D8

**DESCRIPTION**

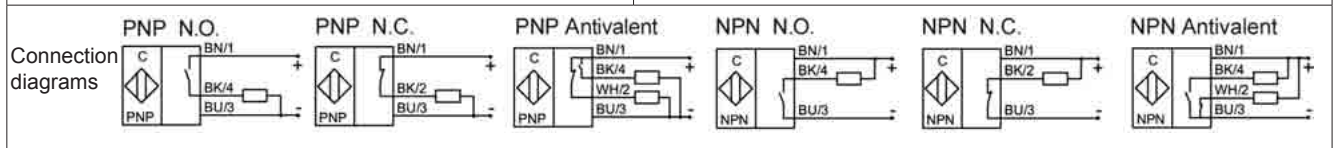
10 = PNP  
 20 = NPN  
 S = normally open  
 O = normally closed  
 B = bracket version  
 D8 = Sn 8mm

**DIMENSIONS AND TECHNICAL DATA**



Operating distance Sn	8 mm
Flush mounting	no
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current max. Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 10%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 500 Hz
Hysteresis	< 15 %
Repeat accuracy	< 5 %
Permitted ambient temperature	-10...+60°C
Temperature drift	< 15 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	PVDF
Active surface	PVDF
Connection	cable 2m, PVC, 3x0.14mm <sup>2</sup>
Maximum torque Nm	-

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# INDUCTIVE SENSOR - VR

**Rectangular housing  
Cable output  
Mounting bracket C type**

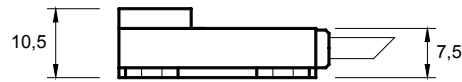
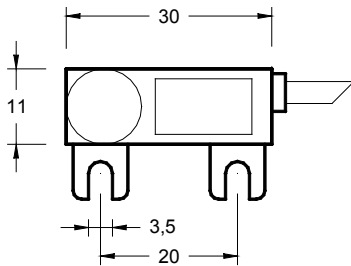
**TYPE - ART. NO.**

VR-10-S-C - SM105100  
VR-10-O-C  
VR-20-S-C - SM205031

**DESCRIPTION**

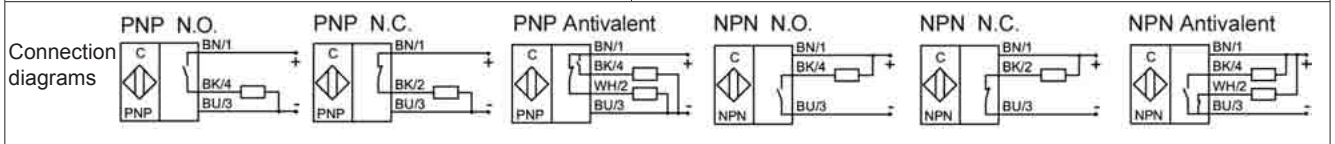
10 = PNP  
20 = NPN  
S = normally open  
O = normally closed  
C = bracket version

**DIMENSIONS AND TECHNICAL DATA**



Operating distance Sn	2 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current max. Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 10%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	PA
Active surface	PA
Connection	cable 2m, PVC, 3x0.14mm <sup>2</sup>
Maximum torque Nm	-

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# INDUCTIVE SENSOR - VR

**Rectangular housing - Long distance version  
Cable output  
Mounting bracket C type**

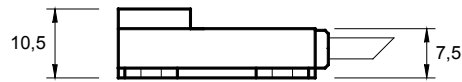
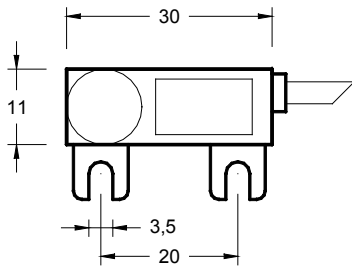
**TYPE - ART. NO.**

- VR-10-S-C-D4 - SM105046
- VR-10-O-C-D4 - SM107003
- VR-20-S-C-D4
- VR-20-O-C-D4 - SM207002

**DESCRIPTION**

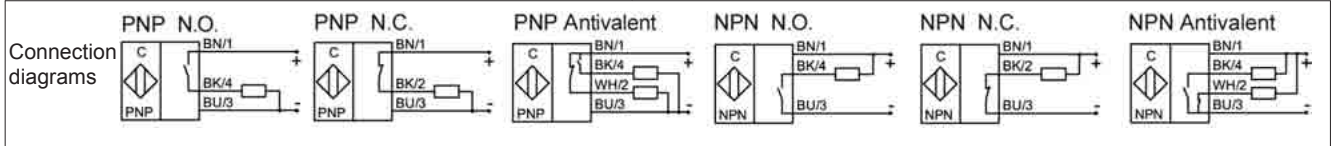
- 10 = PNP
- 20 = NPN
- S = normally open
- O = normally closed
- C = bracket version
- D4 = Sn 4mm

**DIMENSIONS AND TECHNICAL DATA**



Operating distance Sn	4 mm
Flush mounting	no
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current max. Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 10%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	PA
Active surface	PA
Connection	cable 2m, PVC, 3x0.14mm <sup>2</sup>
Maximum torque Nm	-

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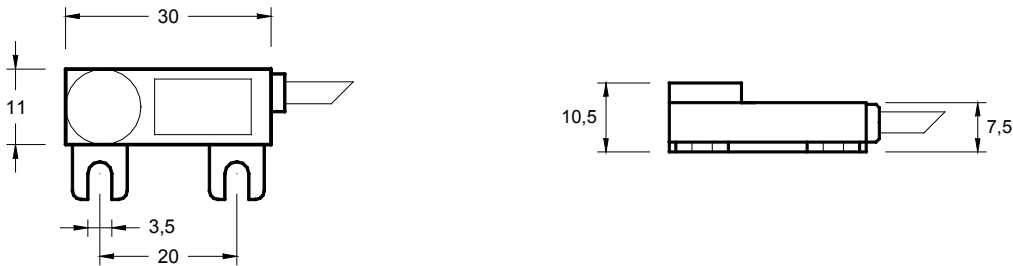
# INDUCTIVE SENSOR - VR

**Rectangular housing - Long distance version  
Cable output  
Mounting bracket C type**

**TYPE - ART. NO.**  
 VR-10-S-C-D8  
 VR-10-O-C-D8  
 VR-20-S-C-D8

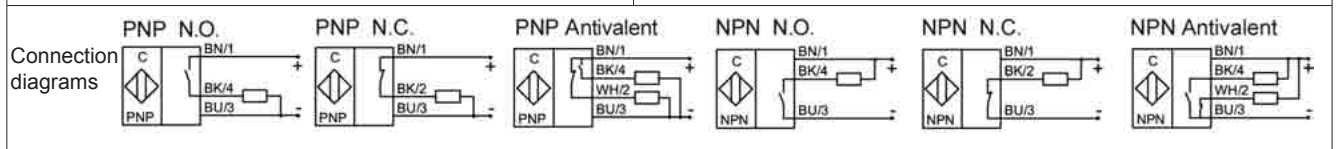
**DESCRIPTION**  
 10 = PNP  
 20 = NPN  
 S = normally open  
 O = normally closed  
 C = bracket version  
 D8 = Sn 8mm

## DIMENSIONS AND TECHNICAL DATA



Operating distance Sn	8 mm
Flush mounting	no
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current max. Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 10%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 500 Hz
Hysteresis	< 15 %
Repeat accuracy	< 5 %
Permitted ambient temperature	-10...+60°C
Temperature drift	< 15 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	PA
Active surface	PA
Connection	cable 2m, PVC, 3x0.14mm <sup>2</sup>
Maximum torque Nm	-

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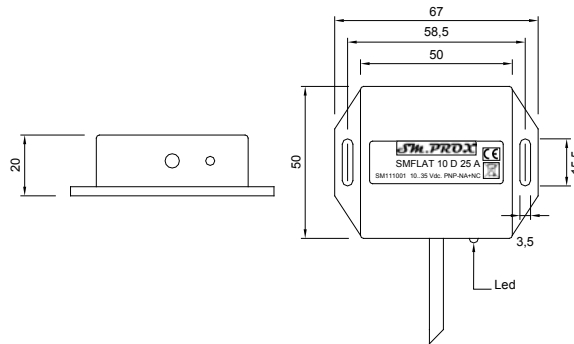
# INDUCTIVE SENSOR - SM FLAT

**Special housing, 20mm high  
Suitable for applications where high sensibility  
and minimum space are requested**

**TYPE - ART. NO.**  
SMFLAT-10-D25-A - SM111001

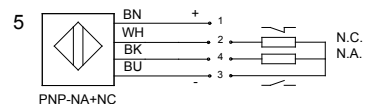
**DESCRIPTION**  
10 = PNP  
D25 = Sn 25mm  
A = antivalent

## DIMENSIONS AND TECHNICAL DATA



Operating distance Sn	25 mm
Flush mounting	no
Electrical version	4 wires DC
Operating voltage Ub	10...35 Vdc
Output current max. Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 10%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 200 Hz
Hysteresis	< 15 %
Repeat accuracy	< 5 %
Permitted ambient temperature	-10...+60°C
Temperature drift	< 15 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	ABS
Active surface	ABS
Connection	cable 2m, PVC, 4x0.25mm <sup>2</sup>
Maximum torque Nm	-

Connection diagrams



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**INDUCTIVE SENSORS - DIAMETER M8 - FLUSH MOUNTABLE**

<u>TYPE</u>	<u>ART. NO.</u>	<u>PAGE</u>
SM-10-A11-S-L	SM105006	2
SM-10-A11-O-L	SM105091	2
SM-20-A11-S-L	SM105091	2
SM-10-A11-S-L-I0	SM107015	3
SM-10-A11-O-L-I0		3
SM-20-A11-S-L-I0		3
SM-10-A11-S-L-D3	SM109005	4
SM-10-A11-O-L-D3		4
SM-20-A11-S-L-D3		4
SM 20 A 11 SL-HF	SM212002	5
SM-10-A11-S-L-100		6
SM-10-A11-O-L-100		6
SM-20-A11-S-L-100		6
SM-10-A11-S-Y5-D3	SM109008	7
SM-10-A11-O-Y5-D3		7
SM-20-A11-S-Y5-D3		7
SM-10-A11-S-Y5-L55	SM105012	8
SM-10-A11-O-Y5-L55		8
SM-20-A11-S-Y5-L55		8
SM-10-A11-S-Y5-L55-D3	SM106004	9
SM-10-A11-O-Y5-L55-D3		9
SM-20-A11-S-Y5-L55-D3		9

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# INDUCTIVE SENSOR - M8

**Standard version  
Cable output  
Flush mountable**

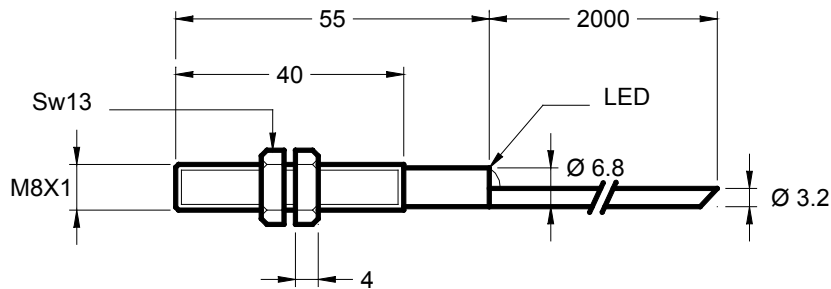
**ART. NO.**

SM-10-A11-S-L - SM105006  
SM-10-A11-O-L - SM105091  
SM-20-A11-S-L

**DESCRIPTION**

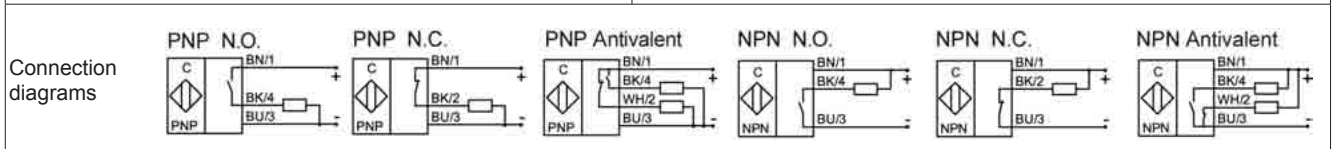
10 = PNP  
20 = NPN  
A11 = M8x1  
S = NO  
O = NC  
L = led

**DIMENSIONS AND TECHNICAL DATA**



Operating distance $S_n$	2 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 10mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	INOX303
Active surface	PVDF
Connection	2m cable, PVC, 3x0.14mm <sup>2</sup>
Maximum torque Nm	4.5

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# INDUCTIVE SENSOR - M8

**Zero hysteresis version  
Cable output  
Flush-mountable**

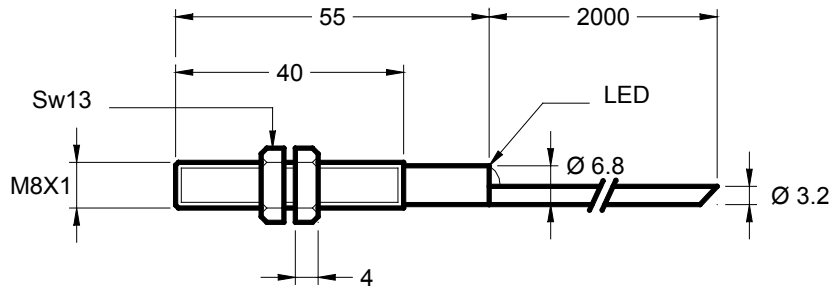
**ART. NO.**

SM-10-A11-S-L-I0 - SM107015  
SM-10-A11-O-L-I0  
SM-20-A11-S-L-I0

**DESCRIPTION**

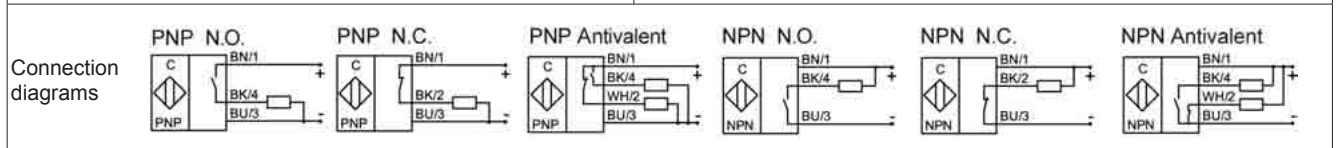
10 = PNP  
20 = NPN  
A11 = M8x1  
S = NO  
O = NC  
L = led  
I0 = Zero hysteresis

**DIMENSIONS AND TECHNICAL DATA**



Operating distance $S_n$	1 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 10mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 3 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	INOX303
Active surface	PVDF
Connection	cable 2m, PVC, 3x0.14mm <sup>2</sup>
Maximum torque Nm	4.5

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# INDUCTIVE SENSOR - M8

Long distance version  
Cable output  
Flush-mountable

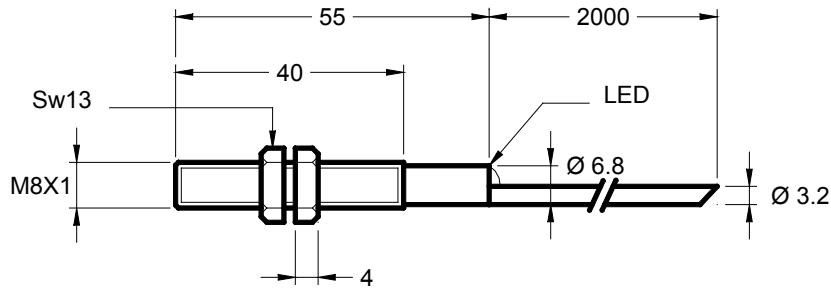
**ART. NO.**

SM-10-A11-S-L-D3 - SM109005  
SM-10-A11-O-L-D3  
SM-20-A11-S-L-D3

**DESCRIPTION**

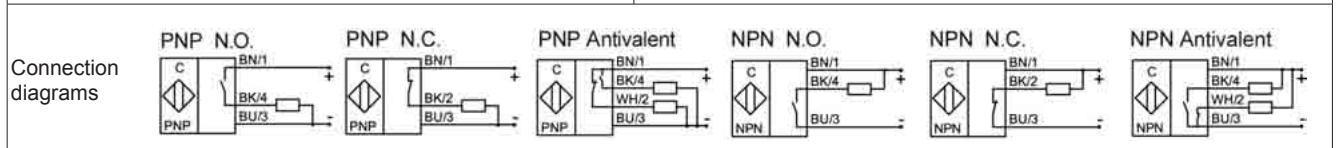
10 = PNP  
20 = NPN  
A11 = M8x1  
S = NO  
O = NC  
L = led  
D3 = Sn 3 mm

**DIMENSIONS AND TECHNICAL DATA**



Operating distance Sn	3 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 10mA
Frequency of operating cycles	max. 1 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-10...+60°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	INOX303
Active surface	PVDF
Connection	cable 2m, PVC, 3x0.14mm <sup>2</sup>
Maximum torque Nm	4.5

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# INDUCTIVE SENSOR - M8

**Special version, sensor suitable for the detection of frequencies  
Cable output  
Flush-mountable**

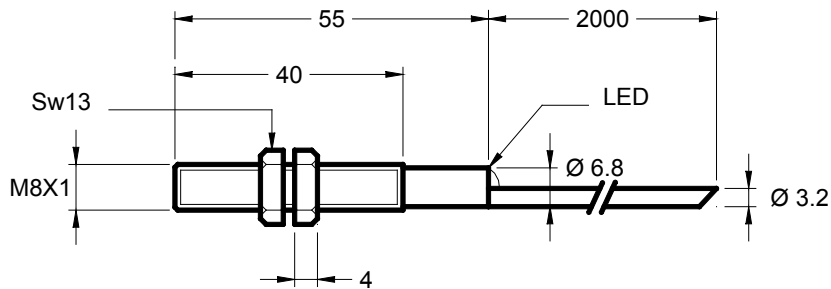
**ART. NO.**

**SM-20-A11-S-L-HF - SM212002**

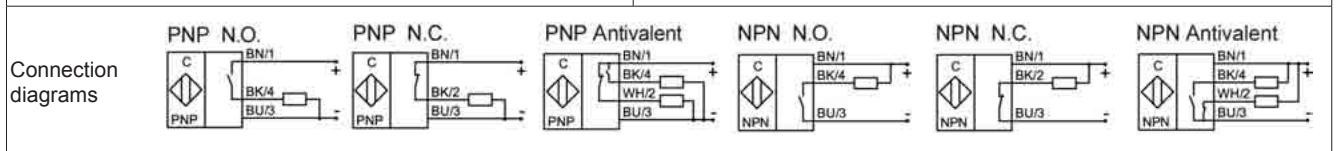
**DESCRIPTION**

**20 = NPN**  
**A11 = M8x1**  
**S = NO**  
**L = led**  
**HF = special version**

**DIMENSIONS AND TECHNICAL DATA**



Operating distance $S_n$	1 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 10mA
Frequency of operating cycles	$< 5$ KHz
Hysteresis	$< 10$ %
Repeat accuracy	$< 1$ %
Permitted ambient temperature	-20...+70°C
Temperature drift	$< 10$ %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	INOX303
Active surface	PVDF
Connection	cable 2m, PVC, 3x0.14mm <sup>2</sup>
Maximum torque Nm	4.5



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# INDUCTIVE SENSOR - M8

**Sensor for high temperature  
Cable output  
Flush-mountable**

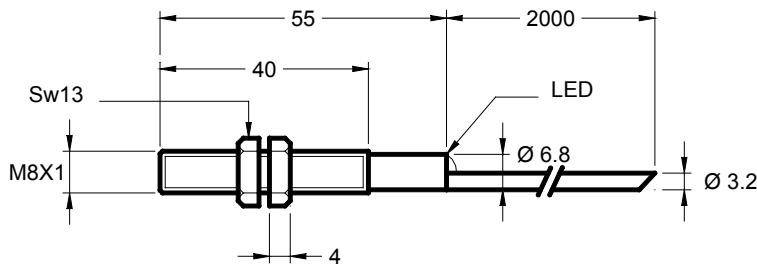
**ART. NO.**

SM-10-A11-S-L-100  
SM-10-A11-O-L-100  
SM-20-A11-S-L-100

**DESCRIPTION**

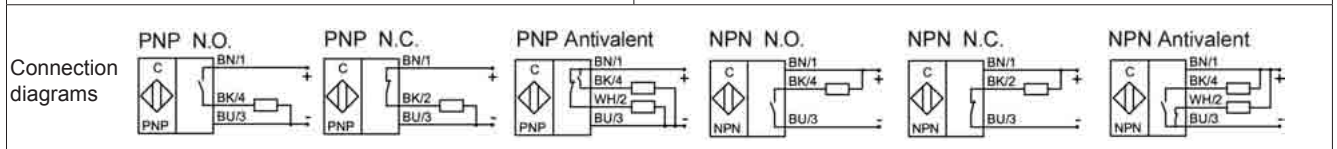
10 = PNP  
20 = NPN  
A11 = M8x1  
S = NO  
O = NC  
L = led  
100 = 100°C

**DIMENSIONS AND TECHNICAL DATA**



Operating distance $S_n$	1.5 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 10mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-25...+100°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	INOX303
Active surface	PTFE
Connection	cable 2m, TEEE/SPR, 3x0.22mm <sup>2</sup>
Maximum torque Nm	4.5

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# INDUCTIVE SENSOR - M8

**Long distance version  
Connector output  
Flush-mountable**

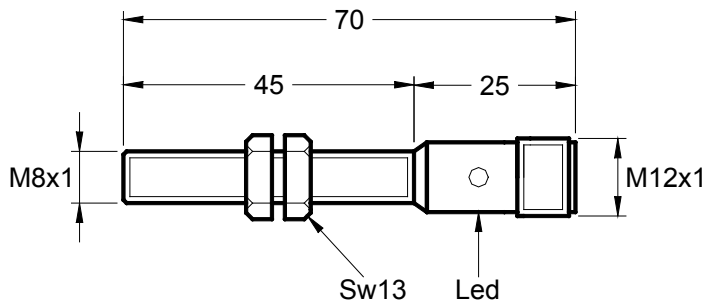
**ART. NO.**

SM-10-A11-S-Y5-D3 - SM109008  
SM-10-A11-O-Y5-D3  
SM-20-A11-S-Y5-D3

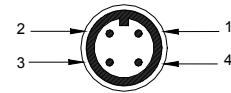
**DESCRIPTION**

10 = PNP  
20 = NPN  
A11 = M8x1  
S = NO  
O = NC  
Y5 = metal connector M12x1  
D3 = Sn 3 mm

