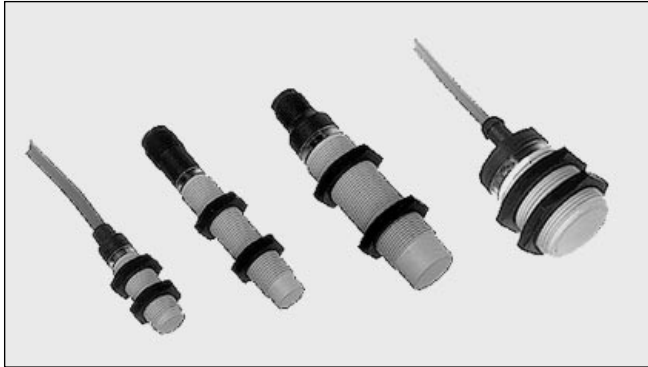


# Proximity Sensors Inductive Thermoplastic Polyester Housing Types IA 12, IA 18 and IA 30, Namur



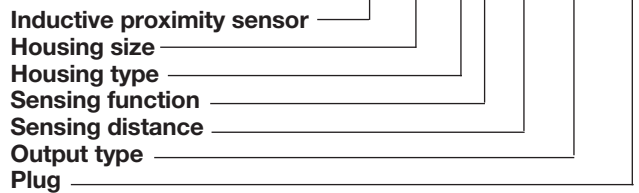
- Euronorm thermoplastic polyester housing, cylindrical
- Short or long versions
- Diameter: M 12, M 18, M 30.
- Sensing distance: 2 to 15 mm
- Output: Namur EN 50 227
- Protection: Reverse polarity
- LED-indication
- 2 m cable or M12 plug

## Product Description

Proximity switch in M 12, M18 and M 30 polyester housings. Made in accordance with euronorms EN 50 227 and EN 60 947-5-2. For metal versions refer to type IA 12 E... Amplifier relay SD..... is available.

## Ordering Key

**IA 12 CSF 02 UC M1**



## Type Selection

Housing diameter	Body style	Connection	Rated operating dist. (S <sub>n</sub> )	Ordering no. Namur
M 12	Short	Cable	2 mm <sup>1)</sup>	<b>IA 12 CSF 02 UC</b>
M 12	Short	Plug	2 mm <sup>1)</sup>	<b>IA 12 CSF 02 UC M1</b>
M 12	Long	Cable	2 mm <sup>1)</sup>	<b>IA 12 CLF 02 UC</b>
M 12	Long	Plug	2 mm <sup>1)</sup>	<b>IA 12 CLF 02 UC M1</b>
M 12	Short	Cable	4 mm <sup>2)</sup>	<b>IA 12 CSN 04 UC</b>
M 12	Short	Plug	4 mm <sup>2)</sup>	<b>IA 12 CSN 04 UC M1</b>
M 12	Long	Cable	4 mm <sup>2)</sup>	<b>IA 12 CLN 04 UC</b>
M 12	Long	Plug	4 mm <sup>2)</sup>	<b>IA 12 CLN 04 UC M1</b>
M 18	Short	Cable	5 mm <sup>1)</sup>	<b>IA 18 CSF 05 UC</b>
M 18	Short	Plug	5 mm <sup>1)</sup>	<b>IA 18 CSF 05 UC M1</b>
M 18	Long	Cable	5 mm <sup>1)</sup>	<b>IA 18 CLF 05 UC</b>
M 18	Long	Plug	5 mm <sup>1)</sup>	<b>IA 18 CLF 05 UC M1</b>
M 18	Short	Cable	8 mm <sup>2)</sup>	<b>IA 18 CSN 08 UC</b>
M 18	Short	Plug	8 mm <sup>2)</sup>	<b>IA 18 CSN 08 UC M1</b>
M 18	Long	Cable	8 mm <sup>2)</sup>	<b>IA 18 CLN 08 UC</b>
M 18	Long	Plug	8 mm <sup>2)</sup>	<b>IA 18 CLN 08 UC M1</b>
M 30	Short	Cable	10 mm <sup>1)</sup>	<b>IA 30 CSF 10 UC</b>
M 30	Short	Plug	10 mm <sup>1)</sup>	<b>IA 30 CSF 10 UC M1</b>
M 30	Long	Cable	10 mm <sup>1)</sup>	<b>IA 30 CLF 10 UC</b>
M 30	Long	Plug	10 mm <sup>1)</sup>	<b>IA 30 CLF 10 UC M1</b>
M 30	Short	Cable	15 mm <sup>2)</sup>	<b>IA 30 CSN 15 UC</b>
M 30	Short	Plug	15 mm <sup>2)</sup>	<b>IA 30 CSN 15 UC M1</b>
M 30	Long	Cable	15 mm <sup>2)</sup>	<b>IA 30 CLN 15 UC</b>
M 30	Long	Plug	15 mm <sup>2)</sup>	<b>IA 30 CLN 15 UC M1</b>

