

OsiSense® XS Inductive sensors

General purpose
with increased range





Helping you to find the most efficient solution

The inductive detection function that performs and lasts

A new offer to meet the demands of machine manufacturers for increased range in inductive sensing.

> Easy to install

Contributes to machine compactness
Wider adjustment range

> Robust

Solutions that last

> Readily available

Contributes to machine performance

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Cylindrical inductive proximity sensors

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Make the most of your energySM

NOTE: Sensors described in this catalog are designed to be used for standard industrial presence sensing applications. These sensors do not include the self-checking redundant circuitry necessary to allow for their use in safety applications.

> Contributes to machine compactness

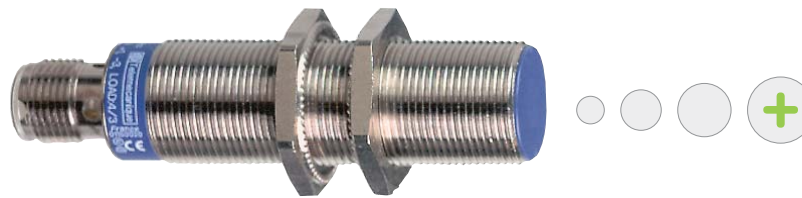
Easy to install:

Compact product (short), easier integration in the machine

- Increased range (x2), sensing distance easier to adjust
- All standard diameters (complete range, from Ø 6.5 to Ø 30 mm)
- Long and short product lengths to meet the most demanding dimension standards on the market
- DC and AC/DC versions available for maximum flexibility

+100%

of the sensing distance for flush mountable models



> Increase the reliability of your solution

Quality by design:

- Subjected to climatic cycle tests: -25 to +70 °C (-13 to 158 °F) cycle, 95% RH for 3,000 hours under power to verify their ability to maintain specifications over time.
- Resistance to electromagnetic interference—immune to high levels of EMC
- Resistance to environment—IP 65, IP 67 and IP 68 for pre-cabled versions, IP 69K for 12 and 30 mm diameter sensors



> Contributes to machine performance

Readily available:

- Robust products to meet your needs
- Particularly well-suited for your machines used in sectors such as machine tooling, assembly, packaging, conveying and the automotive industry.



Packaging



Automotive



Materials handling



Machine Tooling

- Proven tried-and-tested performance with worldwide product availability
- You export your machines throughout the world. Schneider Electric has locations in 190 countries.



availability
throughout
the world

General purpose flush or non-flush mountable, standard or increased range:

A global offer of high-performance inductive sensors to meet your individual needs



XS6..B range

Metal AC or DC
Increased range
2.5 to 22 mm
(0.10 to 0.87 in.)

**Flush or non-flush
mountable**



XS5..BL range

3-wire DC
Metal
Standard range
1.5 to 10 mm
(0.06 to 0.39 in.)

Flush mountable



XS5..B1M range

2-wire AC or DC
Metal
Standard range
2.0 to 10 mm
(0.04 to 0.39 in.)

Flush mountable



XS1... range

3-wire DC
Metal
Increased range
2.5 to 15 mm
(0.10 to 0.59 in.)

Flush mountable

> Selection guide—General purpose inductive sensors

Flush mountable, standard range
1.5 to 10 mm (0.06 to 0.39 in.)

Metal

3-wire DC



| | | | | | |
|-------------------------|---------------------------|--|----------------------------|----------------------------|----------------------------|
| Format | Ø 6.5 mm plain | Ø 8 mm | Ø 12 mm | Ø 18 mm | Ø 30 mm |
| Sensing dist., mm (in.) | 1.5 (0.06) | 1.5 (0.06) | 2 (0.08) | 5 (0.20) | 10 (0.39) |
| Length Short case | 33 (1.30) | 33 (1.30) | 35 (1.38) | 39 (1.54) | 43 (1.69) |
| mm (in.) Long Case | 51 (2.01) | 51 (2.01) | 53 (2.09) | 62 (2.44) | 62 (2.44) |
| Connection | 2 m cable M8 connector | 2 m cable M8 connector M12 connector | 2 m cable M12 connector | 2 m cable M12 connector | 2 m cable M12 connector |
| Supply, DC | 12–24 V, 12–48 V | 12–24 V, 12–48 V | 12–24 V, 12–48 V | 12–24 V, 12–48 V | 12–24 V, 12–48 V |
| Output | PNP or NPN | PNP or NPN | PNP or NPN | PNP or NPN | PNP or NPN |
| Function | NO or NC | NO or NC | NO or NC | NO or NC | NO or NC |
| Short case model | XS506B1*** | XS508B1*** | XS512B1*** | XS518B1*** | XS530B1*** |
| Long case model | XS506BL*** | XS508BL*** | XS512BL*** | XS518BL*** | XS530BL*** |

Flush mountable, standard range
1.5 to 10 mm (0.06 to 0.39 in.)

