

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

CARLO GAVAZZI



- 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	IA18ASF08NOM1
Housing style	IA18ASF08NOM1
Housing size	IA18ASF08NOM1
Housing material	IA18ASF08NOM1
Housing length	IA18ASF08NOM1
Detection principle	IA18ASF08NOM1
Sensing distance	IA18ASF08NOM1
Output type	IA18ASF08NOM1
Output configuration	IA18ASF08NOM1
Connection type	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 IA18 ..N 14 IA30 ..F 15 IA30 ..N 22	≥ 1400 Hz ≥ 700 Hz ≥ 700 Hz ≥ 500 Hz
Ripple	$\leq 10\%$	Indication for output ON	LED, yellow	
Output current (I_o)	≤ 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 IA 30 ≤ 10 mA ≤ 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			

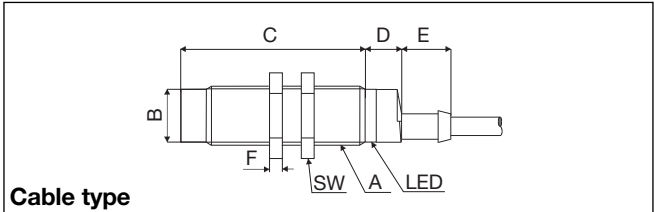


Specifications (cont.)

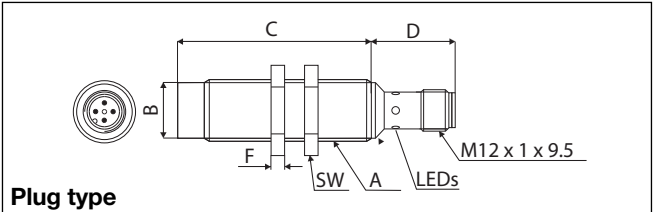
Ambient temperature	Operating -25° to +70°C (-13° to +158°F) Storage -30° to +80°C (-22° to +176°F)	Degree of protection	IP 67
		Weight (cable/nuts included)	
Housing material	Body Nickel-plated brass Front Grey thermoplastic polyester Backpart Plug NPB Cable PBTP (black polyester) Nuts NPB	IA 18 .S.	120 g
		IA 30 .S.	185 g
		Tightening torque	
		IA 18 IA 30	27.5 Nm 50.0 Nm
Connection	Cable 2 m, 3 x 0.3 mm², grey PVC,oil proof Plug M12 x 1 Cables for plug (-1) CONM13NF series	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

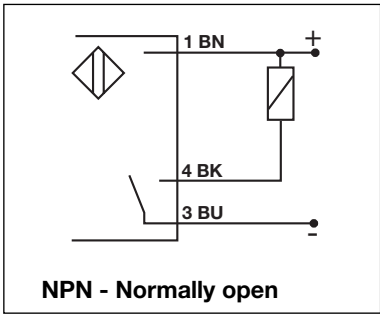


Cable type

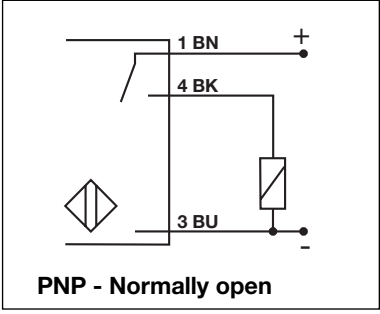


Plug type

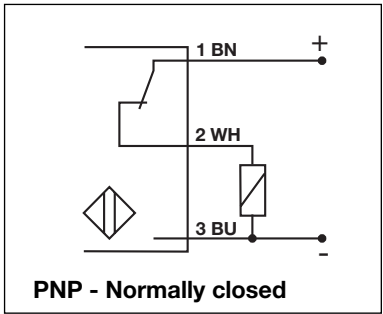
Wiring Diagrams



NPN - Normally open

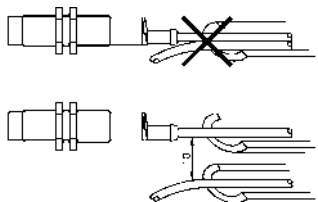
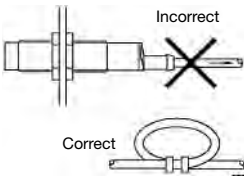
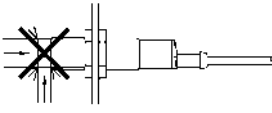
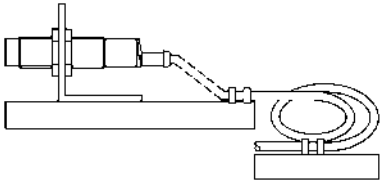


PNP - Normally open



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

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)