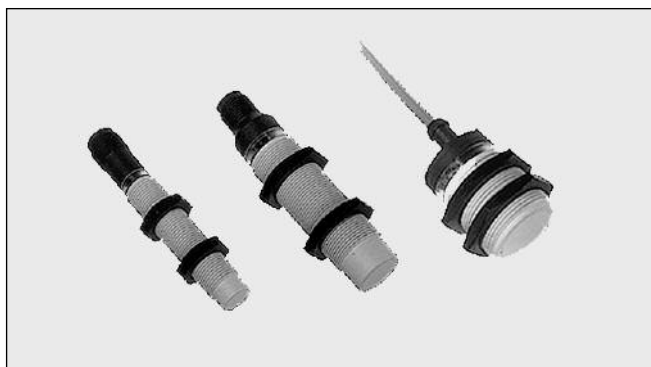


# Proximity Sensors Inductive Thermoplastic Polyester Housing Types EI, AC, M18, M30

CARLO GAVAZZI



- 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	Connec-tion	Rated operating dist. (S <sub>n</sub> )	Ordering no. SCR NO	Ordering no. SCR NC
M18	Short	Cable	5 mm <sup>1)</sup>	EI 1805 TBOPS	
M18	Long	Cable	5 mm <sup>1)</sup>	EI 1805 TBOPL	
M18	Long	Cable	8 mm <sup>2)</sup>	EI 1808 TBOPL	EI 1808 TBCPL
M18	Long	Plug	8 mm <sup>2)</sup>		EI 1808 TBCPL-6
M30	Long	Cable	10 mm <sup>1)</sup>	EI 3010 TBOPL	
M30	Long	Cable	15 mm <sup>2)</sup>	EI 3015 TBOPL	

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

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

## Specifications

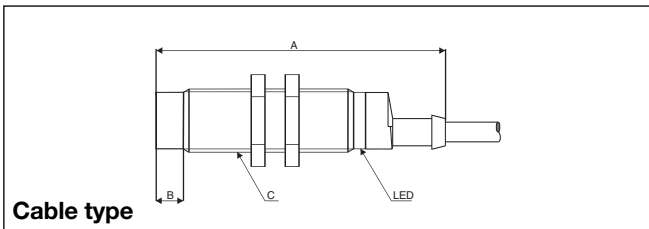
<b>Rated operational volt.</b> (U <sub>e</sub> ) (U <sub>B</sub> )	24 to 240 VAC 20 to 265 VAC, 50 to 60 Hz	<b>Indication for output ON</b>	LED, yellow
<b>Rated operational current</b> (I <sub>e</sub> ) Continuous Short-time	10 - 500 mA ≤ 2.5 A, max. 20 ms	<b>Assured operating dist.</b> (S <sub>a</sub> )	0 ≤ S <sub>a</sub> ≤ 0.81 S <sub>n</sub>
<b>Minimum load current</b>	10 mA	<b>Repeat accuracy</b> (R)	≤ 5%
<b>OFF-state current</b> (I <sub>r</sub> )	≤ 2 mA	<b>Hysteresis</b> (H) (Differential travel)	3 to 20% of sensing distance
<b>Voltage drop</b> (U <sub>d</sub> )	≤ 8 VAC at max. load	<b>Effective operating dist.</b> (S <sub>r</sub> )	0.9 x S <sub>n</sub> ≤ S <sub>r</sub> ≤ 1.1 x S <sub>n</sub>
<b>Protection</b>	Transients	<b>Usable operating dist.</b> (S)	0.9 x S <sub>r</sub> ≤ S <sub>u</sub> ≤ 1.1 x S <sub>r</sub>
<b>Transient voltage</b>	Level 3, 2.5 kV, acc. to IEC 60255-5 (500 Ω, 0.5 J) (prepared)	<b>Ambient temperature</b> Operating Storage	-25° to +70°C (-13° to +158°F) -30° to +80°C (-22° to +176°F)
<b>Power ON delay</b>	≤ 100 ms	<b>Degree of protection</b>	IP 67 (Nema 1, 3, 4, 6, 13)
<b>Frequency of operating cycles</b> (f)	25 Hz	<b>Housing material</b> Body Back	Grey thermoplastic polyester Black thermoplastic Polyester

