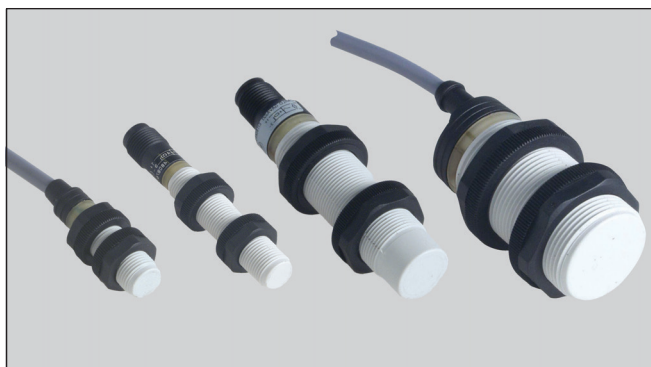


Proximity Sensors Inductive Thermoplastic Polyester Housing Types EI, DC, M12, M18, M30



- Euronorm thermoplastic polyester housing, cylindrical
- Diameter: M12, M18, M30
- Flush and non-flush types
- Long and short body versions
- Sensing distance: 2 to 15 mm
- Power supply: 10 to 32 VDC
- Output: Transistor NPN/PNP, Normally open or Normally closed
- Protection: Short-circuit, reverse polarity and overload
- LED-indication for output ON
- 2 m cable or M12 plug

Product Description

Proximity switch in M12, M18 and M30 polyester housings. Made in accordance with EN 60947-5-2.

Ordering Key

EI 1808 PPCPL-1

Type _____
Housing diameter (mm) _____
Rated operating dist. (mm) _____
Output type _____
Housing material _____
Body style _____
Plug _____

Type Selection DC Types, Cable and M12 Plug

Housing diameter	Body style	Connection	Rated operating dist. (S _n)	Ordering no. Transistor NPN Normally open	Ordering no. Transistor PNP Normally open	Ordering no. Transistor PNP Normally closed
M12	Long	Cable	2 mm ¹⁾		EI 1202 PPOPL	
M12	Short	Cable	4 mm ²⁾		EI 1204 PPOPS	
M12	Long	Cable	4 mm ²⁾	EI 1204 NPOPL	EI 1204 PPOPL	
M18	Long	Cable	5 mm ¹⁾	EI 1805 NPOPL	EI 1805 PPOPL	
M18	Short	Cable	8 mm ²⁾	EI 1808 NPOPS	EI 1808 PPOPS	
M18	Short	Plug	8 mm ²⁾		EI 1808 PPOPS-1	
M18	Long	Cable	8 mm ²⁾	EI 1808 NPOPL	EI 1808 PPOPL	EI 1808 PPCPL
M18	Long	Plug	8 mm ²⁾		EI 1808 PPOPL-1	EI 1808 PPCPL-1
M30	Long	Cable	10 mm ¹⁾	EI 3010 NPOPL	EI 3010 PPOPL	EI 3010 PPCPL
M30	Short	Cable	15 mm ²⁾	EI 3015 NPOPS		
M30	Long	Cable	15 mm ²⁾		EI 3015 PPOPL	

¹⁾ For flush mounting in metal

²⁾ For non-flush mounting in metal

Specifications

Rated operational volt. (U_B)	10 to 32 VDC (ripple incl.)	Frequency of operating cycles (f)	
Ripple	≤ 10%	EI 1202	800 Hz
Rated operational current (I_e)		EI 1204	500 Hz
Continuous	≤ 200 mA	EI 1805	500 Hz
No-load supply current (I_o)	Output ON: < 6.5 mA Output OFF: < 2.7 mA	EI 1808	400 Hz
Voltage drop (U_d)	≤ 2 VDC at max. load	EI 3010	300 Hz
Protection	Reverse polarity, short-circuit, transients	EI 3015	100 Hz
Transient voltage	≤ 700 V/0.5 J	Indication for output ON	LED, yellow
Power ON delay	< 10 ms	Assured operating dist. (S_a)	0 ≤ S _a ≤ 0.81 S _n
		Repeatability (R)	≤ 5%
		Hysteresis (H) (Differential travel)	1 to 15% of sensing distance
		Effective operating dist. (S_i)	0.9 x S _n ≤ S _r ≤ 1.1 x S _n
		Usable operating dist. (S)	0.9 x S _r ≤ S _u ≤ 1.1 x S _r

