# Proximity Sensors Inductive Short body, Stainless Steel Housing Types IA, M5 w/short-circuit protection 

- Miniature stainless steel housing M5
- Short body
- Sensing distance: 1.0 mm ( 0.8 mm for IA05BSF10NCP only)
- Power supply: 10 to 30 VDC
- Output: Transistor NPN/PNP, normally open or normally closed
- Protection: Reverse polarity and short-circuit protection
- LED-indication for output ON
- 2 m PVC cable or M8 plug


## Product Description

Miniature inductive proximity sensor with reduced body length. Output configuration for NPN/PNP with both NO
and NC types as standard. M5 stainless steel housing. Connection with 2 m PVC cable or M8 plug.

## Type Selection

| Rated operating dist. ( $\mathrm{S}_{\mathrm{n}}$ ) | 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 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0.8 mm ${ }^{1)}$ | Cable |  | IA 05 BSF 10 NC P |  |  |
| 1.0 mm ${ }^{11}$ | Cable | IA 05 BSF 10 NO P |  | IA 05 BSF 10 PO P | IA 05 BSF 10 PC P |
| 1.0 mm ${ }^{1)}$ | Plug | IA 05 BSF 10 NO M5 P | IA 05 BSF 10 NC M5 P | IA 05 BSF 10 PO M5 P | IA 05 BSF 10 PC M5 P |

## Specifications

| Rated operational volt. ( $\mathrm{U}_{\mathrm{B}}$ ) | 10 to 30 VDC (ripple included) | Ambient temperature |  |
| :---: | :---: | :---: | :---: |
| Ripple | $\leq 10 \%$ | Operating | $-25^{\circ} \text { to }+70^{\circ} \mathrm{C}\left(-13^{\circ} \text { to }+158^{\circ} \mathrm{F}\right)$ |
| Rated operational current (le) |  | Storage | $-30^{\circ}$ to $+75^{\circ} \mathrm{C}\left(-22^{\circ}\right.$ to $\left.+167^{\circ} \mathrm{F}\right)$ |
| Continuous | $\leq 200 \mathrm{~mA}$ | Degree of protection | IP 67 (Nema 1, 3, 4, 6, 13) |
| No-load supply current ( $\mathrm{l}_{0}$ ) | $\leq 10 \mathrm{~mA}$ (ON) | Housing material | Stainless steel, AISI 303 |
| Voltage drop ( $\mathrm{U}_{\mathrm{c}}$ ) | $<1.0 \mathrm{~V}$ (@ $\mathrm{I}_{\text {max }}$ ) | CE-marking | Yes |
| Protection | Reverse polarity and short-circuit protection | Connection Cable | $2 \mathrm{~m}, \mathrm{PVC}$, oil proof |
| Frequency of operating cycles (f) | 2000 Hz | Plug |  |
| Indication for output ON | LED, yellow |  |  |
| Effective operating dist. ( $\mathrm{S}_{\mathrm{r}}$ ) | $0.9 \times \mathrm{S}_{\mathrm{n}} \leq \mathrm{S}_{\mathrm{r}} \leq 1.1 \times \mathrm{S}_{\mathrm{n}}$ |  |  |
| Usable operating dist. ( $\mathrm{S}_{\mathrm{u}}$ ) | $0.85 \times \mathrm{S}_{\mathrm{r}} \leq \mathrm{S}_{\mathrm{u}} \leq 1.15 \times \mathrm{S}_{\mathrm{r}}$ |  |  |

Wiring Diagrams


## Installation Hints



Dimensions


