EI
Технические характеристики

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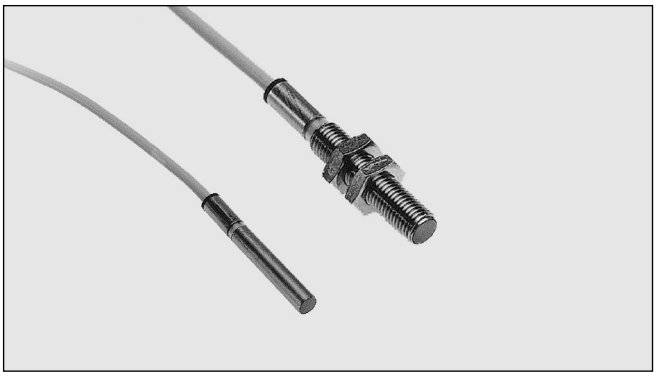
Proximity Sensors Inductive
Stainless Steel Housing
Types EI, Ø 6.5, M8, NAMUR



- **Stainless steel housing, cylindrical**
- **Diameter: Ø 6.5, M8**
- **Short versions**
- **Sensing distance: 1 to 2 mm**
- **Output: NAMUR (DIN 19234)**
- **Protection: Reverse polarity**
- **2 m cable**

Product Description

Proximity switch in Ø 6.5 and M8 housings. Made in accordance with NAMUR DIN 19 234. Short version in standard stainless steel housing. Amplifier relay SD ... is available.

Ordering Key

EI 0601 NAC S

Type
Housing diameter (mm)
Rated operating dist. (mm)
Output type
Housing material

Type Selection

Housing diameter	Rated operating distance (S_n)	Ordering no. NAMUR
Ø 6.5 mm	1 mm [1]	**EI 0601 NACS**
M8	1 mm [1]	**EI 0801 NACS**
M8	2 mm [2]	**EI 0802 NACS**

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

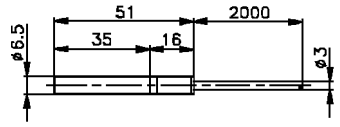
Specifications

Rated operational volt. (U_e) (U_B)	8.2 VDC 7 to 9 VDC (6 to 35 VDC, all specifications not observed in extended supply range)
Self-inductance	Max. 500 µH
Self-capacitance	Max. 120 nF
Current consumption (I_o)	Activated: ≤1 mA Not activated: ≥ 2.2 mA Max.: 9.35 mA
Protection	Reverse polarity
Transient voltage	≤ 1 kV/0.5 J (prepared)
Frequency of operating cycles (f)	
EI 0601	2000 Hz
EI 0801	2000 Hz
EI 0802	1500 Hz
Assured operating dist. (S_a)	$0 \le S_a \le 0.81 \times S_n$
Repeat accuracy (R)	≤ 5%
Hysteresis (H) (Differential travel)	Dependent on amplifier relay
Effective operating dist. (S_r)	$0.9 \times S_n \le S_r \le 1.1 \times S_n$
Usable operating dist. (S_u)	$0.9 \times S_r \le S_u \le 1.1 \times S_r$

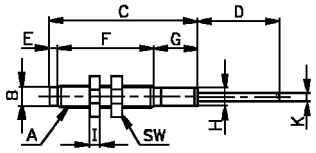
Ambient temperature		
Operating		-25° to +70°C (-13° to +158°F)
Storage		-30° to +80°C (-22° to +176°F)
Degree of protection		IP 67 (Nema 1, 3, 4, 6, 13)
Housing material		
Body		Stainless steel (1.4301)
Front		Thermoplastic polyester
Back		Black PVC
Cable		2 m, 2 x 0.14 mm² grey PVC, oil proof
Weight (cable included)		
	EI 06	30 g
	EI 08	50 g
Tightening torque	**EI 08**	3.0 Nm (x) 7.0 Nm (y) Refer to "Terms Used" Technical information.
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
EI 0801	M8 x 1	6.7	51	2000	0	35	16	Ø 6.5	4	13	3
EI 0802	M8 x 1	6.7	54	2000	3	35	16	Ø 6.5	4	13	3



