

Proximity Sensors Inductive Stainless Steel Housing Types IA 12, IA 18 and IA 30, Namur



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

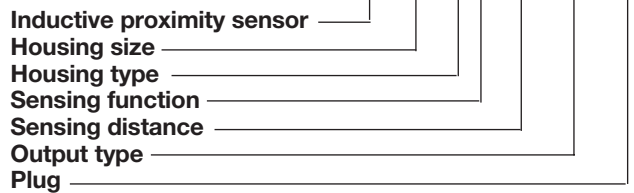
Product Description

Proximity switch in M12, M18 and M30 stainless steel housing. Made in accordance with Euronorm EN 50 227 and EN

60 947-5-2. For thermoplastic housing refer to type IA 12C.... Amplifier relay SD.... is available.

Ordering Key

IA 12 ESF 02 UC M1



Type Selection

Housing diameter	Body style	Connec- tion	Rated operating dist. (S _n)	Ordering no. Namur
M 12	Short	Cable	2 mm ¹⁾	IA 12 ESF 02 UC
M 12	Short	Plug	2 mm ¹⁾	IA 12 ESF 02 UC M1
M 12	Long	Cable	2 mm ¹⁾	IA 12 ELF 02 UC
M 12	Long	Plug	2 mm ¹⁾	IA 12 ELF 02 UC M1
M 12	Short	Cable	4 mm ²⁾	IA 12 ESN 04 UC
M 12	Short	Plug	4 mm ²⁾	IA 12 ESN 04 UC M1
M 12	Long	Cable	4 mm ²⁾	IA 12 ELN 04 UC
M 12	Long	Plug	4 mm ²⁾	IA 12 ELN 04 UC M1
M 18	Short	Cable	5 mm ¹⁾	IA 18 ESF 05 UC
M 18	Short	Plug	5 mm ¹⁾	IA 18 ESF 05 UC M1
M 18	Long	Cable	5 mm ¹⁾	IA 18 ELF 05 UC
M 18	Long	Plug	5 mm ¹⁾	IA 18 ELF 05 UC M1
M 18	Short	Cable	8 mm ²⁾	IA 18 ESN 08 UC
M 18	Short	Plug	8 mm ²⁾	IA 18 ESN 08 UC M1
M 18	Long	Cable	8 mm ²⁾	IA 18 ELN 08 UC
M 18	Long	Plug	8 mm ²⁾	IA 18 ELN 08 UC M1
M 30	Short	Cable	10 mm ¹⁾	IA 30 ESF 10 UC
M 30	Short	Plug	10 mm ¹⁾	IA 30 ESF 10 UC M1
M 30	Long	Cable	10 mm ¹⁾	IA 30 ELF 10 UC
M 30	Long	Plug	10 mm ¹⁾	IA 30 ELF 10 UC M1
M 30	Short	Cable	15 mm ²⁾	IA 30 ESN 15 UC
M 30	Short	Plug	15 mm ²⁾	IA 30 ESN 15 UC M1
M 30	Long	Cable	15 mm ²⁾	IA 30 ELN 15 UC
M 30	Long	Plug	15 mm ²⁾	IA 30 ELN 15 UC M1

¹⁾ For flush mounting in metal

²⁾ For non-flush mounting in metal

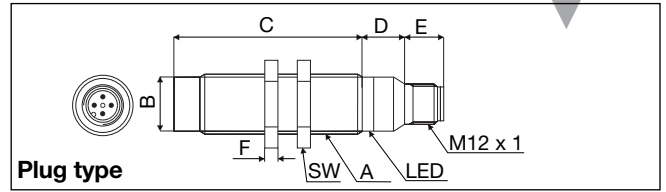
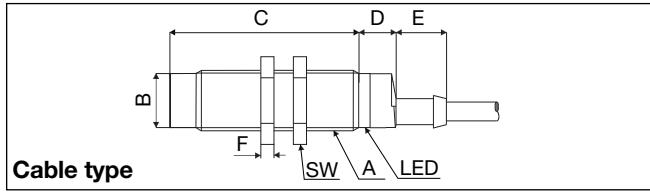


Specifications

Rated operational volt. (U _e) (U _B)	8.2 VDC 7 to 9 VDC (6 to 35 VDC, all specifications not observed in extended supply range)	Hysteresis (H) (Differential travel)	1 to 15% of sensing distance
Self-inductance	≤ 500µH	Effective operating dist. (S_r)	0.9 × S _n ≤ S _r ≤ 1.1 × S _n
Self-capacitance	≤ 120 nF	Usable operating dist. (S)	0.9 × S _r ≤ S _u ≤ 1.1 × S _r
No-load supply current (I₀)	Activated: ≤1 mA Not activated: ≥ 2.2 mA Max. 9.35 mA	Ambient temperature	Operating -25° to +70°C (-13° to +158°F) Storage -30° to +80°C (-22° to +176°F)
Protection	Reverse polarity	Degree of protection	IP 67 (Nema 1, 3, 4, 6, 13)
Transient voltage	≤ 1 kV/0.5 J	Housing material	Body Stainless Steel (1.4301) Front Grey thermoplastic polyester Back Black thermoplastic polyester
EMC	Approved according to EN 50 080, EN 50 081	Connection	Cable 2 m, 2 x 0.5 mm ² , grey PVC, oil proof M 12 x 1 Plug Cables for plug (-1) CONH1A series
Power ON delay	< 10 ms	Weight (cable excluded)	IA 12xx 20 g IA 18xxF05 26 g IA 18xxN08 30 g IA 30xxF10 75 g IA 30xxN15 80 g
Frequency of operating cycles (f)	IA12xxF02 800 Hz IA12xxN04 400 Hz IA18xxF05 500 Hz IA18xxN08 200 Hz IA30xxF10 300 Hz IA30xxF15 100 Hz	Tightening torque	IA 12 7.5 Nm IA 18 27.5 Nm IA 30 100 Nm
Indication not activated	LED, yellow		
Assured operating dist. (S_a)	0 ≤ S _a ≤ 0.81 S _n		
Repeat accuracy (R)	≤ 5%		

Dimensions

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



Wiring Diagrams

Refer to "Wiring Diagrams",
Technical information.

Installation Hints

Refer to "Installation Hints",
Technical information.

Power Supplies

> SD 110/210
> SD 170/270

Refer to Technical informa-
tion.