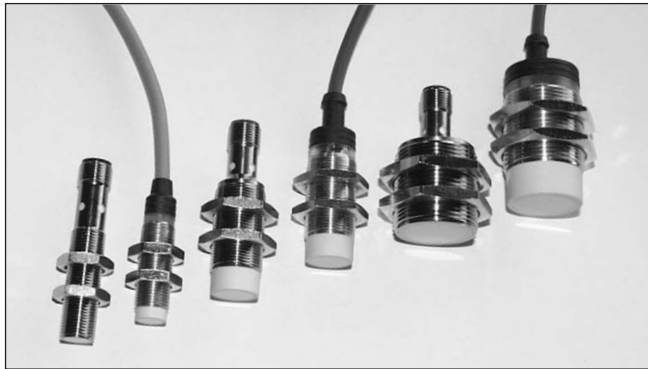


Proximity Sensors Inductive Extended Range, Nickel Plated Brass Housing Types IA, DC, M12, M18 and M30, 2-wire



- 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

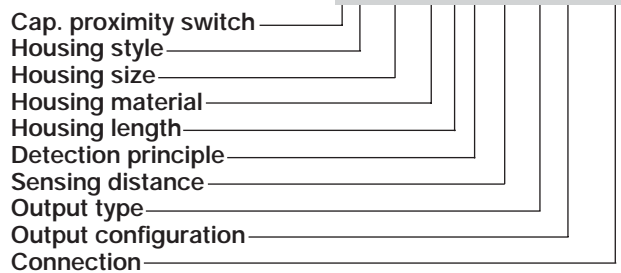


Product Description

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

Ordering Key

IA12DSF04DOM1



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		

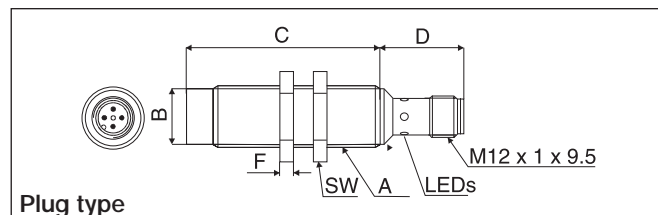
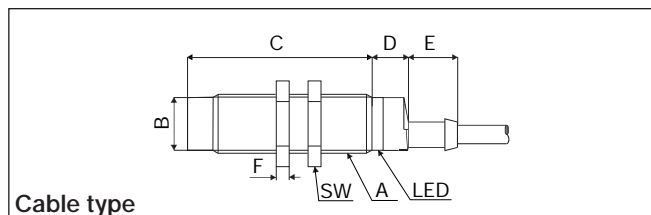


Specifications (cont.)

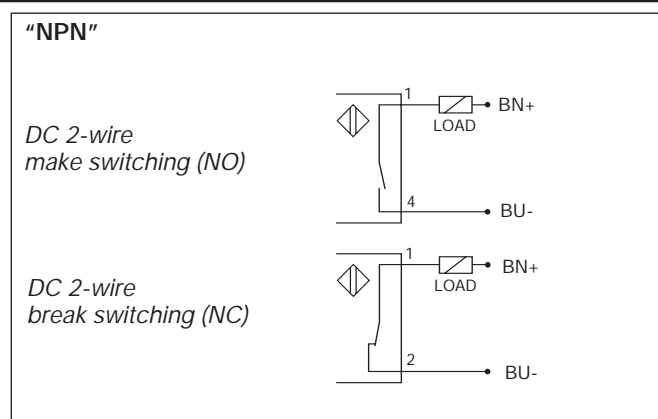
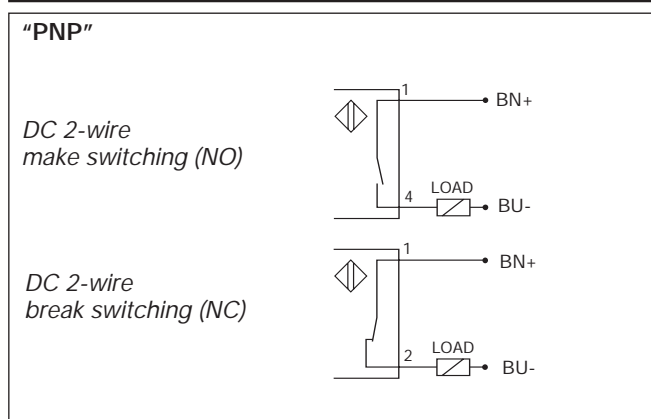
Indication	LED, yellow	Connection											
Repeat accuracy (R)	≤ 10%	Cable	2 m, 2 x 0.5 mm ² , grey PVC, oil proof										
Hysteresis (H) (Differential travel)	1 to 20% of sensing distance	Plug	M12 x 1										
Assured operating dist. (S_a)	0 ≤ S _a ≤ 0.77 S _n	Cables for plug (-1)	CONM14 series										
Effective operating dist. (S_r)	0.9 x S _n ≤ S _r ≤ 1.1 x S _n	Weight (cable excluded)	<table border="0"> <tr><td>IA 12xxx</td><td>20 g</td></tr> <tr><td>IA 18xxF</td><td>26 g</td></tr> <tr><td>IA 18xxN</td><td>30 g</td></tr> <tr><td>IA 30xxF</td><td>50 g</td></tr> <tr><td>IA 30xxN</td><td>80 g</td></tr> </table>	IA 12xxx	20 g	IA 18xxF	26 g	IA 18xxN	30 g	IA 30xxF	50 g	IA 30xxN	80 g
IA 12xxx	20 g												
IA 18xxF	26 g												
IA 18xxN	30 g												
IA 30xxF	50 g												
IA 30xxN	80 g												
Usable operating dist. (S)	0.85 x S _r ≤ S _u ≤ 1.15 x S _r	Tightening torque	<table border="0"> <tr><td>IA 12 (x)</td><td>7 Nm</td></tr> <tr><td></td><td>15 Nm</td></tr> <tr><td>IA 18</td><td>27.5 Nm</td></tr> <tr><td>IA 30</td><td>50 Nm</td></tr> </table>	IA 12 (x)	7 Nm		15 Nm	IA 18	27.5 Nm	IA 30	50 Nm		
IA 12 (x)	7 Nm												
	15 Nm												
IA 18	27.5 Nm												
IA 30	50 Nm												
Ambient temperature		Approvals	CSA, UL										
Operating	-25° to +70°C (-13° to +158°F)	CE-marking	Yes										
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)												

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



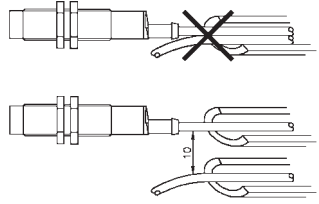
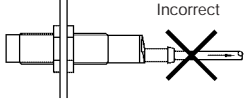
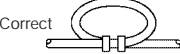
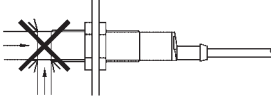
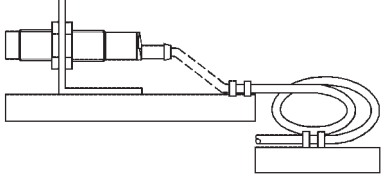
Wiring Diagrams



Power Supplies

Power supplies VDC: > SS 130/140.

Installation Hints

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