Proximity Inductive Sensors Increased Operating Distance, Nickel-Plated Brass Housing - Types ICB, M30





- · Sensing distance: 22 to 40 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
- 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



Type





ICB30S35F22NOM1

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 thanks to lower risk of mechanical damage.

Housing style downtime Housing material-Housing size **Housing length** Thread length

Ordering Key

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	22 mm ¹⁾	ICB30S35F22N0	ICB30S35F22P0	ICB30S35F22NC	ICB30S35F22PC
Cable	Short	40 mm 2)	ICB30S35N40N0	ICB30S35N40P0	ICB30S35N40NC	ICB30S35N40PC
Plug	Short	22 mm 1)	ICB30S35F22N0M1	ICB30S35F22P0M1	ICB30S35F22NCM1	ICB30S35F22PCM1
Plug	Short	40 mm 2)	ICB30S35N40N0M1	ICB30S35N40P0M1	ICB30S35N40NCM1	ICB30S35N40PCM1
Cable	Long	22 mm 1)	ICB30L50F22N0	ICB30L50F22P0	ICB30L50F22NC	ICB30L50F22PC
Cable	Long	40 mm 2)	ICB30L50N40N0	ICB30L50N40P0	ICB30L50N40NC	ICB30L50N40PC
Plug	Long	22 mm 1)	ICB30L50F22N0M1	ICB30L50F22P0M1	ICB30L50F22NCM1	ICB30L50F22PCM1
Plug	Long	40mm ²⁾	ICB30L50N40N0M1	ICB30L50N40P0M1	ICB30L50N40NCM1	ICB30L50N40PCM1

¹⁾ For quasi-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)	≤ 20 ms
Operating frequency (f)	≤ 100 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)	$0 \leq S_a \leq 0.81 \ x \ S_n$
Effective operating distance (S _r)	$0.9 \times S_n \le S_r \le 1.1 \times S_n$
Usable operating distance (S _u)	$0.9 \ x \ S_r \le S_u \le 1.1 \ x \ S_r$
Repeat accuracy (R)	≤ 10%
Differential travel (H) (Hysteresis)	1 to 20% of sensing dist.

²⁾ For non-flush mounting in metal

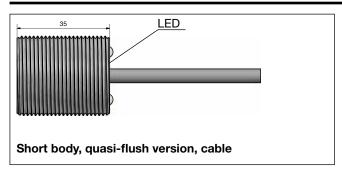


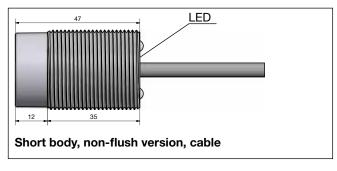
Specifications (cont.)

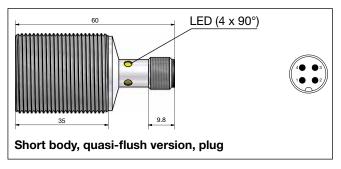
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Ambient temperature Operating Storage	-25° to +70°C (-13° to +158°F) -30° to +80°C (-22° to +176°F)
Shock and vibration	IEC 60947-5-2/7.4
Housing material Body Front	Nickel-plated brass Grey thermoplastic polyester
Connection	
Cable	Ø5.2 x 2 m, 3 x 0.34 mm ² , grey PVC, oil proof M12 x 1
Plug	= // .
Degree of protection	IP 67
Weight (cable/nuts included)	
Cable	Max. 220 g
Plug	Max. 160 g
Dimensions	See diagrams below
Tightening torque	25 Nm
Setup function NO version LED flashing (f=0.67 Hz) LED lights continuously NC version LED flashing (f=0.67 Hz)	$\begin{array}{l} 0.8 \; S_{n} < S_{r} \leq S_{n} \\ 0 \leq S_{r} \leq 0.8 \; S_{n} \; (*) \\ \\ 0.8 \; S_{n} < S_{r} \leq S_{n} \end{array}$
LED OFF	$0 \le S_r \le 0.8 S_n$ (*) (*): safer installation

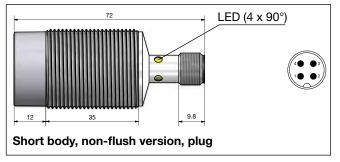
Approvals cULus	(UL508)
Note: The terminal connector (versionM1) was not evaluated. The suitability of the terminal connector should be determined in the end-use application.	Equipment for Hazardous Locations. - Class I, Division 2, Groups A, B, C and D. - T5, Enclosure Type 4.
	CCC is not required for 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, 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
MTTF _d	700 years @ 50°C (122°F)

Dimensions (mm)



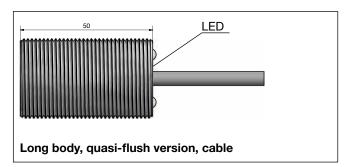


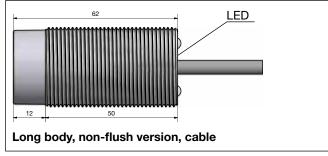


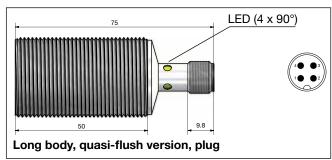


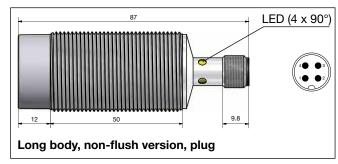


Dimensions (mm) (cont.)









Installation

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

Picture 1A

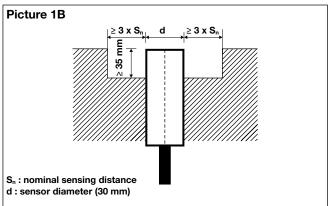
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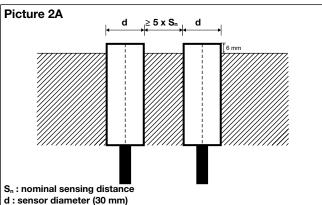
smm

sn: nominal sensing distance
d: sensor diameter (30 mm)

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