**DIMENSIONS AND TECHNICAL DATA**



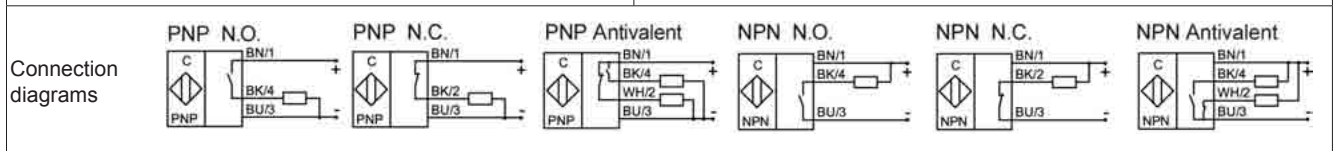
Connector Y1-Y3-Y5 for M12-M18-M30 sensors



- 1 = brown = + Vcc
- 2 = free or NC output for A version
- 3 = blue = - GND
- 4 = black = NPN-PNP, NO output or NC output for O version

Operating distance Sn	3 mm
Flush mounting	yes
Electrical version	4 pin DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 10mA
Frequency of operating cycles	max. 1 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-10...+60°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	INOX303
Active surface	PVDF
Connection	metal connector M12x1
Maximum torque Nm	4.5

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# INDUCTIVE SENSOR - M8

**Short housing  
Connector output  
Flush-mountable**

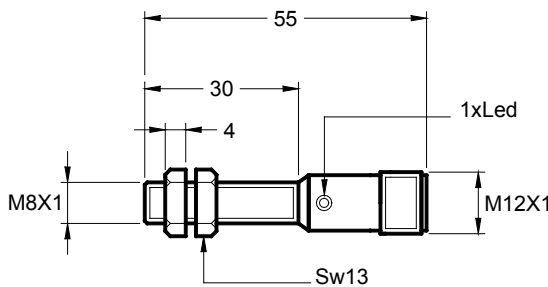
**ART. NO.**

SM-10-A11-S-Y5-L55 - SM105012  
SM-10-A11-O-Y5-L55  
SM-20-A11-S-Y5-L55

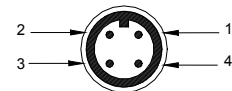
**DESCRIPTION**

10 = PNP  
20 = NPN  
A11 = M8x1  
S = NO  
O = NC  
Y5 = metal connector M12x1  
L55 = housing length

**DIMENSIONS AND TECHNICAL DATA**



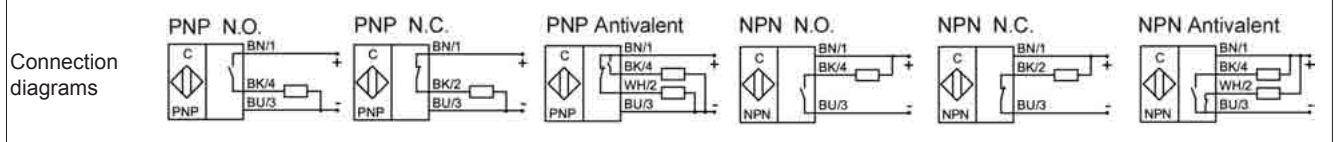
Connector Y1-Y3-Y5  
for M12-M18-M30 sensors



- 1 = brown = + Vcc
- 2 = free or NC output for A version
- 3 = blue = - GND
- 4 = black = NPN-PNP, NO output or NC output for O version

Operating distance $S_n$	2 mm
Flush mounting	yes
Electrical version	4 pin DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 10mA
Frequency of operating cycles	max. 1 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	INOX303
Active surface	PVDF
Connection	metal connector M12x1
Maximum torque Nm	4.5

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# INDUCTIVE SENSOR - M8

**Long distance version and 55 mm in length  
Connector output  
Flush-mountable**

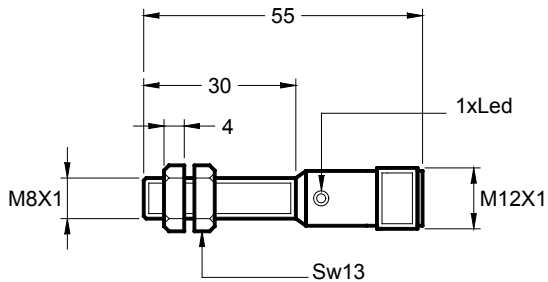
**ART. NO.**

**SM-10-A11-S-Y5-L55-D3 - SM106004**  
**SM-10-A11-O-Y5-L55-D3**  
**SM-20-A11-S-Y5-L55-D3**

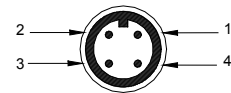
**DESCRIPTION**

**10 = PNP**  
**20 = NPN**  
**A11 = M8x1**  
**S = NO**  
**O = NC**  
**Y5 = metal connector M12x1**  
**L55 = housing length 55mm**  
**D3 = Sn 3 mm**

**DIMENSIONS AND TECHNICAL DATA**

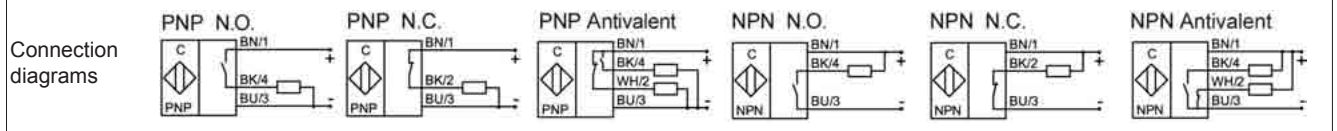


Connector Y1-Y3-Y5 for M12-M18-M30 sensors



1 = brown = + Vcc  
 2 = free or NC output for A version  
 3 = blue = - GND  
 4 = black = NPN-PNP, NO output or NC output for O version

Operating distance Sn	3 mm
Flush mounting	yes
Electrical version	4 pin DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 10mA
Frequency of operating cycles	max. 1 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-10...+60°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	INOX303
Active surface	PVDF
Connection	metal connector M12x1
Maximum torque Nm	4.5



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**INDUCTIVE SENSORS - DIAMETER M8 - NON FLUSH MOUNTABLE**

<u>TYPE</u>	<u>ART. NO.</u>	<u>PAGE</u>
SM-10-A21-S-L	SM105020	2
SM-10-A21-O-L		2
SM-20-A21-S-L	SM205023	2
SM-10-A21-S-L-D5	SM105045	3
SM-10-A21-O-L-D5		3
SM-20-A21-S-L-D5		3
SM-10-A21-S-L-100	SM105035	4
SM-10-A21-O-L-100		4
SM-20-A21-S-L-100		4
SM-10-A21-S-Y3	SM105079	5
SM-10-A21-O-Y3		5
SM-20-A21-S-Y3		5
SM-10-A21-S-Y3-D5	SM105074	6
SM-10-A21-O-Y3-D5		6
SM-20-A21-S-Y3-D5		6
SM-10-A21-S-Y7-L46-D5	SM112005	7
SM-10-A21-O-Y7-L46-D5		7
SM-20-A21-S-Y7-L46-D5		7

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# INDUCTIVE SENSOR - M8

**Standard version  
Cable output  
Non-flush mountable**

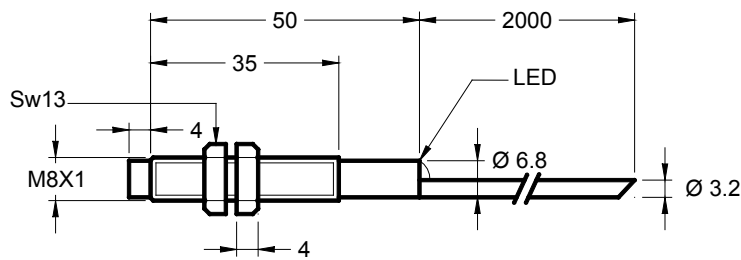
**TYPE - ART. NO.**

SM-10-A21-S-L - SM105020  
SM-10-A21-O-L  
SM-20-A21-S-L - SM205023

**DESCRIPTION**

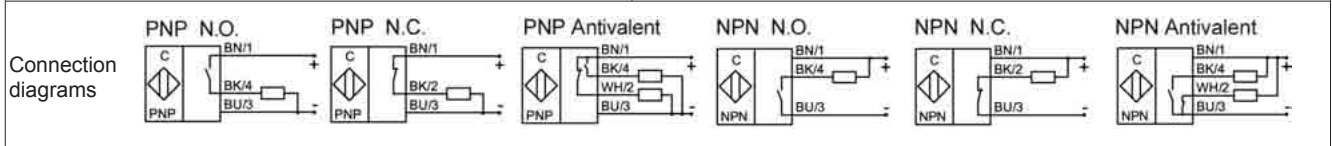
10 = PNP  
20 = NPN  
A21 = M8x1  
S = normally open  
O = normally closed  
L = led

**DIMENSIONS AND TECHNICAL DATA**



Operating distance Sn	3 mm
Flush mounting	no
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 10mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	INOX303
Active surface material	PA
Connection	cable 2m, PVC, 3x0.14mm <sup>2</sup>
Maximum torque Nm	4.5

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# INDUCTIVE SENSOR - M8

**Long distance version  
Cable output  
Non-flush mountable**

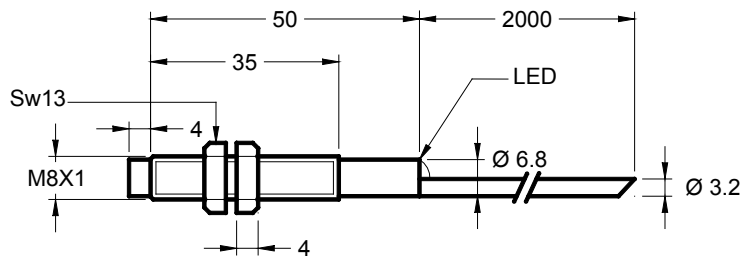
**TYPE - ART. NO.**

SM-10-A21-S-L-D5 - SM105045  
SM-10-A21-O-L-D5  
SM-20-A21-S-L-D5

**DESCRIPTION**

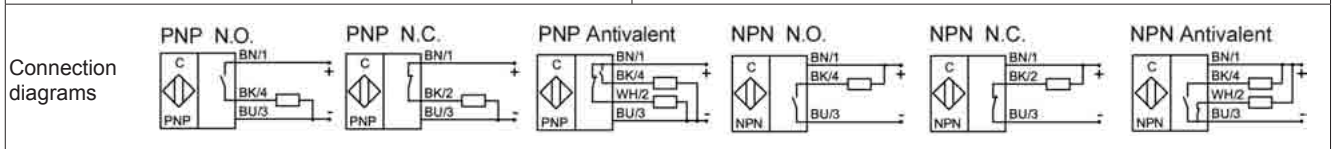
10 = PNP  
20 = NPN  
A21 = M8x1  
S = normally open  
O = normally closed  
L = led  
D5 = Sn 5 mm

**DIMENSIONS AND TECHNICAL DATA**



Operating distance Sn	5 mm
Flush mounting	no
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 10mA
Frequency of operating cycles	max. 500 Hz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-10...+60°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	INOX303
Active surface material	PA
Connection	cable 2m, PVC, 3x0.14mm <sup>2</sup>
Maximum torque Nm	4.5

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# INDUCTIVE SENSOR - M8

Suitable for high ambient temperature  
Cable output  
Non-flush mountable

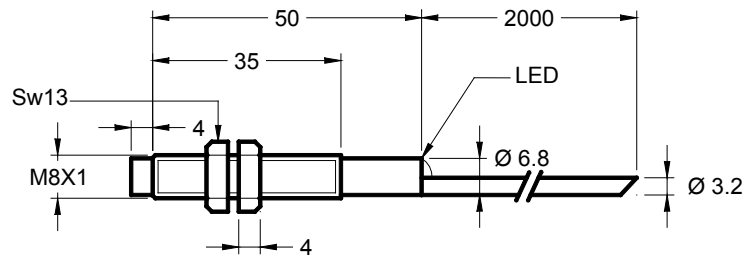
**TYPE - ART. NO.**

SM-10-A21-S-L-100 - SM105035  
SM-10-A21-O-L-100  
SM-20-A21-S-L-100

**DESCRIPTION**

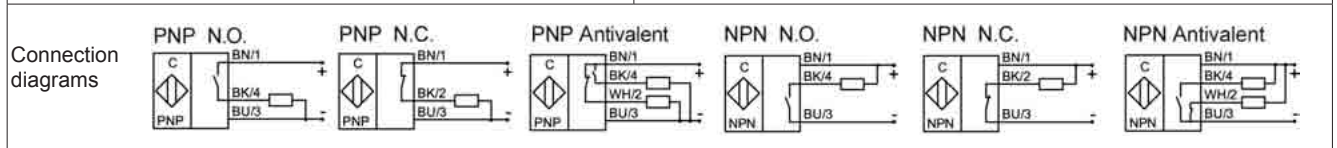
10 = PNP  
20 = NPN  
A21 = M8x1  
S = normally open  
O = normally closed  
L = led  
100 = 100°C

**DIMENSIONS AND TECHNICAL DATA**



Operating distance $S_n$	2 mm
Flush mounting	no
Electrical version	3 wires DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 10mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-25...+100°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	INOX303
Active surface material	PTFE
Connection	cable 2m, TEE/SPR, 3x0.22mm <sup>2</sup>
Maximum torque Nm	4.5

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# INDUCTIVE SENSOR - M8

**Standard version  
Connector output  
Non-flush mountable**

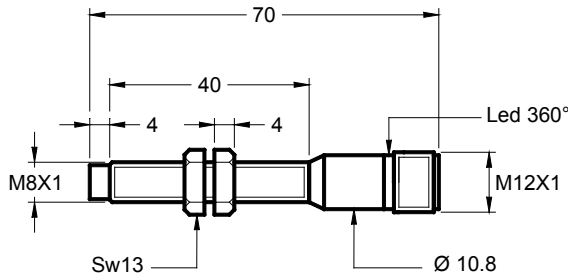
**TYPE - ART. NO.**

SM-10-A21-S-Y3 - SM105079  
SM-10-A21-O-Y3  
SM-20-A21-S-Y3

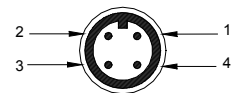
**DESCRIPTION**

10 = PNP  
20 = NPN  
A21 = M8x1  
S = normally open  
O = normally closed  
Y3 = plastic connector M12x1

**DIMENSIONS AND TECHNICAL DATA**



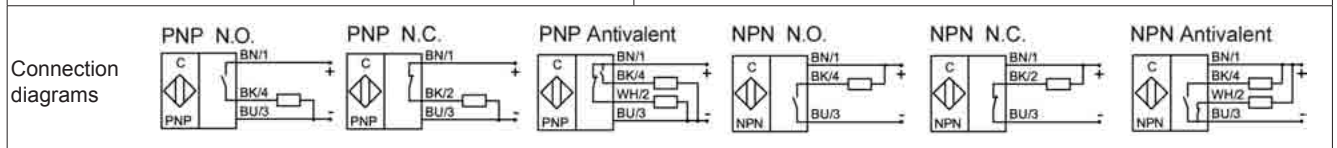
Connector Y1-Y3-Y5  
for M12-M18-M30 sensors



1 = brown = + Vcc  
2 = free or NC output for A version  
3 = blue = - GND  
4 = black = NPN-PNP, NO output  
or NC output for O version

Operating distance Sn	3 mm
Flush mounting	no
Electrical version	4 pin DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 10mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	INOX303
Active surface material	PA
Connection	plastic connector M12x1
Maximum torque Nm	4.5

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# INDUCTIVE SENSOR - M8

**Long distance version  
Connector output  
Non-flush mountable**

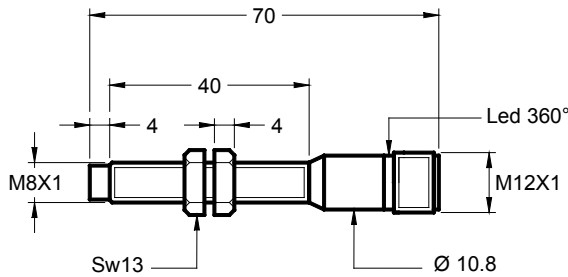
**TYPE - ART. NO.**

SM-10-A21-S-Y3-D5 - SM105074  
SM-10-A21-O-Y3-D5  
SM-20-A21-S-Y3-D5

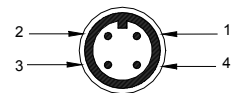
**DESCRIPTION**

10 = PNP  
20 = NPN  
A21 = M8x1  
S = normally open  
O = normally closed  
Y3 = plastic connector M12x1  
D5 = Sn 5 mm

**DIMENSIONS AND TECHNICAL DATA**



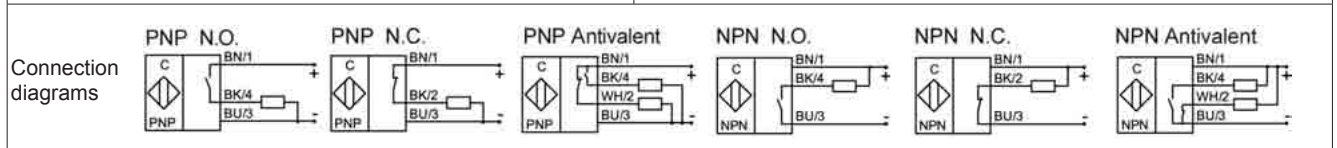
Connector Y1-Y3-Y5  
for M12-M18-M30 sensors



1 = brown = + Vcc  
2 = free or NC output for A version  
3 = blue = - GND  
4 = black = NPN-PNP, NO output  
or NC output for O version

Operating distance Sn	5 mm
Flush mounting	no
Electrical version	4 pin DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 10mA
Frequency of operating cycles	max. 500 Hz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-10...+60°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	INOX303
Active surface material	PA
Connection	plastic connector M12x1
Maximum torque Nm	4.5

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# INDUCTIVE SENSOR - M8

**Long distance version e L 46 mm  
Connector output  
Non-flush mountable**

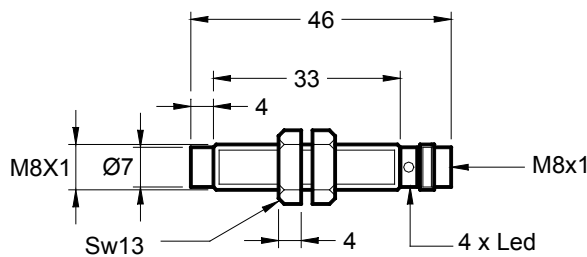
**TYPE - ART. NO.**

SM-10-A21-S-Y7-L46-D5 - SM112005  
SM-10-A21-O-Y7-L46-D5  
SM-20-A21-S-Y7-L46-D5

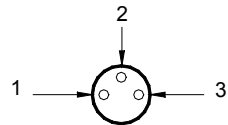
**DESCRIPTION**

10 = PNP  
20 = NPN  
A21 = M8x1  
S = normally open  
O = normally closed  
Y7 = metal connector M8x1  
L46 = housing length 46 mm  
D5 = Sn 5 mm

**DIMENSIONS AND TECHNICAL DATA**



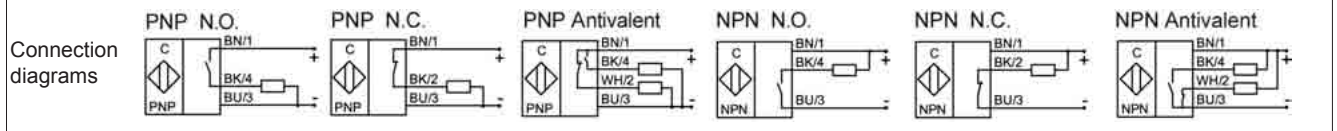
Connector Y7 for sensors 6,5-M8



1= Brown = +  
2= Black= PNP-NPN output  
3= Blue = -

Operating distance Sn	5 mm
Flush mounting	no
Electrical version	3 pin DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 10mA
Frequency of operating cycles	max. 500 Hz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Permitted ambient temperature	-10...+60°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	INOX303
Active surface material	PA
Connection	metal connector M8x1
Maximum torque Nm	4.5

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**INDUCTIVE SENSORS - DIAMETER M12 - FLUSH MOUNTABLE**

<u>TYPE</u>	<u>ART. NO.</u>	<u>PAGE</u>
SM-10-A12-S-L	SM105002	2
SM-10-A12-O-L		2
SM-20-A12-S-L	SM205007	2
SM-20-A12-O-L	SM206005	2
SM-10-A12-S-L-5M	SM105049	2
SM-10-A12-S-L-D3.6	SM105007	3
SM-10-A12-O-L-D3.6		3
SM-20-A12-S-L-D3.6	SM205014	3
SM-10-A12-S-L-L35	SM105073	4
SM-10-A12-O-L-L35		4
SM-20-A12-S-L-L35		4
SM-20-A12-O-L-L35		4
SM-10-A12-S-L-L35-D3.6	SM105066	5
SM-10-A12-O-L-L35-D3.6		5
SM-20-A12-S-L-L35-D3.6		5
SM-10-A12-S-L-D6	SM105044	6
SM-10-A12-O-L-D6		6
SM-20-A12-S-L-D6		6
SM-10-A12-S-L-100	SM105014	7
SM-10-A12-O-L-100		7
SM-20-A12-S-L-100	SM205022	7
SM-10-A12-S-125		8
SM-10-A12-O-125		8
SM-20-A12-S-125		8
SM-10-A12-S-Y5	SM105003	9
SM-10-A12-O-Y5	SM105067	9
SM-20-A12-S-Y5	SM205016	9
SM-20-A12-O-Y5		9
SM-10-A12-S-Y5-D3.6	SM105048	10
SM-10-A12-O-Y5-D3.6	SM105060	10
SM-20-A12-S-Y5-D3.6	SM206003	10
SM-10-A12-A-Y5-D6	SM109006	11
SM-20-A12-A-Y5-D6		11
SM-10-A12-S-Y5-L45		12
SM-10-A12-O-Y5-L45		12
SM-20-A12-S-Y5-L45		12
SM-20-A12-O-Y5-L45		12
SM-10-A12-S-Y5-L58	SM105009	13
SM-10-A12-O-Y5-L58	SM105013	13
SM-20-A12-S-Y5-L58		13
SM-20-A12-O-Y5-L58		13
SM-10-A12-S-Y5-L70	SM111002	14
SM-10-A12-A-Y3-PTFE-D3.6	SM111004	15
SM-10-A12-S-Y7	SM106021	16
SM-10-A12-O-Y7		16
SM-20-A12-S-Y7		16
SM-20-A12-O-Y7		16