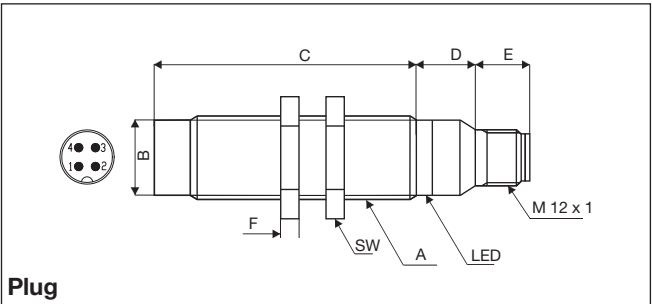
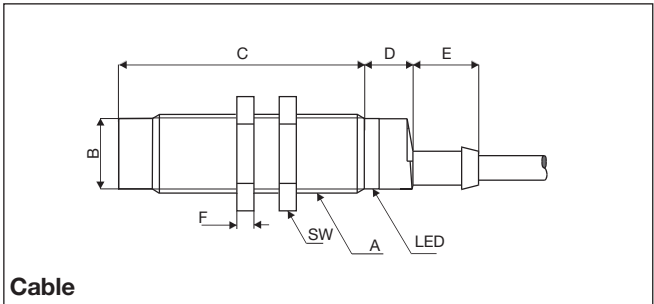


Specifications (cont.)

Ambient temperature		Weight (cable excluded)	
Operating	-25° to +70°C (-13° to +158°F)	EI12	10 g
Storage	-30° to +80°C (-22° to +176°F)	EI 1805	18 g
Degree of protection		EI 1808	20 g
Housing material		EI 3010	50 g
Body	Grey thermoplastic polyester	EI 3015	70 g
Back	Black polyester	Tightening torque	
Connection		EI 12	1.8 Nm
Cable	2 m, 3 x 0.3 mm², grey PVC, oil proof	EI 18	2.6 Nm
Plug	M 12 x 1	EI 30	7.5 Nm
Cables for plug (-1)	CONx... series to be purchased separately	Approvals	
		CE-marking	
		EMC	
		UL, CSA	
		Yes	
		Approved acc. to EN 60947-5-2	

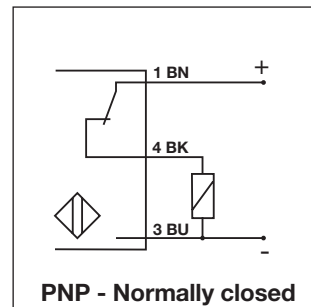
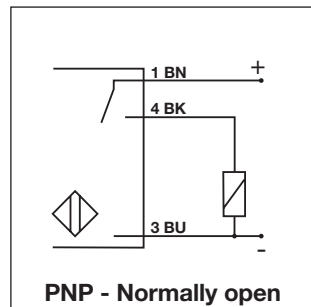
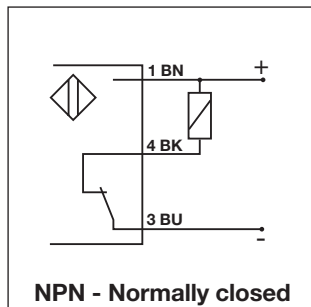
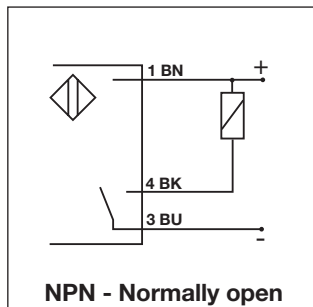
Dimensions

