

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

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- Sensing distance: 5 to 15 mm
- Flush and non-flush types
- Long and short housing
- Rated operational voltage: 10 - 40 VDC
- Output: DC 200 mA, NPN or PNP
- Normally open and Normally closed function
- Output indication: by yellow LED
- Protection: reverse polarity, short circuit, transients
- Cable and plug versions

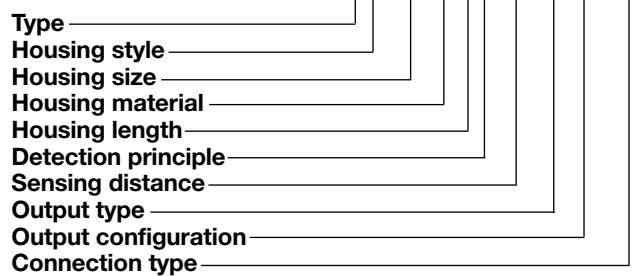
Product Description

A family of inexpensive proximity inductive switches in industrial standard nickel-plated brass housings (M18 and M30 types).
Output indication: by yellow LED.

Outputs are open collector NPN or PNP transistors. Available with cable and M12 plug.

Ordering Key

IA18ASF05NOM1



Type Selection

Housing diameter	Connection	Housing 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
M18	Cable	Short	5 mm ¹⁾	IA 18 DSF 05 NO	IA 18 DSF 05 PO	IA 18 DSF 05 NC	IA 18 DSF 05 PC
M18	Plug	Short	5 mm ¹⁾	IA 18 ASF 05 NOM1	IA 18 ASF 05 POM1	IA 18 ASF 05 NCM1	IA 18 ASF 05 PCM1
M18	Cable	Long	5 mm ¹⁾		IA 18 DLF 05 PO		IA 18 DLF 05 PC
M18	Plug	Long	5 mm ¹⁾		IA 18 ALF 05 POM1		IA 18 ALF 05 PCM1
M18	Cable	Short	8 mm ²⁾	IA 18 DSN 08 NO	IA 18 DSN 08 PO	IA 18 DSN 08 NC	IA 18 DSN 08 PC
M18	Plug	Short	8 mm ²⁾	IA 18 ASN 08 NOM1	IA 18 ASN 08 POM1	IA 18 ASN 08 NCM1	IA 18 ASN 08 PCM1
M30	Cable	Short	10 mm ¹⁾	IA 30 DSF 10 NO	IA 30 DSF 10 PO		
M30	Plug	Short	10 mm ¹⁾	IA 30 ASF 10 NOM1	IA 30 ASF 10 POM1		
M30	Cable	Long	10 mm ¹⁾		IA 30 DLF 10 PO		IA 30 DLF 10 PC
M30	Plug	Long	10 mm ¹⁾		IA 30 ALF 10 POM1		
M30	Cable	Short	15 mm ²⁾	IA 30 DSN 15 NO	IA 30 DSN 15 PO		
M30	Plug	Short	15 mm ²⁾	IA 30 ASN 15 NOM1	IA 30 ASN 15 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.)	Power ON delay (t_v)	50 ms
Ripple	≤ 10%	Operating frequency (f)	IA18 ..F 05 ≤ 1500 Hz IA18 DSN 08 ≤ 1500 Hz IA30 ..F 10 ≤ 700 Hz IA30 DSN 15 ≤ 700 Hz
Output current (I_e)	≤ 200 mA @ 50°C (≤ 150 mA @ 50-70°C)	Indication for output ON	LED, yellow
No load supply current (I_o)	IA 18 ≤ 10 mA IA 30 ≤ 10 mA	Operating sensing distance (S_a)	$0 \leq S_a \leq 0.81 \times S_n$
Voltage drop (U_d)	Max. 2.5 VDC @ 200 mA	Effective operating distance (S_r)	$0.9 \times S_n \leq S_r \leq 1.1 \times S_n$
Protection	Reverse polarity, short-circuit, transients	Usable operating distance (S_u)	$0.9 \times S_r \leq S_u \leq 1.1 \times S_r$
Voltage transient	1 kV/0.5 J		

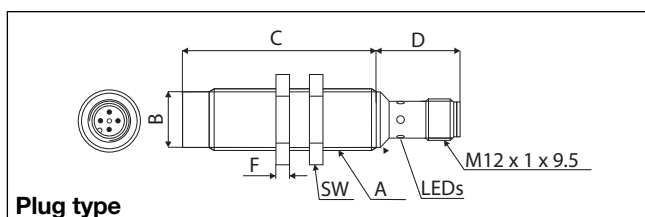
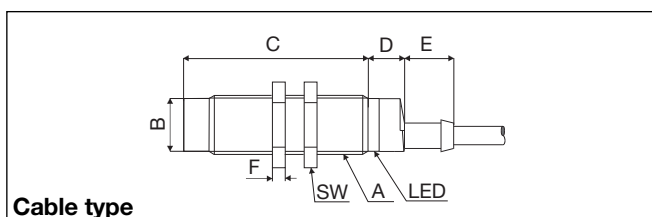


Specifications (cont.)