<sup>1)</sup> For flush mounting in metal

<sup>2)</sup> For non-flush mounting in metal

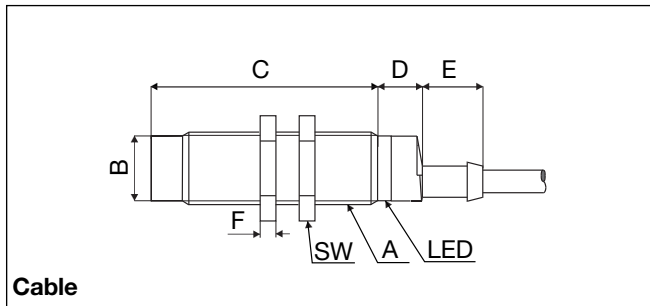


## Specifications

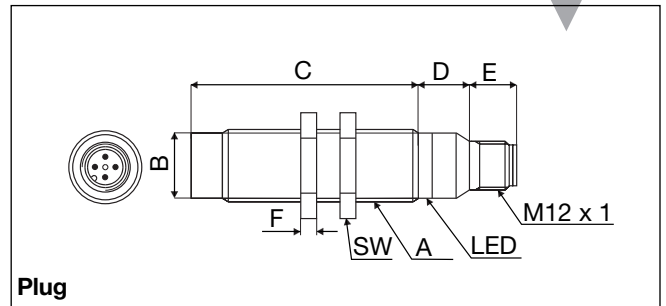
<b>Rated operational volt.</b> (U <sub>e</sub> ) (U <sub>B</sub> )	8.2 VDC 7 to 9 VDC (6 to 35 VDC, all specifications not observed in extended supply range)	<b>Hysteresis (H)</b> (Differential travel)	1 to 15% of sensing distance
<b>Self-inductance</b>	≤ 500μH	<b>Effective operating dist.</b> (S <sub>r</sub> )	0.9 × S <sub>n</sub> ≤ S <sub>r</sub> ≤ 1.1 × S <sub>n</sub>
<b>Self-capacitance</b>	≤ 120 nF	<b>Usable operating dist.</b> (S)	0.9 × S <sub>r</sub> ≤ S <sub>u</sub> ≤ 1.1 × S <sub>r</sub>
<b>No-load supply current</b> (I <sub>o</sub> )	Activated: ≤1 mA Not activated: ≥ 2.2 mA Max. 9.35 mA	<b>Ambient temperature</b>	
<b>Protection</b>	Reverse polarity	Operating	-25° to +70°C (-13° to +158°F)
<b>Transient voltage</b>	≤ 1 kV/0.5 J	Storage	-30° to +80°C (-22° to +176°F)
<b>EMC</b>	Approved according to EN 50 080, EN 50 081	<b>Degree of protection</b>	IP 67 (Nema 1, 3, 4, 6, 13)
<b>Power ON delay</b>	< 10 ms	<b>Housing material</b>	
<b>Frequency of operating cycles</b> (f)	<b>IA12xxF02</b> 800 Hz <b>IA12xxN04</b> 400 Hz <b>IA18xxF05</b> 500 Hz <b>IA18xxN08</b> 200 Hz <b>IA30xxF10</b> 300 Hz <b>IA30xxF15</b> 100 Hz	Body	Grey thermoplastic polyester
<b>Indication not activated</b>	LED, yellow	Back	Black polyester
<b>Assured operating dist.</b> (S <sub>a</sub> )	0 ≤ S <sub>a</sub> ≤ 0.81 S <sub>n</sub>	<b>Connection</b>	
<b>Repeat accuracy</b> (R)	≤ 5%	Cable	2 m, 2 x 0.5 mm <sup>2</sup> , grey PVC, oil proof
		Plug	M 12 x 1
		Cables for plug (-1)	CONH1A series0
		<b>Weight</b> (cable excluded)	
		<b>IA 12xx</b>	10 g
		<b>IA 18xxF05</b>	18 g
		<b>IA 18xxN08</b>	20 g
		<b>IA 30xxF10</b>	50 g
		<b>IA 30xxN15</b>	70 g
		<b>Tightening torque</b>	
		<b>IA 12</b>	1.8 Nm
		<b>IA 18</b>	2.6 Nm
		<b>IA 30</b>	7.5 Nm

