

Proximity Sensors Inductive Stainless Steel Housing Types EI, DC, M 12, M 18, M 30

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- Stainless steel housing, cylindrical
- Diameter: M 12, M 18, M 30
- Short or long versions
- Sensing distance: 2 to 15 mm
- Power supply: 10 to 40 VDC
- Output: Transistor NPN/PNP, make or break switching
- Protection: Short-circuit and reverse polarity
- LED-indication for output ON
- 2 m cable or plug M 12

Product Description

Proximity switch in housings ranging from M 12 to M 30. Short or long versions in standard stainless steel housing. Made after Euronorm EN 50 008.

Ordering Key

EI 1202 NPOSS-1

Type: Inductive proximity switch
Housing diameter (mm)
Rated operating dist. (mm)
Output type
Housing material
Body style
Plug

Type Selection DC Types, Cable and M 12 Plug

Housing diameter	Body style	Conne- ction	Rated operating dist. (S _n)	Ordering no. Transistor NPN Make switching	Ordering no. Transistor NPN Break switching	Ordering no. Transistor PNP Make switching	Ordering no. Transistor PNP Break switching
M 12	Short	Cable	2 mm ¹⁾	EI 1202 NPOSS	EI 1202 NPCSS	EI 1202 PPOSS	EI 1202 PPCSS
M 12	Short	Plug	2 mm ¹⁾	EI 1202 NPOSS-1	EI 1202 NPCSS-1	EI 1202 PPOSS-1	EI 1202 PPCSS-1
M 12	Long	Cable	2 mm ¹⁾	EI 1202 NPOSL	EI 1202 NPCSL	EI 1202 PPOSL	EI 1202 PPCSL
M 12	Long	Plug	2 mm ¹⁾	EI 1202 NPOSL-1	EI 1202 NPCSL-1	EI 1202 PPOSL-1	EI 1202 PPCSL-1
M 12	Short	Cable	4 mm ²⁾	EI 1204 NPOSS	EI 1204 NPCSS	EI 1204 PPOSS	EI 1204 PPCSS
M 12	Short	Plug	4 mm ²⁾	EI 1204 NPOSS-1	EI 1204 NPCSS-1	EI 1204 PPOSS-1	EI 1204 PPCSS-1
M 12	Long	Cable	4 mm ²⁾	EI 1204 NPOSL	EI 1204 NPCSL	EI 1204 PPOSL	EI 1204 PPCSL
M 12	Long	Plug	4 mm ²⁾	EI 1204 NPOSL-1	EI 1204 NPCSL-1	EI 1204 PPOSL-1	EI 1204 PPCSL-1
M 18	Short	Cable	5 mm ¹⁾	EI 1805 NPOSS	EI 1805 NPCSS	EI 1805 PPOSS	EI 1805 PPCSS
M 18	Short	Plug	5 mm ¹⁾	EI 1805 NPOSS-1	EI 1805 NPCSS-1	EI 1805 PPOSS-1	EI 1805 PPCSS-1
M 18	Long	Cable	5 mm ¹⁾	EI 1805 NPOSL	EI 1805 NPCSL	EI 1805 PPOSL	EI 1805 PPCSL
M 18	Long	Plug	5 mm ¹⁾	EI 1805 NPOSL-1	EI 1805 NPCSL-1	EI 1805 PPOSL-1	EI 1805 PPCSL-1
M 18	Short	Cable	8 mm ²⁾	EI 1808 NPOSS	EI 1808 NPCSS	EI 1808 PPOSS	EI 1808 PPCSS
M 18	Short	Plug	8 mm ²⁾	EI 1808 NPOSS-1	EI 1808 NPCSS-1	EI 1808 PPOSS-1	EI 1808 PPCSS-1
M 18	Long	Cable	8 mm ²⁾	EI 1808 NPOSL	EI 1808 NPCSL	EI 1808 PPOSL	EI 1808 PPCSL
M 18	Long	Plug	8 mm ²⁾	EI 1808 NPOSL-1	EI 1808 NPCSL-1	EI 1808 PPOSL-1	EI 1808 PPCSL-1
M 30	Short	Cable	10 mm ¹⁾	EI 3010 NPOSS	EI 3010 NPCSS	EI 3010 PPOSS	EI 3010 PPCSS
M 30	Short	Plug	10 mm ¹⁾	EI 3010 NPOSS-1	EI 3010 NPCSS-1	EI 3010 PPOSS-1	EI 3010 PPCSS-1
M 30	Long	Cable	10 mm ¹⁾	EI 3010 NPOSL	EI 3010 NPCSL	EI 3010 PPOSL	EI 3010 PPCSL
M 30	Long	Plug	10 mm ¹⁾	EI 3010 NPOSL-1	EI 3010 NPCSL-1	EI 3010 PPOSL-1	EI 3010 PPCSL-1
M 30	Short	Cable	15 mm ²⁾	EI 3015 NPOSS	EI 3015 NPCSS	EI 3015 PPOSS	EI 3015 PPCSS
M 30	Short	Plug	15 mm ²⁾	EI 3015 NPOSS-1	EI 3015 NPCSS-1	EI 3015 PPOSS-1	EI 3015 PPCSS-1
M 30	Long	Cable	15 mm ²⁾	EI 3015 NPOSL	EI 3015 NPCSL	EI 3015 PPOSL	EI 3015 PPCSL
M 30	Long	Plug	15 mm ²⁾	EI 3015 NPOSL-1	EI 3015 NPCSL-1	EI 3015 PPOSL-1	EI 3015 PPCSL-1

