

# IBS04, ICS05 IO-Link 3-wire DC



## Miniaturized proximity inductive sensors with IO-Link communication



### Benefits

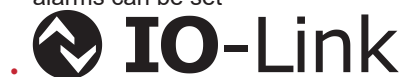
- **A complete family.** Available in Ø4 and M5 male thread robust stainless steel housings with an operating distance of 0.8 to 1.3 mm.
- **High speed detection.** IBS04 and ICS05 inductive proximity sensors can reach an operating frequency of up to 6 kHz.
- **Easy to install.** The active face can be installed flush with the surrounding area. The user can choose between 2 m PVC cable and M8-disconnect plug versions.
- **High precision.** The onboard advanced microcontroller ensures better stability with respect to environmental influences, with highly reliable repeatable measurements between -25 and +70°C.
- **Easy customization to specific OEM requests:** different cable lengths and materials, special labelling, customized pig-tail solutions with special cables and connectors are possible on request.

### Description

The IBS04 and ICS05 series represent the optimal solution for industrial automation equipment in applications where space is limited, including tool-selection, robotic position-sensing and control of micro-mechanisms. The advanced electronics is enclosed in a robust stainless steel housing. The availability of the M8-plug and 2m-PVC cable connection allow flexible mounting. On-board IO-Link communication opens up many possibilities, such as easy configuration and set-up of the devices and advanced parameter setting.

### Only for IO-Link sensors

- **The output** can be operated either as a switching output or in IO-Link mode.
- **Fully configurable via IO-Link v1.1.** Electrical outputs can be configured as PNP/NPN/Push-pull, normally open or normally closed.
- **Timer functions** can be set, such as switch-on and switch-off delay
- **Adjustable sensing distance and hysteresis:** sensing distance can be set to 62% or 100% of the maximum sensing distance
- **Temperature monitoring:** over or under-run temperature alarms can be set



### Applications

- Non contact detection of metal objects in general position-sensing and presence-sensing in industrial applications
- Particularly suitable for rotational speed monitoring thanks to the high operating frequency

### Main functions

- Integrated diagnostic function with flashing LED in the event of a short circuit or overload

**IO-Link sensors**

- The devices can be operated in IO-Link mode once connected to an IO-Link master, or in standard I/O mode.
- In IO-Link mode the switching signals of the sensor are made available in the process data via the IO-Link interface.
- Several sensor functions can be set via the IO-Link interface:
  - ▶ Adjustable switching distance: 62% or 100% of the maximum switching distance.
  - ▶ Adjustable hysteresis: standard or increased value.
  - ▶ Divider function: the sensor gives a signal after a specified number of actuation pulses has been reached.
  - ▶ Switch-on delay: the switching pulse is generated after the sensor actuation.
  - ▶ Switch-off delay: the generation of the switch signal is delayed by the set time after sensor actuation.
  - ▶ Temperature error: temperature is out of specifications.
  - ▶ Temperature over-run and under-run: temperature is out of the limits defined by the user.

## References

**Order code**



Enter the code option instead of

Code	Option	Description
I	-	Inductive sensor
<input type="checkbox"/>	B	Cylindrical housing with smooth barrel
	C	Cylindrical housing with threaded barrel
S	-	Stainless steel housing
<input type="checkbox"/>	04	Ø4 housing
	05	M5 housing
<input type="checkbox"/>	S	Short housing with smooth barrel
	S23	Short housing with thread length of 23 mm
F	-	Flush
<input type="checkbox"/>	08	Sensing distance 0.8mm
	15	Sensing distance 1.3mm
<input type="checkbox"/>	M5	M8 plug
	A2	2 m PVC cable
<input type="checkbox"/>	NO	NPN – normally open output
	NC	NPN – normally closed output
	PO	PNP – normally open output
	PC	PNP – normally closed output
	IO	IO-Link programmable version

Additional characters can be used for customized versions.