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# INDUCTIVE SENSOR - M12

**Standard version  
Cable output  
Flush mountable**

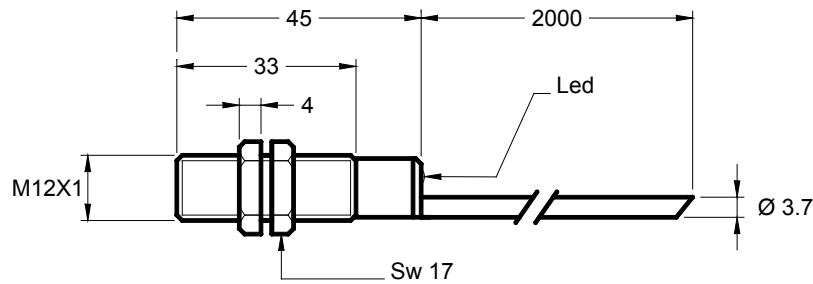
**TYPE - ART. NO.**

SM-10-A12-S-L - SM105002  
 SM-10-A12-O-L  
 SM-20-A12-S-L - SM205007  
 SM-20-A12-O-L - SM206005  
 SM-10-A12-S-L-5M - SM105049

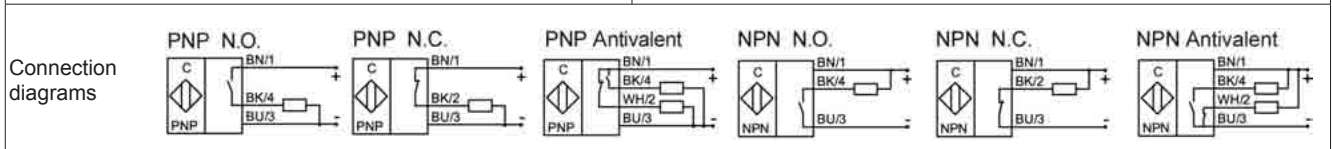
**DESCRIPTION**

10 = PNP  
 20 = NPN  
 A12 = M12x1  
 S = normally open  
 O = normally closed  
 L = led  
 5M = 5 m cable, on request

**DIMENSIONS AND TECHNICAL DATA**



Operating distance $S_n$	2 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PVDF
Connection	cable 2m (on request 5m), PVC, 3x0.25mm <sup>2</sup>
Maximum torque Nm	16



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# INDUCTIVE SENSOR - M12

**Long distance version  
Cable output  
Flush mountable**

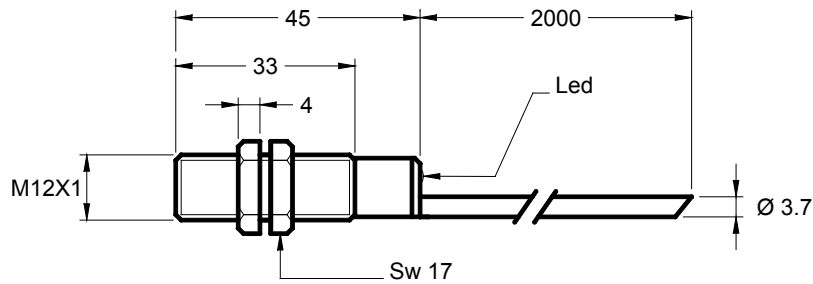
**TYPE - ART. NO.**

SM-10-A12-S-L-D3.6 - SM105007  
 SM-10-A12-O-L-D3.6  
 SM-20-A12-S-L-D3.6 - SM205014

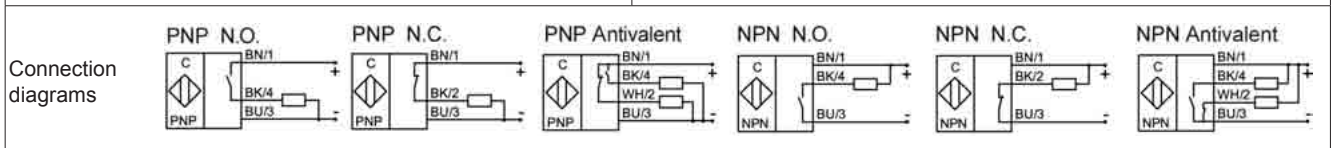
**DESCRIPTION**

10 = PNP  
 20 = NPN  
 A12 = M12x1  
 S = normally open  
 O = normally closed  
 L = led  
 D3.6 = Sn 3.6 mm

**DIMENSIONS AND TECHNICAL DATA**



Operating distance Sn	3.6 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-10...+60°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PVDF
Connection	cable 2m, PVC, 3x0.25mm <sup>2</sup>
Maximum torque Nm	16



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# INDUCTIVE SENSOR - M12

**Special version short housing  
Cable output  
Flush mountable**

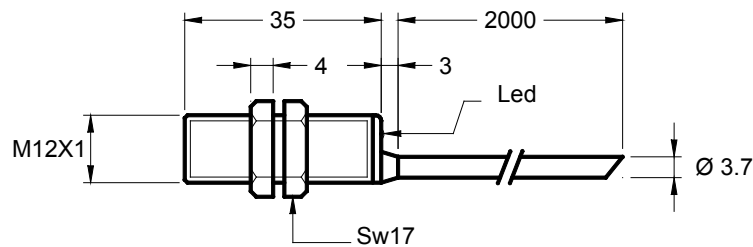
**TYPE - ART. NO.**

SM-10-A12-S-L-L35 - SM105073  
 SM-10-A12-O-L-L35  
 SM-20-A12-S-L-L35  
 SM-20-A12-O-L-L35

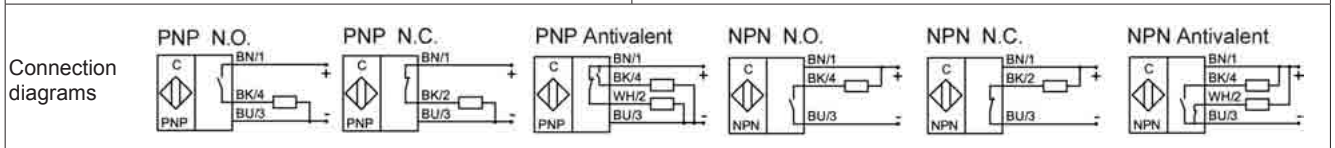
**DESCRIPTION**

10 = PNP  
 20 = NPN  
 A12 = M12x1  
 S = normally open  
 O = normally closed  
 L = led  
 L35 = length 35 mm

**DIMENSIONS AND TECHNICAL DATA**



Operating distance Sn	2 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PVDF
Connection	cable 2m, PVC, 3x0.25mm <sup>2</sup>
Maximum torque Nm	16



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# INDUCTIVE SENSOR - M12

**Special version short housing  
Cable output  
Flush mountable**

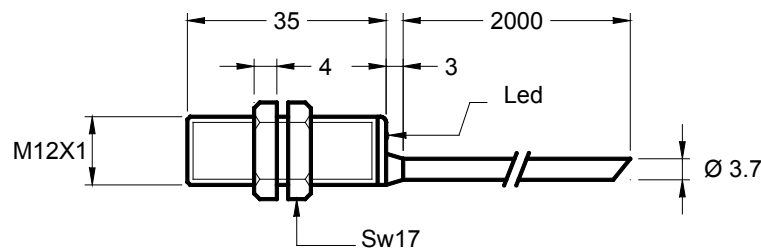
**TYPE - ART. NO.**

SM-10-A12-S-L-L35-D3.6 - SM105066  
 SM-10-A12-O-L-L35-D3.6  
 SM-20-A12-S-L-L35-D3.6

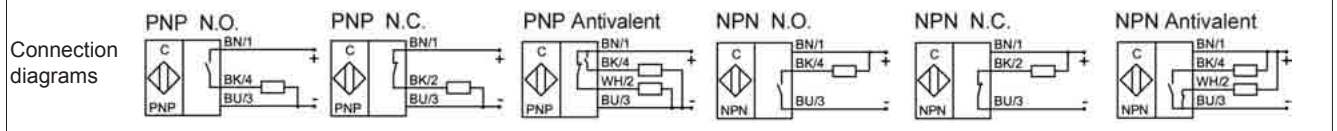
**DESCRIPTION**

10 = PNP  
 20 = NPN  
 A12 = M12x1  
 S = normally open  
 O = normally closed  
 L = led  
 L35 = length 35 mm  
 D3.6 = Sn 3.6mm

**DIMENSIONS AND TECHNICAL DATA**



Operating distance Sn	3.6 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-10...+60°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	niched brass
Active surface material	PVDF
Connection	cable 2m, PVC, 3x0.25mm <sup>2</sup>
Maximum torque Nm	16



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# INDUCTIVE SENSOR - M12

**Long distance version  
Cable output  
Flush mountable**

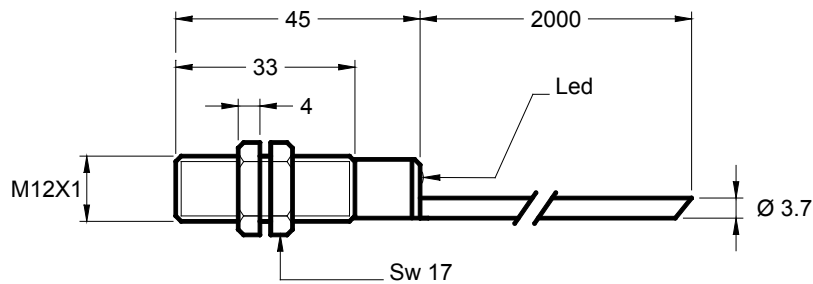
**TYPE - ART. NO.**

SM-10-A12-S-L-D6 - SM105044  
SM-10-A12-O-L-D6  
SM-20-A12-S-L-D6

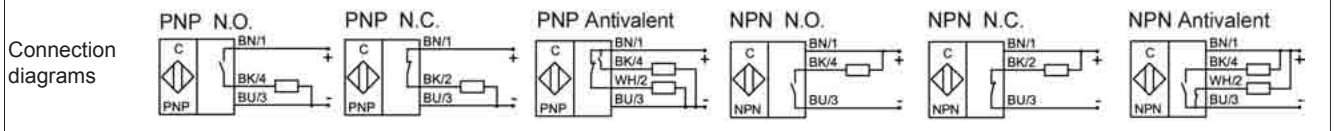
**DESCRIPTION**

10 = PNP  
20 = NPN  
A12 = M12x1  
S = normally open  
O = normally closed  
L = led  
D6 = Sn 6 mm

**DIMENSIONS AND TECHNICAL DATA**



Operating distance Sn	6 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 800 Hz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-10...+60°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PVDF
Connection	cable 2m, PVC, 3x0.25mm <sup>2</sup>
Maximum torque Nm	16



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# INDUCTIVE SENSOR - M12

Suitable for high ambient temperature +100°C  
Cable output  
Flush mountable

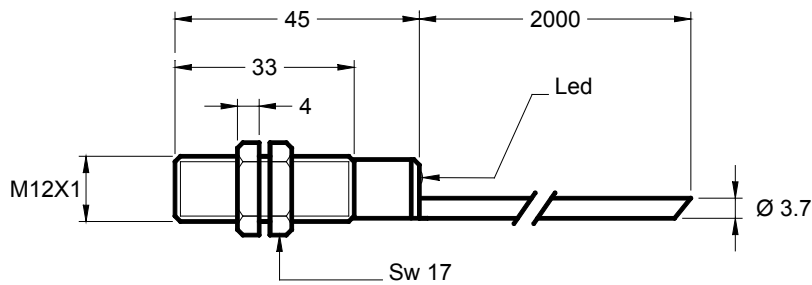
**TYPE - ART. NO.**

SM-10-A12-S-L-100 - SM105014  
SM-10-A12-O-L-100  
SM-20-A12-S-L-100 - SM205022

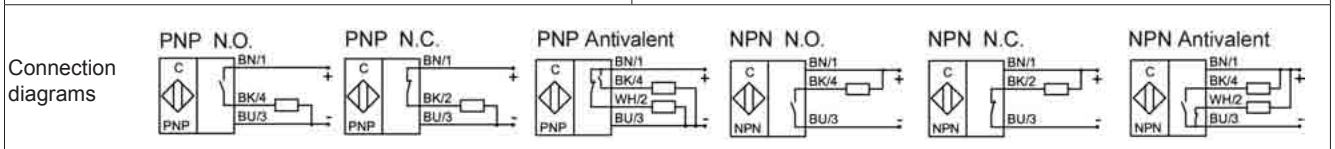
**DESCRIPTION**

10 = PNP  
20 = NPN  
A12 = M12x1  
S = normally open  
O = normally closed  
L = led  
100 = 100°C

**DIMENSIONS AND TECHNICAL DATA**



Operating distance Sn	2 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-25...+100°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PTFE
Connection	cable 2m, TEEE/SPR, 3x0.22mm <sup>2</sup>
Maximum torque Nm	16



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# INDUCTIVE SENSOR - M12

Suitable for high ambient temperature +125°C  
Cable output  
Flush mountable

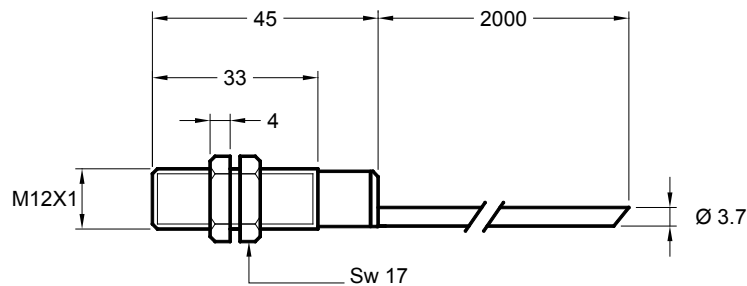
**TYPE - ART. NO.**

SM-10-A12-S-125  
SM-10-A12-O-125  
SM-20-A12-S-125

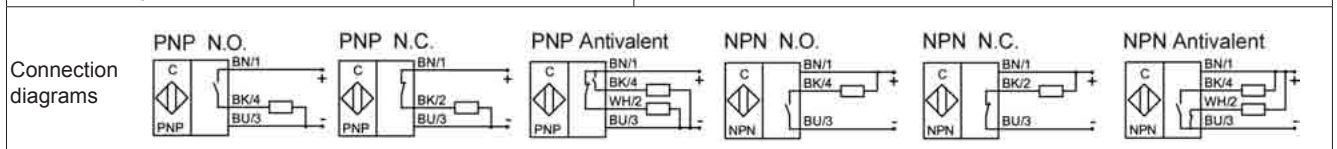
**DESCRIPTION**

10 = PNP  
20 = NPN  
A12 = M12x1  
S = normally open  
O = normally closed  
125 = 125°C

**DIMENSIONS AND TECHNICAL DATA**



Operating distance $S_n$	2 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-25...+125°C
Temperature drift	< 10 %
Led display	-
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PTFE
Connection	cable 2m, TEEE/SPR, 3x0.22mm <sup>2</sup>
Maximum torque Nm	16



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# INDUCTIVE SENSOR - M12

**Standard version  
Connector output  
Flush mountable**

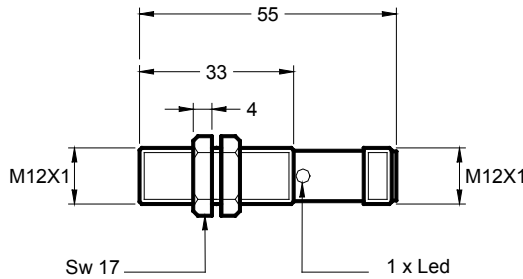
**TYPE - ART. NO.**

SM-10-A12-S-Y5 - SM105003  
 SM-10-A12-O-Y5 - SM105067  
 SM-20-A12-S-Y5 - SM205016  
 SM-20-A12-O-Y5

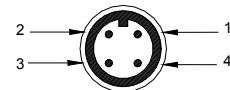
**DESCRIPTION**

10 = PNP  
 20 = NPN  
 A12 = M12x1  
 S = normally open  
 O = normally closed  
 Y5 = metal connector M12x1

**DIMENSIONS AND TECHNICAL DATA**

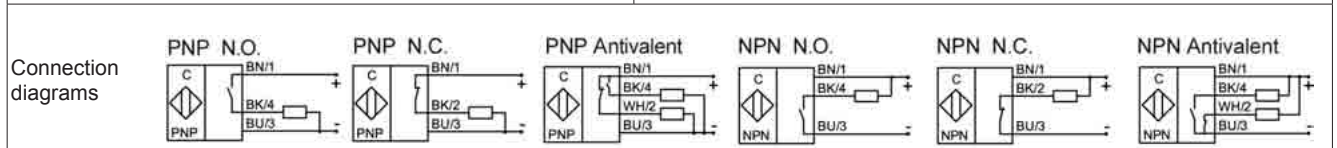


Connector Y1-Y3-Y5 for M12-M18-M30 sensors



- 1 = brown = + Vcc
- 2 = free or NC output for A version
- 3 = blue = - GND
- 4 = black = NPN-PNP, NO output or NC output for O version

Operating distance Sn	2 mm
Flush mounting	yes
Electrical version	4 pin DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PVDF
Connection	metal connector M12x1
Maximum torque Nm	16



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# INDUCTIVE SENSOR - M12

**Special version  
Connector output  
Flush mountable**

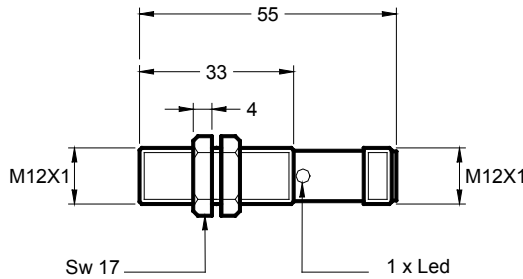
**TYPE - ART. NO.**

SM-10-A12-S-Y5-D3.6 - SM105048  
 SM-10-A12-O-Y5-D3.6 - SM105060  
 SM-20-A12-S-Y5-D3.6 - SM206003

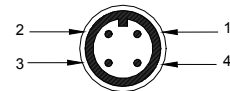
**DESCRIPTION**

10 = PNP  
 20 = NPN  
 A12 = M12x1  
 S = normally open  
 O = normally closed  
 Y5 = metal connector M12x1  
 D3.6 = Sn 3.6 mm

**DIMENSIONS AND TECHNICAL DATA**

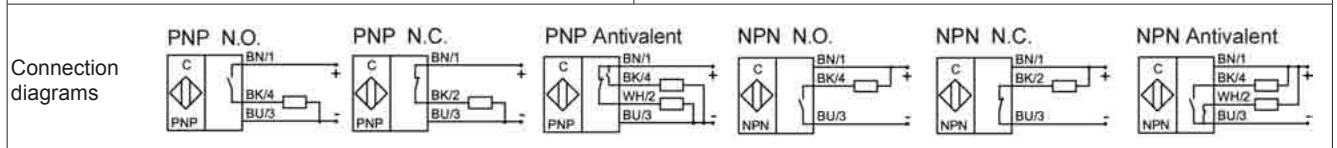


Connector Y1-Y3-Y5  
for M12-M18-M30 sensors



1 = brown = + Vcc  
 2 = free or NC output for A version  
 3 = blue = - GND  
 4 = black = NPN-PNP, NO output  
 or NC output for O version

Operating distance Sn	3.6 mm
Flush mounting	yes
Electrical version	4 pin DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-10...+60°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PVDF
Connection	metal connector M12x1
Maximum torque Nm	16



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# INDUCTIVE SENSOR - M12

**Long distance version  
Connector output  
Flush mountable**

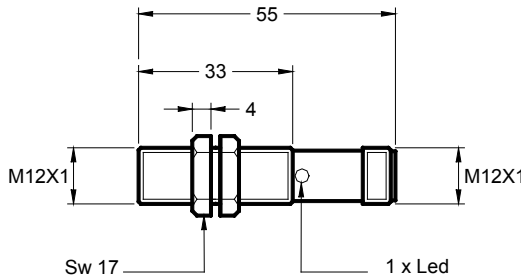
**TYPE - ART. NO.**

SM-10-A12-A-Y5-D6 - SM109006  
SM-20-A12-A-Y5-D6

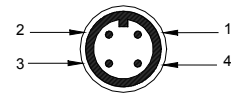
**DESCRIPTION**

10 = PNP  
20 = NPN  
A12 = M12x1  
A = antivalent  
Y5 = metal connector M12x1  
D6 = Sn 6 mm

**DIMENSIONS AND TECHNICAL DATA**

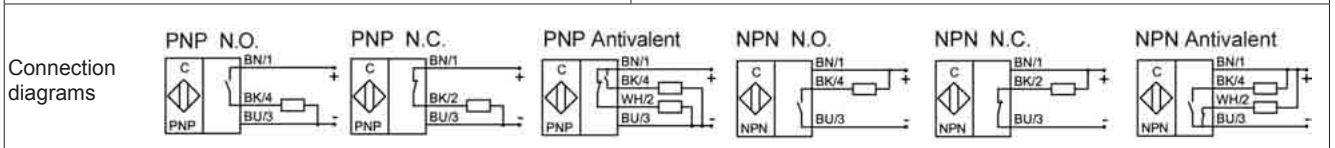


Connector Y1-Y3-Y5  
for M12-M18-M30 sensors



1 = brown = + Vcc  
2 = free or NC output for A version  
3 = blue = - GND  
4 = black = NPN-PNP, NO output  
or NC output for O version

Operating distance Sn	6 mm
Flush mounting	yes
Electrical version	4 pin DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 800 Hz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-10...+60°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PVDF
Connection	metal connector M12x1
Maximum torque Nm	16



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# INDUCTIVE SENSOR - M12

**Special version short housing  
Connector output  
Flush mountable**

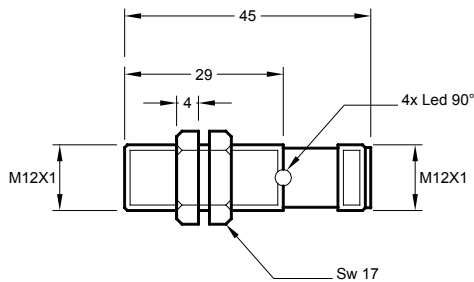
**TYPE - ART. NO.**

- SM-10-A12-S-Y5-L45
- SM-10-A12-O-Y5-L45
- SM-20-A12-S-Y5-L45
- SM-20-A12-O-Y5-L45

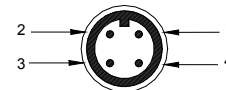
**DESCRIPTION**

- 10 = PNP
- 20 = NPN
- A12 = M12x1
- S = normally open
- O = normally closed
- Y5 = metal connector M12x1
- L45 = length 45 mm