Metal

2-wire DC



| | | | | | |
|-------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| Format | Ø 6.5 mm | Ø 8 mm | Ø 12 mm | Ø 18 mm | Ø 30 mm |
| Sensing dist., mm (in.) | 1.5 (0.06) | 1.5 (0.06) | 2 (0.08) | 5 (0.20) | 10 (0.39) |
| Length Short Case | 33 (1.30) | 33 (1.30) | 35 (1.38) | 39 (1.54) | 43 (1.69) |
| mm (in.) Long Case | – | 51 (2.01) | 53 (2.09) | 62 (2.44) | 62 (2.44) |
| Connection | 2 m cable M12 connector | 2 m cable M12 connector | 2 m cable M12 connector | 2 m cable M12 connector | 2 m cable M12 connector |
| Supply, DC | 12–24 V, 12–48 V | 12–24 V, 12–48 V | 12–24 V, 12–48 V | 12–24 V, 12–48 V | 12–24 V, 12–48 V |
| Function | NO or NC | NO or NC | NO or NC | NO or NC | NO or NC |
| Short case model | XS506BS*** | XS508BS*** | XS512BS*** | XS518BS*** | XS530BS*** |
| Long case model | – | XS508B1*** | XS512B1*** | XS518B1*** | XS530B1*** |

Flush mountable, increased range
2.5 to 15 mm (0.10 to 0.59 in.)

Metal

3-wire DC



| | | | | | |
|-------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| Format | Ø 6.5 mm | Ø 8 mm | Ø 12 mm | Ø 18 mm | Ø 30 mm |
| Sensing dist., mm (in.) | 2.5 (0.10) | 2.5 (0.10) | 4 (0.16) | 8 (0.31) | 15 (0.59) |
| Length Short Case | 33 (1.30) | 33 (1.30) | 35 (1.38) | 39 (1.54) | 43 (1.69) |
| mm (in.) Long Case | – | 51 (2.01) | 53 (2.09) | 62 (2.44) | 62 (2.44) |
| Connection | 2 m cable M12 connector | 2 m cable M12 connector | 2 m cable M12 connector | 2 m cable M12 connector | 2 m cable M12 connector |
| Supply, DC | 12–24 V, 12–48 V | 12–24 V, 12–48 V | 12–24 V, 12–48 V | 12–24 V, 12–48 V | 12–24 V, 12–48 V |
| Output | PNP or NPN | PNP or NPN | PNP or NPN | PNP or NPN | PNP or NPN |
| Function | NO or NC | NO or NC | NO or NC | NO or NC | NO or NC |
| Short case model | XS106B3••• | XS108B3••• | XS112B3••• | XS118B3••• | XS130B3••• |
| Long case model | – | XS608B1••• | XS612B1••• | XS618B1••• | XS630B1••• |

Flush mountable, increased range
2 to 15 mm (0.08 to 0.59 in.)

Metal

2-wire DC



| | | | | | |
|-------------------------|----------------------------|--|----------------------------|----------------------------|----------------------------|
| Format | Ø 6.5 mm plain | Ø 8 mm | Ø 12 mm | Ø 18 mm | Ø 30 mm |
| Sensing dist., mm (in.) | 2.5 (0.10) | 2.5 (0.10) | 4 (0.16) | 8 (0.31) | 15 (0.59) |
| Length Short case | 33 (1.30) | 33 (1.30) | 35 (1.38) | 39 (1.54) | 43 (1.69) |
| mm (in.) Long Case | 51 (2.01) | 51 (2.01) | 53 (2.09) | 62 (2.44) | 62 (2.44) |
| Connection | 2 m cable M12 connector | 2 m cable M8 connector M12 connector | 2 m cable M12 connector | 2 m cable M12 connector | 2 m cable M12 connector |
| Supply, DC | 12–24 V, 12–48 V | 12–24 V, 12–48 V | 12–24 V, 12–48 V | 12–24 V, 12–48 V | 12–24 V, 12–48 V |
| Function | NO or NC | NO or NC | NO or NC | NO or NC | NO or NC |
| Short case model | XS606B3••• | XS608B3••• | XS612B3••• | XS618B3••• | XS630B3••• |
| Long case model | XS606B1••• | XS608B1••• | XS612B1••• | XS618B1••• | XS630B1••• |

> Selection guide—continued

Flush mountable, standard range
2 to 10 mm (0.08 to 0.39 in.)

