Proximity Inductive Sensors Extended Range, Nickel-Plated Brass Housing Types ICB, M30





- · Sensing distance: 15 to 22 mm
- · Flush or non-flush types
- . Short or long body versions
- Rated operational voltage (U_b): 10 36 VDC
- Output: DC 200 mA, NPN or PNP
- Normally open or Normally closed
- LED indication for output ON, short-circuit and overload
- 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







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	ICB30S30F15NOM1
Type	
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 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	15 mm ¹⁾	ICB30S30F15N0	ICB30S30F15P0	ICB30S30F15NC	ICB30S30F15PC
Cable	Short	22 mm 2)	ICB30S30N22N0	ICB30S30N22P0	ICB30S30N22NC	ICB30S30N22PC
Plug	Short	15 mm 1)	ICB30S30F15N0M1	ICB30S30F15P0M1	ICB30S30F15NCM1	ICB30S30F15PCM1
Plug	Short	22 mm 2)	ICB30S30N22N0M1	ICB30S30N22P0M1	ICB30S30N22NCM1	ICB30S30N22PCM1
Cable	Long	15 mm 1)	ICB30L50F15N0	ICB30L50F15P0	ICB30L50F15NC	ICB30L50F15PC
Cable	Long	22 mm 2)	ICB30L50N22N0	ICB30L50N22P0	ICB30L50N22NC	ICB30L50N22PC
Plug	Long	15 mm 1)	ICB30L50F15NOM1	ICB30L50F15P0M1	ICB30L50F15NCM1	ICB30L50F15PCM1
Plug	Long	22 mm 2)	ICB30L50N22N0M1	ICB30L50N22P0M1	ICB30L50N22NCM1	ICB30L50N22PCM1

¹⁾ For flush mounting in metal

Specifications

Rated operational voltage (U _b)	10 to 36 VDC (ripple incl.)
Ripple	≤ 10%
Output current (I _e)	≤ 200 mA @ 50°C (≤ 150 mA @ 50-70°C)
OFF-state current (I _r)	≤ 50 µA
No load supply current (I _o)	≤ 15 mA
Voltage drop (U _d)	Max. 2.5 VDC @ 200 mA
Protection	Reverse polarity, short-circuit, transients
Voltage transient	1 kV/0.5 J
Power ON delay (t _v)	300 ms
Operating frequency (f)	≤ 1000 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 _a)	$0 \leq S_a \leq 0.81 \text{ x } S_n$
Effective operating distance (S _r)	$0.9 \times S_n \le S_r \le 1.1 \times S_n$
Usable operating distance (S _u)	$0.85 \ x \ S_r \le S_u \le 1.1 \ x \ S_r$
Repeat accuracy (R)	≤ 5%
Differential travel (H) (Hysteresis)	1 to 20% of sensing dist.

²⁾ For non-flush mounting in metal

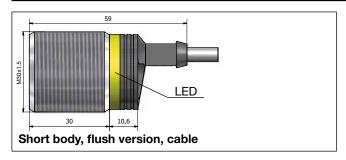


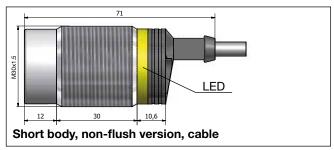
Specifications (cont.)

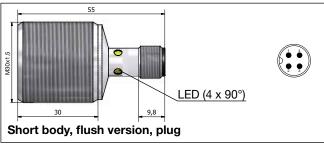
Ambient temperature Operating	
Cable	-25° to +70°C (-13° to +158°F)
Plug	-40° to +70°C (-40° to +158°F)
Storage	-40° to +80°C (-40° to +176°F)
Shock and vibration	IEC 60947-5-2/7.4
Housing material	
Body	Nickel-plated brass
Front cap	Grey thermoplastic polyester
Connection	
Cable	Ø5.2 x 2 m, 3 x 0.34 mm ² ,
	grey PVC, oil proof
Plug	M12 x 1
Degree of protection	IP 67
Weight (cable/nuts included)	
ICB30 S	Max. 185 g
ICB30 L	Max. 195 g
Dimensions	See diagrams below
Tightening torque	25 Nm
Approvals cULus	(UL508)

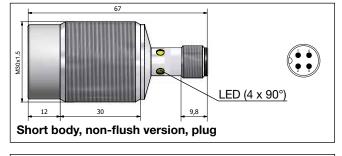
Approvals (cont.)	
Note: The terminal connector (versionM1) was not evaluated. The suitability of the terminal connector should be determined in the end-use application.	As Process Control Equipment for Hazardous Locations Class I, Division 2, Groups A, B, C and D T5 up to 150 mA, T4A for a load current > 150 mA and up to 200 mA, Enclosure Type 4. Ambient temperature Ta: -25° to +60°C.
	CCC is not required for products with a maximum operating voltage of ≤ 36 V
EMC protection	According to IEC 60947-5-2
IEC 61000-4-2 (ESD)	8 KV air discharge,
IEC 61000-4-3 IEC 61000-4-4 IEC 61000-4-6 IEC 61000-4-8	4 KV contact discharge 12 V/m 4 kV 10 V 30 A/m
MTTF _d	850 years @ 50°C (122°F)

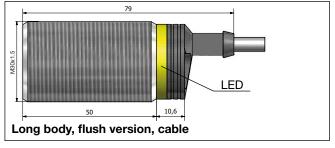
Dimensions (mm)

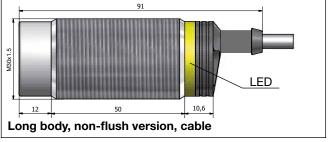






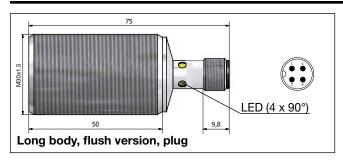


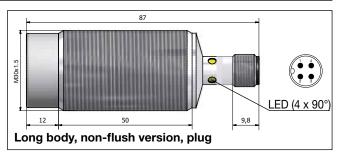






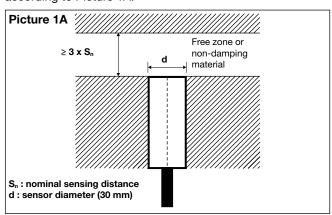
Dimensions (mm) (cont.)



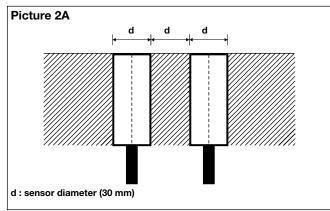


Installation

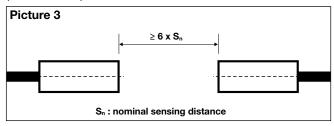
Flush sensor, when installed in damping material, must be according to Picture 1A.



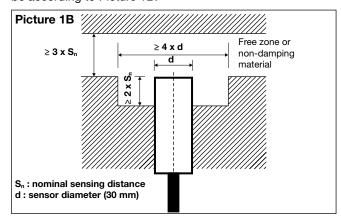
Flush sensors, when installed together in damping material, must be according to Picture 2A.



For sensors installed opposite each other, a minimum space of 6 x 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.