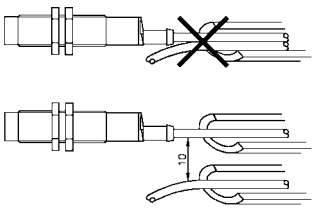
EI 0601



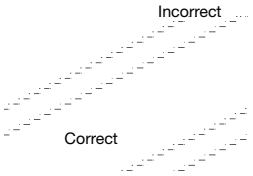
EI 08

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

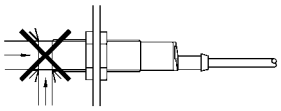


Relief of cable strain



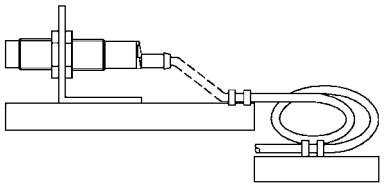
The cable should not be pulled

Protection of the sensing face



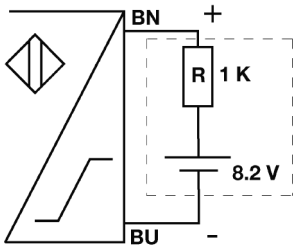
A proximity switch should not serve as mechanical stop

Switch mounted on mobile carrier



Any repetitive flexing of the cable should be avoided

Wiring Diagram



NAMUR, Amplifier Relays

> SD 110/210.
> SD 170/270.

Refer to Technical information.

Proximity Sensors Inductive
Analogue Position Sensor
Types EI, M18, M30

CARLO GAVAZZI

- **Nickel-plated brass housing, cylindrical**
- **Diameter: M18, M30**
- **Sensing range: EI 1805 I020: 2 to 5 mm**
  EI 3008 I020: 3 to 8 mm
- **Power supply: 15 to 30 VDC**
- **Current source output: 0 to 20 mA**
- **Protection: Reverse polarity, internal current limiter**
- **2 m cable or plug M12**

Product Description

Cylindrical analogue position sensor in M18 and M30 nickel-plated brass housings. High degree of linearity, output current 0 to 20 mA. Can be extended with level amplifier relay S 183 and analogue display to make up complete measuring systems.

Ordering Key

EI 1805 I020-1

Type: Inductive switch
Housing diameter
Rated operating dist. (mm)
Current output 0 to 20 mA
Connection type

Type Selection

Housing diameter	Rated operating dist. (S_n)	Ordering no. Output type 0 to 20 mA	Ordering no. Output type 0 to 20 mA
M18	2 to 5 mm [1]	**EI 1805 I020**	**EI 1805 I020-1**
M30	3 to 8 mm [1]	**EI 3008 I020**	

[1] For flush mounting in metal

Specifications

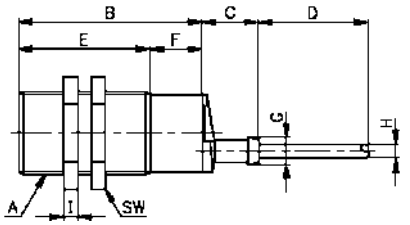
Rated operational volt. (U_e)	17 to 27 VDC	
(U_B)	15 to 30 VDC (ripple included)	
Ripple	≤ 10%	
Rated operational current (I_e)	0 to 20 mA (R load: 0 to 500 Ω) Max. 30 mA (current limiter)	
No-load supply current (I_o)	≤ 7 mA (no load)	
Protection	Reverse polarity current limiter	
Transient voltage	≤ 2 kV/0.5 J (prepared)	
Power ON delay	Safe operation after 1 s	
Rate of rise	**EI 1805 I020**	≥ 1 mm/ms
	EI 3008 I020	≥ 3 mm/ms
Assured operating dist. (S_a)	**EI 1805 I020**	2 to 5 mm
	EI 3008 I020	3 to 8 mm
Linearity	± 3% of full scale	
Repeat accuracy (R)	≤ 1%	
Temperature drift	**EI 1805 I020** ≤ 2 µm/°C per mm **EI 3008 I020** ≤ 1 µm/°C per mm	