Metal

2-wire AC or DC



| | | | |
|---------------------------|--|--|--|
| Format | Ø 12 mm plain | Ø 18 mm | Ø 30 mm |
| Sensing dist., mm (in.) | 2 (0.08) | 5 (0.20) | 10 (0.39) |
| Length Long Case mm (in.) | 53 (2.09) | 62 (2.44) | 62 (2.44) |
| Connection | 2 m cable 1/2" -20 UNF connector | 2 m cable 1/2" -20 UNF connector | 2 m cable 1/2" -20 UNF connector |
| Supply, AC or DC | 24–240 | 24–240 | 24–240 |
| Function | NO or NC | NO or NC | NO or NC |
| Long case model | XS512B1M••• | XS518B1M••• | XS530B1M••• |

Non-flush mountable, increased range
7 to 22 mm (0.28 to 0.87 in.)

Metal

3-wire DC



| | | | |
|---------------------------|----------------------------|----------------------------|----------------------------|
| Format | Ø 12 mm plain | Ø 18 mm | Ø 30 mm |
| Sensing dist., mm (in.) | 7 (0.28) | 12 (0.47) | 22 (0.87) |
| Length Long Case mm (in.) | 55 (2.17) | 60 (2.36) | 63 (2.48) |
| Connection | 2 m cable M12 connector | 2 m cable M12 connector | 2 m cable M12 connector |
| Output | PNP or NPN | PNP or NPN | PNP or NPN |
| Function | NO or NC | NO or NC | NO or NC |
| Long case model | XS612B4••• | XS618B4••• | XS630B4••• |

Flush mountable, increased range
4 to 15 mm (0.16 to 0.59 in.)

Metal

2-wire AC or DC



| | | | |
|---------------------------|--|--|--|
| Format | Ø 12 mm plain | Ø 18 mm | Ø 30 mm |
| Sensing dist., mm (in.) | 4 (0.16) | 8 (0.31) | 15 (0.59) |
| Length Long Case mm (in.) | 53 (2.09) | 62 (2.44) | 62 (2.44) |
| Connection | 2 m cable 1/2" -20 UNF connector | 2 m cable 1/2" -20 UNF connector | 2 m cable 1/2" -20 UNF connector |
| Supply, AC or DC | 24-240 | 24-240 | 24-240 |
| Function | NO or NC | NO or NC | NO or NC |
| Long case model | XS612B1M*** | XS618B1M*** | XS630B1M*** |

Non-flush mountable, increased range
12 to 22 mm (0.47 to 0.87 in.)

Metal

2-wire AC or DC



| | | |
|----------------------------|--|----------------------------|
| Format | Ø 18 mm | Ø 30 mm |
| Sensing dist., mm (in.) | 12 (0.47) | 22 (0.87) |
| Length Long case, mm (in.) | 60 (2.36) | 63 (2.48) |
| Connection | 2 m cable M8 connector M12 connector | 2 m cable M12 connector |
| Supply | 3-wire 12-24 V | 3-wire 12-24 V |
| Output | PNP or NPN | PNP or NPN |
| Function | NO or NC | NO or NC |
| Long case model | XS618B4M*** | XS630B4M*** |

OsiSense® Inductive proximity sensors

General purpose

Cylindrical, standard range, flush mountable

Three-wire DC, solid-state output



XS506B1●●L2



XS508B1●●L2



XS512B1●●M12



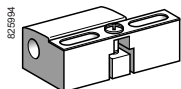
XS518B1●●M12



XS518B1●●L2



XS530B1●●L2



XSZB1●●

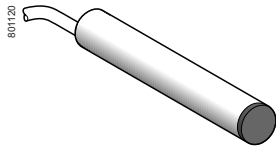
Sensors, 3-wire 12–24 V $\bar{\text{DC}}$, short case model

