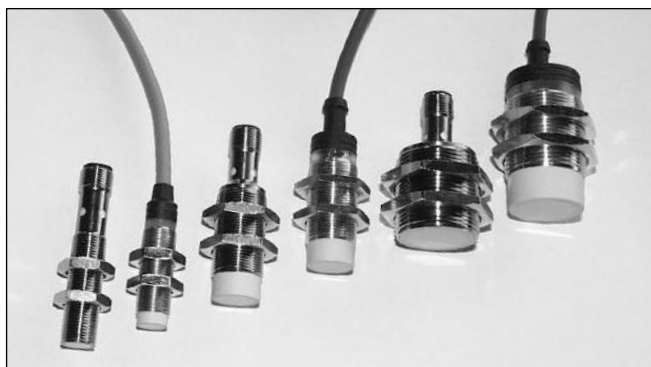


Proximity Sensors Inductive Extended Range, Nickel Plated Brass Housing Types IA, DC, M12, M18 and M30, 2-wire

CARLO GAVAZZI



- Sensing distance: 4 to 22 mm
- Flush and non-flush types
- Power supply: 10 to 40 VDC
- Output: Transistor
- Make or break switching
- Protection: Reverse polarity, short-circuit and transients
- 2 m cable or plug M12
- Diameter: M12, M18, M30



Product Description

Proximity switch M12, M18 and M30 in nickel-plated brass housings. Made in accordance with Euronorm EN 60 947-5-2.

Ordering Key

IA12ASF04DOM1

Cap. proximity switch	
Housing style	
Housing size	
Housing material	
Housing length	
Detection principle	
Sensing distance	
Output type	
Output configuration	
Connection	

Type Selection

Housing diameter	Body style	Connec- tion	Rated operating dist. (S _n)	Ordering no. 2 wire DC Normally open	Ordering no. 2 wire DC Normally closed
M12	Short	Cable	4 mm ¹⁾	IA 12 DSF 04 DO	IA 12 DSF 04 DC
M12	Short	Plug	4 mm ¹⁾	IA 12 ASF 04 DO M1	IA 12 ASF 04 DC M1
M12	Short	Cable	8 mm ²⁾	IA 12 DSN 08 DO	IA 12 DSN 08 DC
M12	Short	Plug	8 mm ²⁾	IA 12 ASN 08 DO M1	IA 12 ASN 08 DC M1
M18	Short	Cable	8 mm ¹⁾	IA 18 DSF 08 DO	IA 18 DSF 08 DC
M18	Short	Plug	8 mm ¹⁾	IA 18 ASF 08 DO M1	IA 18 ASF 08 DC M1
M18	Short	Cable	14 mm ²⁾	IA 18 DSN 14 DO	IA 18 DSN 14 DC
M18	Short	Plug	14 mm ²⁾	IA 18 ASN 14 DO M1	IA 18 ASN 14 DC M1
M30	Short	Cable	15 mm ¹⁾	IA 30 DSF 15 DO	IA 30 DSF 15 DC
M30	Short	Plug	15 mm ¹⁾	IA 30 ASF 15 DO M1	IA 30 ASF 15 DC M1
M30	Short	Cable	22 mm ²⁾	IA 30 DSN 22 DO	IA 30 DSN 22 DC
M30	Short	Plug	22 mm ²⁾	IA 30 ASN 22 DO M1	IA 30 ASN 22 DC M1

¹⁾ For flush mounting in metal

²⁾ For non-flush mounting in metal

Specifications

Rated operational volt. (U _e) (U _B)	12 to 36 VDC 10 to 40 VDC (ripple included)	Transient voltage	≤ 1 kV/0.5 J
Ripple	≤ 10%	EMC	Approved according to EN 50 080, EN 50 081
Rated operational current (I _e) Continuous	≤ 5-100 mA	Power ON delay	< 50 ms
No-load supply current (I)	≤ 0.8 mA	Frequency of operating cycles (f)	IA12xSF 1000 Hz IA12xSN 800 Hz IA18xSF 500 Hz IA18xSN 400 Hz IA30xSF 400 Hz IA30xSN 200 Hz
Voltage drop (U _d)	≤ 3 VDC at max. load		
Protection	Reverse polarity, short-circuit, transients		

Specifications (cont.)