**DIMENSIONS AND TECHNICAL DATA**

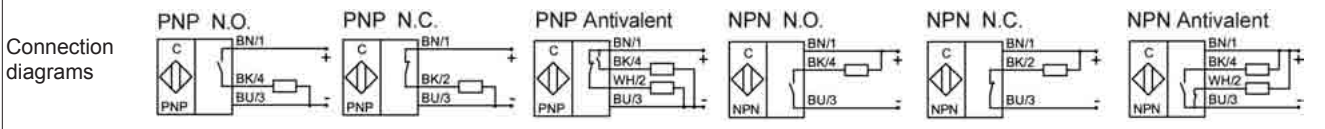


Connector Y1-Y3-Y5 for M12-M18-M30 sensors



- 1 = brown = + Vcc
- 2 = free or NC output for A version
- 3 = blue = - GND
- 4 = black = NPN-PNP, NO output or NC output for O version

Operating distance Sn	2 mm
Flush mounting	yes
Electrical version	4 pin DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PVDF
Connection	metal connector M12x1
Maximum torque Nm	16



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# INDUCTIVE SENSOR - M12

**Special version long housing  
Connector output  
Flush mountable**

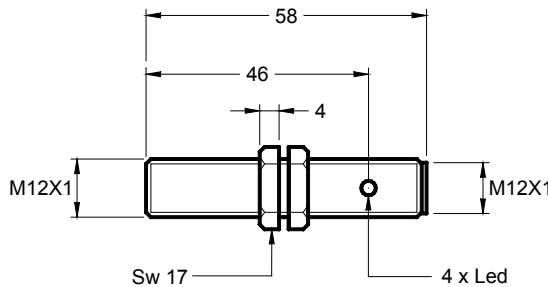
**TYPE - ART. NO.**

SM-10-A12-S-Y5-L58 - SM105009  
 SM-10-A12-O-Y5-L58 - SM105013  
 SM-20-A12-S-Y5-L58  
 SM-20-A12-O-Y5-L58

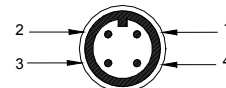
**DESCRIPTION**

10 = PNP  
 20 = NPN  
 A12 = M12x1  
 S = normally open  
 O = normally closed  
 Y5 = metal connector M12x1  
 L58 = length 58 mm

**DIMENSIONS AND TECHNICAL DATA**

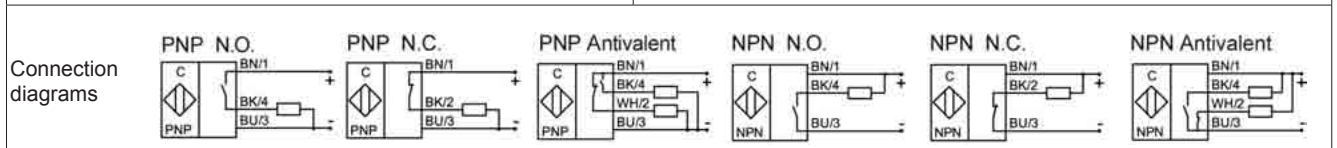


Connector Y1-Y3-Y5 for M12-M18-M30 sensors



1 = brown = + Vcc  
 2 = free or NC output for A version  
 3 = blue = - GND  
 4 = black = NPN-PNP, NO output or NC output for O version

Operating distance Sn	2 mm
Flush mounting	yes
Electrical version	4 pin DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PVDF
Connection	metal connector M12x1
Maximum torque Nm	16



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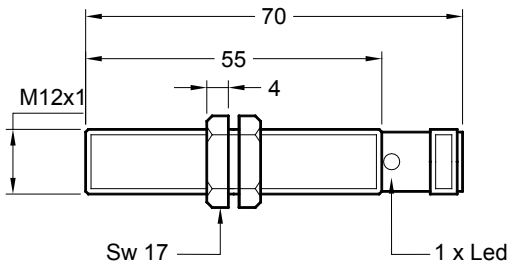
# INDUCTIVE SENSOR - M12

**Special version long housing  
Connector output  
Flush mountable**

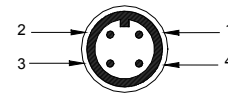
**TYPE - ART. NO.**  
SM-10-A12-S-Y5-L70 - SM111002

**DESCRIPTION**  
10 = PNP  
A12 = M12x1  
S = normally open  
Y5 = metal connector M12x1  
L70 = length 70 mm

## DIMENSIONS AND TECHNICAL DATA

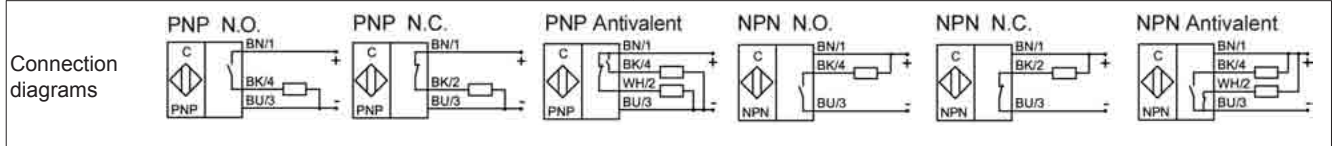


Connector Y1-Y3-Y5  
for M12-M18-M30 sensors



1 = brown = + Vcc  
2 = free or NC output for A version  
3 = blue = - GND  
4 = black = NPN-PNP, NO output  
or NC output for O version

Operating distance $S_n$	2 mm
Flush mounting	yes
Electrical version	4 pin DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PVDF
Connection	metal connector M12x1
Maximum torque Nm	16



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# INDUCTIVE SENSOR - M12

**Special version e custodia in PTFE  
Connector output  
Flush mountable**

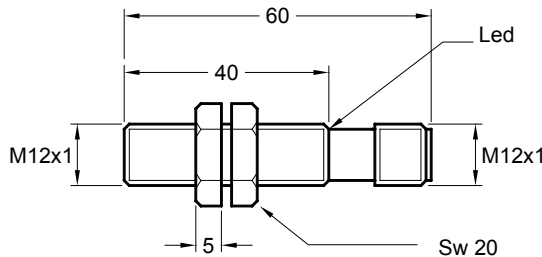
**TYPE - ART. NO.**

**SM-10-A12-A-Y3-PTFE-D3.6 - SM111004**

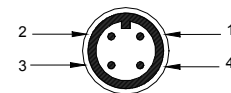
**DESCRIPTION**

**10 = PNP**  
**A12 = M12x1**  
**A = antivalent**  
**Y3 = plastic connector M12x1**  
**PTFE = housing material**  
**D3.6 = Sn 3.6mm**

**DIMENSIONS AND TECHNICAL DATA**

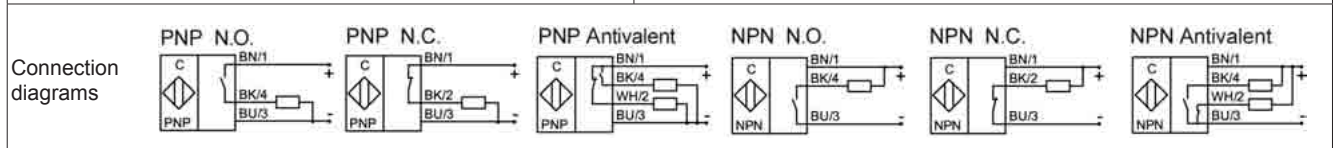


Connector Y1-Y3-Y5  
for M12-M18-M30 sensors



1 = brown = + Vcc  
 2 = free or NC output for A version  
 3 = blue = - GND  
 4 = black = NPN-PNP, NO output  
 or NC output for O version

Operating distance Sn	3.6 mm
Flush mounting	yes
Electrical version	4 pin DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-25...+100°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 68 with suitable female connector
Housing material	PTFE
Active surface material	PTFE
Connection	plastic connector M12x1
Maximum torque Nm	1



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# INDUCTIVE SENSOR - M12

**Special version  
Connector output M8x1  
Flush mountable**

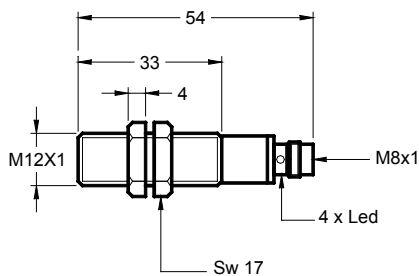
**TYPE - ART. NO.**

SM-10-A12-S-Y7 - SM106021  
SM-10-A12-O-Y7  
SM-20-A12-S-Y7  
SM-20-A12-O-Y7

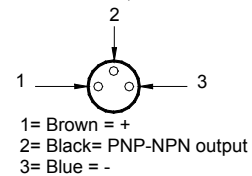
**DESCRIPTION**

10 = PNP  
20 = NPN  
A12 = M12x1  
S = normally open  
O = normally closed  
Y7 = metal connector M8x1

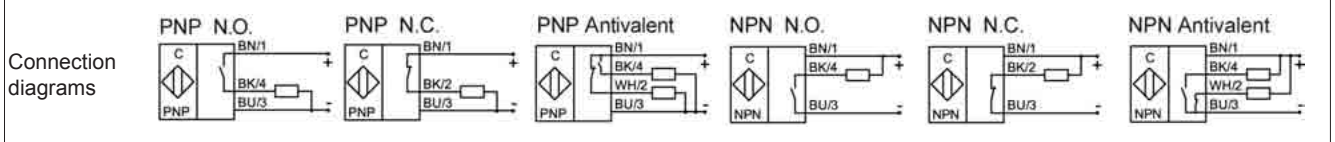
**DIMENSIONS AND TECHNICAL DATA**



Connector Y7  
for sensors 6,5-M8



Operating distance $S_n$	2 mm
Flush mounting	yes
Electrical version	3 pin DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PVDF
Connection	metal connector M8x1
Maximum torque Nm	16



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**INDUCTIVE SENSORS - DIAMETER M12 - NON-FLUSH MOUNTABLE**

<u>TYPE</u>	<u>ART. NO.</u>	<u>PAGE</u>
SM-10-A22-S-L	SM105064	2
SM-10-A22-O-L	SM112001	2
SM-20-A22-S-L	SM205024	2
SM-20-A22-O-L		2
SM-10-A22-S-L-L40		3
SM-10-A22-O-L-L40		3
SM-20-A22-S-L-L40		3
SM-20-A22-O-L-L40		3
SM-10-A22-S-L-D10	SM106002	4
SM-10-A22-O-L-D10		4
SM-20-A22-S-L-D10		4
SM-10-A22-S-L-100	SM105094	5
SM-10-A22-O-L-100		5
SM-20-A22-S-L-100	SM205018	5
SM-10-A22-S-125		6
SM-10-A22-O-125		6
SM-20-A22-S-125		6
SM-10-A22-S-PEEK-125	SM107005	7
SM-10-A22-O-PEEK-125		7
SM-20-A22-S-PEEK-125		7
SM-10-A22-S-Y5	SM105034	8
SM-10-A22-O-Y5	SM105055	8
SM-20-A22-S-Y5		8
SM-20-A22-O-Y5		8
SM-10-A22-S-Y5-L50	SM106003	9
SM-10-A22-O-Y5-L50	SM105084	9
SM-20-A22-S-Y5-L50	SM206004	9
SM-20-A22-O-Y5-L50		9
SM-10-A22-A-Y5-D10	SM105016	10

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# INDUCTIVE SENSOR - M12

**Standard version  
Cable output  
Non-flush mountable**

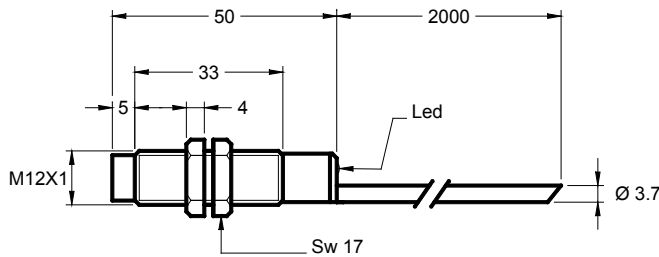
**TYPE - ART. NO.**

SM-10-A22-S-L - SM105064  
 SM-10-A22-O-L - SM112001  
 SM-20-A22-S-L - SM205024  
 SM-20-A22-O-L

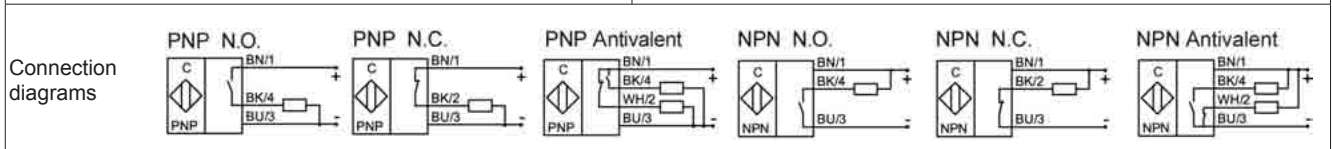
**DESCRIPTION**

10 = PNP  
 20 = NPN  
 A22 = M12x1  
 S = normally open  
 O = normally closed  
 L = led

**DIMENSIONS AND TECHNICAL DATA**



Operating distance $S_n$	4 mm
Flush mounting	no
Electrical version	3 wires DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PVDF
Connection	cable 2m, PVC, 3x0.25mm <sup>2</sup>
Maximum torque Nm	16



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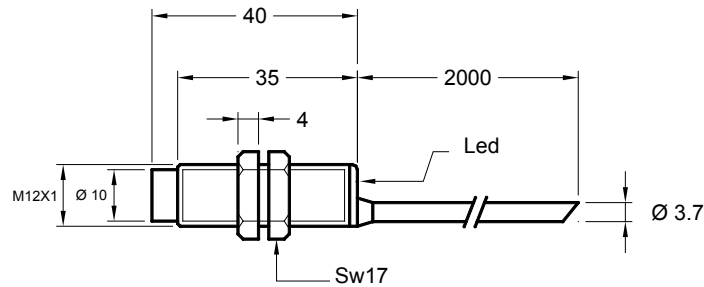
# INDUCTIVE SENSOR - M12

**Short housing  
Cable output  
Non-flush mountable**

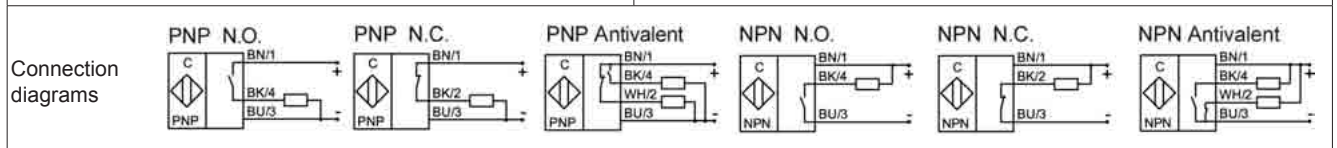
**TYPE - ART. NO.**  
 SM-10-A22-S-L-L40  
 SM-10-A22-O-L-L40  
 SM-20-A22-S-L-L40  
 SM-20-A22-O-L-L40

**DESCRIPTION**  
 10 = PNP  
 20 = NPN  
 A22 = M12x1  
 S = normally open  
 O = normally closed  
 L = led  
 L40 = 40mm in length

## DIMENSIONS AND TECHNICAL DATA



Operating distance $S_n$	4 mm
Flush mounting	no
Electrical version	3 wires DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	$< 10$ %
Repeat accuracy	$< 1$ %
Temperatura permessa	-20...+70°C
Temperature drift	$< 10$ %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PVDF
Connection	cable 2m, PVC, 3x0.25mm <sup>2</sup>
Maximum torque Nm	16



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# INDUCTIVE SENSOR - M12

**Special version long distance  
Cable output  
Non-flush mountable**

**TYPE - ART. NO.**

SM-10-A22-S-L-D10 - SM106002

SM-10-A22-O-L-D10

SM-20-A22-S-L-D10

**DESCRIPTION**

10 = PNP

20 = NPN

A22 = M12x1

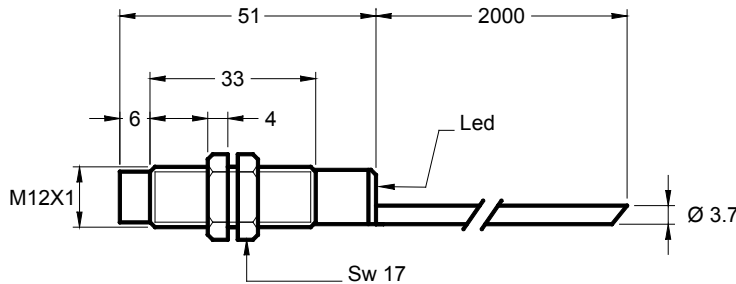
S = normally open

O = normally closed

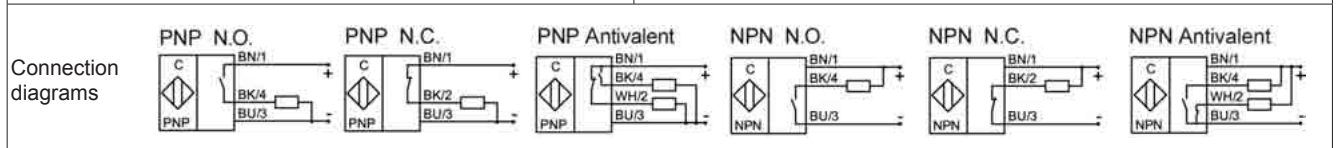
L = led

D10 = Sn 10mm

**DIMENSIONS AND TECHNICAL DATA**



Operating distance Sn	10 mm
Flush mounting	no
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 400 Hz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-10...+60°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PVDF
Connection	cable 2m, PVC, 3x0.25mm <sup>2</sup>
Maximum torque Nm	16



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# INDUCTIVE SENSOR - M12

Suitable for ambient with high temperature  
Cable output  
Non-flush mountable

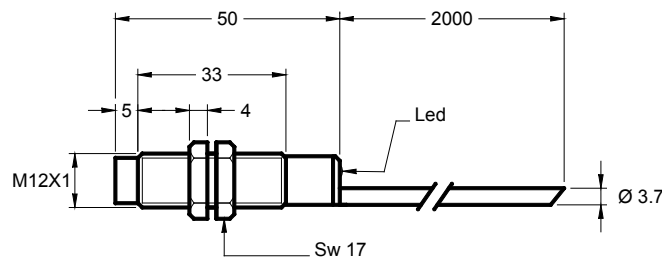
**TYPE - ART. NO.**

SM-10-A22-S-L-100 - SM105094  
SM-10-A22-O-L-100  
SM-20-A22-S-L-100 - SM205018

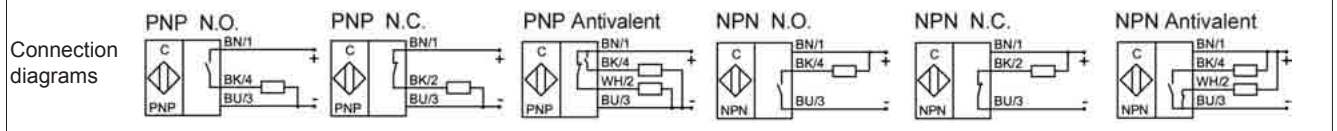
**DESCRIPTION**

10 = PNP  
20 = NPN  
A22 = M12x1  
S = normally open  
O = normally closed  
L = led  
100 = 100°C

**DIMENSIONS AND TECHNICAL DATA**



Operating distance $S_n$	4 mm
Flush mounting	no
Electrical version	3 wires DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-25...+100°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PVDF
Connection	cable 2m, TEEE/SPR, 3x0.22mm <sup>2</sup>
Maximum torque Nm	16



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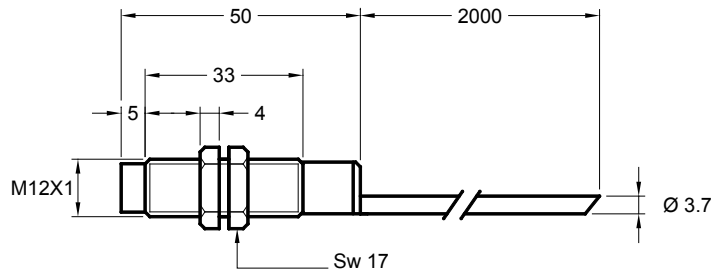
# INDUCTIVE SENSOR - M12

Suitable for ambient with high temperature up to +125°C  
Cable output  
Non-flush mountable

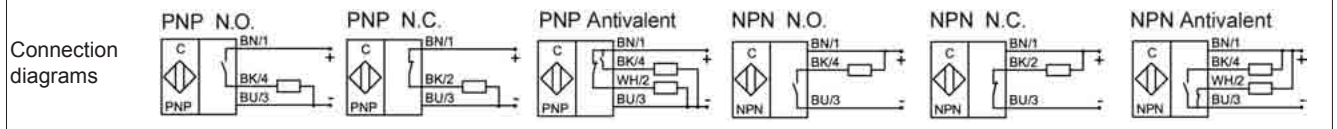
**TYPE - ART. NO.**  
SM-10-A22-S-125  
SM-10-A22-O-125  
SM-20-A22-S-125

**DESCRIPTION**  
10 = PNP  
20 = NPN  
A22 = M12x1  
S = normally open  
O = normally closed  
L = led  
125 = 125°C

## DIMENSIONS AND TECHNICAL DATA



Operating distance $S_n$	4 mm
Flush mounting	no
Electrical version	3 wires DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	$< 10$ %
Repeat accuracy	$< 1$ %
Temperatura permessa	-25...+125°C
Temperature drift	$< 10$ %
Led display	-
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	niched brass
Active surface material	PVDF
Connection	cable 2m, TEEE/SPR, 3x0.22mm <sup>2</sup>
Maximum torque Nm	16



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# INDUCTIVE SENSOR - M12

Suitable for ambient with high temperature up to +125°C  
Cable output  
Non-flush mountable

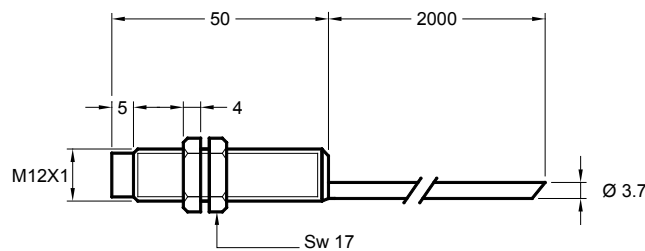
**TYPE - ART. NO.**

- SM-10-A22-S-PEEK-125
- SM-10-A22-O-PEEK-125
- SM-20-A22-S-PEEK-125

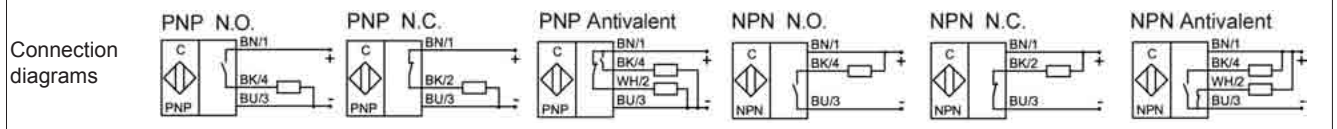
**DESCRIPTION**

- 10 = PNP
- 20 = NPN
- A22 = M12x1
- S = normally open
- O = normally closed
- PEEK = housing material
- 125 = 125°C