| Sensing dist. Sn, mm (in.) | Function | Output | Connection | Catalog Number | Weight kg (lb) |
|---------------------------------|-------------------------|-------------------|-------------------|-------------------|-------------------|
| Ø 6.5, plain | | | | | |
| 1.5 (0.06) | NO | PNP | Pre-cabled (1) | XS506B1PAL2 | 0.035 (0.08) |
| | | | M8 connector | XS506B1PAM8 | 0.025 (0.06) |
| | | | M12 connector | XS506B1PAM12 | 0.025 (0.06) |
| | NPN | PNP | Pre-cabled (1) | XS506B1NAL2 | 0.035 (0.08) |
| | | | M8 connector | XS506B1NAM8 | 0.025 (0.06) |
| | | | M12 connector | XS506B1NAM12 | 0.025 (0.06) |
| | NC | PNP | Pre-cabled (1) | XS506B1PBL2 | 0.035 (0.08) |
| | | | M8 connector | XS506B1PBM8 | 0.025 (0.06) |
| | | | M12 connector | XS506B1PBM12 | 0.025 (0.06) |
| | NPN | PNP | Pre-cabled (1) | XS506B1NBL2 | 0.035 (0.08) |
| | | | M8 connector | XS506B1NBM8 | 0.025 (0.06) |
| | | | M12 connector | XS506B1NBM12 | 0.025 (0.06) |
| Ø 8, threaded M8 x 1 | | | | | |
| 1.5 (0.06) | NO | PNP | Pre-cabled (1) | XS508B1PAL2 | 0.035 (0.08) |
| | | | M8 connector | XS508B1PAM8 | 0.025 (0.06) |
| | | | M12 connector | XS508B1PAM12 | 0.025 (0.06) |
| | NPN | PNP | Pre-cabled (1) | XS508B1NAL2 | 0.035 (0.08) |
| | | | M8 connector | XS508B1NAM8 | 0.025 (0.06) |
| | | | M12 connector | XS508B1NAM12 | 0.025 (0.06) |
| | NC | PNP | Pre-cabled (1) | XS508B1PBL2 | 0.035 (0.08) |
| | | | M8 connector | XS508B1PBM8 | 0.025 (0.06) |
| | | | M12 connector | XS508B1PBM12 | 0.025 (0.06) |
| | NPN | PNP | Pre-cabled (1) | XS508B1NBL2 | 0.035 (0.08) |
| | | | M8 connector | XS508B1NBM8 | 0.025 (0.06) |
| | | | M12 connector | XS508B1NBM12 | 0.025 (0.06) |
| Ø 12, threaded M12 x 1 | | | | | |
| 2 (0.08) | NO | PNP | Pre-cabled (1) | XS512B1PAL2 | 0.075 (0.17) |
| | | | M12 connector | XS512B1PAM12 | 0.035 (0.08) |
| | | | M12 connector | XS512B1NAM12 | 0.035 (0.08) |
| | NPN | PNP | Pre-cabled (1) | XS512B1NAL2 | 0.075 (0.17) |
| | | | M12 connector | XS512B1NAM12 | 0.035 (0.08) |
| | | | M12 connector | XS512B1NAM12 | 0.035 (0.08) |
| | NC | PNP | Pre-cabled (1) | XS512B1PBL2 | 0.075 (0.17) |
| | | | M12 connector | XS512B1PBM12 | 0.035 (0.08) |
| | | | M12 connector | XS512B1PBM12 | 0.035 (0.08) |
| | NPN | PNP | Pre-cabled (1) | XS512B1NBL2 | 0.075 (0.17) |
| | | | M12 connector | XS512B1NBM12 | 0.035 (0.08) |
| | | | M12 connector | XS512B1NBM12 | 0.035 (0.08) |
| Ø 18, threaded M18 x 1 | | | | | |
| 5 (0.20) | NO | PNP | Pre-cabled (1) | XS518B1PAL2 | 0.120 (0.26) |
| | | | M12 connector | XS518B1PAM12 | 0.060 (0.13) |
| | | | M12 connector | XS518B1NAM12 | 0.060 (0.13) |
| | NPN | PNP | Pre-cabled (1) | XS518B1NAL2 | 0.120 (0.26) |
| | | | M12 connector | XS518B1NAM12 | 0.060 (0.13) |
| | | | M12 connector | XS518B1NAM12 | 0.060 (0.13) |
| | NC | PNP | Pre-cabled (1) | XS518B1PBL2 | 0.120 (0.26) |
| | | | M12 connector | XS518B1PBM12 | 0.060 (0.13) |
| | | | M12 connector | XS518B1PBM12 | 0.060 (0.13) |
| | NPN | PNP | Pre-cabled (1) | XS518B1NBL2 | 0.120 (0.26) |
| | | | M12 connector | XS518B1NBM12 | 0.060 (0.13) |
| | | | M12 connector | XS518B1NBM12 | 0.060 (0.13) |
| Ø 30, threaded M30 x 1.5 | | | | | |
| 10 (0.39) | NO | PNP | Pre-cabled (1) | XS530B1PAL2 | 0.205 (0.45) |
| | | | M12 connector | XS530B1PAM12 | 0.145 (0.32) |
| | | | M12 connector | XS530B1NAM12 | 0.145 (0.32) |
| | NPN | PNP | Pre-cabled (1) | XS530B1NAL2 | 0.205 (0.45) |
| | | | M12 connector | XS530B1NAM12 | 0.145 (0.32) |
| | | | M12 connector | XS530B1NAM12 | 0.145 (0.32) |
| | NC | PNP | Pre-cabled (1) | XS530B1PBL2 | 0.205 (0.45) |
| | | | M12 connector | XS530B1PBM12 | 0.145 (0.32) |
| | | | M12 connector | XS530B1PBM12 | 0.145 (0.32) |
| | NPN | PNP | Pre-cabled (1) | XS530B1NBL2 | 0.205 (0.45) |
| | | | M12 connector | XS530B1NBM12 | 0.145 (0.32) |
| | | | M12 connector | XS530B1NBM12 | 0.145 (0.32) |
| Accessories | | | | | |
| Description | For use with sensors | Catalog Number | Weight kg (lb) | | |
| Mounting clamps | Ø 6.5 (plain) | XSZB165 | 0.005 (0.01) | | |
| | Ø 8 | XSZB108 | 0.006 (0.01) | | |
| | Ø 12 | XSZB112 | 0.006 (0.01) | | |
| | Ø 18 | XSZB118 | 0.010 (0.02) | | |
| | Ø 30 | XSZB130 | 0.020 (0.02) | | |