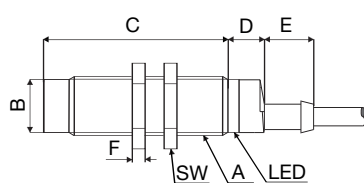
Indication	LED, yellow
Repeat accuracy (R)	≤ 10%
Hysteresis (H) (Differential travel)	1 to 20% of sensing distance
Assured operating dist. (S_a)	$0 \leq S_a \leq 0.77 S_n$
Effective operating dist. (S_r)	$0.9 \times S_n \leq S_r \leq 1.1 \times S_n$
Usable operating dist. (S)	$0.85 \times S_r \leq S_u \leq 1.15 \times S_r$
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 (Nema 1, 3, 4, 6, 13)
Housing material	
Body	In nickel-plated brass
Front	Grey thermoplastic polyester
Back	Black polyester (cable)
	In nickel-plated brass (plug)

Connection

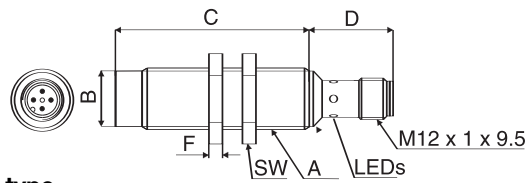
Cable	2 m, 2 x 0.5 mm ² , grey PVC, oil proof M12 x 1	
Plug	Cables for plug (-1)	
Weight (cable excluded)		CONH1A serie
	IA 12xxx	20 g
	IA 18xxF	26 g
	IA 18xxN	30 g
	IA 30xxF	50 g
	IA 30xxN	80 g
Tightening torque		
	IA 12 (x)	7 Nm 15 Nm
	IA 18	27.5 Nm
	IA 30	50 Nm
Approvals	CSA, UL	
CE-marking	Yes	

Dimensions

Type	A	B Ø mm	C mm	D mm	E mm	F mm	SW mm
IA 12 DSF 04 D.	M 12 x 1 x 38	10.7	38	11	5.0	4	17
IA 12 ASF 04 D. M1	M 12 x 1 x 38	10.7	38	25.2		4	17
IA 12 DSN 08 D.	M 12 x 1 x 38	10.7	42	11	5.0	4	17
IA 12 ASN 08 D. M1	M 12 x 1 x 38	10.7	42	25.2		4	17
IA 18 DSF 08 D.	M 18 x 1 x 30	16.7	30	11.6	15.4	4	24
IA 18 ASF 08 D. M1	M 18 x 1 x 30	16.7	30	25.0		4	24
IA 18 DSN 14 D.	M 18 x 1 x 30	16.7	38	11.6	15.4	4	24
IA 18 ASN 14 D. M1	M 18 x 1 x 30	16.7	38	25.0		4	24
IA 30 DSF 15 D.	M 30 x 1.5 x 30	28	30	13.6	15.4	5	36
IA 30 ASF 15 D. M1	M 30 x 1.5 x 30	28	30	25.0		5	36
IA 30 DSN 22 D.	M 30 x 1.5 x 30	28	42	13.6	15.4	5	36
IA 30 ASN 22 D. M1	M 30 x 1.5 x 30	28	42	25.0		5	36



Cable type

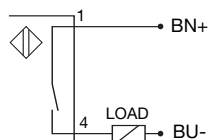


Plug type

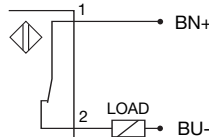
Wiring Diagrams

"PNP"

DC 2-wire
make switching (NO)

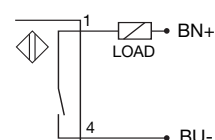


DC 2-wire
break switching (NC)

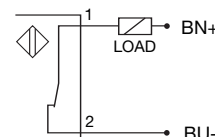


"NPN"

DC 2-wire
make switching (NO)



DC 2-wire
break switching (NC)

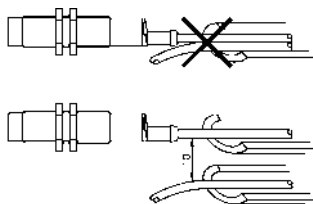
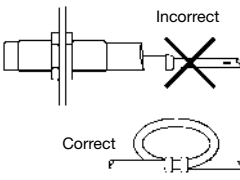
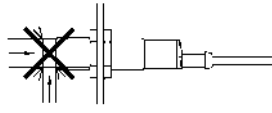
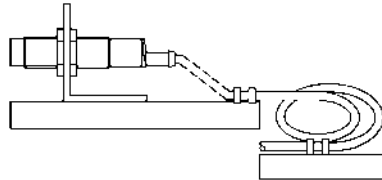


Power Supplies

Power supplies VDC:

> SS 130/140.

Installation Hints

<i>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</i> 	<i>Relief of cable strain</i>  The cable should not be pulled	<i>Protection of the sensing face</i>  A proximity switch should not serve as mechanical stop	<i>Switch mounted on mobile carrier</i>  Any repetitive flexing of the cable should be avoided
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