**DIMENSIONS AND TECHNICAL DATA**



Operating distance $S_n$	4 mm
Flush mounting	no
Electrical version	3 wires DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	$< 10$ %
Repeat accuracy	$< 1$ %
Temperatura permessa	-25...+125°C
Temperature drift	$< 10$ %
Led display	-
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	PEEK
Active surface material	PEEK
Connection	cable 2m, TEEE/SPR, 3x0.22mm <sup>2</sup>
Maximum torque Nm	16



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# INDUCTIVE SENSOR - M12

**Standard versione  
Connector output  
Non-flush mountable**

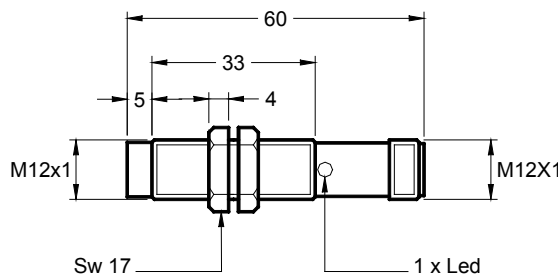
**TYPE - ART. NO.**

SM-10-A22-S-Y5 - SM105034  
 SM-10-A22-O-Y5 - SM105055  
 SM-20-A22-S-Y5  
 SM-20-A22-O-Y5

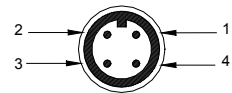
**DESCRIPTION**

10 = PNP  
 20 = NPN  
 A22 = M12x1  
 S = normally open  
 O = normally closed  
 Y5 = metal connector M12x1

**DIMENSIONS AND TECHNICAL DATA**

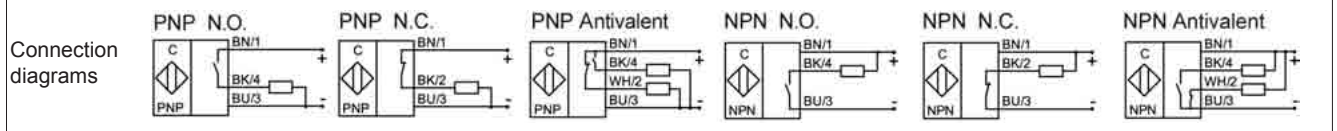


Connector Y1-Y3-Y5 for M12-M18-M30 sensors



- 1 = brown = + Vcc
- 2 = free or NC output for A version
- 3 = blue = - GND
- 4 = black = NPN-PNP, NO output or NC output for O version

Operating distance $S_n$	4 mm
Flush mounting	no
Electrical version	4 pins DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PVDF
Connection	metal connector M12x1
Maximum torque Nm	16



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# INDUCTIVE SENSOR - M12

**Short housing  
Connector output  
Non-flush mountable**

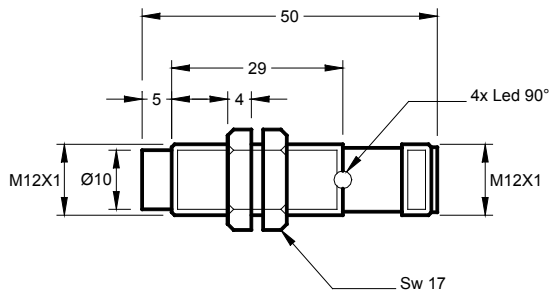
**TYPE - ART. NO.**

- SM-10-A22-S-Y5-L50 - SM106003
- SM-10-A22-O-Y5-L50 - SM105084
- SM-20-A22-S-Y5-L50 - SM206004
- SM-20-A22-O-Y5-L50

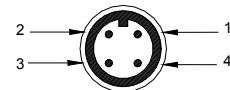
**DESCRIPTION**

- 10 = PNP
- 20 = NPN
- A22 = M12x1
- S = normally open
- O = normally closed
- Y5 = metal connector M12x1
- L50 = 50mm in length

**DIMENSIONS AND TECHNICAL DATA**

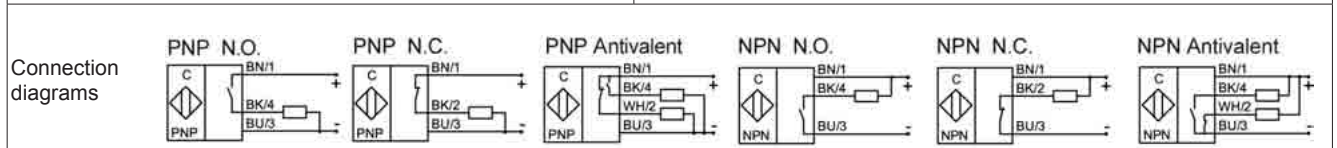


Connector Y1-Y3-Y5 for M12-M18-M30 sensors



- 1 = brown = + Vcc
- 2 = free or NC output for A version
- 3 = blue = - GND
- 4 = black = NPN-PNP, NO output or NC output for O version

Operating distance Sn	4 mm
Flush mounting	no
Electrical version	4 pins DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PVDF
Connection	metal connector M12x1
Maximum torque Nm	16



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# INDUCTIVE SENSOR - M12

**Special version long distance  
Connector output  
Non-flush mountable**

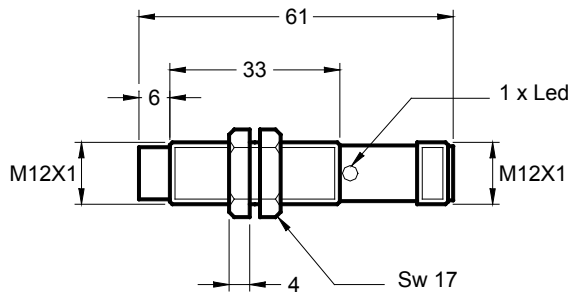
**TYPE - ART. NO.**

**SM-10-A22-A-Y5-D10 - SM105016**

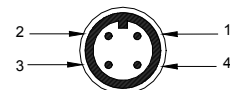
**DESCRIPTION**

**10 = PNP  
20 = NPN  
A22 = M12x1  
A = antivalent  
Y5 = metal connector M12x1  
D10 = Sn 10mm**

**DIMENSIONS AND TECHNICAL DATA**

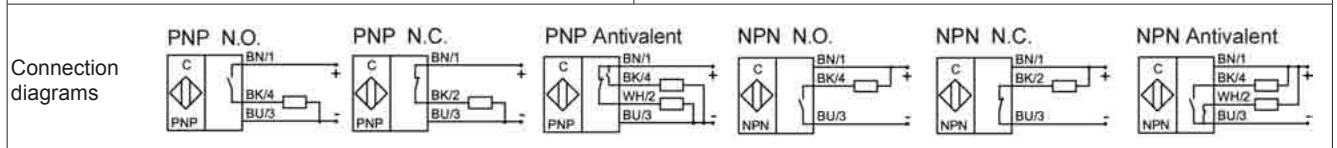


Connector Y1-Y3-Y5  
for M12-M18-M30 sensors



1 = brown = + Vcc  
2 = free or NC output for A version  
3 = blue = - GND  
4 = black = NPN-PNP, NO output  
or NC output for O version

Operating distance Sn	10 mm
Flush mounting	no
Electrical version	4 pins DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 400 Hz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-10...+60°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PVDF
Connection	metal connector M12x1
Maximum torque Nm	16



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## INDUCTIVE SENSORS - DIAMETER M18 - FLUSH MOUNTABLE

<u>TYPE</u>	<u>ART. NO.</u>	<u>PAGE</u>
SM-10-A13-S-L	SM105078	2
SM-10-A13-O-L	SM105092	2
SM-20-A13-S-L	SM205011	2
SM-10-A13-S-L-L35		3
SM-10-A13-O-L-L35		3
SM-20-A13-S-L-L35		3
SM-10-A13-S-L-D12		4
SM-10-A13-O-L-D12		4
SM-10-A13-S-K-L		5
SM-10-A13-O-K-L		5
SM-20-A13-S-K-L		5
SM-10-A13-A-Y3	SM105089	6
SM-20-A13-S-Y3		6
SM-10-A13-S-Y3-L55	SM111003	7
SM-10-A13-O-Y3-L55		7
SM-20-A13-S-Y3-L55		7
SM-10-A13-A-Y3-D12	SM105023	8
SM-10-A13-A-Y3-L55-D12	SM109003	9
SM-10-A13-A-K-Y3	SM106010	10
SM-20-A13-S-K-Y3		10
SM-10-A13-S-L-100	SM105050	11
SM-10-A13-O-L-100		11
SM-20-A13-S-L-100		11
SM-10-A13-S-125		12
SM-10-A13-O-125		12
SM-20-A13-S-125		12
SM-10-A13-S-125-10M	SM107013	12

# INDUCTIVE SENSOR - M18

**Standard version  
Cable output  
Flush mountable**

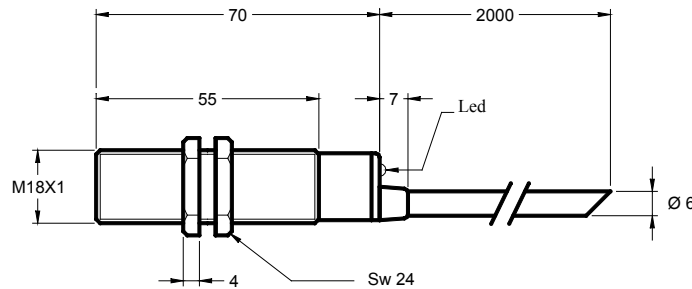
**TYPE - ART. NO.**

SM-10-A13-S-L - SM105078  
SM-10-A13-O-L - SM105092  
SM-20-A13-S-L - SM205011

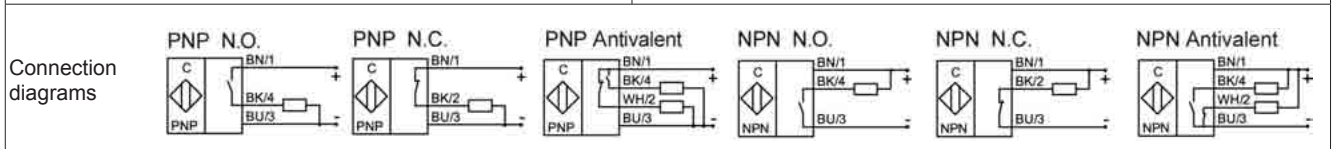
**DESCRIPTION**

10 = PNP  
20 = NPN  
A13 = M18x1  
S = normally open  
O = normally closed  
L = led

**DIMENSIONS AND TECHNICAL DATA**



Operating distance $S_n$	5 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PVDF
Connection	cable 2m, PVC, 3x0.25mm <sup>2</sup>
Maximum torque Nm	28



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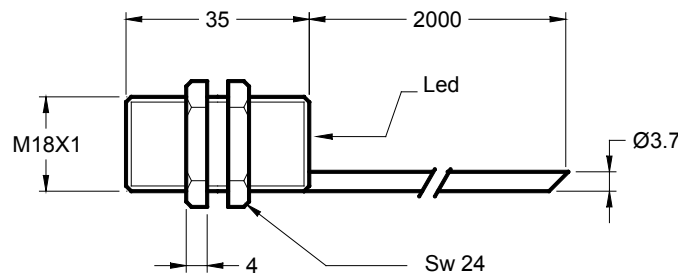
# INDUCTIVE SENSOR - M18

**Very short housing  
Cable output  
Flush mountable**

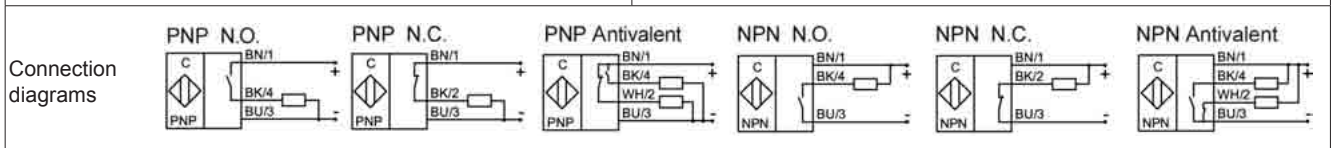
**TYPE - ART. NO.**  
**SM-10-A13-S-L-L35**  
**SM-10-A13-O-L-L35**  
**SM-20-A13-S-L-L35**

**DESCRIPTION**  
**10 = PNP**  
**20 = NPN**  
**A13 = M18x1**  
**S = normally open**  
**O = normally closed**  
**L = led**  
**L35 = 35mm in length**

## DIMENSIONS AND TECHNICAL DATA



Operating distance $S_n$	5 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PVDF
Connection	cable 2m, PVC, 3x0.25mm <sup>2</sup>
Maximum torque Nm	28



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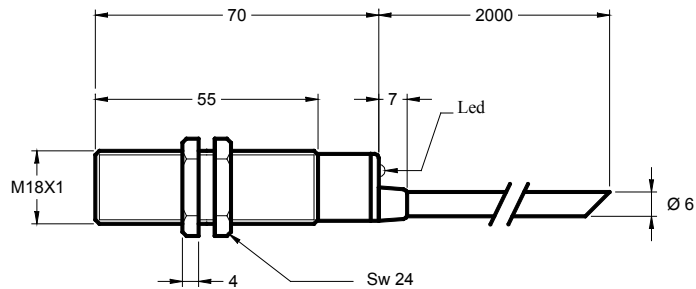
# INDUCTIVE SENSOR - M18

**Special version long distance  
Cable output  
Flush mountable**

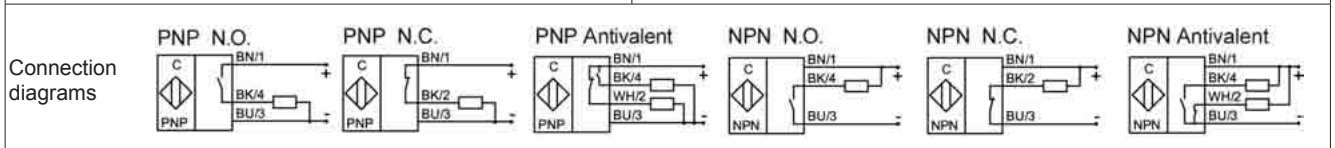
**TYPE - ART. NO.**  
SM-10-A13-S-L-D12  
SM-10-A13-O-L-D12

**DESCRIPTION**  
10 = PNP  
A13 = M18x1  
S = normally open  
O = normally closed  
L = led  
D12 = Sn 12mm

## DIMENSIONS AND TECHNICAL DATA



Operating distance Sn	12 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 1 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-10...+60°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PVDF
Connection	cable 2m, PVC, 3x0.25mm <sup>2</sup>
Maximum torque Nm	28



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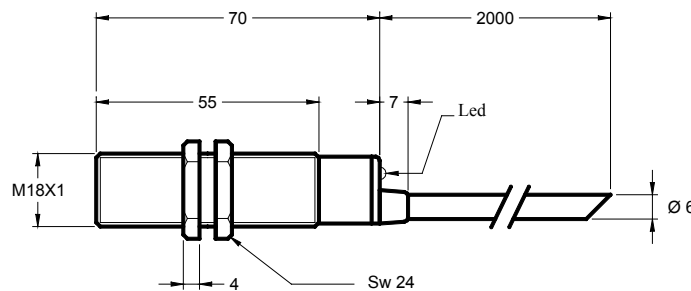
# INDUCTIVE SENSOR - M18

**Special version plastic housing  
Cable output  
Flush mountable**

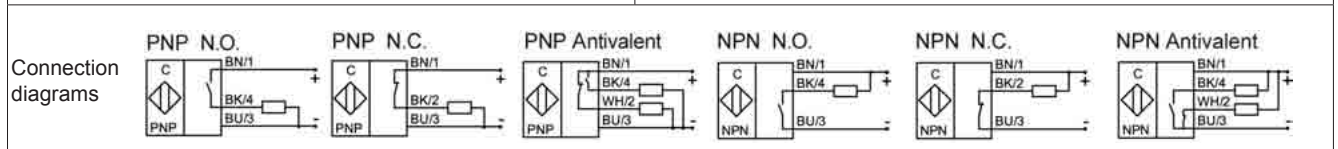
**TYPE - ART. NO.**  
**SM-10-A13-S-K-L**  
**SM-10-A13-O-K-L**  
**SM-20-A13-S-K-L**

**DESCRIPTION**  
**10 = PNP**  
**20 = NPN**  
**A13 = M18x1**  
**S = normally open**  
**O = normally closed**  
**K = plastic housing**  
**L = led**

## DIMENSIONS AND TECHNICAL DATA



Operating distance $S_n$	5 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	PA
Active surface material	PA
Connection	cable 2m, PVC, 3x0.25mm <sup>2</sup>
Maximum torque Nm	1.7



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# INDUCTIVE SENSOR - M18

**Standard version  
Connector output  
Flush mountable**

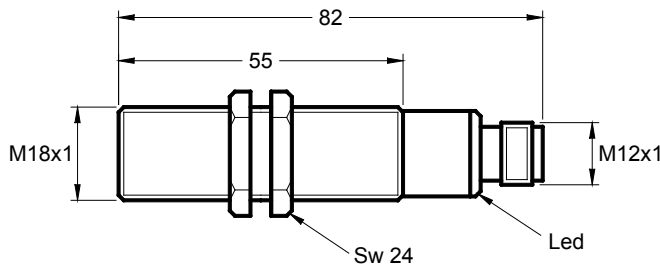
**TYPE - ART. NO.**

SM-10-A13-A-Y3 - SM105089  
SM-20-A13-S-Y3

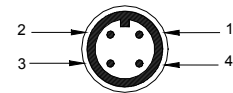
**DESCRIPTION**

10 = PNP  
20 = NPN  
A13 = M18x1  
A = antivalent  
S = normally open  
Y3 = plastic connector M12x1

**DIMENSIONS AND TECHNICAL DATA**

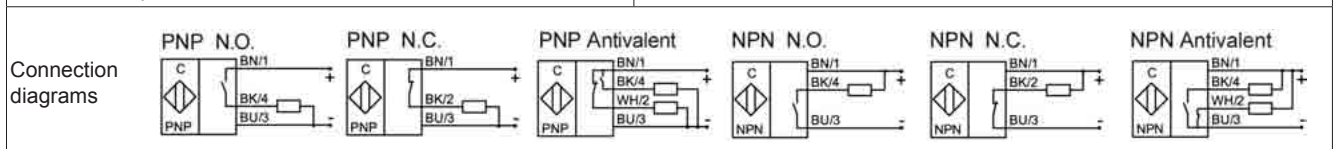


Connector Y1-Y3-Y5  
for M12-M18-M30 sensors



1 = brown = + Vcc  
2 = free or NC output for A version  
3 = blue = - GND  
4 = black = NPN-PNP, NO output  
or NC output for O version

Operating distance $S_n$	5 mm
Flush mounting	yes
Electrical version	4 pins DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PVDF
Connection	plastic connector M12x1
Maximum torque Nm	28



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# INDUCTIVE SENSOR - M18

**Short housing  
Connector output  
Flush mountable**

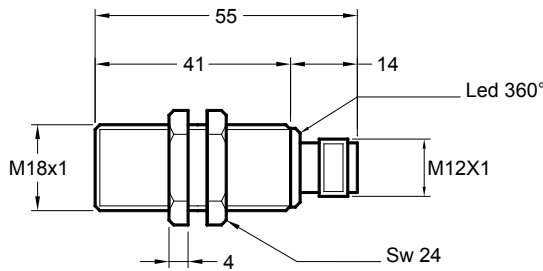
**TYPE - ART. NO.**

**SM-10-A13-S-Y3-L55 - SM111003**  
**SM-10-A13-O-Y3-L55**  
**SM-20-A13-S-Y3-L55**

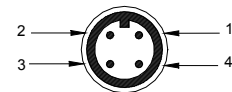
**DESCRIPTION**

**10 = PNP**  
**20 = NPN**  
**A13 = M18x1**  
**S = normally open**  
**O = normally closed**  
**Y3 = plastic connector M12x1**  
**L55 = 55mm in length**

**DIMENSIONS AND TECHNICAL DATA**

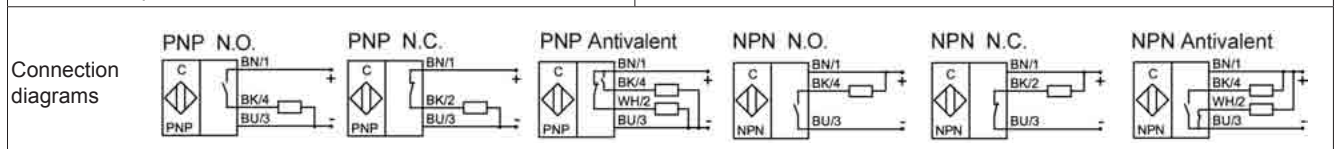


Connector Y1-Y3-Y5  
for M12-M18-M30 sensors



1 = brown = + Vcc  
 2 = free or NC output for A version  
 3 = blue = - GND  
 4 = black = NPN-PNP, NO output  
 or NC output for O version

Operating distance $S_n$	5 mm
Flush mounting	yes
Electrical version	4 pins DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PVDF
Connection	plastic connector M12x1
Maximum torque Nm	28



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# INDUCTIVE SENSOR - M18

**Long distance version  
Connector output  
Flush mountable**

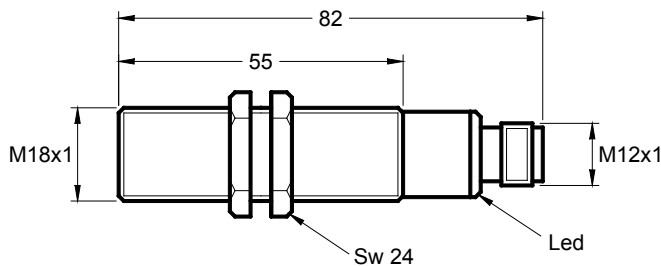
**TYPE - ART. NO.**

**SM-10-A13-A-Y3-D12 - SM105023**

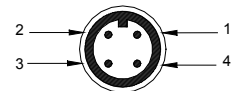
**DESCRIPTION**

**10 = PNP**  
**A13 = M18x1**  
**A = antivalent**  
**Y3 = plastic connector M12x1**  
**D12 = Sn 12mm**

**DIMENSIONS AND TECHNICAL DATA**

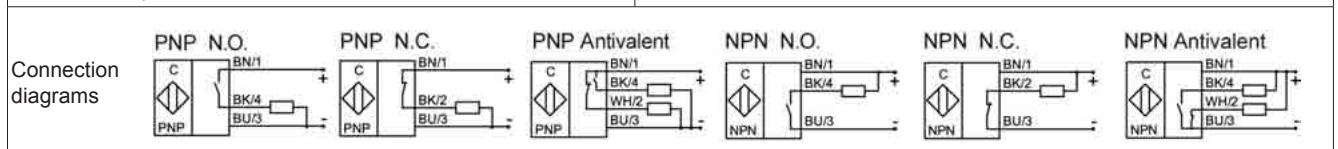


Connector Y1-Y3-Y5  
for M12-M18-M30 sensors



- 1 = brown = + Vcc
- 2 = free or NC output for A version
- 3 = blue = - GND
- 4 = black = NPN-PNP, NO output or NC output for O version