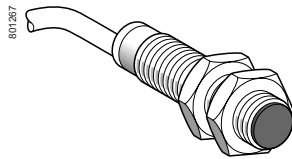
(1) For a 5 m long cable replace L2 with L5; for a 10 m cable replace L2 with L10.
Example: XS508B1PAL2 becomes XS508B1PAL5 with a 5 m cable.

OsiSense® Inductive proximity sensors

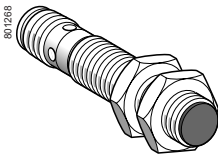
General purpose
Cylindrical, standard range, flush mountable
Three-wire DC, solid-state output



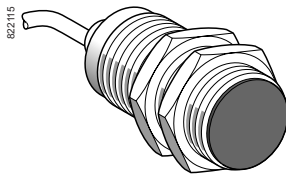
XS506BL●●L2



XS5●●BL●●L2



XS5●●BL●●M12



XS5 30BL●●L2

Sensors, 3-wire 12–48 V $\overline{\text{DC}}$, long case model

| Sensing dist. Sn, mm (in.) | Function | Output | Connection | Catalog Number | Weight kg | Weight (lb) |
|----------------------------|----------|--------|----------------|----------------|-----------|-------------|
| Ø 6.5, plain | | | | | | |
| 1.5 (0.06) | NO | PNP | Pre-cabled (1) | XS506BLPAL2 | 0.035 | (0.08) |
| | | NPN | Pre-cabled (1) | XS506BLNAL2 | 0.035 | (0.08) |

Ø 8, threaded M8 x 1

| | | | | | | |
|------------|----------------|----------------|----------------|--------------|--------|--------|
| 1.5 (0.06) | NO | PNP | Pre-cabled (1) | XS508BLPAL2 | 0.035 | (0.08) |
| | | | M12 connector | XS508BLPAM12 | 0.025 | (0.06) |
| | NPN | Pre-cabled (1) | XS508BLNAL2 | 0.035 | (0.08) | |
| | | M12 connector | XS508BLNAM12 | 0.025 | (0.06) | |
| | NC | PNP | Pre-cabled (1) | XS508BLPBL2 | 0.035 | (0.08) |
| | | | M12 connector | XS508BLPBM12 | 0.025 | (0.06) |
| NPN | Pre-cabled (1) | XS508BLNBL2 | 0.035 | (0.08) | | |
| | M12 connector | XS508BLNBM12 | 0.025 | (0.06) | | |

Ø 12, threaded M12 x 1

| | | | | | | |
|----------|----------------|----------------|----------------|--------------|--------|--------|
| 2 (0.08) | NO | PNP | Pre-cabled (1) | XS512BLPAL2 | 0.075 | (0.17) |
| | | | M12 connector | XS512BLPAM12 | 0.035 | (0.08) |
| | NPN | Pre-cabled (1) | XS512BLNAL2 | 0.075 | (0.17) | |
| | | M12 connector | XS512BLNAM12 | 0.035 | (0.08) | |
| | NC | PNP | Pre-cabled (1) | XS512BLPBL2 | 0.075 | (0.17) |
| | | | M12 connector | XS512BLPBM12 | 0.035 | (0.08) |
| NPN | Pre-cabled (1) | XS512BLNBL2 | 0.075 | (0.17) | | |
| | M12 connector | XS512BLNBM12 | 0.035 | (0.08) | | |

Ø 18, threaded M18 x 1

| | | | | | | |
|----------|----------------|----------------|----------------|--------------|--------|--------|
| 5 (0.20) | NO | PNP | Pre-cabled (1) | XS518BLPAL2 | 0.120 | (0.26) |
| | | | M12 connector | XS518BLPAM12 | 0.060 | (0.13) |
| | NPN | Pre-cabled (1) | XS518BLNAL2 | 0.120 | (0.26) | |
| | | M12 connector | XS518BLNAM12 | 0.060 | (0.13) | |
| | NC | PNP | Pre-cabled (1) | XS518BLPBL2 | 0.120 | (0.26) |
| | | | M12 connector | XS518BLPBM12 | 0.060 | (0.13) |
| NPN | Pre-cabled (1) | XS518BLNBL2 | 0.120 | (0.26) | | |
| | M12 connector | XS518BLNBM12 | 0.060 | (0.13) | | |

