

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



- 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 _____
Housing style _____
Housing size _____
Housing material _____
Housing length _____
Detection principle _____
Sensing distance _____
Output type _____
Output configuration _____
Connection type _____

Type Selection

Housing diameter	Connec- tion	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

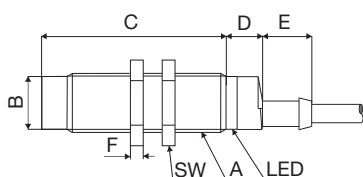
Rated operational voltage (U_B)	10 to 40 VDC (ripple incl.)	Power ON delay (t_v)	50 ms
Ripple	≤ 10%	Operating frequency (f)	
Output current (I_o)	≤ 200 mA @ 50°C (≤ 150 mA @ 50-70°C)	IA18 ..F 05	≤ 1500 Hz
No load supply current (I_o)		IA18 DSN 08	≤ 1500 Hz
IA 18	≤ 10 mA	IA30 ..F 10	≤ 700 Hz
IA 30	≤ 10 mA	IA30 DSN 15	≤ 700 Hz
Voltage drop (U_d)	Max. 2.5 VDC @ 200 mA	Indication for output ON	LED, yellow
Protection	Reverse polarity, short-circuit, transients	Operating sensing distance (S_a)	$0 \leq S_a \leq 0.81 \times S_n$
Voltage transient	1 kV/0.5 J	Effective operating distance (S_r)	$0.9 \times S_n \leq S_r \leq 1.1 \times S_n$
		Usable operating distance (S_u)	$0.9 \times S_r \leq S_u \leq 1.1 \times S_r$

Specifications (cont.)

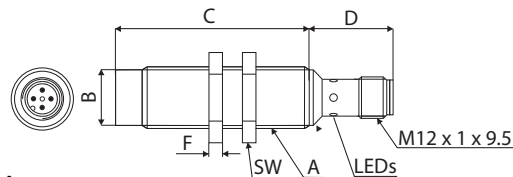
Repeated accuracy (R)	≤ 5%	Degree of protection	IP 67
Differential travel (H) (Hysteresis)	1 to 20% of sensing dist.	Weight	
Ambient temperature		IA 18 .S.	120 g
Operating	-25° to +70°C (-13° to +158°F)	IA 18 .L.	130 g
Storage	-30° to +80°C (-22° to +176°F)	IA 30 .S.	185 g
Housing material		IA 30 .L.	195 g
Body	Nickel-plated brass	Tightening torque	
Front	Grey thermoplastic polyester	IA 18	27.5 Nm
Backpart		IA 30	50.0 Nm
Plug	NPB	Approvals	UL, CSA
Cable	PBTP (black polyester)	CE-marking	Yes
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/CONH1O 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

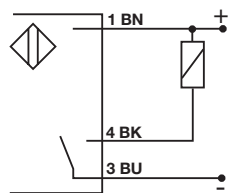


Cable type

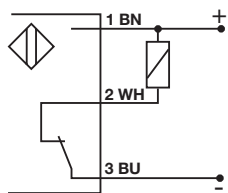


Plug type

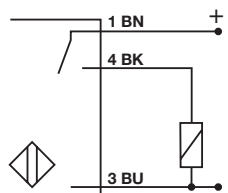
Wiring Diagrams



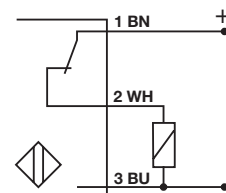
NPN - Normally open



NPN - Normally closed



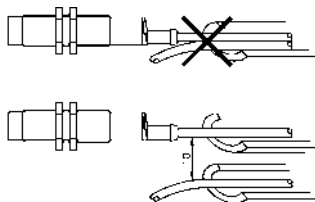
PNP - Normally open



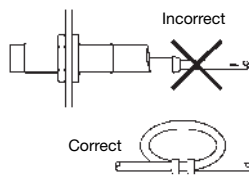
PNP - Normally closed

Installation Hints

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

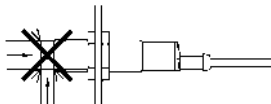


Relief of cable strain



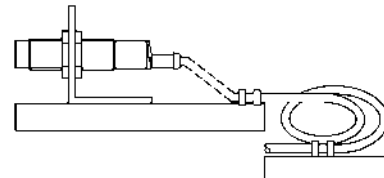
The cable should not be pulled

Protection of the sensing face



A proximity switch should not serve as mechanical stop

Switch mounted on mobile carrier



Any repetitive flexing of the cable should be avoided

Delivery Contents

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

Accessories

M12 connector

CONH10-A2

CONH10-A5

CONH10-S2

CONH10-S5

(90°, 2 m cable)

(90°, 5 m cable)

(straight, 2 m cable)

(straight, 5 m cable)

Detection Diagrams