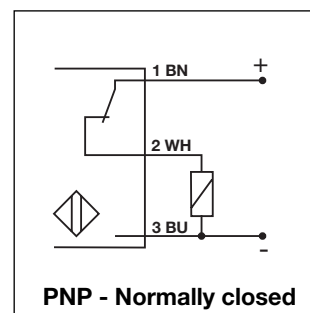
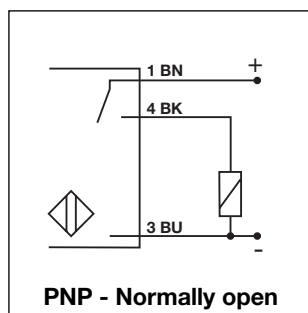
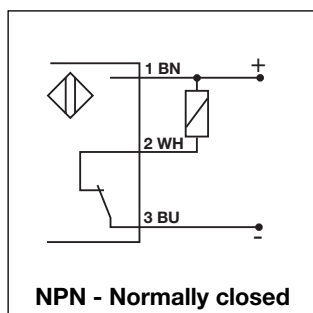
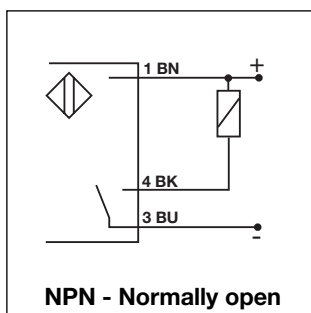
Repeated accuracy (R)	≤ 5%	Degree of protection	IP 67
Differential travel (H) (Hysteresis)	1 to 20% of sensing dist.	Weight	IA 18 .S. 120 g IA 18 .L. 130 g IA 30 .S. 185 g IA 30 .L. 195 g
Ambient temperature		Tightening torque	IA 18 27.5 Nm IA 30 50.0 Nm
Operating	-25° to +70°C (-13° to +158°F)	Approvals	UL, CSA
Storage	-30° to +80°C (-22° to +176°F)	CE-marking	Yes
Housing material			
Body	Nickel-plated brass		
Front	Grey thermoplastic polyester		
Backpart			
Plug	NPB		
Cable	PBTP (black polyester)		
Nuts	NPB		
Connection			
Cable	2 m, 3 x 0.3 mm ² , Grey PVC, oil proof		
Plug	M12 x 1		
Cables for plug (-1)	CONH1A/CONH10 series		

Dimensions

Type	A	B mm	C mm	D mm	E mm	F mm	SW mm
IA 18 DSF 05 xx	M18 x 1 x 30	16.7	30	11.6	15.4	4	24
IA 18 ASF 05 xx M1	M18 x 1 x 30	16.7	30	25.0		4	24
IA 18 DLF 05 xx	M18 x 1 x 50	16.7	50	11.6	15.4	4	24
IA 18 ALF 05 xx M1	M18 x 1 x 50	16.7	50	25.0		4	24
IA 18 DSN 08 xx	M18 x 1 x 30	16.7	38	11.6	15.4	4	24
IA 18 ASN 08 xx M1	M18 x 1 x 30	16.7	38	25.0		4	24
IA 30 DSF 10 xx	M30 x 1.5 x 30	28	30	13.6	15.4	5	36
IA 30 ASF 10 xx M1	M30 x 1.5 x 30	28	30	25.0		5	36
IA 30 DLF 10 xx	M30 x 1.5 x 50	28	50	13.6	15.4	5	36
IA 30 ALF 10 xx M1	M30 x 1.5 x 50	28	50	25.0		5	36
IA 30 DSN 15 xx	M30 x 1.5 x 30	28	42	13.6	15.4	5	36
IA 30 ASN 15 xx 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

- M12 connector**
- | | |
|-----------|-----------------------|
| CONH10-A2 | (90°, 2 m cable) |
| CONH10-A5 | (90°, 5 m cable) |
| CONH10-S2 | (straight, 2 m cable) |
| CONH10-S5 | (straight, 5 m cable) |

Detection Diagrams