Ø 30, threaded M30 x 1.5

| | | | | | | |
|-----------|----------------|----------------|----------------|--------------|--------|--------|
| 10 (0.39) | NO | PNP | Pre-cabled (1) | XS530BLPAL2 | 0.205 | (0.45) |
| | | | M12 connector | XS530BLPAM12 | 0.145 | (0.32) |
| | NPN | Pre-cabled (1) | XS530BLNAL2 | 0.205 | (0.45) | |
| | | M12 connector | XS530BLNAM12 | 0.145 | (0.32) | |
| | NC | PNP | Pre-cabled (1) | XS530BLPBL2 | 0.205 | (0.45) |
| | | | M12 connector | XS530BLPBM12 | 0.145 | (0.32) |
| NPN | Pre-cabled (1) | XS530BLNBL2 | 0.205 | (0.45) | | |
| | M12 connector | XS530BLNBM12 | 0.145 | (0.32) | | |

Accessories

| Description | For use with sensors | Catalog Number | Weight kg | Weight (lb) |
|-----------------|----------------------|----------------|-----------|-------------|
| Mounting clamps | Ø 6.5 (plain) | XSZ B165 | 0.005 | (0.01) |
| | Ø 8 | XSZB108 | 0.006 | (0.01) |
| | Ø 12 | XSZB112 | 0.006 | (0.01) |
| | Ø 18 | XSZB118 | 0.010 | (0.02) |
| | Ø 30 | XSZB130 | 0.020 | (0.04) |

(1) For a 5 m cable replace L2 with L5; for a 10 m cable replace L2 with L10.
Example: XS508BLPAL2 becomes XS508BLPAL5 with a 5 m cable.

OsiSense® Inductive proximity sensors

General purpose

Cylindrical, standard range, flush mountable

Three-wire DC, solid-state output

| Specifications | | | | |
|-----------------------------------|------------------------------|---|---|--|
| Sensor type | | | XS5●●B1●●M8, XS5●●B1●●M12 XS5●●BL●●M8, XS5●●BL●●M12 | XS5●●B1●●L2 XS5●●BL●●L2 |
| Product certifications | | | | UL, CSA, CE |
| Connection | Connector | | M8 on Ø 6.5 and Ø 8, M12 on Ø 8, Ø 12, Ø 18 and Ø 30 | – |
| | Pre-cabled | | – | Length 2 m |
| Operating zone | Ø 6.5 and Ø 8 | mm | 0–1.2 (0–0.05 in.) | |
| | Ø 12 | mm | 0–1.6 (0–0.06 in.) | |
| | Ø 18 | mm | 0–4 (0–0.28 in.) | |
| | Ø 30 | mm | 0–8 (0–0.31 in.) | |
| Differential travel | | % | 1–15 of effective sensing distance (Sr) | |
| Degree of protection | Conforming to IEC 60529 | | IP 65 and IP 67 | IP 65 and IP 68, double insulation ☐ (except Ø 6.5 and Ø 8: IP 67) |
| | Conforming to DIN 40050 | | IP 69K for Ø 12 to Ø 30 | |
| Storage temperature | | °C | -40 to +85 (-40 to +185 °F) | |
| Operating temperature | | °C | -25 to +70 (-13 to +158 °F) | |
| Materials | Case | | Nickel plated brass (except XS5 06 and XS5 08BL: stainless steel, grade 303) | |
| | Sensing face | | PPS | |
| | Cable | | – | PvR 3 x 0.34 mm ² (22 AWG) except XS506 and XS508 : 3 x 0.11 mm ² (27 AWG) |
| Vibration resistance | Conforming to IEC 60068-2-6 | | 25 gn, amplitude ± 2 mm (f = 10 to 50 Hz) | |
| Shock resistance | Conforming to IEC 60068-2-27 | | 50 gn, duration 11 ms | |
| Output state indication | | | Yellow LED: 4 viewing ports at 90° | Yellow LED: circular |
| Rated supply voltage | | V | --- 12–48 for XS5●●BL, --- 12–24 for XS5●●B1 with protection against reverse polarity | |
| Voltage limits (including ripple) | | V | --- 10–58 for XS5●●BL, --- 10–36 for XS5●●B1 | |
| Switching capacity | | mA | ≤ 200 with overload and short-circuit protection | |
| Voltage drop, closed state | | V | ≤ 2 | |
| Current consumption, no-load | | mA | ≤ 10 | |
| Maximum switching frequency | XS506, XS508, XS512 | Hz | 5000 | |
| | XS518 | Hz | 2000 | |
| | XS530 | Hz | 1000 | |
| Delays | First-up | ms | ≤ 10 | |
| | Response | ms | ≤ 0.1 : XS506 , XS508 and XS512 | |
| | | | ≤ 0.15 : XS518 | |
| ≤ 0.3 : XS530 | | | | |
| Recovery | ms | ≤ 0.1 : XS506 , XS508 and XS512 ≤ 0.35 : XS518 ≤ 0.7 : XS530 | | |