Type	A	B (Ø mm)	C (mm)	D (mm)	E (mm)	F (mm)	SW (mm)
EI 1202 xPxPL	M 12 x 1 x 50	10.7	50	11	5.0	8	17
EI 1204 xPxPS	M 12 x 1 x 30	10.7	34	11	5.0	8	17
EI 1204 xPxPL	M 12 x 1 x 50	10.7	54	11	5.0	8	17
EI 1805 xPxPL	M 18 x 1 x 50	16.7	50	11.6	15.4	8	24
EI 1808 xPxPS	M 18 x 1 x 30	16.7	38	11.6	15.4	8	24
EI 1808 xPxPL	M 18 x 1 x 50	16.7	58	11.6	15.4	8	24
EI 1808 xPxPS-1	M 18 x 1 x 30	16,7	38	13,1	11,9	8	24
EI 1808 xPxPL-1	M 18 x 1 x 50	16.7	58	13.1	11.9	8	24
EI 3010 xPxPL	M 30 x 1.5 x 50	28	50	13.6	15.4	10	36
EI 3015 xPxPS	M 30 x 1.5 x 30	28	42	13.6	15.4	10	36
EI 3015 xPxPL	M 30 x 1.5 x 50	28	62	13.6	15.4	10	36

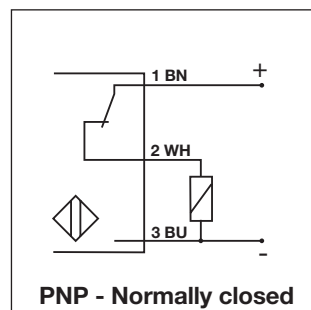
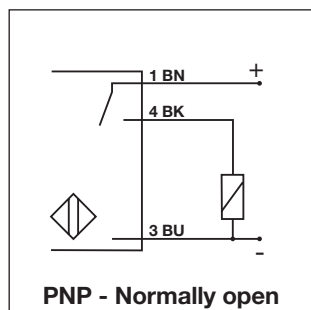
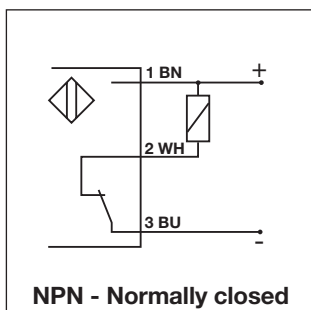
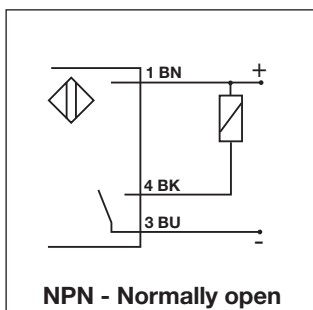


Wiring Diagrams

Cable version



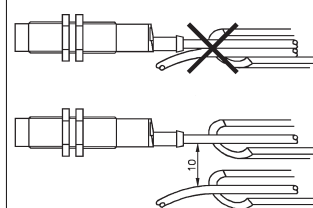
Plug version



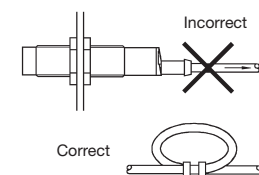
1 BN = Brown 2 WH = White 3 BU = Blue 4 BK = Black

Installation Hints

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

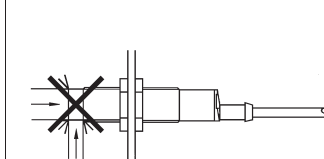


Relief of cable strain



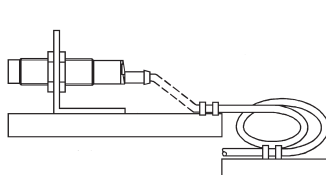
The cable should not be pulled

Protection of the sensing face



A proximity switch should not serve as mechanical stop

Switch mounted on mobile carrier



Any repetitive flexing of the cable should be avoided