## Programmable Inductive Sensors SPIP

- **High reliability**
- **Up to 15 mm sense**
- **Programmable output type**

The **SPIP** inductive sensors distributed by COMECO are manufactured by INFRA. The SPIP series include inductive sensors from M12 to M30 with programmable output type. Using different wiring schemes the operator can simulate NPN, PNP, NO or NC output logic. There are two groups of SPIP sensors, depending on the number of output leads:
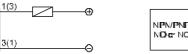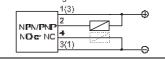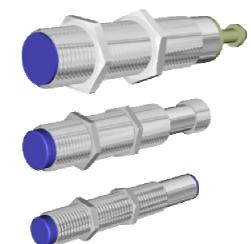
**2-wire output**
The load can be indifferently connected to the one of the output leads for simulating NPN or PNP functional logic.

**4-wire output**
The load can be connected between four different couples of output leads for simulating NPN-NO, NPN-NC, PNP-NO or PNP-NC functional logic.



## Technical specifications

**SP**

| Power supply | 2 - wire | 4 - wire |
|---|---|---|
| *Supply voltage* | 10...30 VDC | 12…30 VDC |
| *Residual/Absorption current* | < 1.6 mA | < 1.2 mA @ 24V |

| Output | | |
|---|---|---|
| *Output type (selectable)* | NO or NC | NPN,PNP,NO,NC |
| *Max. output current* | 100mA | 200mA |
| *Max. voltage drop at 100mA* | 6.5V | 1.8V |
| *Hysteresis* | < 50 ms | |
| *Residual ripple* | maximum 10% | |
| *Start-up delay* | maximum 10% | |
| *Short circuit protection* | Yes (self-reset) | |
| *Electric protection* | Against polarity reverse | |

| Indication and adjusting | |
|---|---|
| *Indication* | Yellow LED |
| *Pre-set* | factory set |

| Operating conditions | |
|---|---|
| *Operating temperature* | -25 to 70 °C |
| *Voltage deviation* | +10% -15% |

| Design and materials | |
|---|---|
| *Casing material* | Nickel plated brass |
| *Wiring* | 2m cable 2x0.25 mm$^2$ |
| *Output connector (option)* | 4-pin connector M12 |
| *Protection class* | IP-67 |

| Diameter | Æ12 | | Æ18 | | Æ30 | |
|---|---|---|---|---|---|---|
| *Parameter* | | | | | | |
| *Shield* | Yes | No | Yes | No | Yes | No |
| *Switching distance* | 2 mm | 4 mm | 5 mm | 8 mm | 10 mm | 15 mm |
| *- increased range* | 4 mm | - | 8 mm | - | 15 mm | - |
| *Switching frequency* | 1 kHz | 1 kHz | 1 kHz | 1 kHz | 0.3 kHz | 0.3 kHz |
| *- increased range* | 0.5 kHz | - | 0.5 kHz | - | 0.2 kHz | - |
| *Repeatability* | ≤1% | ≤ 1% | ≤ 1% | ≤ 2% | ≤ 1% | ≤ 2% |
| *- increased range* | | - | ≤ 2% | - | ≤ 2% | - |
| *Weight with cable* | 110 g | | 145 g | | 210 g | |
| *Weight with connector M12* | 60 g | | 95 g | | 170 g | |

## Ordering code

➜ **SPIP✶ - G1.G2 - #1**

| Code | Feature or option | Code values |
|---|---|---|
| ✶ | Variant | **2** - two wire output, **4** - four wire output |
| G1 | Mounting thread | **12** - M12x1, **18** - M18x1, **30** - M30x1.5 |
| G2 | Input sensing range | **N** - normal, **I** - increased |
| #1 | Output connector | **X** - none (cable output), **C1** - output connector M12 mounted |

COMECO reserves the right of changing specifications without prior notice!