¹⁾ For flush mounting in metal

²⁾ For non-flush mounting in metal

Make switching = Normally Open (NO)

Break switching = Normally Closed (NC)

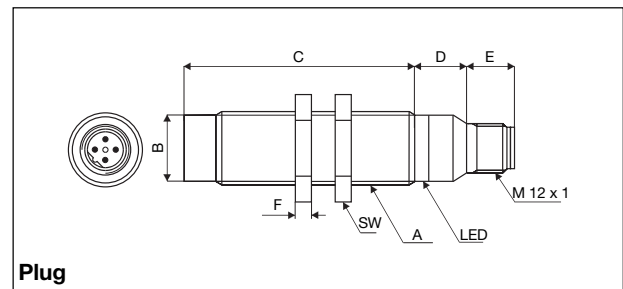
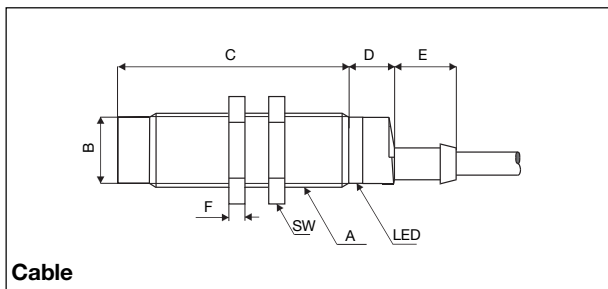
Specifications

Rated operational volt. (U_e) (U_B)	12 to 36 VDC 10 to 40 VDC (ripple included)	Repeat accuracy (R)	≤ 5%
Ripple	≤ 10%	Hysteresis (H) (Differential travel)	1 to 15% of sensing distance
Rated operational current (I_e) Continuous	≤ 200 mA	Effective operating dist. (S_r)	$0.9 \times S_n \leq S_r \leq 1.1 \times S_n$
No-load supply current (I_o)	Output ON: < 6.5 mA Output OFF: < 2.7 mA	Usable operating dist. (S)	$0.9 \times S_r \leq S_u \leq 1.1 \times S_r$
Voltage drop (U_d)	≤ 2 VDC at max. load	Ambient temperature Operating	-25° to +70°C (-13° to +158°F)
Protection	Reverse polarity, short-circuit, transients	Storage	-30° to +80°C (-22° to +176°F)
Transient voltage	≤ 700 V/0.5 J	Degree of protection	IP 67 (Nema 1, 3, 4, 6, 13)
EMC	Approved according to EN 50 080, EN 50 081	Housing material Body	Stainless steel (1.4301)
Power ON delay	< 10 ms	Front	Grey thermoplastic polyester
Frequency of operating cycles (f)	EI 1202 800 Hz EI 1204 500 Hz EI 1805 500 Hz EI 1808 400 Hz EI 3010 300 Hz EI 3015 100 Hz	Back	Black polyester
Indication for output ON	LED, yellow	Connection Cable	2 m, 3 x 0.3 mm ² , grey PVC, oil proof
Assured operating dist. (S_a)	$0 \leq S_a \leq 0.81 S_n$	Plug	M 12 x 1
		Cables for plug (-1)	CONH1A serie
		Weight (cable excluded)	EI 12 10 g EI 1805 18 g EI 1808 20 g EI 3010 50 g EI 3015 70 g
		Tightening torque	EI 12 7.5 Nm (x) 17.5 Nm (y) EI 18 27.5 Nm EI 30 100.0 Nm
		Approvals	UL, CSA
		CE-marking	Yes

