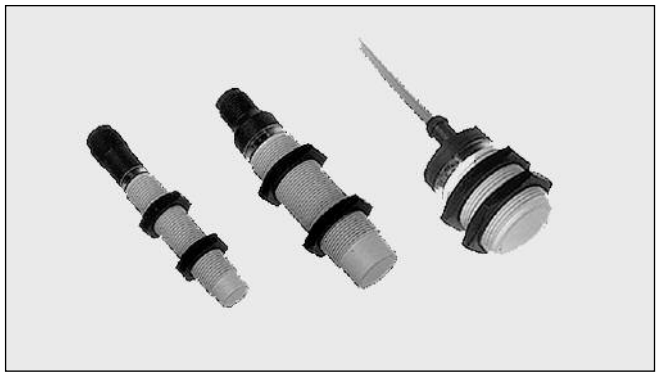
Proximity Sensors Inductive Thermoplastic Polyester Housing Types EI, AC, M18, M30



- **Thermoplastic polyester housing, cylindrical**
- **Diameter: M18 and M30**
- **Sensing distance: 5 to 15 mm**
- **Power supply: 20 to 250 VAC**
- **Output: SCR, make or break switching**
- **Protection: Overvoltage**
- **LED-indication for output ON**
- **Long or short housing**
- **2 m cable or M12 plug (double keyed)**

Product Description

AC proximity switches constructed in rugged thermoplastic polyester housings. Sizes available are M18 and M30. Length of housing is selectable with 30 mm thread or 50 mm thread. Bright LED ring utilizing a yellow LED clearly gives indication of output status. Protection rating IP 67 ensures environmental compatibility.

Ordering Key

EI 1808 TBCPL-6

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

Type Selection AC Types, Cable and M12 Plug

Housing diameter	Body style	Connection	Rated operating dist. (S_n)	Ordering no. SCR NO	Ordering no. SCR NC
M18	Short	Cable	5 mm [1]	**EI 1805 TBOPS**	
M18	Long	Cable	5 mm [1]	**EI 1805 TBOPL**	
M18	Long	Cable	8 mm [2]	**EI 1808 TBOPL**	**EI 1808 TBCPL**
M18	Long	Plug	8 mm [2]		**EI 1808 TBCPL-6**
M30	Long	Cable	10 mm [1]	**EI 3010 TBOPL**	
M30	Long	Cable	15 mm [2]	**EI 3015 TBOPL**	

[1] For flush mounting in metal
[2] For non-flush mounting in metal

Specifications

Rated operational volt. (U_e) (U_B)	24 to 240 VAC 20 to 265 VAC, 50 to 60 Hz
Rated operational current (I_e) Continuous Short-time	 10 - 500 mA ≤ 2.5 A, max. 20 ms
Minimum load current	10 mA
OFF-state current (I_r)	≤ 2 mA
Voltage drop (U_d)	≤ 8 VAC at max. load
Protection	Transients
Transient voltage	Level 3, 2.5 kV, acc. to IEC 60255-5 (500 Ω, 0.5 J) (prepared)
Power ON delay	≤ 100 ms
Frequency of operating cycles (f)	25 Hz

Indication for output ON	LED, yellow
Assured operating dist. (S_a)	$0 \le S_a \le 0.81\ S_n$
Repeat accuracy (R)	≤ 5%
Hysteresis (H) (Differential travel)	 3 to 20% of sensing distance
Effective operating dist. (S_r)	$0.9 \times S_n \le S_r \le 1.1 \times S_n$
Usable operating dist. (S)	$0.9 \times S_r \le S_u \le 1.1 \times S_r$
Ambient temperature Operating Storage	 -25° to +70°C (-13° to +158°F) -30° to +80°C (-22° to +176°F)
Degree of protection	IP 67 (Nema 1, 3, 4, 6, 13)
Housing material Body Back	 Grey thermoplastic polyester Black thermoplastic Polyester

Specifications (cont.)

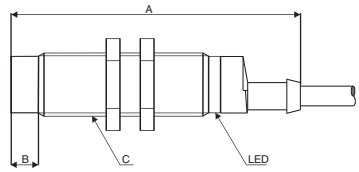
Connection	
Cable	2 m, 2 x 0.50 mm² grey PVC, oil proof
Plug	M12 x 1 (double keyed)
Cables for plug (-6)	CONH6A-xx
Weight (cable excluded)	**EI 18** 110 g **EI 30** 180 g

Tightening torque	**EI 18** 2.6 Nm **EI 30** 7.5 Nm
Approvals	UL, CSA
CE-marking	Yes

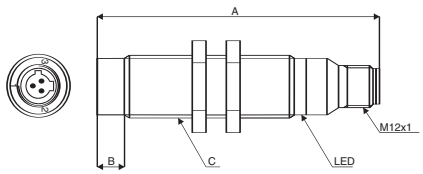
Dimensions

Type	A	B (mm)	C (mm)
EI 1805 TB..S	57	0	M 18 x 1 x 30
EI 1805 TB..L	77	0	M 18 x 1 x 50
EI 1808 TB..L	85	8	M 18 x 1 x 50
EI 1808 TB..L-6	83	8	M 18 x 1 x 50

Type	A	B (mm)	C (mm)
EI 3010 TB..L	79	0	M 30 x 1.5 x 50
EI 3015 TB..L	91	12	M 30 x 1.5 x 50

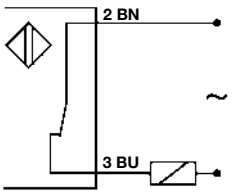


Cable type

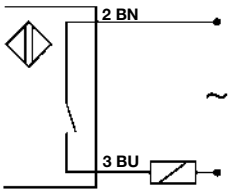


Plug type

Wiring Diagrams



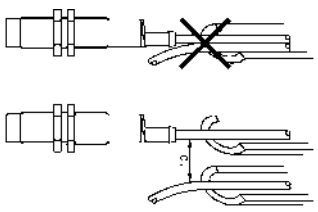
TBCS



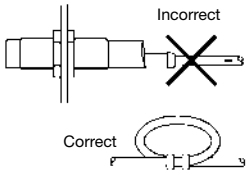
TBOS

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

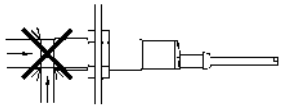


Relief of cable strain

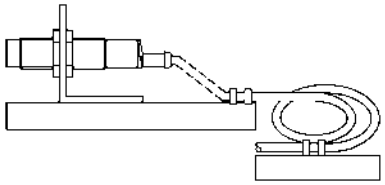


The cable should not be pulled

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

Power Supplies

Power supplies VAC: > SS 110