# **Proximity Inductive Sensors** Standard Range, Nickel-Plated Brass Housing Types ICB, M18





- Sensing distance: 5 to 8 mm
- Flush or non-flush types
- Short or long body versions
- Rated operational voltage (U<sub>b</sub>): 10 36 VDC
- Output: DC 200 mA, NPN or PNP
- Normally open or Normally closed
- LED indication for output ON
- Protection: reverse polarity, short circuit, transients
- Cable or M12 plug versions
- According to IEC 60947-5-2
- Laser engraved on front cap, permanently legible
- CSA certified for Hazardous Locations



**Type** 

Ordering Key





ICB18S30F05NOM1

## **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.

#### Housing style Housing material Housing size **Housing length** Thread length **Detection principle** Sensing distance Output type Output configuration Connection

### Type Selection

Connec- tion	Body style	Rated operating	Ordering no. NPN,	Ordering no. PNP,	Ordering no. NPN,	Ordering no. PNP,
		distance S <sub>n</sub>	Normally open	Normally open	Normally closed	Normally closed
Cable	Short	5 mm <sup>1)</sup>	ICB18S30F05N0	ICB18S30F05P0	ICB18S30F05NC	ICB18S30F05PC
Cable	Short	8 mm <sup>2)</sup>	ICB18S30N08N0	ICB18S30N08P0	ICB18S30N08NC	ICB18S30N08PC
Plug	Short	5 mm 1)	ICB18S30F05N0M1	ICB18S30F05P0M1	ICB18S30F05NCM1	ICB18S30F05PCM1
Plug	Short	8 mm <sup>2)</sup>	ICB18S30N08N0M1	ICB18S30N08P0M1	ICB18S30N08NCM1	ICB18S30N08PCM1
Cable	Long	5 mm 1)	ICB18L50F05N0	ICB18L50F05P0	ICB18L50F05NC	ICB18L50F05PC
Cable	Long	8 mm <sup>2)</sup>	ICB18L50N08N0	ICB18L50N08P0	ICB18L50N08NC	ICB18L50N08PC
Plug	Long	5 mm 1)	ICB18L50F05N0M1	ICB18L50F05P0M1	ICB18L50F05NCM1	ICB18L50F05PCM1
Plug	Long	8 mm <sup>2)</sup>	ICB18L50N08N0M1	ICB18L50N08P0M1	ICB18L50N08NCM1	ICB18L50N08PCM1

<sup>1)</sup> For flush mounting in metal

## **Specifications**

Rated operational voltage ( $U_b$ )	10 to 36 VDC (ripple incl.)	
Ripple	≤ 10%	
Output current (I <sub>e</sub> )	≤ 200 mA @ 50°C (≤ 150 mA @ 50-70°C)	
OFF-state current (I <sub>r</sub> )	≤ 50 µA	
No load supply current (I <sub>o</sub> )	≤ 15 mA	
Voltage drop (U <sub>d</sub> )	Max. 2.5 VDC @ 200 mA	
Protection	Reverse polarity, short-circuit, transients	
Voltage transient	1 kV/0.5 J	
Power ON delay (t <sub>v</sub> )	≤ 20 ms	
Operating frequency (f)	≤ 1500 Hz	
Indication for output ON NO version NC version	Activated LED, yellow Target present Target not present	

Indication for short circuit/ overload	LED blinking (f = 2 Hz)
Assured operating sensing distance (S <sub>a</sub> )	$0 \leq S_a \leq 0.81 \text{ x } S_n$
Effective operating distance (S <sub>r</sub> )	$0.9 \times S_n \le S_r \le 1.1 \times S_n$
Usable operating distance (S <sub>u</sub> )	$0.9 \times S_r \le S_u \le 1.1 \times S_r$
Repeat accuracy (R)	≤ 10%
Differential travel (H)	
(Hysteresis)	1 to 20% of sensing dist.
Ambient temperature Operating Storage	-25° to +70°C (-13° to +158°F) -30° to +80°C (-22° to +176°F)
Shock and vibration	IEC 60947-5-2/7.4
Housing material Body Front	Nickel-plated brass Grey thermoplastic polyester

