

Proximity Inductive Sensors Extended Range, Nickel-Plated Brass Housing Types ICB, M18

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- Sensing distance: 8 to 14 mm
- Flush and non-flush types
- Short and long body versions
- Rated operational voltage (U_b): 10 - 36 VDC
- Output: DC 200 mA, NPN or PNP
- Normally open, Normally closed
- LED indication for output ON
- Protection: reverse polarity, short circuit, transients
- Cable and M12 plug versions
- According to IEC 60947-5-2

Product Description

A family of inductive proximity switches in industrial standard nickel-plated brass housings. They are able to handle applications where

high sensing range is requested. Output is open collector NPN or PNP transistors.

Ordering Key

ICB18SF08NOM1

Type _____
Housing style _____
Housing material _____
Housing size _____
Housing length _____
Detection principle _____
Sensing distance _____
Output type _____
Output configuration _____
Connection _____

Type Selection

Con- nection	Body style	Rated operating distance S_n	Ordering no. NPN Normally open	Ordering no. PNP Normally open	Ordering no. NPN Normally closed	Ordering no. PNP Normally closed
Cable	Short	8 mm ¹⁾	ICB 18 SF 08 NO	ICB 18 SF 08 PO	ICB 18 SF 08 NC	ICB 18 SF 08 PC
Cable	Short	14 mm ²⁾	ICB 18 SN 14 NO	ICB 18 SN 14 PO	ICB 18 SN 14 NC	ICB 18 SN 14 PC
Plug	Short	8 mm ¹⁾	ICB 18 SF 08 NOM1	ICB 18 SF 08 POM1	ICB 18 SF 08 NCM1	ICB 18 SF 08 PCM1
Plug	Short	14 mm ²⁾	ICB 18 SN 14 NOM1	ICB 18 SN 14 POM1	ICB 18 SN 14 NCM1	ICB 18 SN 14 PCM1
Cable	Long	8 mm ¹⁾	ICB 18 LF 08 NO	ICB 18 LF 08 PO	ICB 18 LF 08 NC	ICB 18 LF 08 PC
Cable	Long	14 mm ²⁾	ICB 18 LN 14 NO	ICB 18 LN 14 PO	ICB 18 LN 14 NC	ICB 18 LN 14 PC
Plug	Long	8 mm ¹⁾	ICB 18 LF 08 NOM1	ICB 18 LF 08 POM1	ICB 18 LF 08 NCM1	ICB 18 LF 08 PCM1
Plug	Long	14 mm ²⁾	ICB 18 LN 14 NOM1	ICB 18 LN 14 POM1	ICB 18 LN 14 NCM1	ICB 18 LN 14 PCM1