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Three-wire DC, solid-state output

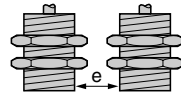
Wiring diagrams



For M8 connector, NO and NC outputs on terminal 4

Setup

Minimum mounting distances (mm)



| Sensors | Side by side | Face to face | Facing a metal object |
|---------|--------------|--------------|-----------------------|
| Ø 6.5 | e ≥ 3 | e ≥ 18 | e ≥ 4.5 |
| Ø 8 | e ≥ 3 | e ≥ 18 | e ≥ 4.5 |
| Ø 12 | e ≥ 4 | e ≥ 24 | e ≥ 6 |
| Ø 18 | e ≥ 10 | e ≥ 60 | e ≥ 15 |
| Ø 30 | e ≥ 20 | e ≥ 120 | e ≥ 30 |

Dimensions (mm)



(1) LED

| Sensors | | Pre-cabled (mm) | | M8 connector (mm) | | M12 connector (mm) | |
|-------------------------|---------|-----------------|----|-------------------|----|--------------------|----|
| | | a | b | a | b | a | b |
| Short case model | | | | | | | |
| Ø 6.5 | XS506B1 | 33 | – | 42 | – | 45 | – |
| Ø 8 | XS508B1 | 33 | 25 | 42 | 26 | 45 | 24 |
| Ø 12 | XS512B1 | 35 | 25 | – | – | 50 | 30 |
| Ø 18 | XS518B1 | 39 | 28 | – | – | 50 | 28 |
| Ø 30 | XS530B1 | 43 | 32 | – | – | 55 | 32 |
| Long case model | | | | | | | |
| Ø 6.5 | XS506BL | 51 | – | – | – | – | – |
| Ø 8 | XS508BL | 51 | 42 | 62 | 40 | – | – |
| Ø 12 | XS512BL | 53 | 42 | 62 | 42 | – | – |
| Ø 18 | XS518BL | 62 | 52 | 74 | 52 | – | – |
| Ø 30 | XS530BL | 62 | 52 | 74 | 52 | – | – |

OsiSense® Inductive proximity sensors

General purpose

Cylindrical, standard range, flush mountable

Two-wire DC



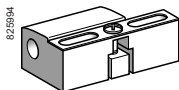
XS506BS●●L2



XS512BS●●L2



XS5●●BS●●M12



XSZB1●●

Sensors, 2-wire 12–24 V $\bar{\text{DC}}$, short case model

| Sensing dist. Sn, mm (in.) | Function | Connection | Catalog Number | Weight kg (lb) |
|---------------------------------|---------------------------|----------------------|------------------------|-------------------|
| Ø 6.5, plain | | | | |
| 1.5 (0.06) | NO terminals 1 & 4 (2) | Pre-cabled (1) | XS506BSCAL2 | 0.035 (0.08) |
| | | Remote M12 connector | XS506BSCAL01M12 | 0.050 (0.11) |
| | NC | Pre-cabled (1) | XS506BSCBL2 | 0.035 (0.08) |
| Ø 8, threaded M8 x 1 | | | | |
| 1.5 (0.06) | NO terminals 1 & 4 (2) | Pre-cabled (1) | XS508BSCAL2 | 0.035 (0.08) |
| | | Remote M12 connector | XS508BSCAL01M12 | 0.050 (0.11) |
| | | Remote M12 connector | XS508BSCAL08M12 | 0.050 (0.11) |
| | NC | Pre-cabled (1) | XS508BSCBL2 | 0.035 (0.08) |
| | | Remote M12 connector | XS508BSCBL01M12 | 0.050 (0.11) |
| Ø 12, threaded M12 x 1 | | | | |
| 2 (0.08) | NO | Pre-cabled (1) | XS512BSDAL2 | 0.075 (0.17) |
| | | M12 connector | XS512BSDAM12 | 0.035 (0.08) |
| | NO terminals 1 & 4 (2) | M12 connector | XS512BSCAM12 | 0.035 (0.08) |
| | | Remote M12 connector | XS512BSCAL08M12 | 0.060 (0.13) |
| | NC | Pre-cabled (1) | XS512BSDBL2 | 0.075 (0.17) |
| | M12 connector | XS512BSDBM12 | 0.035 (0.08) | |
| Ø 18, threaded M18 x 1 | | | | |
| 5 (0.20) | NO | Pre-cabled (1) | XS518BSDAL2 | 0.120 (0.26) |
| | | M12 connector | XS518BSDAM12 | 0.060 (0.13) |
| | NO terminals 1 & 4 (2) | M12 connector | XS518BSCAM12 | 0.060 (0.13) |
| | | Remote M12 connector | XS518BSCAL08M12 | 0.085 (0.19) |
| | NC | Pre-cabled (1) | XS518BSDBL2 | 0.120 (0.26) |
| | M12 connector | XS518BSDBM12 | 0.060 (0.13) | |
| Ø 30, threaded M30 x 1.5 | | | | |
| 10 (0.39) | NO | Pre-cabled (1) | XS530BSDAL2 | 0.205 (0.45) |
| | | M12 connector | XS530BSDAM12 | 0.145 (0.32) |
| | NO terminals 1 & 4 (2) | M12 connector | XS530BSCAM12 | 0.145 (0.32) |
| | | Remote M12 connector | XS530BSCAL08M12 | 0.170 (0.37) |
| | NC | Pre-cabled (1) | XS530BSDBL2 | 0.205 (0.45) |
| | M12 connector | XS530BSDBM12 | 0.145 (0.32) | |