Operating distance Sn	12 mm
Flush mounting	yes
Electrical version	4 pins DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 1 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-10...+60°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PVDF
Connection	plastic connector M12x1
Maximum torque Nm	28



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# INDUCTIVE SENSOR - M18

Long distance version and short housing  
Connector output  
Flush mountable

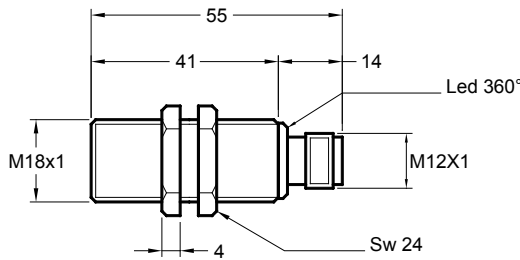
**TYPE - ART. NO.**

**SM-10-A13-A-Y3-L55-D12 - SM109003**

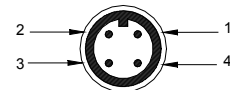
**DESCRIPTION**

**10 = PNP**  
**A13 = M18x1**  
**A = antivalent**  
**Y3 = plastic connector M12x1**  
**L55 = 55mm in length**  
**D12 = Sn 12mm**

**DIMENSIONS AND TECHNICAL DATA**

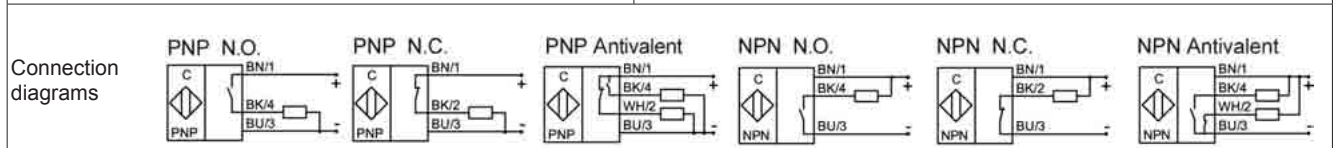


Connector Y1-Y3-Y5  
for M12-M18-M30 sensors



- 1 = brown = + Vcc
- 2 = free or NC output for A version
- 3 = blue = - GND
- 4 = black = NPN-PNP, NO output or NC output for O version

Operating distance Sn	12 mm
Flush mounting	yes
Electrical version	4 pin DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 1 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-10...+60°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PVDF
Connection	plastic connector M12x1
Maximum torque Nm	28



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# INDUCTIVE SENSOR - M18

**Plastic housing  
Connector output  
Flush mountable**

**TYPE - ART. NO.**

SM-10-A13-A-K-Y3 - SM106010

SM-20-A13-S-K-Y3

**DESCRIPTION**

10 = PNP

20 = NPN

A13 = M18x1

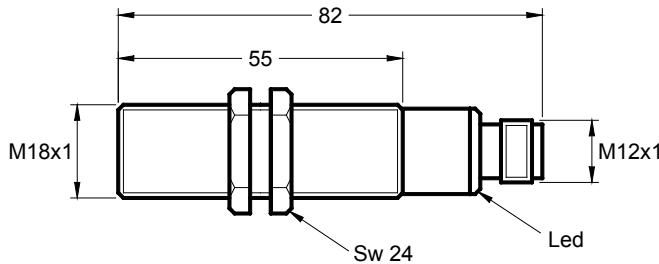
A = antivalent

S = normally open

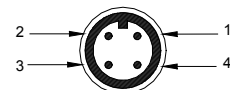
K = plastic housing

Y3 = plastic connector M12x1

**DIMENSIONS AND TECHNICAL DATA**

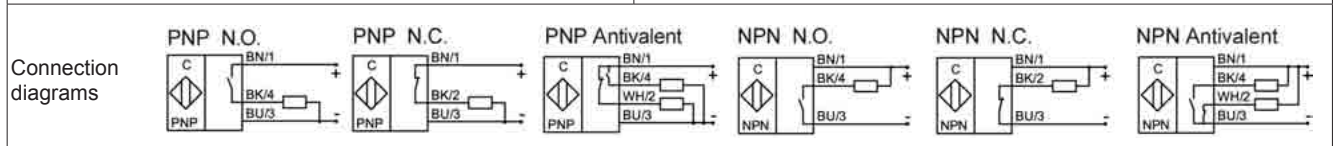


Connector Y1-Y3-Y5  
for M12-M18-M30 sensors



- 1 = brown = + Vcc
- 2 = free or NC output for A version
- 3 = blue = - GND
- 4 = black = NPN-PNP, NO output or NC output for O version

Operating distance Sn	5 mm
Flush mounting	yes
Electrical version	4 pin DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	PA
Active surface material	PA
Connection	plastic connector M12x1
Maximum torque Nm	1.7



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# INDUCTIVE SENSOR - M18

Suitable for ambient with high temperature  
Cable output  
Flush mountable

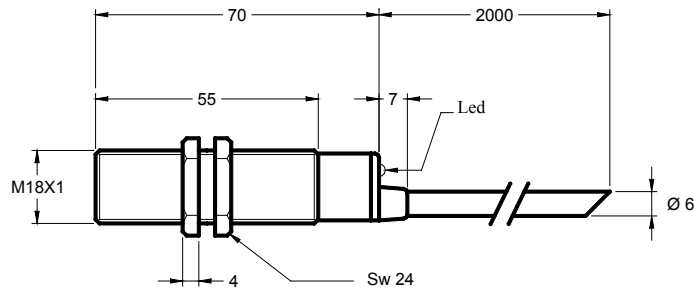
**TYPE - ART. NO.**

SM-10-A13-S-L-100 - SM105050  
SM-10-A13-O-L-100  
SM-20-A13-S-L-100

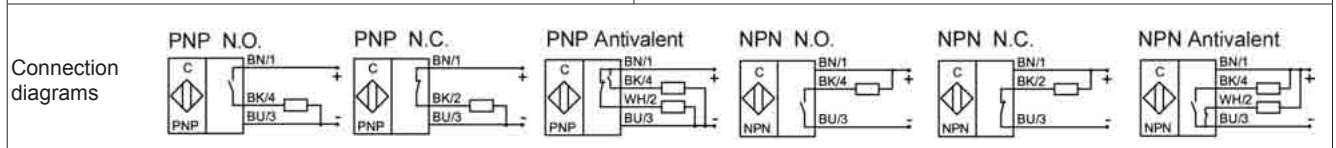
**DESCRIPTION**

10 = PNP  
20 = NPN  
A13 = M18x1  
S = normally open  
O = normally closed  
L = Led  
100 = 100°C

**DIMENSIONS AND TECHNICAL DATA**



Operating distance Sn	5 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-20...+100°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PTFE
Connection	silicon cable 2m, 3x0.5mm <sup>2</sup>
Maximum torque Nm	28



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# INDUCTIVE SENSOR - M18

Suitable for ambient with high temperature  
Cable output  
Flush mountable

**TYPE - ART. NO.**

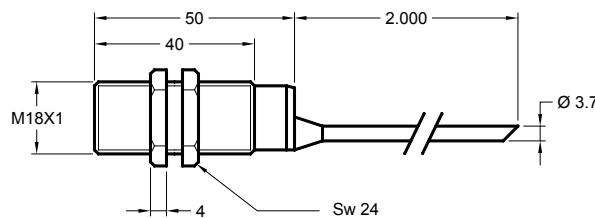
SM-10-A13-S-125  
SM-10-A13-O-125  
SM-20-A13-S-125

SM-10-A13-S-125-10M - SM107013

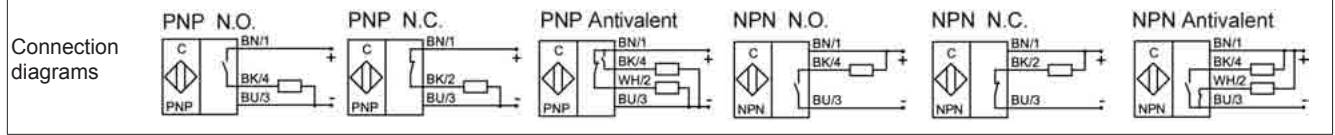
**DESCRIPTION**

10 = PNP  
20 = NPN  
A13 = M18x1  
S = normally open  
O = normally closed  
125 = 125°C  
10M = cable length

**DIMENSIONS AND TECHNICAL DATA**



Operating distance Sn	5 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-25...+125°C
Temperature drift	< 10 %
Led display	-
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PTFE
Connection	silicon cable 2m (10m), 3x0.5mm <sup>2</sup>
Maximum torque Nm	28



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**INDUCTIVE SENSORS - DIAMETER M18 - NON-FLUSH MOUNTABLE**

<u>TYPE</u>	<u>ART. NO.</u>	<u>PAGE</u>
SM-10-A23-S-L	SM105026	2
SM-10-A23-O-L		2
SM-20-A23-S-L	SM205002	2
SM-10-A23-S-L-L55		3
SM-10-A23-O-L-L55		3
SM-20-A23-S-L-L55	SM205004	3
SM-10-A23-S-L-D20		4
SM-10-A23-O-L-D20		4
SM-10-A23-S-K-L		5
SM-10-A23-O-K-L		5
SM-20-A23-S-K-L	SM205008	5
SM-10-A23-S-L-100	SM106020	6
SM-10-A23-O-L-100		6
SM-20-A23-S-L-100		6
SM-10-A23-S-125		7
SM-10-A23-O-125		7
SM-20-A23-S-125		7
SM-10-A23-S-PEEK-IP68	SM108002	8
SM-10-A23-S-125-PEEK	SM112006	9
SM-10-A23-A-Y3	SM106006	10
SM-20-A23-S-Y3		10
SM-10-A23-A-Y3-L55	SM108001	11
SM-10-A23-A-Y3-D20	SM105070	12

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# INDUCTIVE SENSOR - M18

**Standard version  
Cable output  
Non-flush mountable**

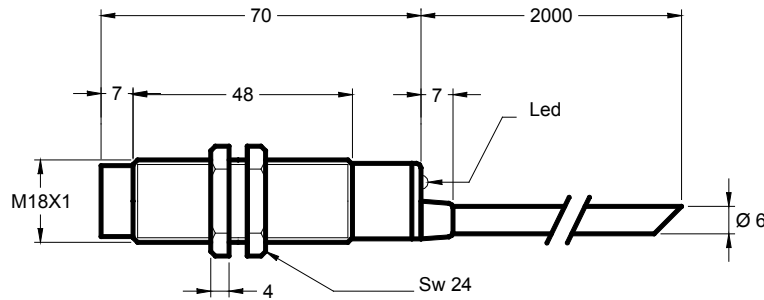
**TYPE - ART. NO.**

SM-10-A23-S-L - SM105026  
SM-10-A23-O-L  
SM-20-A23-S-L - SM205002

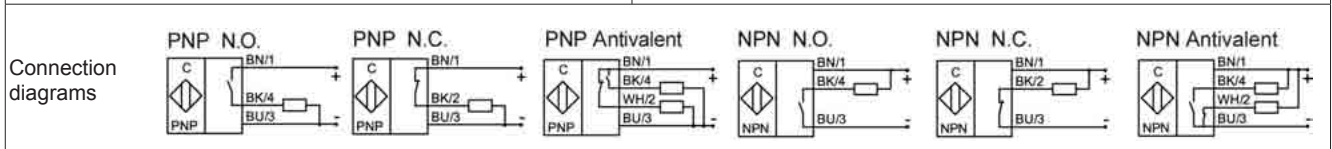
**DESCRIPTION**

10 = PNP  
20 = NPN  
A23 = M18x1 - non flush mountable  
S = normally open  
O = normally closed  
L = led

**DIMENSIONS AND TECHNICAL DATA**



Operating distance $S_n$	8 mm
Flush mounting	no
Electrical version	3 wires DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PVDF
Connection	cable 2m, PVC, 3x0.25mm <sup>2</sup>
Maximum torque Nm	28



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# INDUCTIVE SENSOR - M18

**Short housing  
Cable output  
Non-flush mountable**

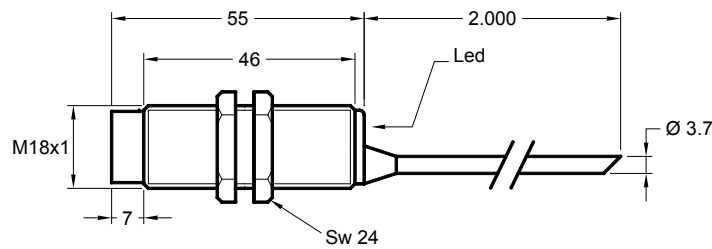
**TYPE - ART. NO.**

SM-10-A23-S-L-L55  
SM-10-A23-O-L-L55  
SM-20-A23-S-L-L55 - SM205004

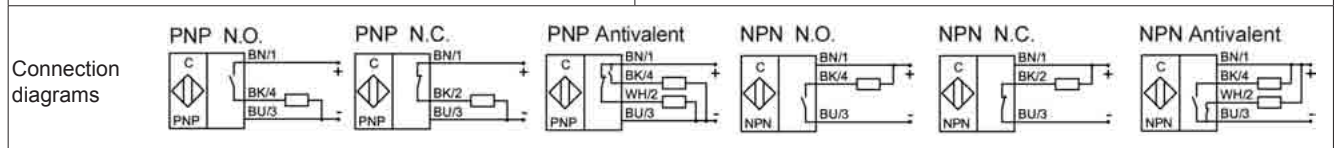
**DESCRIPTION**

10 = PNP  
20 = NPN  
A23 = M18x1 - non flush mountable  
S = normally open  
O = normally closed  
L = led  
L55 = 55mm in length

**DIMENSIONS AND TECHNICAL DATA**



Operating distance $S_n$	8 mm
Flush mounting	no
Electrical version	3 wires DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PVDF
Connection	cable 2m, PVC, 3x0.25mm <sup>2</sup>
Maximum torque Nm	28



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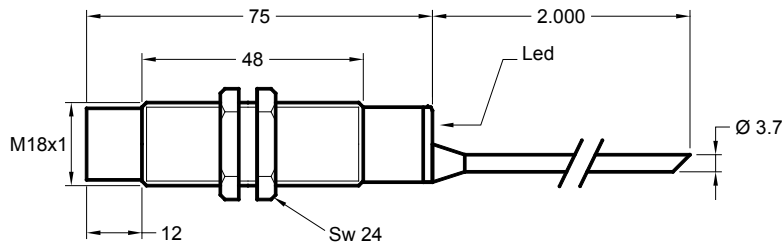
# INDUCTIVE SENSOR - M18

**Special version long distance  
Cable output  
Non-flush mountable**

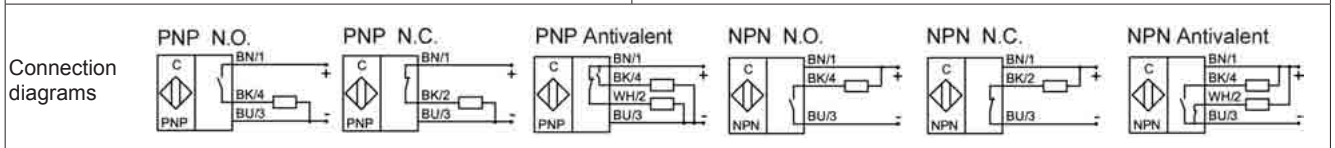
**TYPE - ART. NO.**  
SM-10-A23-S-L-D20  
SM-10-A23-O-L-D20

**DESCRIPTION**  
10 = PNP  
20 = NPN  
A23 = M18x1 - non flush mountable  
S = normally open  
O = normally closed  
L = led  
D20 = Sn 20mm

## DIMENSIONS AND TECHNICAL DATA



Operating distance Sn	20 mm
Flush mounting	no
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 500 Hz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-10...+60°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PVDF
Connection	cable 2m, PVC, 3x0.25mm <sup>2</sup>
Maximum torque Nm	28



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# INDUCTIVE SENSOR - M18

**Plastic housing  
Cable output  
Non-flush mountable**

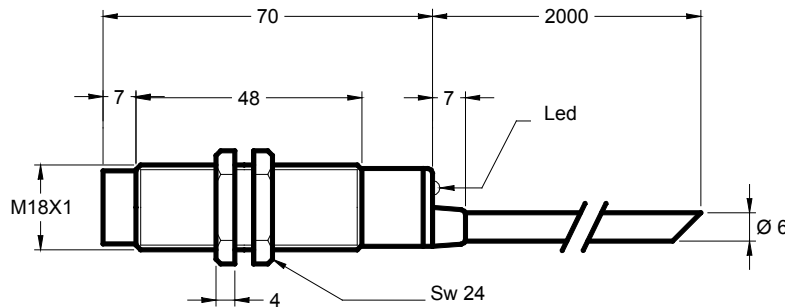
**TYPE - ART. NO.**

SM-10-A23-S-K-L  
SM-10-A23-O-K-L  
SM-20-A23-S-K-L - SM205008

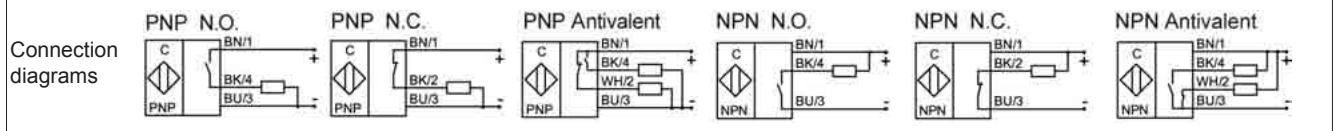
**DESCRIPTION**

10 = PNP  
20 = NPN  
A23 = M18x1 - non flush mountable  
S = normally open  
O = normally closed  
K = plastic housing  
L = Led

**DIMENSIONS AND TECHNICAL DATA**



Operating distance $S_n$	8 mm
Flush mounting	no
Electrical version	3 wires DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	PA
Active surface material	PA
Connection	cable 2m, PVC, 3x0.25mm <sup>2</sup>
Maximum torque Nm	1.7



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# INDUCTIVE SENSOR - M18

Suitable for ambient with high temperature up to +100°C  
Cable output  
Non-flush mountable

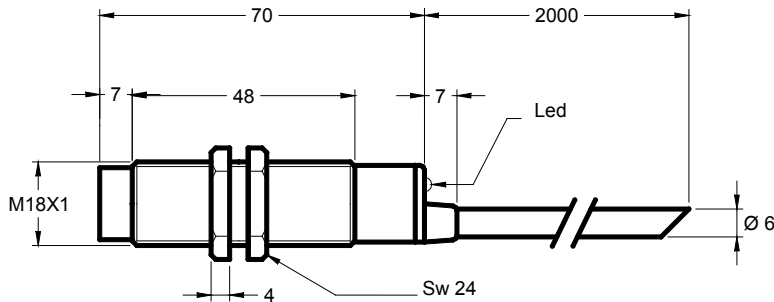
**TYPE - ART. NO.**

SM-10-A23-S-L-100 - SM106020  
SM-10-A23-O-L-100  
SM-20-A23-S-L-100

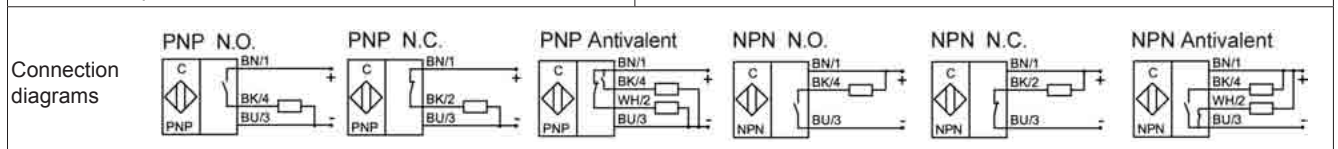
**DESCRIPTION**

10 = PNP  
20 = NPN  
A23 = M18x1 - non flush mountable  
S = normally open  
O = normally closed  
L = led  
100 = 100°C

**DIMENSIONS AND TECHNICAL DATA**



Operating distance $S_n$	8 mm
Flush mounting	no
Electrical version	3 wires DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-25...+100°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PTFE
Connection	silicon cable 2m, 3x0.5mm <sup>2</sup>
Maximum torque Nm	28



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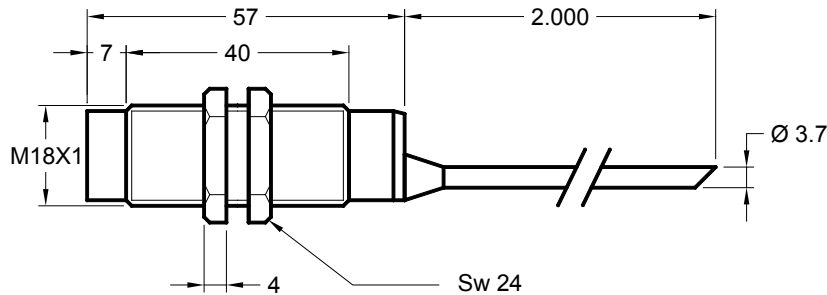
# INDUCTIVE SENSOR - M18

Suitable for ambient with high temperature up to +125°C  
Cable output  
Non-flush mountable

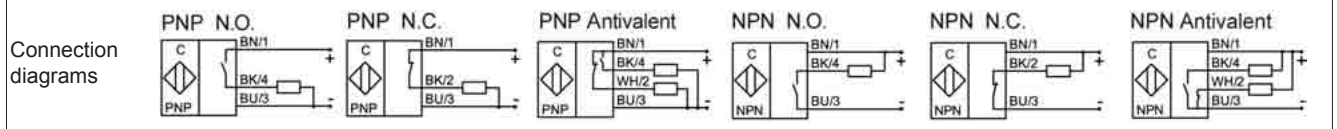
**TYPE - ART. NO.**  
SM-10-A23-S-125  
SM-10-A23-O-125  
SM-20-A23-S-125

**DESCRIPTION**  
10 = PNP  
20 = NPN  
A23 = M18x1 - non flush mountable  
S = normally open  
O = normally closed  
125 = 125°C