¹⁾ For flush mounting in metal

²⁾ For non-flush mounting in metal

Specifications

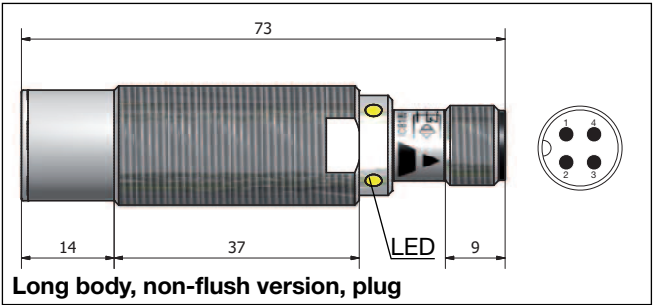
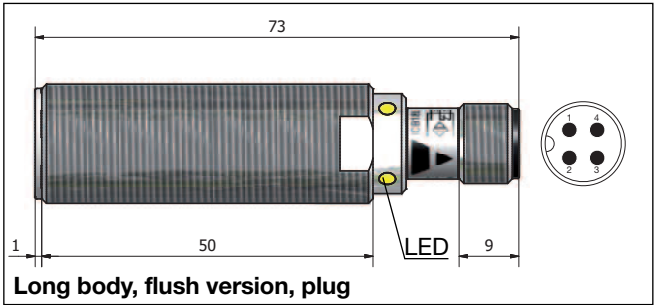
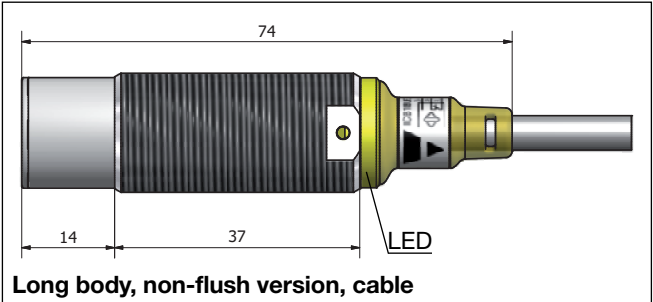
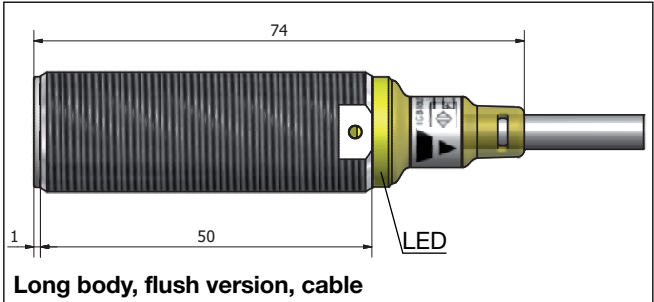
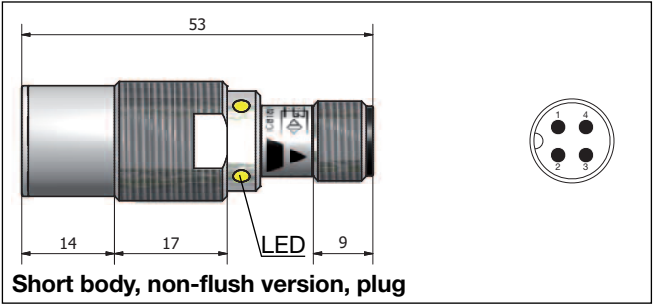
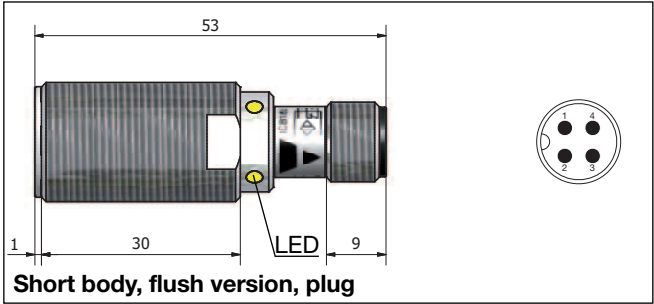
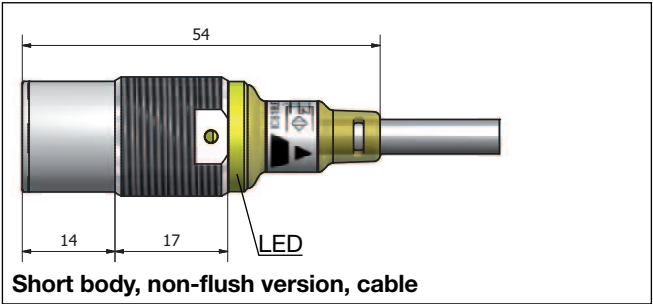
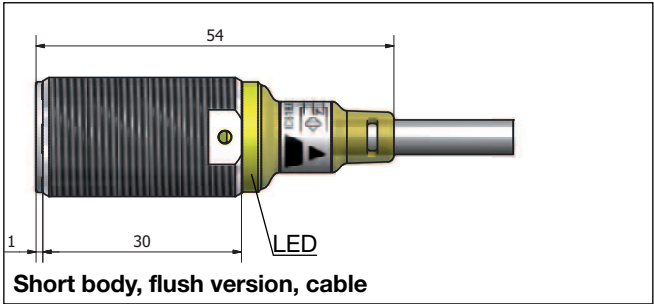
Rated operational voltage (U_b)	10 to 36 VDC (ripple incl.)	Indication for short circuit	LED blinking
Ripple	$\leq 10\%$	Assured operating sensing distance (S_a)	$0 \leq S_a \leq 0.81 \times S_n$
Output current (I_o)	≤ 200 mA @ 50°C (≤ 150 mA @ 50-70°C)	Effective operating distance (S_r)	$0.9 \times S_n \leq S_r \leq 1.1 \times S_n$
OFF-state current (I_i)	≤ 50 μ A	Usable operating distance (S_u)	$0.9 \times S_r \leq S_u \leq 1.1 \times S_r$
No load supply current (I_o)	≤ 15 mA	Repeat accuracy (R)	$\leq 10\%$
Voltage drop (U_d)	Max. 2.5 VDC @ 200 mA	Differential travel (H) (Hysteresis)	1 to 20% of sensing dist.
Protection	Reverse polarity, short-circuit, transients	Shock and vibration	IEC 60947-5-2/7.4
Dielectric impulse voltage withstand	1 kV/0.5 J	Ambient temperature	
Power ON delay (t_o)	300 ms	Operating	-25° to +70°C (-13° to +158°F)
Operating frequency (f)	≤ 1500 Hz	Storage	-30° to +80°C (-22° to +176°F)
Indication for output ON		Housing material	
NO version	Activated LED, yellow	Body	Nickel-plated brass
NC version	Target present Target not present	Front	Grey thermoplastic polyester



