

Proximity Sensors Inductive Extended Range, Nickel-Plated Brass Housing Types IA, M18 and M30

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- Sensing distance: 8 to 22 mm
- Flush and non-flush types
- Long and short body
- Rated operational voltage: 10 - 40 VDC
- Output: DC 200 mA, NPN or PNP
- Normally open / Normally closed function
- LED-indication
- Protection: reverse polarity, short circuit, transients
- Cable and plug versions

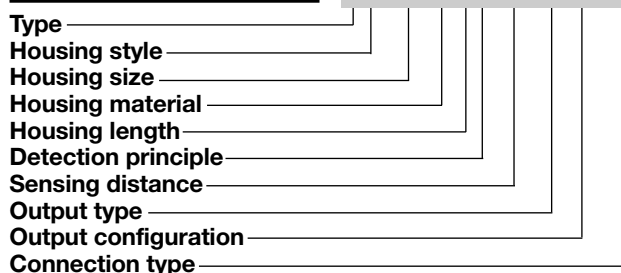
Product Description

A family of Extended range inductive proximity switches in industrial standard nickel-plated brass housings. M18 and M30 types. They are able to handle applications

where high sensing range is requested. Output are open collector NPN or PNP transistors. Available with cable and M12 plug.

Ordering Key

IA18ASF08NOM1



Type Selection

Housing diameter	Connection	Body style	Rated operating distance S_n	Ordering no. NPN Normally open	Ordering no. PNP Normally open	Ordering no. PNP Normally closed
M18	Cable	Short	8 mm ¹⁾	IA 18 DSF 08 NO	IA 18 DSF 08 PO	
M18	Plug	Short	8 mm ¹⁾	IA 18 ASF 08 NOM1	IA 18 ASF 08 POM1	
M18	Cable	Short	14 mm ²⁾	IA 18 DSN 14 NO	IA 18 DSN 14 PO	
M18	Plug	Short	14 mm ²⁾	IA 18 ASN 14 NOM1	IA 18 ASN 14 POM1	
M30	Cable	Short	15 mm ¹⁾	IA 30 DSF 15 NO	IA 30 DSF 15 PO	IA 30 DSF 15 PC
M30	Plug	Short	15 mm ¹⁾	IA 30 ASF 15 NOM1	IA 30 ASF 15 POM1	
M30	Cable	Short	22 mm ²⁾	IA 30 DSN 22 NO	IA 30 DSN 22 PO	
M30	Plug	Short	22 mm ²⁾	IA 30 ASN 22 NOM1	IA 30 ASN 22 POM1	

¹⁾ For flush mounting in metal

²⁾ For non-flush mounting in metal

Specifications

Rated operational voltage (U_b)	10 to 40 VDC (ripple incl.)	Operating frequency (f)	IA18 ..F 08 ≥ 1400 Hz IA18 ..N 14 ≥ 700 Hz IA30 ..F 15 ≥ 700 Hz IA30 ..N 22 ≥ 500 Hz
Ripple	$\leq 10\%$	Indication for output ON	LED, yellow
Output current (I_e)	≤ 200 mA @ 50°C (≤ 150 mA @ 50-70°C)	Assured operating sensing distance (S_a)	$0 \leq S_a \leq 0.81 \times S_n$
No load supply current (I_o)	IA 18 ≤ 10 mA IA 30 ≤ 10 mA	Effective operating distance (S_r)	$0.9 \times S_n \leq S_r \leq 1.1 \times S_n$
Voltage drop (U_d)	Max. 2.5 VDC @ 200 mA	Usable operating distance (S_u)	$0.85 \times S_r \leq S_u \leq 1.15 \times S_r$
Protection	Reverse polarity, short-circuit, transients	Repeat accuracy (R)	$\leq 5\%$
Transient voltage	1 kV/0.5 J	Differential travel (H) (Hysteresis)	1 to 20% of sensing dist.
Power ON delay (t_v)	50 ms		

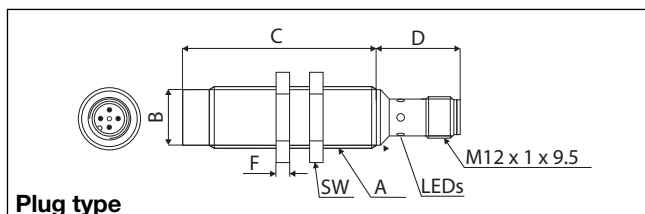
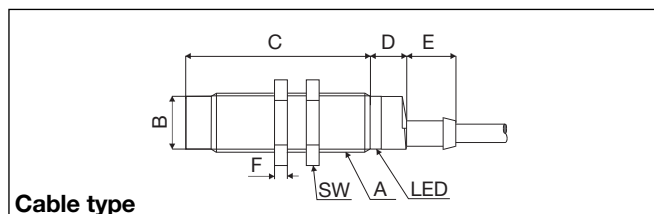


Specifications (cont.)