## DIMENSIONS AND TECHNICAL DATA



Operating distance $S_n$	7 mm
Flush mounting	no
Electrical version	3 wires DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-25...+125°C
Temperature drift	< 10 %
Led display	-
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nickel brass
Active surface material	PTFE
Connection	cable 2m, TEEE/SPR, 3x0.22mm <sup>2</sup>
Maximum torque Nm	28



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# INDUCTIVE SENSOR - M18

**PEEK housing, ideal for use in food applications**  
**Suitable for ambient with high temperature up to 125°C**  
**High degree of protection - Cable output - Non-flush mountable**

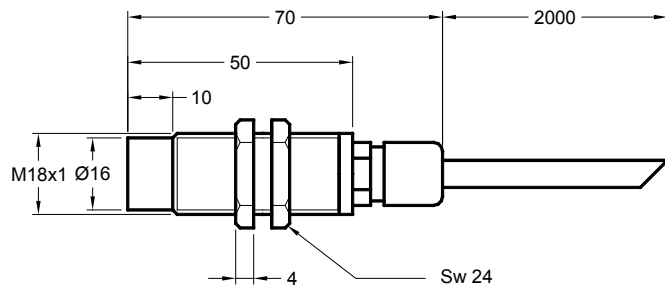
**TYPE - ART. NO.**

**SM-10-A23-S-PEEK-125-IP68 - SM108002**

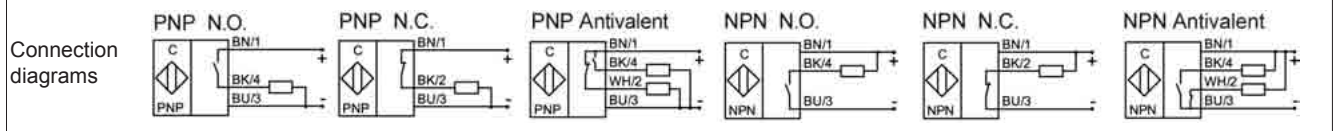
**DESCRIPTION**

**10 = PNP**  
**20 = NPN**  
**A23 = M18x1 - non flush mountable**  
**S = normally open**  
**O = normally closed**  
**PEEK = housing material**  
**125= 125°C**  
**IP68 = degree of protection**

**DIMENSIONS AND TECHNICAL DATA**



Operating distance $S_n$	7 mm
Flush mounting	no
Electrical version	3 wires DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	$< 10$ %
Repeat accuracy	$< 1$ %
Temperatura permessa	-25...+125°C
Temperature drift	$< 10$ %
Led display	-
Protective circuit	built-in
Degree of protection	(IEC 529) IP 68
Housing material	PEEK
Active surface material	PEEK
Connection	cable 2m, TEEE/SPR, 3x0.22mm <sup>2</sup>
Maximum torque Nm	1.7



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# INDUCTIVE SENSOR - M18

PEEK housing, ideal for use in food applications  
 Suitable for ambient with high temperature up to 125°C  
 Cable output - Non-flush mountable

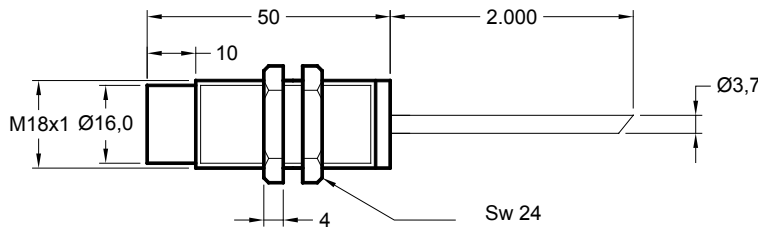
**TYPE - ART. NO.**

SM-10-A23-S-PEEK-125 - SM112006

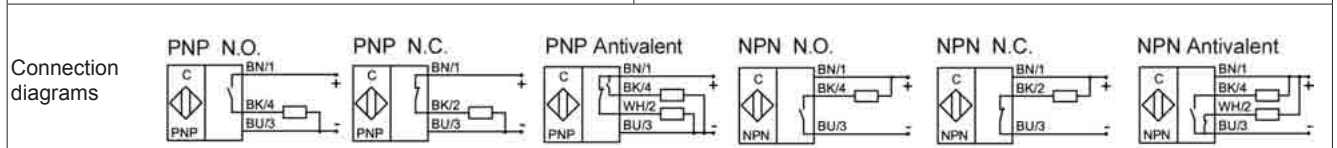
**DESCRIPTION**

10 = PNP  
 20 = NPN  
 A23 = M18x1  
 S = normally open  
 O = normally closed  
 PEEK = housing material  
 125 = 125°C

**DIMENSIONS AND TECHNICAL DATA**



Operating distance Sn	7 mm
Flush mounting	no
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 10 %
Temperatura permessa	-25...+125°C
Temperature drift	< 10 %
Led display	-
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	PEEK
Active surface material	PEEK
Connection	cable 2m, TEE-SPR, 3x0.22mm <sup>2</sup>
Maximum torque Nm	1.7



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# INDUCTIVE SENSOR - M18

**Standard version  
Connector output  
Non-flush mountable**

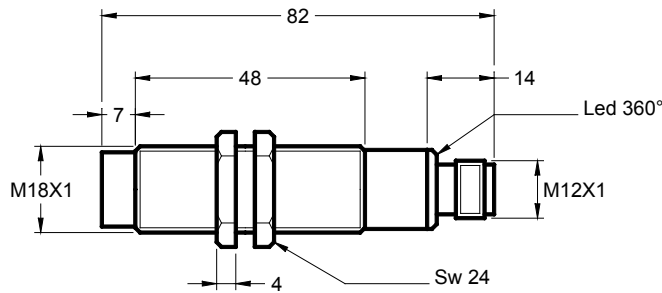
**TYPE - ART. NO.**

SM-10-A23-A-Y3 - SM106006  
SM-20-A23-S-Y3

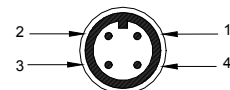
**DESCRIPTION**

10 = PNP  
20 = NPN  
S = normally open  
A23 = M18x1  
A = antivalent  
Y3 = plastic connector M12x1

**DIMENSIONS AND TECHNICAL DATA**

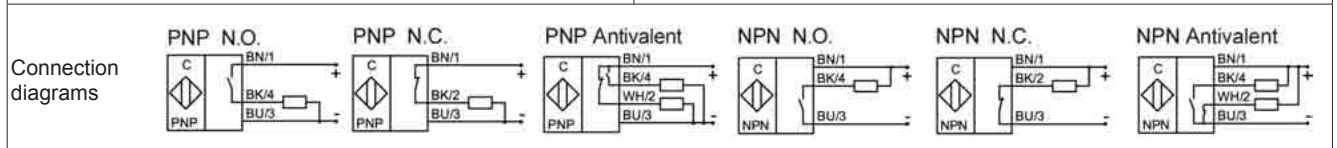


Connector Y1-Y3-Y5  
for M12-M18-M30 sensors



1 = brown = + Vcc  
2 = free or NC output for A version  
3 = blue = - GND  
4 = black = NPN-PNP, NO output  
or NC output for O version

Operating distance Sn	8 mm
Flush mounting	no
Electrical version	4 pins DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PVDF
Connection	plastic connector M12x1
Maximum torque Nm	28



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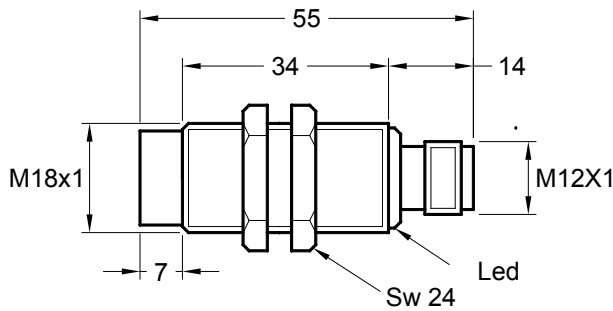
# INDUCTIVE SENSOR - M18

**Short housing  
Connector output  
Non-flush mountable**

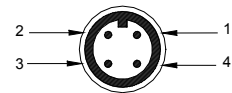
**TYPE - ART. NO.**  
SM-10-A23-A-Y3-L55 - SM108001

**DESCRIPTION**  
10 = PNP  
20 = NPN  
A23 = M18x1  
A = antivalent  
Y3 = plastic connector M12x1  
L55 = 55mm in length

## DIMENSIONS AND TECHNICAL DATA

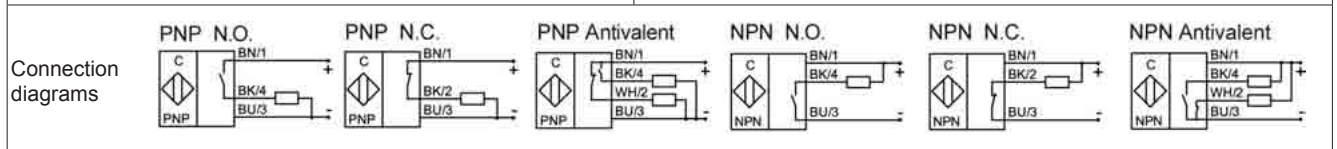


Connector Y1-Y3-Y5  
for M12-M18-M30 sensors



1 = brown = + Vcc  
2 = free or NC output for A version  
3 = blue = - GND  
4 = black = NPN-PNP, NO output  
or NC output for O version

Operating distance $S_n$	8 mm
Flush mounting	no
Electrical version	4 pins DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 15mA
Frequency of operating cycles	max. 2 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PVDF
Connection	plastic connector M12x1
Maximum torque Nm	28



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# INDUCTIVE SENSOR - M18

**Special version long distance  
Connector output  
Non-flush mountable**

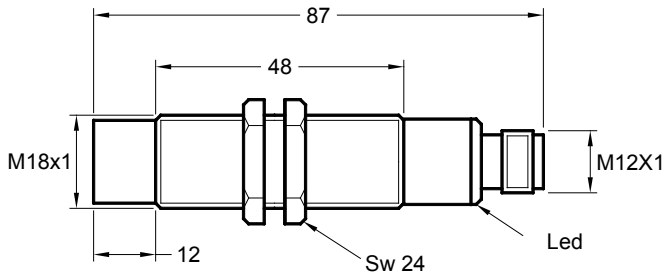
**TYPE - ART. NO.**

**SM-10-A23-A-Y3-D20 - SM105070**

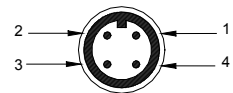
**DESCRIPTION**

**10 = PNP**  
**20 = NPN**  
**A23 = M18x1**  
**A = antivalent**  
**Y3 = plastic connector M12x1**  
**D20 = Sn 20mm**

**DIMENSIONS AND TECHNICAL DATA**

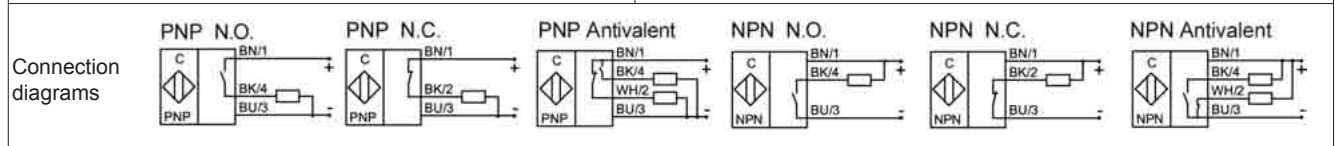


Connector Y1-Y3-Y5  
for M12-M18-M30 sensors



1 = brown = + Vcc  
 2 = free or NC output for A version  
 3 = blue = - GND  
 4 = black = NPN-PNP, NO output  
 or NC output for O version

Operating distance Sn	20 mm
Flush mounting	no
Electrical version	4 pins DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 500 Hz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-10...+60°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PVDF
Connection	plastic connector M12x1
Maximum torque Nm	28



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## INDUCTIVE SENSORS - DIAMETER M30 - FLUSH MOUNTABLE

<u>TYPE</u>	<u>ART. NO.</u>	<u>PAGE</u>
SM-10-A14-S-L	SM106001	2
SM-10-A14-O-L	SM106014	2
SM-20-A14-S-L	SM206002	2
SM-10-A14-A-L-D22		3
SM-10-A14-S-K-L		4
SM-10-A14-O-K-L		4
SM-20-A14-S-K-L		4
SM-10-A14-S-L-100	SM105093	5
SM-10-A14-O-L-100		5
SM-20-A14-S-L-100		5
SM-10-A14-S-125		6
SM-10-A14-O-125		6
SM-20-A14-S-125		6
SM-10-A14-A-Y3		7
SM-20-A14-S-Y3		7
SM-10-A14-A-Y3-L55		8
SM-10-A14-A-Y3-D22		9

# INDUCTIVE SENSOR - M30

**Standard version  
Cable output  
Flush mountable**

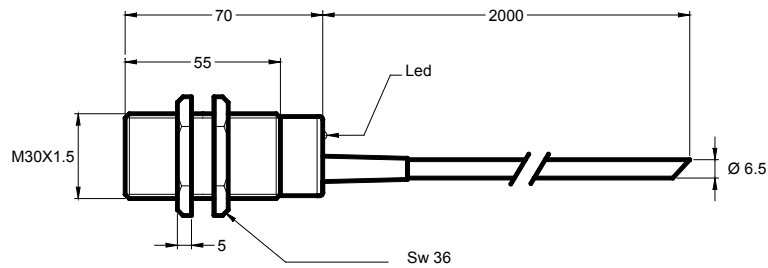
**TYPE - ART. NO.**

SM-10-A14-S-L - SM106001  
 SM-10-A14-O-L - SM106014  
 SM-20-A14-S-L - SM206002

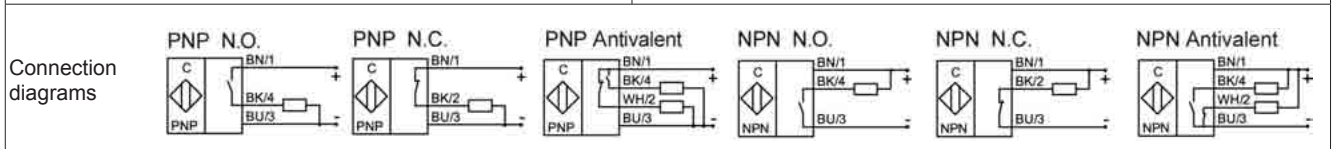
**DESCRIPTION**

10 = PNP  
 20 = NPN  
 A14 = M30x1.5 - flush mountable  
 S = normally open  
 O = normally closed  
 L = led

**DIMENSIONS AND TECHNICAL DATA**



Operating distance $S_n$	10 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 15mA
Frequency of operating cycles	max. 1 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nickel brass
Active surface material	PA
Connection	cable 2m, PVC, 3x0.75mm <sup>2</sup>
Maximum torque Nm	82



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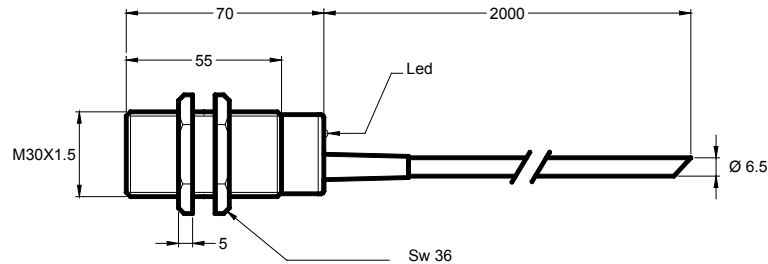
# INDUCTIVE SENSOR - M30

**Special version long distance  
Cable output  
Flush mountable**

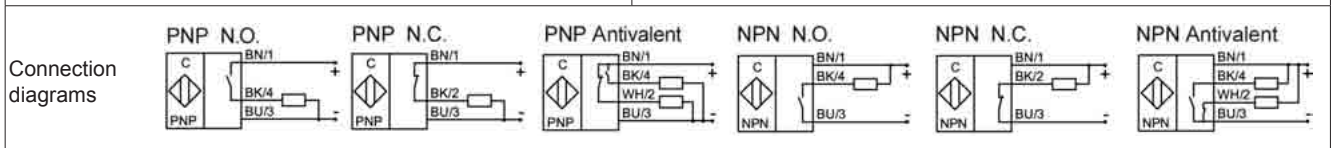
**TYPE - ART. NO.**  
**SM-10-A14-A-L-D22**

**DESCRIPTION**  
**10 = PNP**  
**20 = NPN**  
**A14 = M30x1.5 - flush mountable**  
**A = antivalent**  
**L = led**  
**D22 = Sn 2mm**

## DIMENSIONS AND TECHNICAL DATA



Operating distance Sn	22 mm
Flush mounting	yes
Electrical version	4 wires DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 300 Hz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-10...+60°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nickel brass
Active surface material	PA
Connection	cable 2m, PVC, 4x0.25mm <sup>2</sup>
Maximum torque Nm	82



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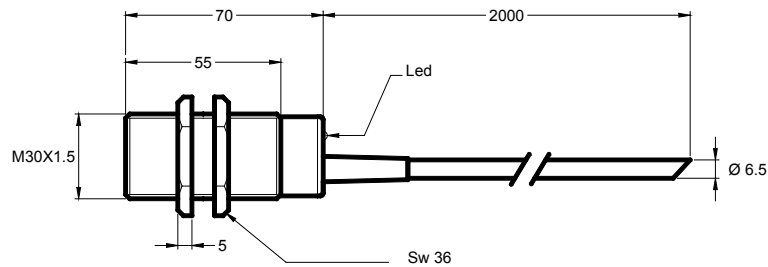
# INDUCTIVE SENSOR - M30

**Plastic housing version  
Cable output  
Flush mountable**

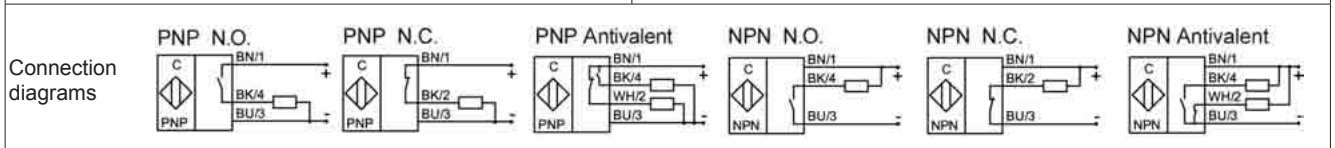
**TYPE - ART. NO.**  
SM-10-A14-S-K-L  
SM-10-A14-O-K-L  
SM-20-A14-S-K-L

**DESCRIPTION**  
10 = PNP  
20 = NPN  
A14 = M30x1.5 - flush mountable  
S = normally open  
O = normally closed  
K = plastic housing  
L = Led

## DIMENSIONS AND TECHNICAL DATA



Operating distance $S_n$	10 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 15mA
Frequency of operating cycles	max. 1 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	PA
Active surface material	PA
Connection	cable 2m, PVC, 3x0.75mm <sup>2</sup>
Maximum torque Nm	8



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# INDUCTIVE SENSOR - M30

Suitable for ambient with high temperature up to +100°C  
Cable output  
Flush mountable

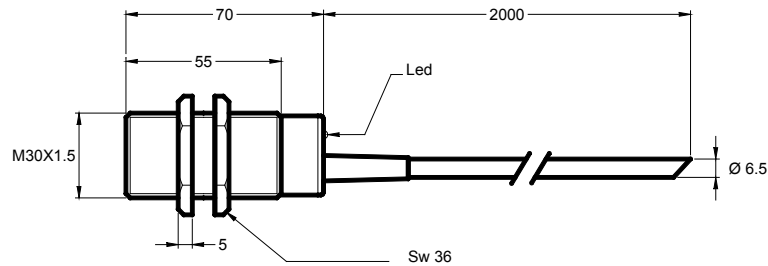
**TYPE - ART. NO.**

SM-10-A14-S-L-100 - SM105093  
SM-10-A14-O-L-100  
SM-20-A14-S-L-100

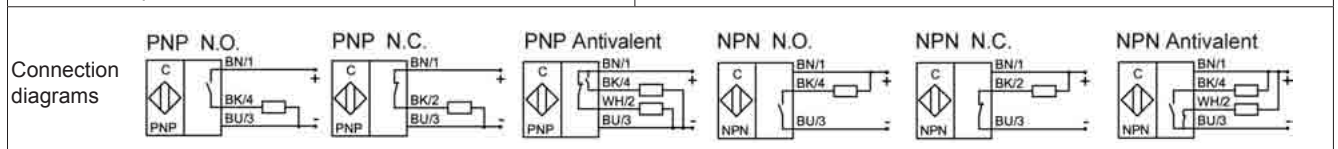
**DESCRIPTION**

10 = PNP  
20 = NPN  
A14 = M30x1.5 - flush mountable  
S = normally open  
O = normally closed  
L = led  
100 = 100°C

**DIMENSIONS AND TECHNICAL DATA**



Operating distance Sn	10 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 1 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-25...+100°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicked brass
Active surface material	PTFE
Connection	silicon cable 2m, 3x0.75mm <sup>2</sup>
Maximum torque Nm	82



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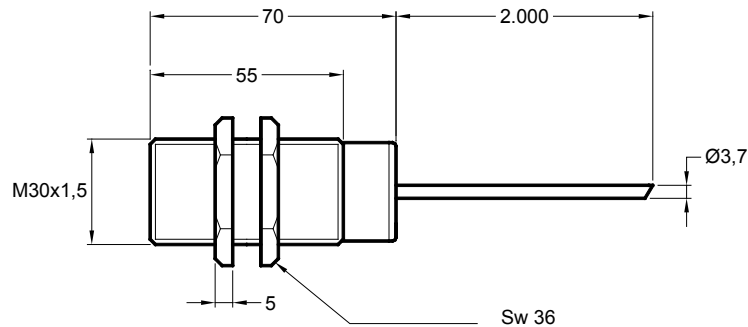
# INDUCTIVE SENSOR - M30

Suitable for ambient with high temperature up to +125°C  
Cable output  
Flush mountable

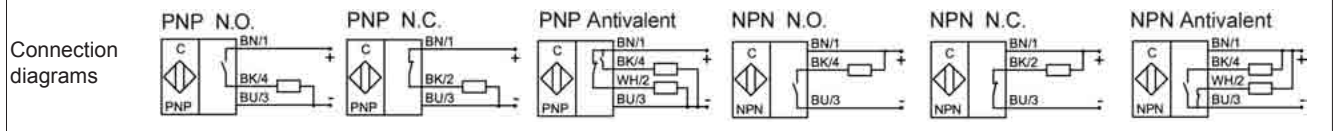
**TYPE - ART. NO.**  
SM-10-A14-S-125  
SM-10-A14-O-125  
SM-20-A14-S-125