## Specifications (cont.)

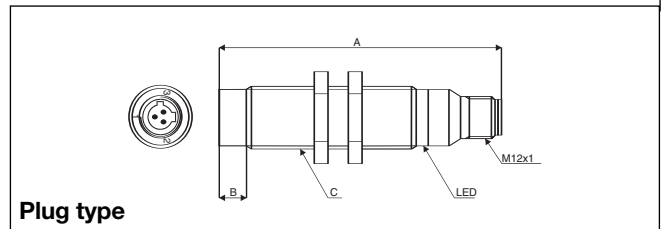
<b>Connection</b> Cable	2 m, 2 x 0.50 mm <sup>2</sup> grey PVC, oil proof M12 x 1 (double keyed) CONH6A-xx	<b>Tightening torque</b>	<b>EI 18</b> 2.6 Nm
			<b>EI 30</b> 7.5 Nm
Plug		<b>Approvals</b>	UL, CSA
Cables for plug (-6)		<b>CE-marking</b>	Yes
<b>Weight</b> (cable excluded)	<b>EI 18</b> 110 g		
	<b>EI 30</b> 180 g		

## Dimensions

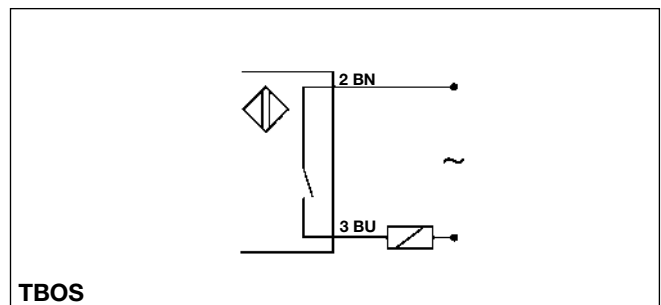
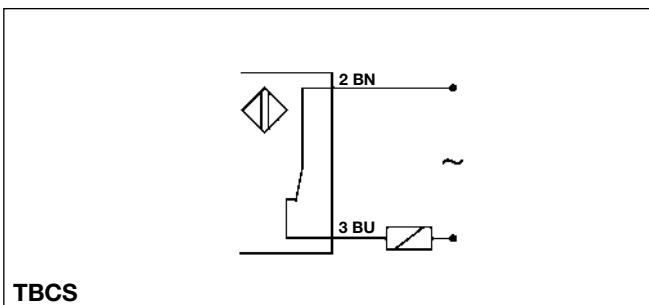
Type	A	B (mm)	C (mm)
EI 1805 TB..S	57	0	M 18 x 1 x 30
EI 1805 TB..L	77	0	M 18 x 1 x 50
EI 1808 TB..L	85	8	M 18 x 1 x 50
EI 1808 TB..L-6	83	8	M 18 x 1 x 50



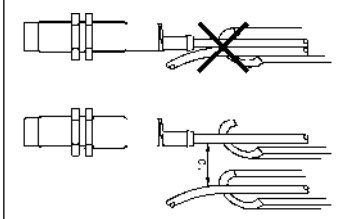
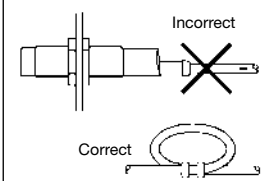
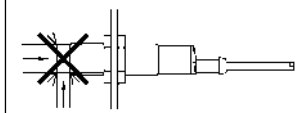
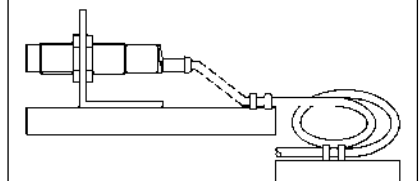
Type	A	B (mm)	C (mm)
EI 3010 TB..L	79	0	M 30 x 1.5 x 50
EI 3015 TB..L	91	12	M 30 x 1.5 x 50



## Wiring Diagrams



## Installation Hints

<p><i>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</i></p> 	<p><b>Relief of cable strain</b></p>  <p><b>Incorrect</b></p> <p><b>Correct</b></p> <p>The cable should not be pulled</p>	<p><b>Protection of the sensing face</b></p>  <p>A proximity switch should not serve as mechanical stop</p>	<p><b>Switch mounted on mobile carrier</b></p>  <p>Any repetitive flexing of the cable should be avoided</p>
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## Power Supplies

Power supplies VAC: > SS 110