Ambient temperature		
Operating	-15° to +65°C (+5° to +144°F)	
Storage	-20° to +70°C (-4° to +158°F)	
Degree of protection	IP 67 (Nema 1, 3, 4, 6, 13)	
Housing material		
Body	Nickel-plated brass	
Front	Blue thermoplastic polyester	
Back	Black thermoplastic polyester	
Cable	2 m, 3 x 0.25 mm² grey PVC, oil proof	
Weight (cable included)	**EI 1805 I020**	85 g
	EI 3008 I020	195 g
Tightening torque	**EI 1805 I020**	17.5 Nm
	EI 3008 I020	35.0 Nm
CE-marking	Yes	

CARLO GAVAZZI

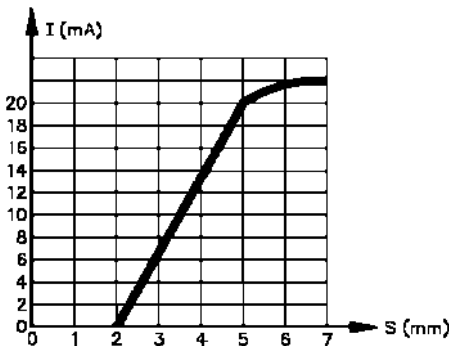
Dimensions

Type	A	B mm	C mm	D mm	E mm	F mm	G mm	H Ø mm	I mm	SW mm
EI 1805 I020	M18 x 1	71	20.5	2000	52	19	10	5.2	4	24
EI 3008 I020	M30 x 1.5	67	20.5	2000	48	19	10	5.2	5	36

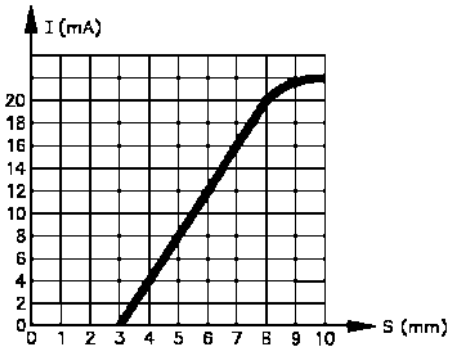


EI I020

Output Curves

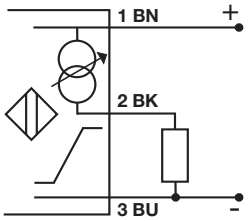


EI 1805 I020



EI 3008 I020

Wiring Diagram

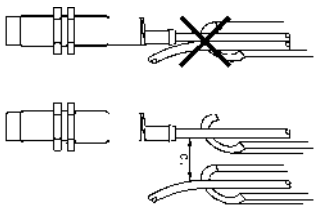


Power Supplies

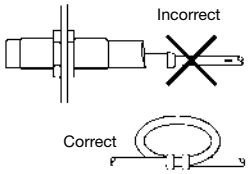
Power supplies VAC: > SS 110.
Power supplies VDC: > SS 130/140.

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

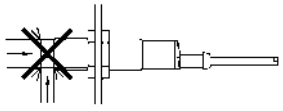


Relief of cable strain



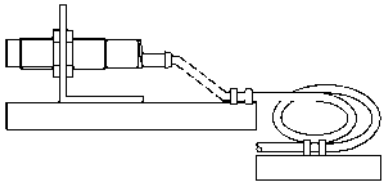
The cable should not be pulled

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

Proximity Sensors Inductive
Flat pack Polycarbonate Housing
Types EI 5510/EI 5515, AC-Types

CARLO GAVAZZI

- Sensing distance 10 or 15 mm
- Rated operational voltage: 20 to 250 VAC
- Output: SCR, make or break switching
- LED indication for output ON
- Protection: Transients
- Inductive, Capacitive and Photoelectric flat pack series in PC housing, IP 67
- Cable and plug versions

Product Description

AC inductive proximity switches with sensing distance 10 mm mounted in metal or 15 mm non-flush mounted. Flat pack housing size (W x H x D) 35 x 55 x 15 mm made in polycarbonate. Easy mounting with only two M 3.5 screws. Ideal for use in conveying and material handling applications.

