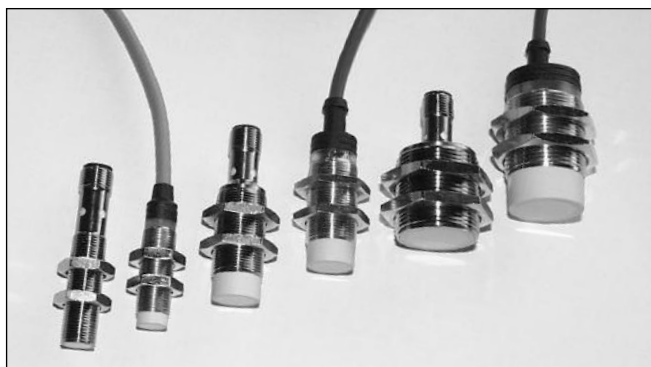


Proximity Sensors Inductive Extended Range, Nickel Plated Brass Housing Types IA, DC, M12, M18 and M30, 2-wire

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	Connection	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.)

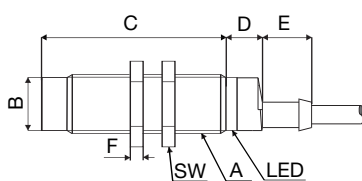
Indication	LED, yellow
Repeat accuracy (R)	≤ 10%
Hysteresis (H) (Differential travel)	1 to 20% of sensing distance
Assured operating dist. (S_a)	$0 \leq S_a \leq 0.77 S_n$
Effective operating dist. (S_r)	$0.9 \times S_n \leq S_r \leq 1.1 \times S_n$
Usable operating dist. (S)	$0.85 \times S_r \leq S_u \leq 1.15 \times S_r$
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

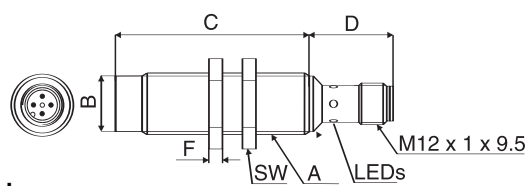
Cable	2 m, 2 x 0.5 mm ² , grey PVC, oil proof M12 x 1	
Plug	Cables for plug (-1)	
Weight (cable excluded)		CONH1A serie
	IA 12xxx	20 g
	IA 18xxF	26 g
	IA 18xxN	30 g
	IA 30xxF	50 g
	IA 30xxN	80 g
Tightening torque		
	IA 12 (x)	7 Nm 15 Nm
	IA 18	27.5 Nm
	IA 30	50 Nm
Approvals	CSA, UL	
CE-marking	Yes	

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

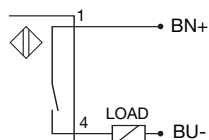


Plug type

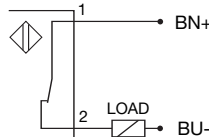
Wiring Diagrams

"PNP"

DC 2-wire
make switching (NO)

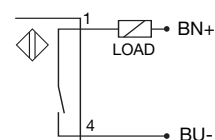


DC 2-wire
break switching (NC)

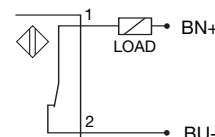


"NPN"

DC 2-wire
make switching (NO)



DC 2-wire
break switching (NC)

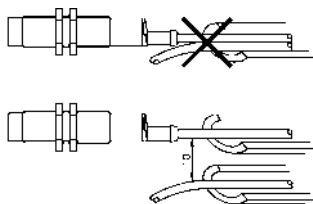
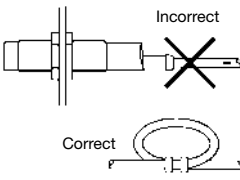
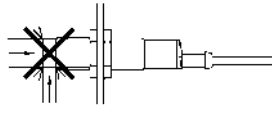
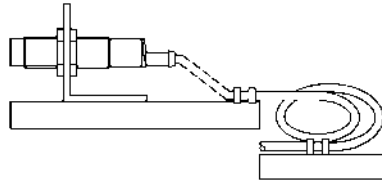


Power Supplies

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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