## Dimensions

Type	A	B Ø mm	C mm	D mm	E mm	F mm	SW mm
IA 12 CSF 02 UC	M 12 x 1 x 30	10.7	30	11	5.0	4	17
IA 12 CLF 02 UC	M 12 x 1 x 50	10.7	50	11	5.0	4	17
IA 12 CSF 02 UC M1	M 12 x 1 x 30	10.7	30	12.6	11.9	4	17
IA 12 CLF 02 UC M1	M 12 x 1 x 50	10.7	50	12.6	11.9	4	17
IA 12 CSN 04 UC	M 12 x 1 x 30	10.7	34	11	5.0	4	17
IA 12 CLN 04 UC	M 12 x 1 x 50	10.7	54	11	5.0	4	17
IA 12 CSN 04 UC M1	M 12 x 1 x 30	10.7	34	12.6	11.9	4	17
IA 12 CLN 04 UC M1	M 12 x 1 x 50	10.7	54	12.6	11.9	4	17
IA 18 CSF 05 UC	M 18 x 1 x 30	16.7	30	11.6	15.4	4	24
IA 18 CLF 05 UC	M 18 x 1 x 50	16.7	50	11.6	15.4	4	24
IA 18 CSF 05 UC M1	M 18 x 1 x 30	16.7	30	13.1	11.9	4	24
IA 18 CLF 05 UC M1	M 18 x 1 x 50	16.7	50	13.1	11.9	4	24
IA 18 CSN 08 UC	M 18 x 1 x 30	16.7	38	11.6	15.4	4	24
IA 18 CLN 08 UC	M 18 x 1 x 50	16.7	58	11.6	15.4	4	24
IA 18 CSN 08 UC M1	M 18 x 1 x 30	16.7	38	13.1	11.9	4	24
IA 18 CLN 08 UC M1	M 18 x 1 x 50	16.7	58	13.1	11.9	4	24
IA 30 CSF 10 UC	M 30 x 1.5 x 30	28	30	13.6	15.4	5	36
IA 30 CLF 10 UC	M 30 x 1.5 x 50	28	50	13.6	15.4	5	36
IA 30 CSF 10 UC M1	M 30 x 1.5 x 30	28	30	13.6	11.9	5	36
IA 30 CLF 10 UC M1	M 30 x 1.5 x 50	28	50	13.6	11.9	5	36
IA 30 CSN 15 UC	M 30 x 1.5 x 30	28	42	13.6	15.4	5	36
IA 30 CLN 15 UC	M 30 x 1.5 x 50	28	62	13.6	15.4	5	36
IA 30 CSN 15 UC M1	M 30 x 1.5 x 30	28	42	13.6	11.9	5	36
IA 30 CLN 15 UC M1	M 30 x 1.5 x 50	28	62	13.6	11.9	5	36



Cable



Plug

### **Wiring Diagrams**

Refer to "Wiring Diagrams",  
Technical information.

### **Installation Hints**

Refer to "Installation Hints",  
Technical information.

### **Namur, Amplifier Relays**

> SD 110/210.  
> SD 170/270.

Refer to Technical informa-  
tion.