Proximity Inductive Sensors Increased Operating Distance, Nickel-Plated Brass Housing - Types ICB, M12





- · Sensing distance: 6 to 10 mm
- Quasi-flush or non-flush mountable
- 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
- Setup indicator
- 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 very long operating distance is requested.

Output is open collector NPN or PNP transistors. Less machine downtime thanks to lower risk of

mechanical damage. Housing length Thread length **Detection principle** Sensing distance

Ordering Key ICB12S30F06NOM1 Type Housing style Housing material Housing size **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	6 mm 1)	ICB12S30F06N0	ICB12S30F06P0	ICB12S30F06NC	ICB12S30F06PC
Cable	Short	10 mm ²⁾	ICB12S30N10N0	ICB12S30N10P0	ICB12S30N10NC	ICB12S30N10PC
Plug	Short	6 mm 1)	ICB12S30F06N0M1	ICB12S30F06P0M1	ICB12S30F06NCM1	ICB12S30F06PCM1
Plug	Short	10 mm ²⁾	ICB12S30N10N0M1	ICB12S30N10P0M1	ICB12S30N10NCM1	ICB12S30N10PCM1
Cable	Long	6 mm 1)	ICB12L50F06N0	ICB12L50F06P0	ICB12L50F06NC	ICB12L50F06PC
Cable	Long	10 mm ²⁾	ICB12L50N10N0	ICB12L50N10P0	ICB12L50N10NC	ICB12L50N10PC
Plug	Long	6 mm 1)	ICB12L50F06N0M1	ICB12L50F06P0M1	ICB12L50F06NCM1	ICB12L50F06PCM1
Plug	Long	10 mm ²⁾	ICB12L50N10N0M1	ICB12L50N10P0M1	ICB12L50N10NCM1	ICB12L50N10PCM1

¹⁾ For quasi-flush mounting in metal

Specifications

Data dan anatian alambana (III)	10 to 00 V/DO (vice alla in all)
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 (U₀)	Max. 2.5 VDC @ 200 mA
Protection	Reverse polarity, short-circuit, transients
Voltage transient	1 kV/0.5 J
Power ON delay (t _v)	≤ 20 ms
Operating frequency (f)	≤ 2000 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)	$0 \le S_a \le 0.81 \times S_n$
Effective operating distance (S _r)	$0.9 \times S_n \le S_r \le 1.1 \times S_n$
Usable operating distance (S _u)	$0.9 \times S_r \le S_u \le 1.1 \times S_r$
Repeat accuracy (R)	≤ 10%
Differential travel (H) (Hysteresis)	1 to 20% of sensing dist.

²⁾ For non-flush mounting in metal

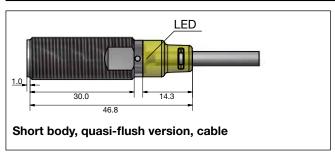


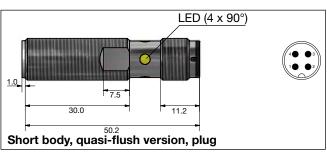
Specifications (cont.)

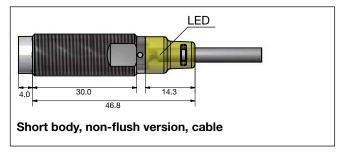
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Ambient temperature Operating	-25° to +70°C (-13° to +158°F)
Storage	-30° to +80°C (-22° to +176°F)
Shock and vibration	IEC 60947-5-2/7.4
Housing material	
Body	Nickel-plated brass
Front	Grey thermoplastic polyester
Connection	
Cable	Ø4.1 x 2 m, 3 x 0.25 mm ² ,
Dive	grey PVC, oil proof M12 x 1
Plug	
Degree of protection	IP 67
Weight (cable/nuts included)	
Cable	Max. 85 g
Plug	Max. 45 g
Dimensions	See diagrams below
Tightening torque	
Distance from sensing face	4.81
from 2 mm to 7 mm	4 Nm
> 7 mm	10 Nm
Setup function	
NO version LED flashing (f=0.67 Hz)	$0.8 S_n < S_r \le S_n$
LED lights continuously	$0.6 S_n < S_r \le S_n$ $0 \le S_r \le 0.8 S_n (*)$
NC version	0 2 Or 2 0.0 On ()
LED flashing (f=0.67 Hz)	$0.8 S_n < S_r \le S_n$
LED OFF	$0 \le S_r \le 0.8 S_n$ (*)
	(*): safer installation

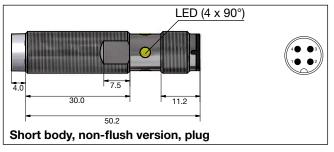
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Approvals	c UL us	(UL508)
Note: The termina (versionM1) wa evaluated. The su the terminal conne be determined in application.	s not itability of ector should	As Process Control Equipment for Hazardous Locations Class I, Division 2, Groups A, B, C and D T5, Enclosure Type 4. 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 (I	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		750 years @ 50°C (122°F)

Dimensions (mm)



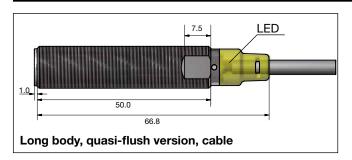


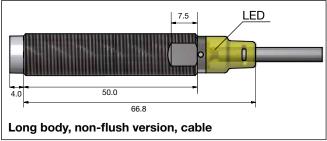


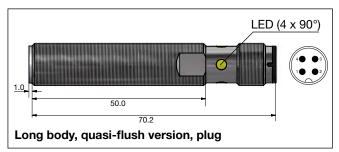


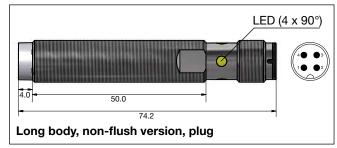


Dimensions (mm) (cont.)







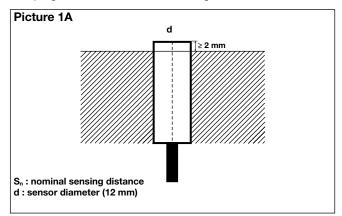


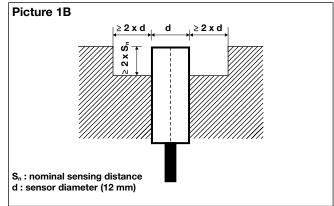
Installation

Quasi-flush mountable proximity switches, when installed in damping material, must be according to Picture 1A.

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

Picture 1B





Quasi-flush mountable proximity switches, when installed together in damping material, must be according to Picture 2A.

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