Dimensions

Type	A	B Ø mm	C mm	D mm	E mm	F mm	G mm	H mm	I mm	SW mm	K Ø mm	L Ø mm
EI 1202 XPXSS	M 12 x 1 x 30	10.7	30	11	5.0	4				17		
EI 1202 XPXSL	M 12 x 1 x 50	10.7	50	11	5.0	4				17		
EI 1202 XPXSS-1	M 12 x 1 x 30	10.7	30	12.6	11.9	4				17		
EI 1202 XPXSL-1	M 12 x 1 x 50	10.7	50	12.6	11.9	4				17		
EI 1204 XPXSS	M 12 x 1 x 30	10.7	34	11	5.0	4				17		
EI 1204 XPXSL	M 12 x 1 x 50	10.7	54	11	5.0	4				17		
EI 1204 XPXSS-1	M 12 x 1 x 30	10.7	34	12.6	11.9	4				17		
EI 1204 XPXSL-1	M 12 x 1 x 50	10.7	54	12.6	11.9	4				17		
EI 1805 XPXSS	M 18 x 1 x 30	16.7	30	11.6	15.4	4				24		
EI 1805 XPXSL	M 18 x 1 x 50	16.7	50	11.6	15.4	4				24		
EI 1805 XPXSS-1	M 18 x 1 x 30	16.7	30	13.1	11.9	4				24		
EI 1805 XPXSL-1	M 18 x 1 x 50	16.7	50	13.1	11.9	4				24		
EI 1808 XPXSS	M 18 x 1 x 30	16.7	38	11.6	15.4	4				24		
EI 1808 XPXSL	M 18 x 1 x 50	16.7	58	11.6	15.4	4				24		
EI 1808 XPXSS-1	M 18 x 1 x 30	16.7	38	13.1	11.9	4				24		
EI 1808 XPXSL-1	M 18 x 1 x 50	16.7	58	13.1	11.9	4				24		
EI 3010 XPXSS	M 30 x 1.5 x 30	28	30	13.6	15.4	5				36		
EI 3010 XPXSL	M 30 x 1.5 x 50	28	50	13.6	15.4	5				36		
EI 3010 XPXSS-1	M 30 x 1.5 x 30	28	30	13.6	11.9	5				36		
EI 3010 XPXSL-1	M 30 x 1.5 x 50	28	50	13.6	11.9	5				36		
EI 3015 XPXSS	M 30 x 1.5 x 30	28	42	13.6	15.4	5				36		
EI 3015 XPXSL	M 30 x 1.5 x 50	28	62	13.6	15.4	5				36		
EI 3015 XPXSS-1	M 30 x 1.5 x 30	28	42	13.6	11.9	5				36		
EI 3015 XPXSL-1	M 30 x 1.5 x 50	28	62	13.6	11.9	5				36		

Dimensions (cont.)



Wiring Diagrams

Refer to "Wiring Diagrams",
Technical information.

Installation Hints

Refer to "Installation Hints",
Technical information.

Power Supplies

Power supplies VDC: > SS 130/140.
Power supplies with amplifier relays: > SV 190.