

# Proximity Inductive Sensors

## Extended range, Stainless Steel Housing

### Types IA, M8



- Sensing distance: 2 to 4 mm
- Flush and non-flush types
- Short body
- Rated operational voltage: 10 - 30 VDC
- Output: DC 200 mA, NPN or PNP, normally open or normally closed
- LED-indication
- Protection: reverse polarity, short-circuit, transients
- Cable and plug versions

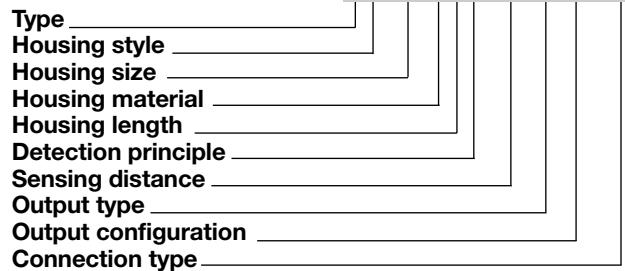
## Product Description

A family of extended range inductive proximity switches in industrial stainless steel housings. They are able to handle applications where high sensing range is requested.

Outputs are open collector NPN or PNP transistors. Available with cable and M8 plug.

## Ordering Key

**IA08BSF20NOM5**



## Type Selection

Rated operating dist. (S <sub>n</sub> )	Conn. type	Ordering no. Transistor NPN Normally open	Ordering no. Transistor NPN Normally closed	Ordering no. Transistor PNP Normally open	Ordering no. Transistor PNP Normally closed
2 mm <sup>1)</sup>	Cable	IA 08 BSF 20 NO	IA 08 BSF 20 NC	IA 08 BSF 20 PO	IA 08 BSF 20 PC
2 mm <sup>1)</sup>	Plug	IA 08 BSF 20 NO M5	IA 08 BSF 20 NC M5	IA 08 BSF 20 PO M5	IA 08 BSF 20 PC M5
4 mm <sup>2)</sup>	Cable	IA 08 BSN 40 NO	IA 08 BSN 40 NC	IA 08 BSN 40 PO	IA 08 BSN 40 PC
4 mm <sup>2)</sup>	Plug	IA 08 BSN 40 NO M5	IA 08 BSN 40 NC M5	IA 08 BSN 40 PO M5	IA 08 BSN 40 PC M5

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

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

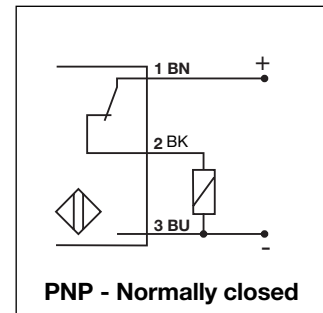
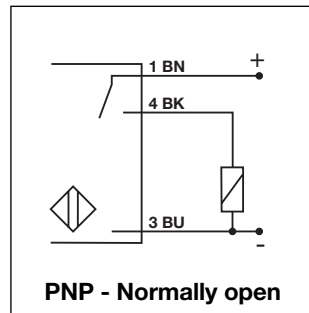
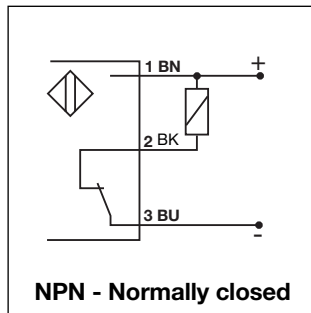
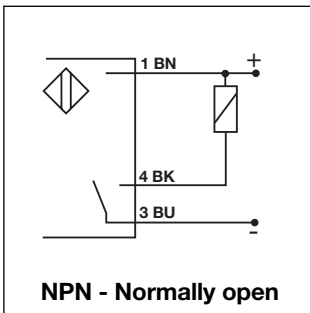
## Specifications