**DESCRIPTION**  
10 = PNP  
A14 = M30x1.5 - flush mountable  
S = normally open  
O = normally closed  
125 = 125°C

## DIMENSIONS AND TECHNICAL DATA



Operating distance $S_n$	10 mm
Flush mounting	yes
Electrical version	3 wires DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 15mA
Frequency of operating cycles	max. 1 KHz
Hysteresis	$< 10$ %
Repeat accuracy	$< 1$ %
Temperatura permessa	-25...+125°C
Temperature drift	$< 10$ %
Led display	-
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicked brass
Active surface material	PTFE
Connection	cable 2m, TEEE/SPR, 3x0.22mm <sup>2</sup>
Maximum torque Nm	82



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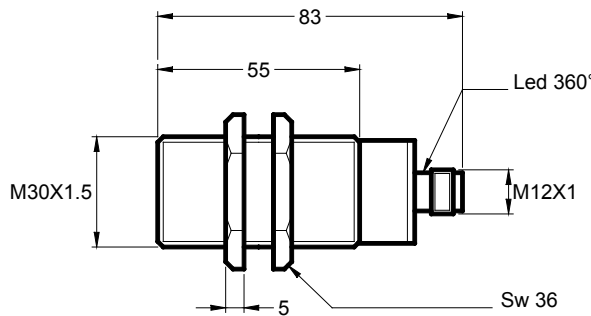
# INDUCTIVE SENSOR - M30

**Standard version  
Connector output  
Flush mountable**

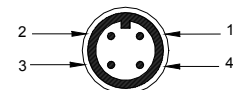
**TYPE - ART. NO.**  
SM-10-A14-A-Y3  
SM-20-A14-S-Y3

**DESCRIPTION**  
10 = PNP  
20 = NPN  
A14 = M30x1.5 - flush mountable  
A = antivalent  
S = normally open  
Y3 = plastic connector

## DIMENSIONS AND TECHNICAL DATA

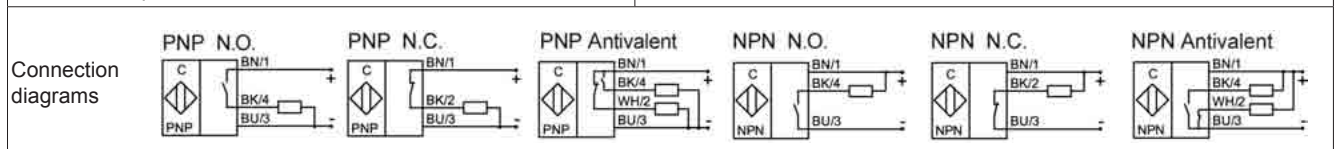


Connector Y1-Y3-Y5  
for M12-M18-M30 sensors



1 = brown = + Vcc  
2 = free or NC output for A version  
3 = blue = - GND  
4 = black = NPN-PNP, NO output  
or NC output for O version

Operating distance $S_n$	10 mm
Flush mounting	yes
Electrical version	4 pins DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 15mA
Frequency of operating cycles	max. 1 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicked brass
Active surface material	PA
Connection	plastic connector M12x1
Maximum torque Nm	82



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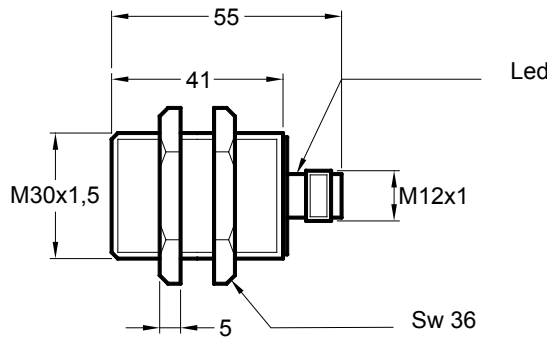
# INDUCTIVE SENSOR - M30

**Short housing  
Connector output  
Flush mountable**

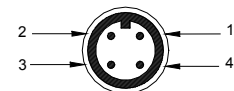
**TYPE - ART. NO.**  
**SM-10-A14-A-Y3-L55**

**DESCRIPTION**  
**10 = PNP**  
**A14 = M30x1.5 - flush mountable**  
**A = antivalent**  
**Y3 = plastic connector**  
**L55 = 55mm in length**

## DIMENSIONS AND TECHNICAL DATA

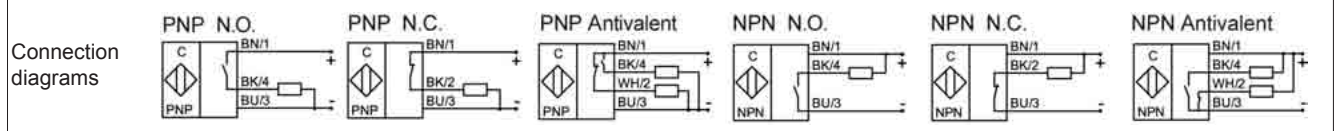


Connector Y1-Y3-Y5  
for M12-M18-M30 sensors



1 = brown = + Vcc  
 2 = free or NC output for A version  
 3 = blue = - GND  
 4 = black = NPN-PNP, NO output  
 or NC output for O version

Operating distance $S_n$	10 mm
Flush mounting	yes
Electrical version	4 pins DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 15mA
Frequency of operating cycles	max. 1 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nickel brass
Active surface material	PA
Connection	plastic connector M12x1
Maximum torque Nm	82



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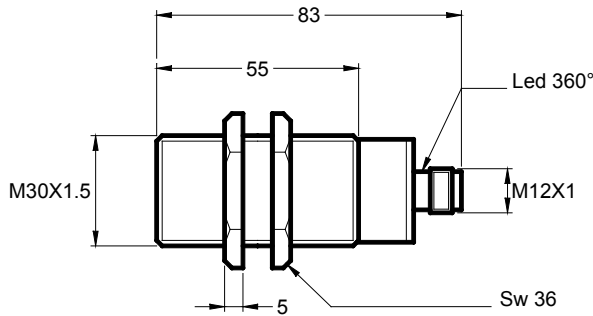
# INDUCTIVE SENSOR - M30

**Long distance  
Connector output  
Flush mountable**

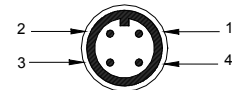
**TYPE - ART. NO.**  
SM-10-A14-A-Y3-D22

**DESCRIPTION**  
 10 = PNP  
 A14 = M30x1.5 - flush mountable  
 A = antivalent  
 Y3 = plastic connector  
 D22 = Sn 22mm

## DIMENSIONS AND TECHNICAL DATA

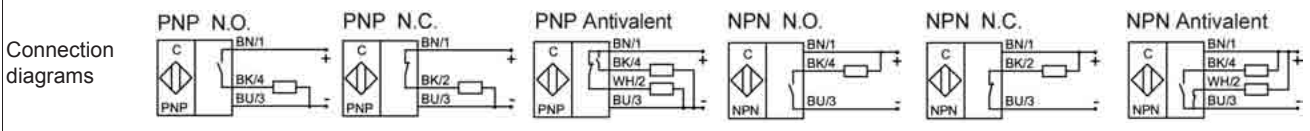


Connector Y1-Y3-Y5  
for M12-M18-M30 sensors



1 = brown = + Vcc  
 2 = free or NC output for A version  
 3 = blue = - GND  
 4 = black = NPN-PNP, NO output  
 or NC output for O version

Operating distance Sn	22 mm
Flush mounting	yes
Electrical version	4 pins DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 300 Hz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-10...+60°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nickel brass
Active surface material	PA
Connection	plastic connector M12x1
Maximum torque Nm	82



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**INDUCTIVE SENSORS - DIAMETER M30 - NON-FLUSH MOUNTABLE**

<u>TYPE</u>	<u>ART. NO.</u>	<u>PAGE</u>
SM-10-A24-S-L	SM110004	2
SM-10-A24-O-L	SM105095	2
SM-20-A24-S-L	SM205010	2
SM-20-A24-O-L	SM206001	2
SM-10-A24-A-K-L-D40	SM105096	3
SM-10-A24-A-Y3	SM105008	4
SM-20-A24-S-Y3		4
SM-20-A24-O-Y3		4
SM-10-A24-A-K-Y3	SM109007	5
SM-20-A24-S-K-Y3		5
SM-20-A24-O-K-Y3		5
SM-10-A24-A-K-Y3-D40	SM107011	6
SM-10-A24-S-125		7
SM-10-A24-O-125		7
SM-20-A24-S-125		7
SM-20-A24-O-125		7

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# INDUCTIVE SENSOR - M30

**Standard version  
Cable output  
Non-flush mountable**

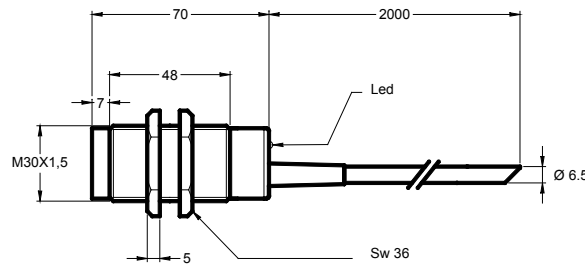
**TYPE - ART. NO.**

SM-10-A24-S-L - SM110004  
 SM-10-A24-O-L - SM105095  
 SM-20-A24-S-L - SM205010  
 SM-20-A24-O-L - SM206001

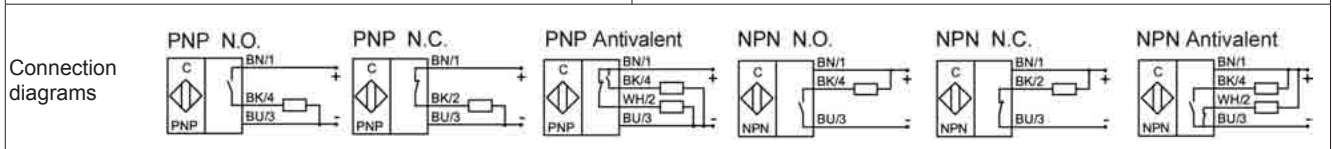
**DESCRIPTION**

10 = PNP  
 20 = NPN  
 A24 = M30x1.5 - non flush mountable  
 S = normally open  
 O = normally closed  
 L = led

**DIMENSIONS AND TECHNICAL DATA**



Operating distance $S_n$	15 mm
Flush mounting	no
Electrical version	3 wires DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 15mA
Frequency of operating cycles	max. 1 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PA
Connection	cable 2m, PVC, 3x0.75mm <sup>2</sup>
Maximum torque Nm	82



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# INDUCTIVE SENSOR - M30

**Special version long distance and plastic housing  
Cable output  
Non-flush mountable**

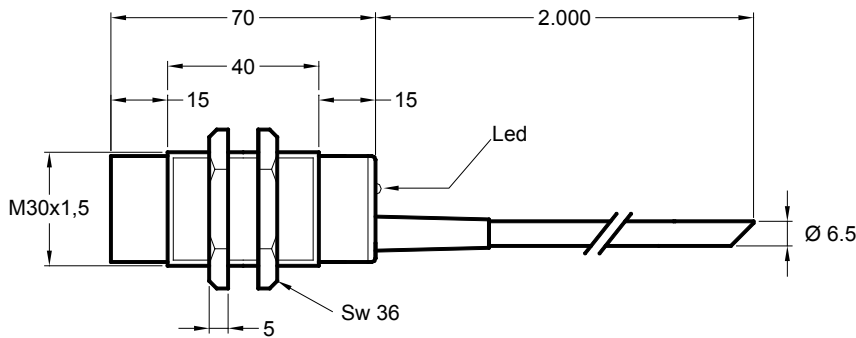
**TYPE - ART. NO.**

**SM-10-A24-A-K-L-D40 - SM105096**

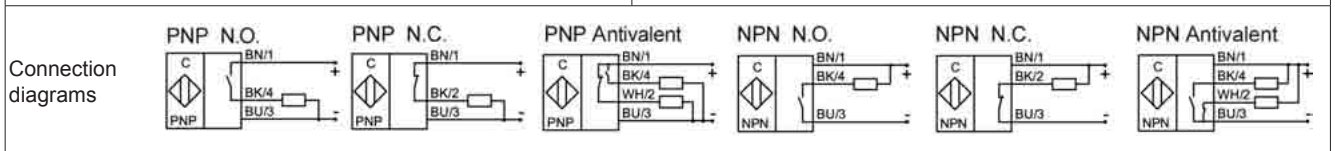
**DESCRIPTION**

**10 = PNP  
20 = NPN  
A24 = M30x1.5 - non flush mountable  
A = antivalent  
K = plastic housing  
L = led  
D40 = Sn 40mm**

**DIMENSIONS AND TECHNICAL DATA**



Operating distance Sn	40 mm
Flush mounting	no
Electrical version	4 wires DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 500 Hz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-10...+60°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	PA
Active surface material	PA
Connection	cable 2m, PVC, 4x0.25mm <sup>2</sup>
Maximum torque Nm	82



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# INDUCTIVE SENSOR - M30

**Standard version  
Connector output  
Non-flush mountable**

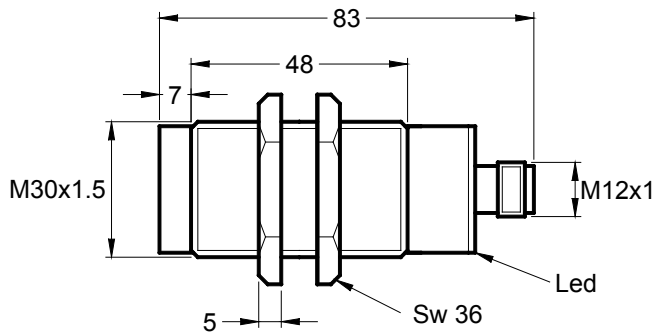
**TYPE - ART. NO.**

SM-10-A24-A-Y3 - SM105008  
SM-20-A24-S-Y3  
SM-20-A24-O-Y3

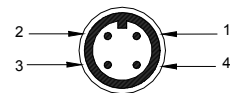
**DESCRIPTION**

10 = PNP  
20 = NPN  
A24 = M30x1.5 - non flush mountable  
A = antivalent  
S = normally open  
O = normally closed  
Y3 = plastic connector

**DIMENSIONS AND TECHNICAL DATA**

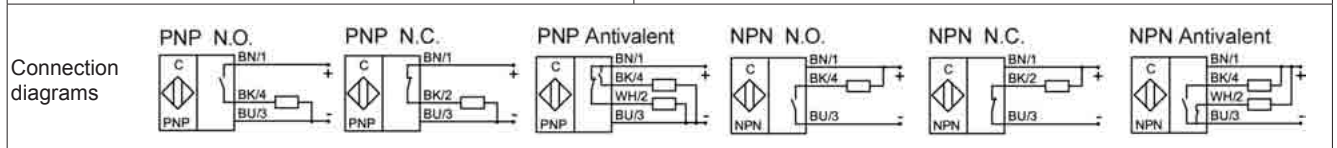


Connector Y1-Y3-Y5  
for M12-M18-M30 sensors



1 = brown = + Vcc  
2 = free or NC output for A version  
3 = blue = - GND  
4 = black = NPN-PNP, NO output  
or NC output for O version

Operating distance Sn	15 mm
Flush mounting	no
Electrical version	4 pins DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 1 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nicheled brass
Active surface material	PA
Connection	plastic connector M12x1
Maximum torque Nm	82



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# INDUCTIVE SENSOR - M30

**Plastic housing  
Connector output  
Non-flush mountable**

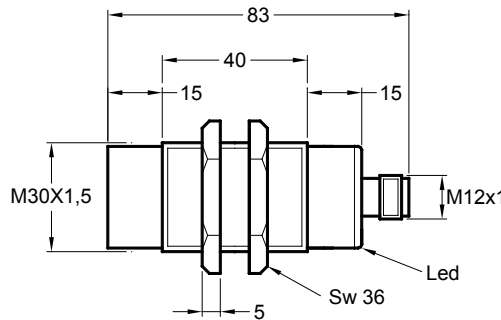
**TYPE - ART. NO.**

SM-10-A24-A-K-Y3 - SM109007  
SM-20-A24-S-K-Y3  
SM-20-A24-O-K-Y3

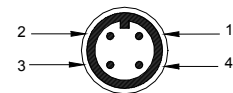
**DESCRIPTION**

10 = PNP  
20 = NPN  
A24 = M30x1.5 - non flush mountable  
A = antivalent  
S = normally open  
O = normally closed  
K = plastic housing  
Y3 = plastic connector

**DIMENSIONS AND TECHNICAL DATA**

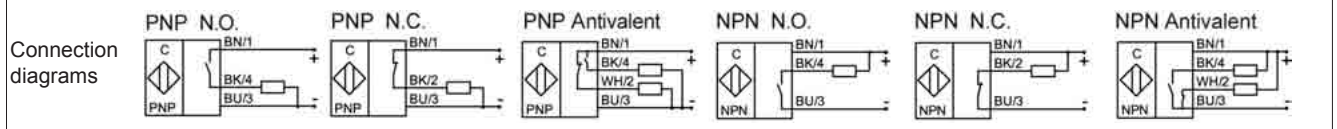


Connector Y1-Y3-Y5 for M12-M18-M30 sensors



1 = brown = + Vcc  
2 = free or NC output for A version  
3 = blue = - GND  
4 = black = NPN-PNP, NO output or NC output for O version

Operating distance Sn	15 mm
Flush mounting	no
Electrical version	4 pins DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 1 KHz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-20...+70°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	PA
Active surface material	PA
Connection	plastic connector M12x1
Maximum torque Nm	1.7



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# INDUCTIVE SENSOR - M30

**Special version long distance and plastic housing  
Connector output  
Non-flush mountable**

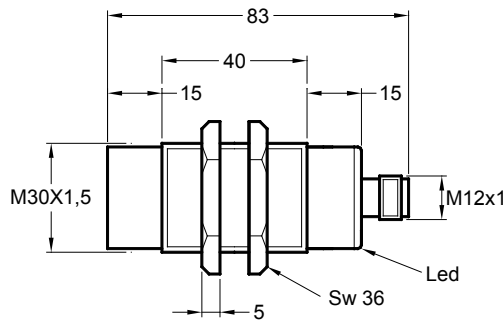
**TYPE - ART. NO.**

**SM-10-A24-A-K-Y3-D40 - SM107011**

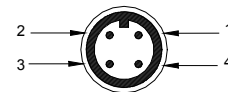
**DESCRIPTION**

**10 = PNP**  
**A24 = M30x1.5 - non flush mountable**  
**A = antivalent**  
**K = plastic housing**  
**Y3 = plastic connector**  
**D40 = Sn 40mm**

**DIMENSIONS AND TECHNICAL DATA**

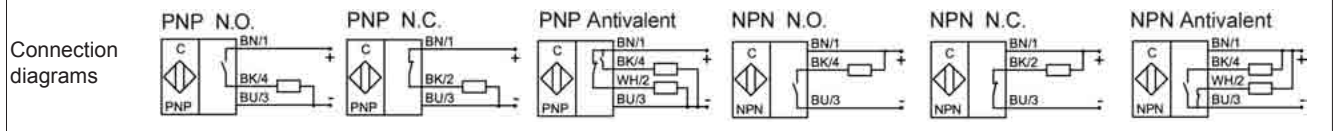


Connector Y1-Y3-Y5  
for M12-M18-M30 sensors



1 = brown = + Vcc  
 2 = free or NC output for A version  
 3 = blue = - GND  
 4 = black = NPN-PNP, NO output  
 or NC output for O version

Operating distance Sn	40 mm
Flush mounting	no
Electrical version	4 pins DC
Operating voltage Ub	10...35 Vdc
Output current Ie	max. 250mA
Voltage drop Ud	max. ≤ 3.5 V
Permitted residual ripple	max. 5%
No load current Io	tip. 15mA
Frequency of operating cycles	max. 500 Hz
Hysteresis	< 10 %
Repeat accuracy	< 1 %
Temperatura permessa	-10...+60°C
Temperature drift	< 10 %
Led display	yellow
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	PA
Active surface material	PA
Connection	plastic connector M12x1
Maximum torque Nm	1.7



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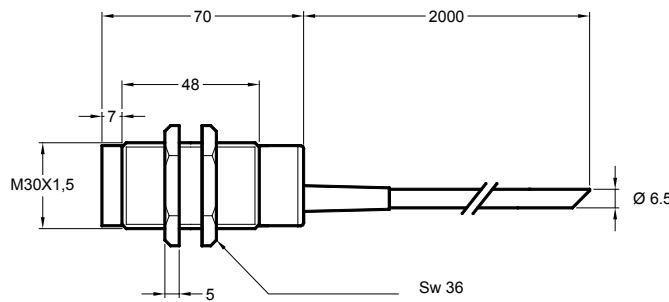
# INDUCTIVE SENSOR - M30

Suitable for ambient with high temperature up to +125°C  
Cable output  
Non-flush mountable

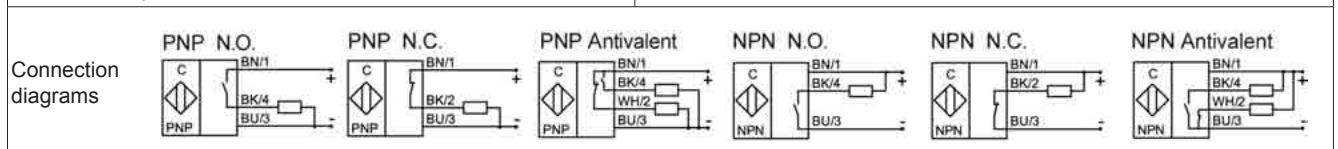
**TYPE - ART. NO.**  
SM-10-A24-S-125  
SM-10-A24-O-125  
SM-20-A24-S-125  
SM-20-A24-O-125

**DESCRIPTION**  
10 = PNP  
20 = NPN  
A24 = M30x1.5 - non flush mountable  
S = normally open  
O = normally closed  
125 = 125°C

## DIMENSIONS AND TECHNICAL DATA



Operating distance $S_n$	15 mm
Flush mounting	no
Electrical version	3 wires DC
Operating voltage $U_b$	10...35 Vdc
Output current $I_e$	max. 250mA
Voltage drop $U_d$	max. $\leq 3.5$ V
Permitted residual ripple	max. 5%
No load current $I_o$	tip. 15mA
Frequency of operating cycles	max. 1 KHz
Hysteresis	$< 10$ %
Repeat accuracy	$< 3$ %
Temperatura permessa	-25...+125°C
Temperature drift	$< 10$ %
Led display	-
Protective circuit	built-in
Degree of protection	(IEC 529) IP 67
Housing material	nickel brass
Active surface material	PTFE
Connection	cable 2m, TEEE/SPR, 3x0.22mm <sup>2</sup>
Maximum torque Nm	82



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