Proximity Sensors Inductive
Analogue Position Sensor
Types EI, M 18, M 30

CARLO GAVAZZI

- **Nickel-plated brass housing, cylindrical**
- **Diameter: M 18, M 30**
- **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 M 18 and M 30 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
M 18	2 to 5 mm [1]	**EI 1805 I020**	**EI 1805 I020-1**
M 30	3 to 8 mm [1]	**EI 3008 I020**	

[1] For flush mounting in metal

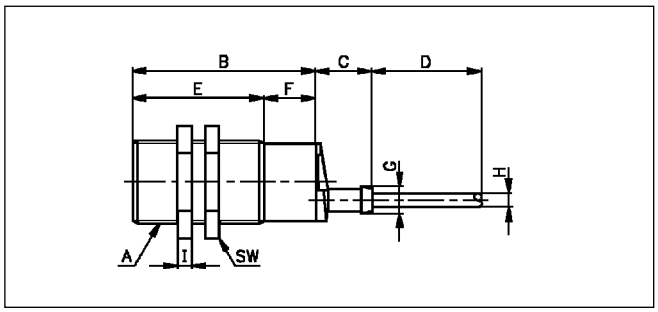
Specifications

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	

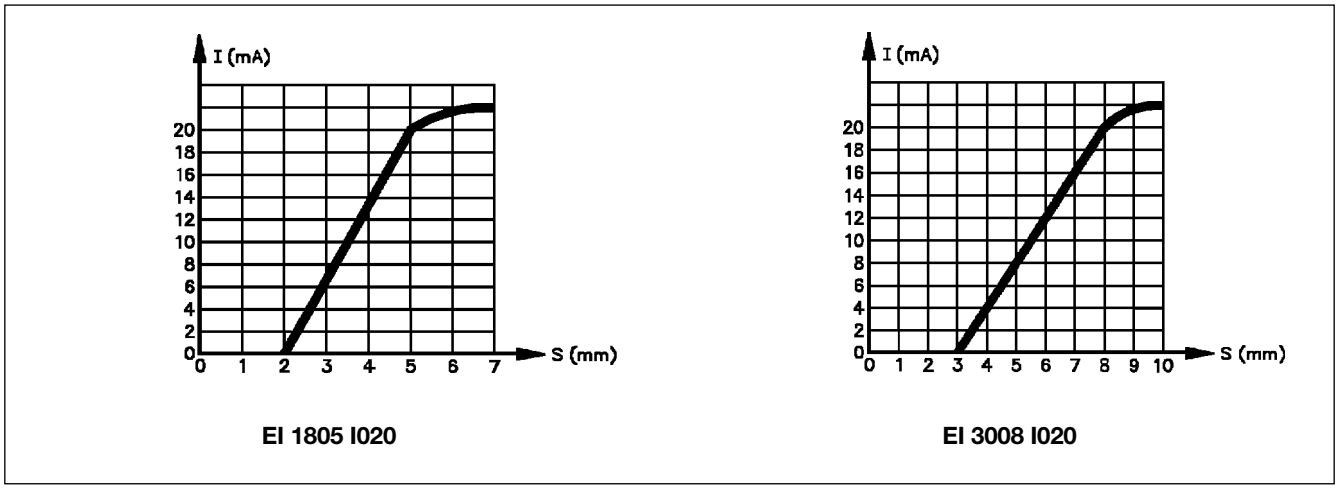
Dimensions

Type	A	B mm	C mm	D mm	E mm	F mm	G mm	H Ø mm	I mm	SW mm
EI 1805 I020	M 18 x 1	71	20.5	2000	52	19	10	5.2	4	24
EI 3008 I020	M 30 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

Refer to “Wiring Diagrams", Technical information.

Installation Hints

Refer to “Installation Hints", Technical information.

Power Supplies

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