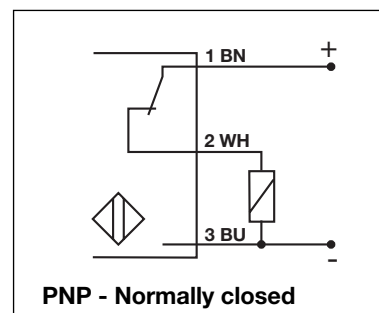
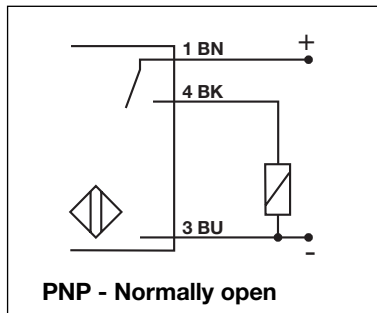
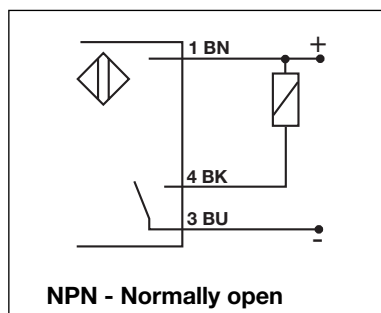
Ambient temperature Operating Storage	-25° to +70°C (-13° to +158°F) -30° to +80°C (-22° to +176°F)	Degree of protection	IP 67
Housing material Body Front Backpart Plug Cable Nuts	Nickel-plated brass Grey thermoplastic polyester NPB PBTP (black polyester) NPB	Weight (cable/nuts included) IA 18 .S. IA 30 .S.	120 g 185 g
Connection Cable Plug Cables for plug (-1)	2 m, 3 x 0.3 mm ² , grey PVC, oil proof M12 x 1 CONM13NF series	Tightening torque IA 18 IA 30	27.5 Nm 50.0 Nm
		Approvals	UL, CSA
		CE-marking	Yes

Dimensions

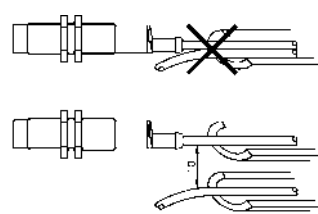
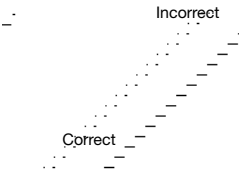
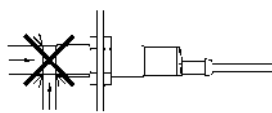
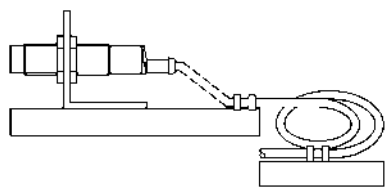
Type	A	B Ø mm	C mm	D mm	E mm	F mm	SW mm
IA 18 DSF 08 .O	M18 x 1 x 30	16.7	30	11.6	15.4	4	24
IA 18 ASF 08 .O M1	M18 x 1 x 30	16.7	30	25.0		4	24
IA 18 DSN 14 .O	M18 x 1 x 30	16.7	38	11.6	15.4	4	24
IA 18 ASN 14 .O M1	M18 x 1 x 30	16.7	38	25.0		4	24
IA 30 DSF 15 xx	M30 x 1.5 x 30	28	30	13.6	15.4	5	36
IA 30 ASF 15 .O M1	M30 x 1.5 x 30	28	30	25.0		5	36
IA 30 DSN 22 .O	M30 x 1.5 x 30	28	42	13.6	15.4	5	36
IA 30 ASN 22 .O M1	M30 x 1.5 x 30	28	42	25.0		5	36



Wiring Diagrams



Installation Hints

<p>To avoid interference from inductive voltage/current peaks, separate the prox. switch power cables from any other power cables, e.g. motor, contactor or solenoid cables</p> 	<p>Relief of cable strain</p>  <p>The cable should not be pulled</p>	<p>Protection of the sensing face</p>  <p>A proximity switch should not serve as mechanical stop</p>	<p>Switch mounted on mobile carrier</p>  <p>Any repetitive flexing of the cable should be avoided</p>
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Delivery Contents

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

Accessories

M 12 connector

- | | |
|-------------|-----------------------|
| CONM13NF-A2 | (90°, 2 m cable) |
| CONM13NF-A5 | (90°, 5 m cable) |
| CONM13NF-S2 | (straight, 2 m cable) |
| CONM13NF-S5 | (straight, 5 m cable) |