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

CARLO GAVAZZI

- Stainless steel housing, cylindrical
- Diameter: M 12, M 18, M 30
- Sensing distance: 2 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 plug M 12 (double keyed)

Product Description

AC proximity switches constructed in stainless steel (1.4301) housings. Sizes available are M 12, M18 and M 30. 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 1202 TBOSL-6

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

Type Selection AC Types, Cable and M 12 Plug

Housing diameter	Body style	Connection	Rated operating dist. (S_n)	Ordering no. SCR Make switching	Ordering no. SCR Break switching
M 12	Long	Cable	2 mm [1]	**EI 1202 TBOSL**	**EI 1202 TBCSL**
M 12	Long	Plug	2 mm [1]	**EI 1202 TBOSL-6**	**EI 1202 TBCSL-6**
M 12	Long	Cable	4 mm [2]	**EI 1204 TBOSL**	**EI 1204 TBCSL**
M 12	Long	Plug	4 mm [2]	**EI 1204 TBOSL-6**	**EI 1204 TBCSL-6**
M 18	Short	Cable	5 mm [1]	**EI 1805 TBOSS**	**EI 1805 TBCSS**
M 18	Short	Plug	5 mm [1]	**EI 1805 TBOSS-6**	**EI 1805 TBCSS-6**
M 18	Long	Cable	5 mm [1]	**EI 1805 TBOSL**	**EI 1805 TBCSL**
M 18	Long	Plug	5 mm [1]	**EI 1805 TBOSL-6**	**EI 1805 TBCSL-6**
M 18	Short	Cable	8 mm [2]	**EI 1808 TBOSS**	**EI 1808 TBCSS**
M 18	Short	Plug	8 mm [2]	**EI 1808 TBOSS-6**	**EI 1808 TBCSS-6**
M 18	Long	Cable	8 mm [2]	**EI 1808 TBOSL**	**EI 1808 TBCSL**
M 18	Long	Plug	8 mm [2]	**EI 1808 TBOSL-6**	**EI 1808 TBCSL-6**
M 30	Short	Cable	10 mm [1]	**EI 3010 TBOSS**	**EI 3010 TBCSS**
M 30	Short	Plug	10 mm [1]	**EI 3010 TBOSS-6**	**EI 3010 TBCSS-6**
M 30	Long	Cable	10 mm [1]	**EI 3010 TBOSL**	**EI 3010 TBCSL**
M 30	Long	Plug	10 mm [1]	**EI 3010 TBOSL-6**	**EI 3010 TBCSL-6**
M 30	Short	Cable	15 mm [2]	**EI 3015 TBOSS**	**EI 3015 TBCSS**
M 30	Short	Plug	15 mm [2]	**EI 3015 TBOSS-6**	**EI 3015 TBCSS-6**
M 30	Long	Cable	15 mm [2]	**EI 3015 TBOSL**	**EI 3015 TBCSL**
M 30	Long	Plug	15 mm [2]	**EI 3015 TBOSL-6**	**EI 3015 TBCSL-6**

Short = 30 mm thread
Long = 50 mm thread
Make switching = Normally Open (NO)
Break switching = Normally Closed (NC)

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

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Specifications

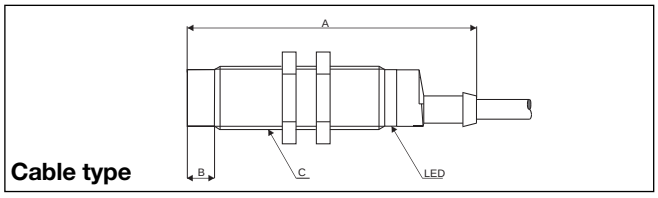
Rated operational volt. (U_e)	24 to 240 VAC,
(U_B)	20 to 265 VAC, 50 to 60 Hz
Rated operational current (I_e)	
Continuous	10 - 500 mA
Short-time	≤ 2.5 A, max. 20 ms
Minimum load current	10 mA
OFF-state current (I_r)	≤ 2 mA
Voltage drop (U_d)	≤ 8 VAC at max. load
Protection	Transients
Transient voltage	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	-25° to +70°C (-13° to +158°F)
Storage	-30° to +80°C (-22° to +176°F)
Degree of protection	IP 67 (Nema 1, 3, 4, 6, 13)
Housing material	
Body	Stainless steel (1.4301)
Front	Grey thermoplastic polyester
Back	Black thermoplastic polyester
Connection	
Cable	2 m, 2 x 0.50 mm², grey PVC, oil proof
Plug	M 12 x 1 (double keyed)
Cables for plug (-6)	CONH6A-xx
Weight (cable excluded)	**EI 12** 80 g **EI 18** 130 g **EI 30** 200 g
Tightening torque	**EI 12** 7.5 Nm (x) 17.5 Nm (y) **EI 18** 27.5 Nm **EI 30** 100.0 Nm

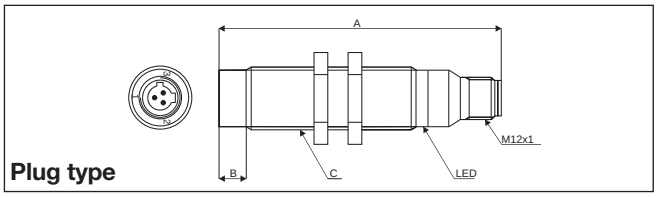
Dimensions

Type	A	B mm	C mm
EI 1202 TB..L	66	0	M 12 x 1 x 50
EI 1202 TB..L-6	74.5	0	M 12 x 1 x 50
EI 1204 TB..L	70	4	M 12 x 1 x 50
EI 1204 TB..L-6	78.5	4	M 12 x 1 x 50
EI 1805 TB..S	57	0	M 18 x 1 x 30
EI 1805 TB..S-6	55	0	M 18 x 1 x 30
EI 1805 TB..L	77	0	M 18 x 1 x 50
EI 1805 TB..L-6	75	0	M 18 x 1 x 50
EI 1808 TB..S	65	8	M 18 x 1 x 30
EI 1808 TB..S-6	63	8	M 18 x 1 x 30
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..S	59	0	M 30 x 1.5 x 30
EI 3010 TB..S-6	55.5	0	M 30 x 1.5 x 30
EI 3010 TB..L	79	0	M 30 x 1.5 x 50
EI 3010 TB..L-6	75.5	0	M 30 x 1.5 x 50
EI 3015 TB..S	87.5	12	M 30 x 1.5 x 30
EI 3015 TB..S-6	67.5	12	M 30 x 1.5 x 30
EI 3015 TB..L	91	12	M 30 x 1.5 x 50
EI 3015 TB..L-6	71	12	M 30 x 1.5 x 50

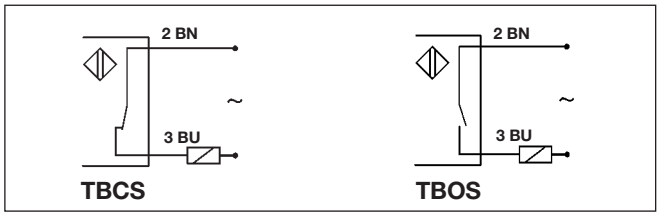


Cable type



Plug type

Wiring Diagrams



Power Supplies

Power supplies VAC: > SS 110

Installation Hints

Refer to “Installation Hints", Technical information.