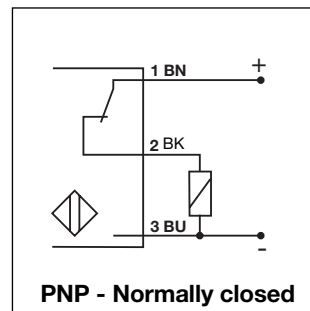
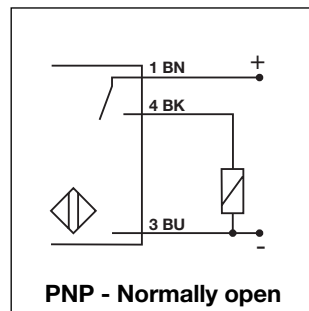
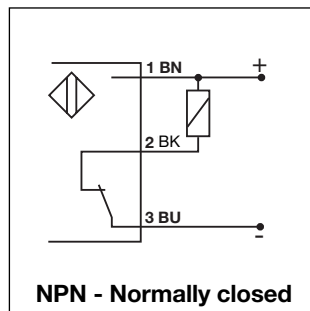
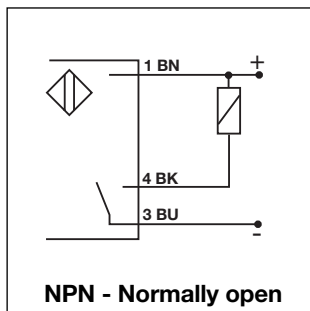
Specifications (cont.)

Connection		Approvals	
Cable	2 m, 3 x 0.3 mm ² , grey PVC, oil proof M12 x 1	CE-marking	UL (cRUus)
Plug			Yes
Degree of protection		EMC protection	
IP 67		IEC 6100-4-2 (ESD)	According to IEC 60947-5-2
Weight (cable/nuts included)		IEC 6100-4-3	8 kV air discharge,
Cable	Max. 150 g	IEC 6100-4-4	4 kV contact discharge
Plug	Max. 70 g	IEC 6100-4-6	3 V/m
Dimensions		IEC 6100-4-8	2 kV
See diagrams below			3 V
Tightening torque			30 A/m
Non-flush version	25 Nm		
Flush version			
From 1 to 3 mm	15 Nm		
> 3 mm	25 Nm		