Ordering Key

EI 55 10 TBO P-6

- **Type: Inductive proximity switch**
- **Housing**
- **Range**
- **Output type**
- **Housing material**
- **Connection type**

Type Selection, AC Types

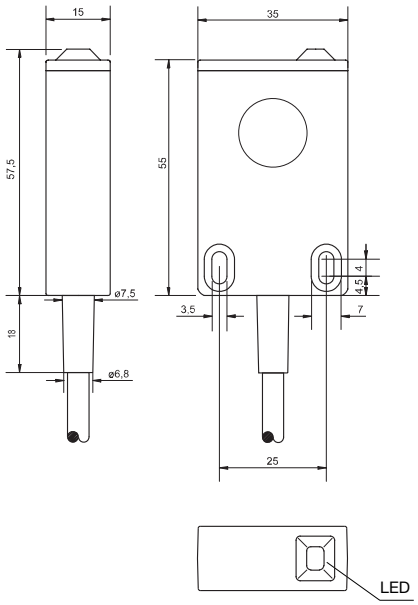
Housing diameter W x H x D	Rated operating dist. (S_n)	Ordering no. Cable Make switching	Ordering no. Cable Break switching	Ordering no. Plug Make switching	Ordering no. Plug Break switching
35 x 55 x 15	10 mm	**EI 5510 TBOP**	**EI 5510 TBCP**	**EI 5510 TBOP-6**	**EI 5510 TBCP-6**
	15 mm	**EI 5515 TBOP**	**EI 5515 TBCP**	**EI 5515 TBOP-6**	**EI 5515 TBCP-6**

Specifications

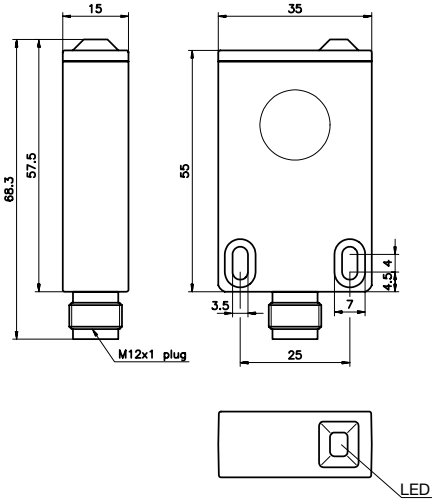
Rated operational volt. (U_e)	24 to 240 VAC
(U_B)	20 to 250 VAC, 50 to 60 Hz
Rated operational current (I_e)	
Continuous	10 to 500 mA
Short-time	≤ 2.5 A, max. 20 ms
Minimum load current (I_o)	≤ 5 mA
OFF-state current (I_r)	20mA
Voltage drop (U_d)	≤ 8 VAC at max. load
Protection	Transients
Transient voltage	Level 3, 2.5 kV, acc. to IEC-60255-5 (500Ω, 0.5 J)
Power ON delay	≤ 100 ms
Frequency of operating cycles (f)	5 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_u)	$0.9 \times S_r \le S_u \le 1.1 \times S_r$
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	Polycarbonate, grey
Connection	
Cable	2 m, 4 x 0.3 mm² grey PUR, oil proof
Plug	M 12 x 1 (double keyed)
Cables for plug (-6)	CONH6A-xx
Weight	125 g cable version 40 g plug version
EMC ratings	Acc. to EN 50 082-2
EN 61 000-4-2 ESD	
Contact discharge	4 kV
Air discharge	8 kV
EN 61 000-4-4 Fast transient	
Rep. freq. 5 kHz	2 kV
ENV 50 140 RF Electromagnetic	
AM, 80-1000 mHz	10 V/m
ENV 50 141 Conducted	
Disturbance	10 V/m
ENV 50 204 RF Electromagnetic	
field PM, 80-900 MHz	10 V/m
Approvals	UL, CSA
CE-marking	Yes

Dimensions

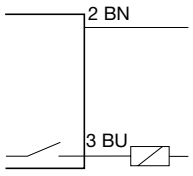


EI 551. TB.P

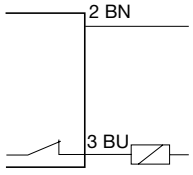


EI 551. TB.P-6

Wiring Diagrams



TBOP



TBCP

Accessories

- Plugs CONH6A.. serie, please refer to "Accessories".

Delivery Contents

- Inductive switch: EI 551. ....
- **Packaging:** Corrugated cardboard (environmentally friendly recycling material).

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