<sup>2)</sup> For non-flush mounting in metal

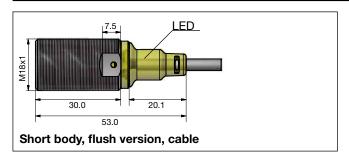


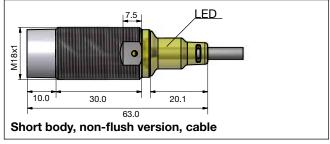
# **Specifications (cont.)**

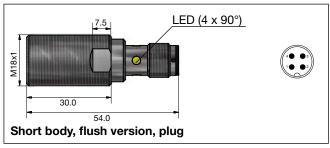
Connection			
Cable		Ø4.1 x 2 m, 3 x 0.25 mm <sup>2</sup> ,	
Dlue		grey PVC, oil proof	
Plug		M12 x 1	
Degree of protection	1	IP 67	
Weight (cable/nuts in	cluded)		
Cable	•	Max. 150 g	
Plug		Max. 70 g	
Dimensions		See diagrams below	
Tightening torque			
Non-flush version		25 Nm	
Flush version			
From 0 to 7 mm		20 Nm	
> 7 mm		25 Nm	
Approvals	c <b>UL</b> us	(UL508)	
•	c <b>CSA</b> us	As Process Control	
		Equipment for Hazardous	
Note: The terminal co	nnector	Locations.	
(versionM1) was no	ot	- Class I, Division 2,	
evaluated. The suitab	ility of	Groups A, B, C and D.	
the terminal connecto	or should	- T5 up to 150 mA, T4A for a	
be determined in the	end-use	load current > 150 mA and	
application.		up to 200 mA, Enclosure	
		Type 4.	

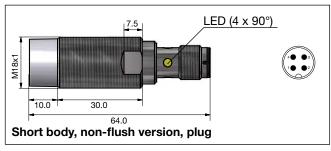
	γ
Approvals (cont.)	Ambient temperature Ta: -25° to +60°C CCC is not required for products with a maximum operating voltage of $\leq$ 36 V
EMC protection IEC 61000-4-2 (ESD)	According to IEC 60947-5-2 8 KV air discharge, 4 KV contact discharge
IEC 61000-4-3	3 V/m
IEC 61000-4-4	2 kV
IEC 61000-4-6	3 V
IEC 61000-4-8	30 A/m
MTTFd	850 years @ 50°C (122°F)

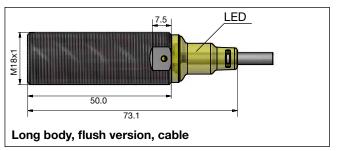
## **Dimensions (mm)**

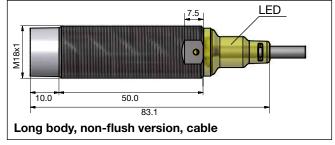






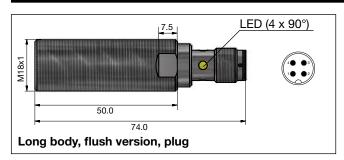


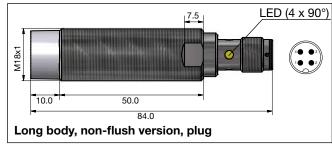






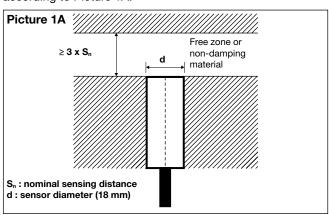
## **Dimensions (mm) (cont.)**



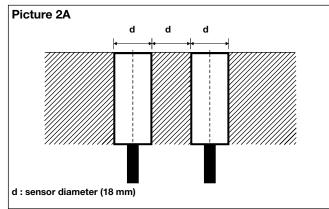


#### Installation

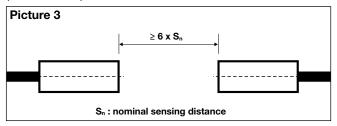
Flush sensor, when installed in damping material, must be according to Picture 1A.



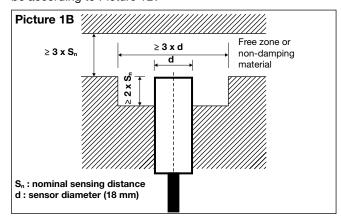
Flush sensors, when installed together in damping material, must be according to Picture 2A.



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



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



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