Rated operational voltage (U <sub>B</sub> )	10 to 30 VDC (ripple incl.)	Usable operating distance (S <sub>u</sub> )	0.85 x S <sub>r</sub> ≤ S <sub>u</sub> ≤ 1.15 x S <sub>r</sub>
Ripple	≤ 10%	Repeat accuracy (R)	≤ 5%
Output current (I <sub>e</sub> )	≤ 200 mA Derating: From +50°C to +70°C, I <sub>e</sub> @ 70°C ≤ 150 mA	Differential travel (H) (Hysteresis)	1 to 20% of sensing dist.
No load supply current (I <sub>o</sub> )	≤ 10 mA	Ambient temperature	Operating: -25° to +70°C (-13° to +158°F) Storage: -30° to +80°C (-22° to +176°F)
Voltage drop (U <sub>d</sub> )	Max. 2.5 VDC @ 200 mA	Housing material	Body: Stainless steel (AISI 304/303) Front: Grey thermoplastic polyester Backpart: NPB Plug: NPB Nuts: NPB
Protection	Reverse polarity, short-circuit, transients	Connection	Cable: 2 m, 3 x 0.14 mm <sup>2</sup> , Ø 3,2 grey PVC, oil proof Plug: M8 x 1 Cables for plug (M5): CONH5A series
Transient voltage	1 kV/0.5 J	Degree of protection	IP 67
Power ON delay (t <sub>v</sub> )	< 100 ms		
Operating frequency (f)	IA08 BSF ≥ 2000 Hz IA08 BSN ≥ 1000 Hz		
Indication for output ON	LED, yellow		
Assured operating dist. (S <sub>a</sub> )	0 ≤ S <sub>a</sub> ≤ 0.81 x S <sub>n</sub>		
Effective operating dist. (S <sub>r</sub> )	0.9 x S <sub>n</sub> ≤ S <sub>r</sub> ≤ 1.1 x S <sub>n</sub>		

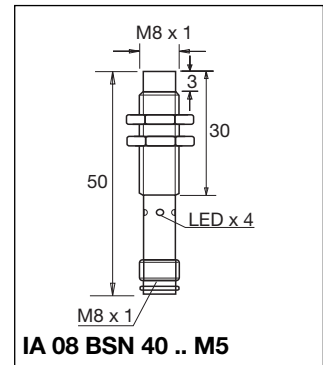
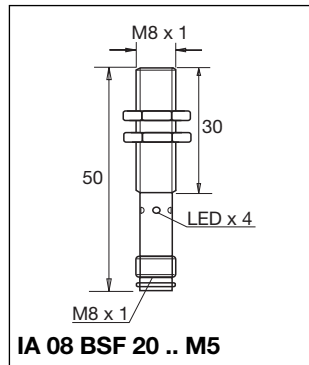
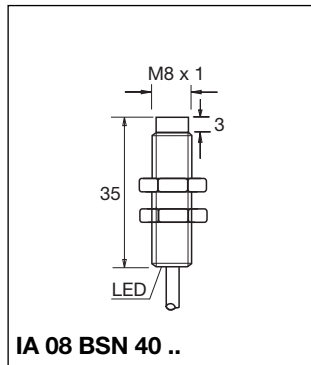
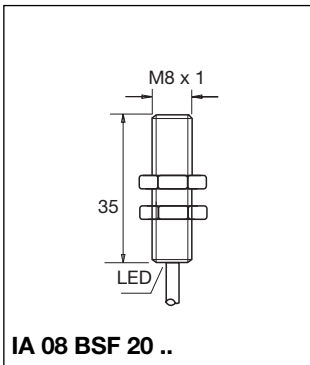
## Specifications (cont.)

Weight (cable/nuts included)	IA 08 ..	Approx. 30 g	Approvals	UL, CSA
	IA 08 .. M5	Approx. 5 g		CE-marking
Tightening torque		5.0 Nm (x) 8.0 Nm (y)		

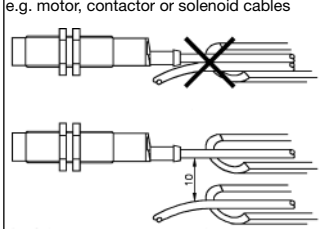
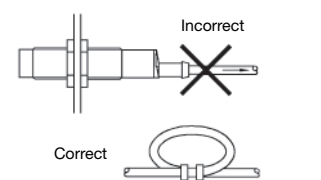
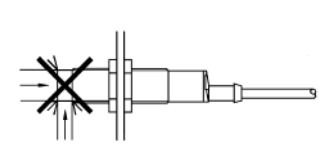
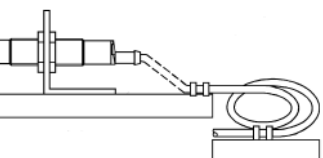
## Wiring Diagrams



## Dimensions



## Installation Hints

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

- Inductive proximity switch IA..
- 2 nuts NPB
- Packaging: plastic bag