

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

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- 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 ex-

tended 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

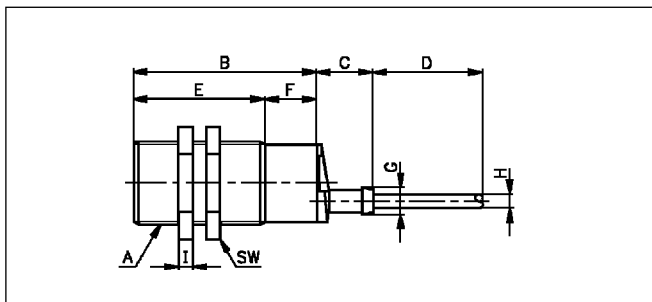
Specifications

| | | | | |
|--|--|--------------------------------|----------------------|--|
| Rated operational volt. (U_e) (U_B) | 17 to 27 VDC 15 to 30 VDC (ripple included) | Ambient temperature | Operating Storage | -15° to +65°C (+5° to +144°F) -20° to +70°C (-4° to +158°F) |
| Ripple | ≤ 10% | Degree of protection | | IP 67 (Nema 1, 3, 4, 6, 13) |
| Rated operational current (I_e) | 0 to 20 mA (R load: 0 to 500 Ω) Max. 30 mA (current limiter) | Housing material | Body Front | Nickel-plated brass Blue thermoplastic polyester |
| No-load supply current (I_o) | ≤ 7 mA (no load) | | Back | Black thermoplastic polyester |
| Protection | Reverse polarity current limiter | Cable | | 2 m, 3 x 0.25 mm ² grey PVC, oil proof |
| Transient voltage | ≤ 2 kV/0.5 J (prepared) | Weight (cable included) | | EI 1805 I020 85 g EI 3008 I020 195 g |
| Power ON delay | Safe operation after 1 s | Tightening torque | | EI 1805 I020 17.5 Nm EI 3008 I020 35.0 Nm |
| Rate of rise | EI 1805 I020 ≥ 1 mm/ms EI 3008 I020 ≥ 3 mm/ms | CE-marking | | Yes |
| 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 | | | |



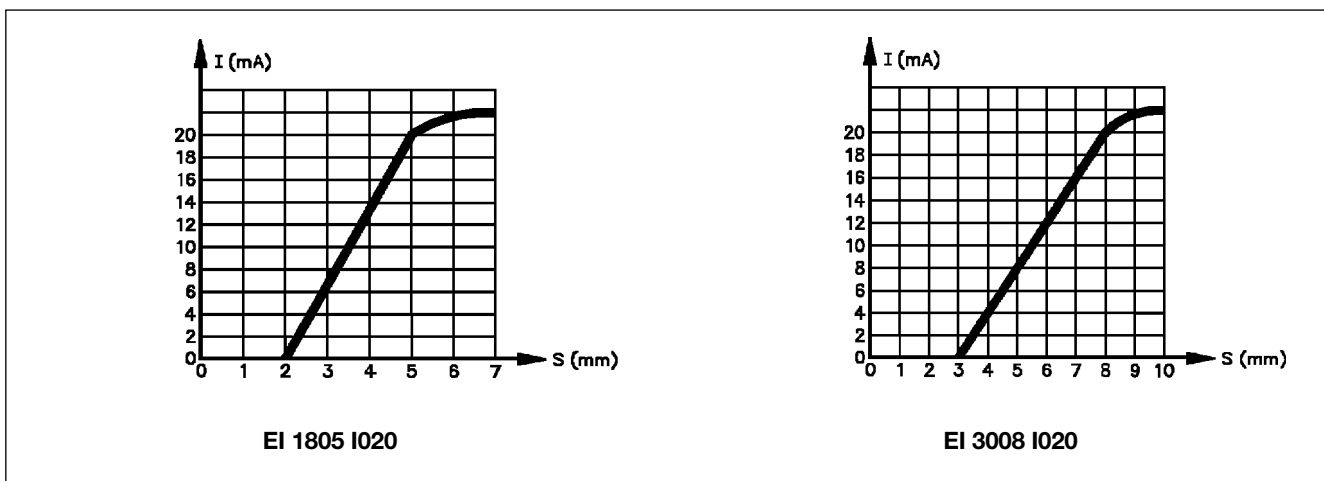
Dimensions

| 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



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.