

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

CARLO GAVAZZI



- Sensing distance: 5 to 15 mm
- Flush and non-flush types
- Long and short body versions
- 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

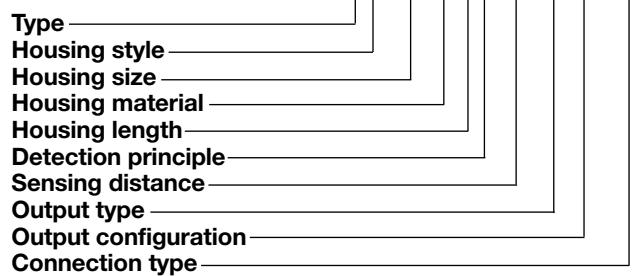
Product Description

A family of 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	Conne- ction	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.)	Operating frequency (f)	IA18 IA30	≤ 1500 Hz ≤ 700 Hz
Ripple	$\leq 10\%$	Indication for output ON	LED, yellow	
Output current (I_o)	≤ 200 mA @ 50°C (≤ 150 mA @ 50-70°C)	Operating sensing distance (S_a)	$0 \leq S_a \leq 0.81 \times S_n$	
No load supply current (I_o)	≤ 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)	$0.9 \times S_r \leq S_u \leq 1.1 \times S_r$	
Protection	Reverse polarity, short-circuit, transients	Repeated accuracy (R)	$\leq 5\%$	
Voltage transient	1 kV/0.5 J			
Power ON delay (t_v)	50 ms			

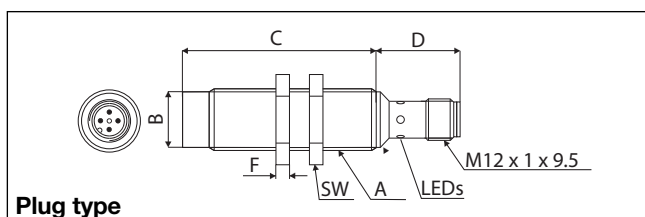
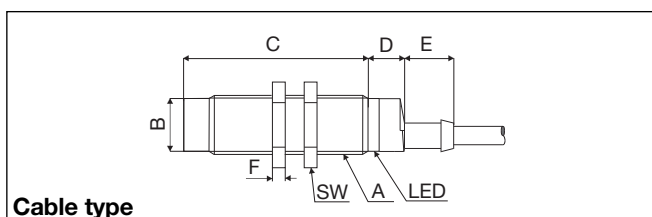


Specifications (cont.)

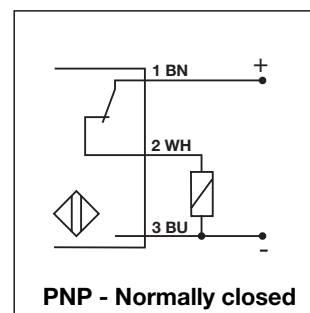
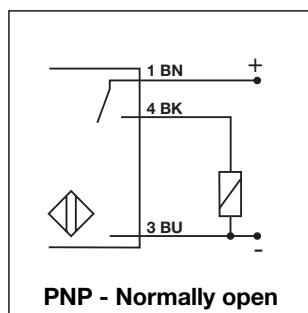
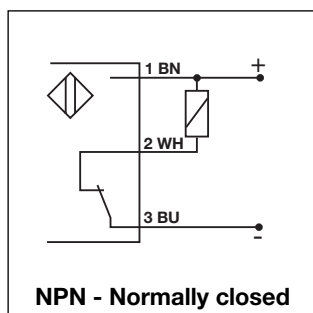
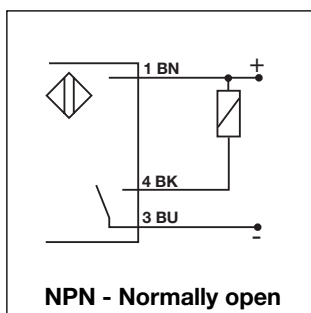
Differential travel (H) (Hysteresis)	1 to 20% of sensing dist.	Degree of protection	IP 67
Ambient temperature		Weight	
Operating	-25° to +70°C (-13° to +158°F)	IA18xS	120 g
Storage	-30° to +80°C (-22° to +176°F)	IA18xL	130 g
Housing material		IA30xS	185 g
Body	Nickel-plated brass	IA30xL	195 g
Front	Grey thermoplastic polyester	Dimensions	See diagrams below
Backpart		Tightening torque	
Plug	NPB	IA 18	27.5 Nm
Cable	PBTP (black polyester)	IA 30	50.0 Nm
Nuts	NPB	Approvals	UL, CSA
Connection		CE-marking	Yes
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

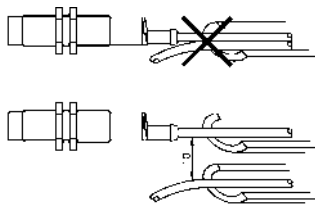


Wiring Diagrams

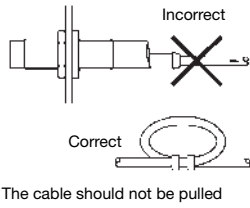


Installation Hints

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

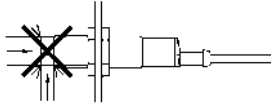


Relief of cable strain



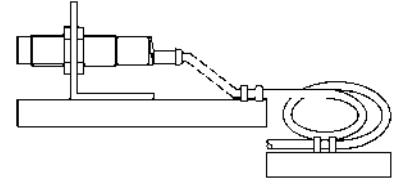
The cable should not be pulled

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

Detection Diagrams