Dimensions

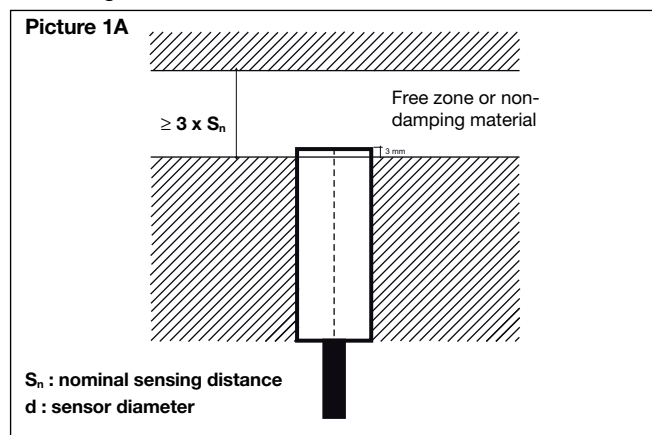


Wiring Diagrams

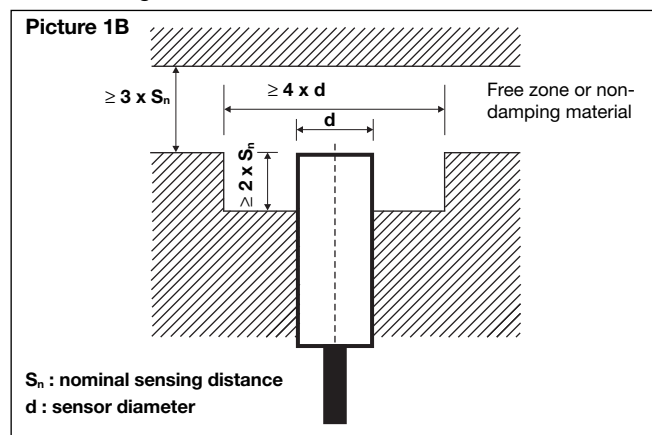


Installation

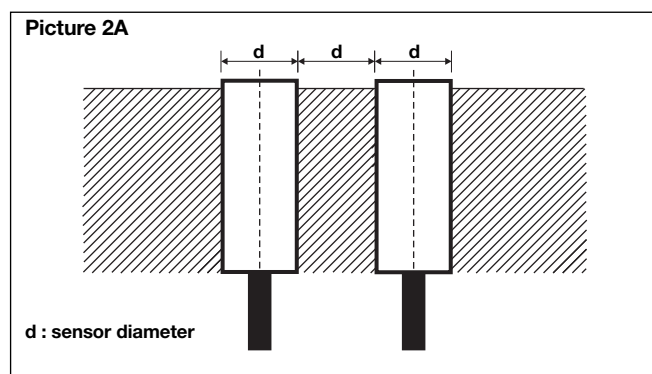
Flush sensor, when installed in damping material, must be according to Picture 1A.



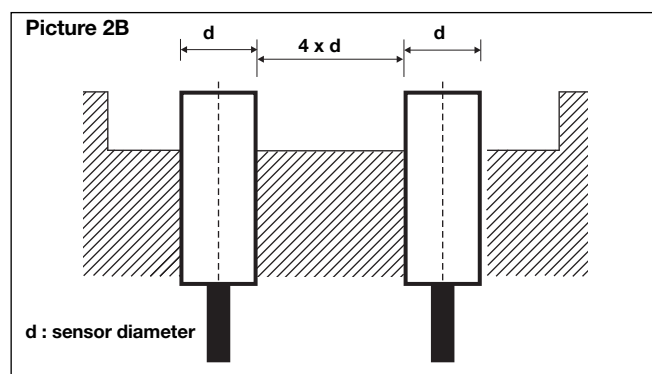
Non-flush sensor, when installed in damping material, must be according to Picture 1B.



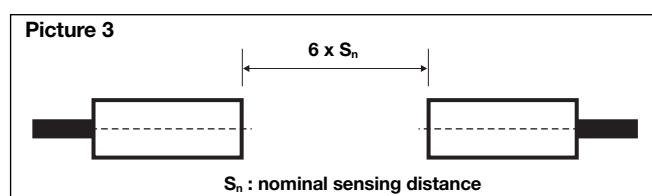
Flush sensors, when installed together in damping material, must be according to Picture 2A.



Non-flush sensors, when installed together in damping material, must be according to Picture 2B.



For sensors installed opposite each other, a minimum space of $6 \times S_n$ (the nominal sensing distance) must be observed (See Picture 3).

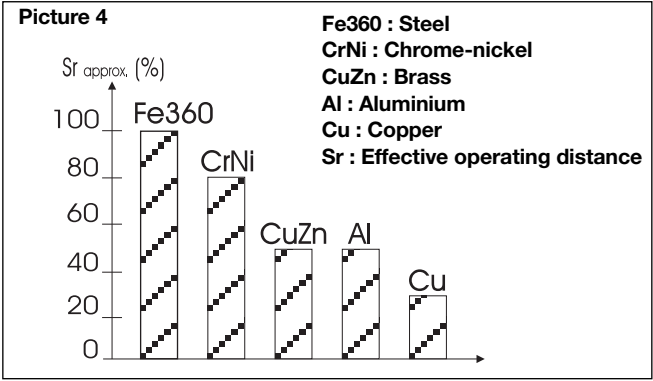




Reduction factors

The rated operating distance is reduced by the use of metals and alloys other than Fe360.

The most important reduction factors for inductive proximity sensors are shown in Picture 4.



Delivery Contents

- Inductive proximity switch ICB.
- 2 nuts NPB
- Packaging: plastic bag