Accessories

| Description | For use with sensors | Catalog Number | Weight kg (lb) |
|--------------------|-------------------------|-------------------|-------------------|
| Mounting clamps | Ø 6.5 (plain) | XSZ B165 | 0.005 (0.01) |
| | Ø 8 | XSZB108 | 0.006 (0.01) |
| | Ø 12 | XSZB112 | 0.006 (0.01) |
| | Ø 18 | XSZB118 | 0.010 (0.02) |
| | Ø 30 | XSZB130 | 0.020 (0.04) |

(1) For a 5 m long cable replace L2 with L5; for a 10 m cable replace L2 with L10.

Example: XS508BSCAL2 becomes **XS508BSCAL5** with a 5 m cable.

(2) The NO output is connected to terminals 1 and 4 of the M12 connector.

OsiSense® Inductive proximity sensors

General purpose
Cylindrical, standard range, flush mountable
Two-wire DC



XS5●●B1●●L2



XS5●●B1●●M12



XS5●●B1●●L01B (2)



XS5●●B1●●L01C



XS5●●B1●●L01G



XSZB1●●

Sensors, 2-wire 12–48 V $\overline{\text{DC}}$, long case model

| Sensing distance Sn, mm (in.) | Function | Connection | Catalog Number | Weight kg | Weight (lb) |
|-------------------------------------|-------------------------------|-------------------------------------|-------------------|----------------|----------------|
| Ø 8, threaded M8 x 1 | | | | | |
| 1.5 (0.06) | NO | Pre-cabled (1) | XS508B1DAL2 | 0.035 | (0.08) |
| | | Remote M12 connector | XS508B1DAL08M12 | 0.050 | (0.11) |
| | NO terminals 1 & 4 (3) | M12 connector | XS508B1DAM12 | 0.025 | (0.06) |
| | | Remote M12 connector | XS508B1CAL08M12 | 0.050 | (0.11) |
| NC | Pre-cabled (1) | XS508B1DBL2 | 0.035 | (0.08) | |
| | M12 connector | XS508B1DBM12 | 0.025 | (0.06) | |
| Ø 12, threaded M12 x 1 | | | | | |
| 2 (0.08) | NO | Pre-cabled (1) | XS512B1DAL2 | 0.075 | (0.17) |
| | | Remote 7/8" connector | XS512B1DAL08U78 | 0.050 | (0.11) |
| | NO terminals 1 & 4 (3) | M12 connector | XS512B1DAM12 | 0.035 | (0.08) |
| | | Remote M12 connector | XS512B1CAL08M12 | 0.060 | (0.13) |
| NC | Pre-cabled (1) | XS512B1DBL2 | 0.075 | (0.17) | |
| | M12 connector | XS512B1DBM12 | 0.035 | (0.08) | |
| Remote M12 connector | | XS512B1DBL08M12 | 0.060 | (0.13) | |
| | Ø 18, threaded M18 x 1 | | | | |
| 5 (0.20) | NO | Pre-cabled (1) | XS518B1DAL2 | 0.120 | (0.26) |
| | | Low temperature version (-40 °C) | XS518B1DAL2TF (4) | 0.120 | (0.26) |
| | | Remote screw terminal connector (2) | XS518B1DAL01B | 0.085 | (0.19) |
| | | Remote DIN 43650A connector | XS518B1DAL01C | 0.085 | (0.19) |
| | Remote M18 connector | | XS518B1DAL01G | 0.085 | (0.19) |
| | | M12 connector | XS518B1DAM12 | 0.060 | (0.13) |
| | NO terminals 1 & 4 (3) | M12 connector | XS518B1CAM12 | 0.060 | (0.13) |
| | | Remote M12 connector | XS518B1CAL08M12 | 0.085 | (0.19) |
| | NC | Pre-cabled (1) | XS518B1DBL2 | 0.120 | (0.26) |
| | | M12 connector | XS518B1DBM12 | 0.060 | (0.13) |
| Remote M12 connector | | XS518B1DBL08M12 | 0.085 | (0.19) | |
| Remote screw terminal connector (2) | | XS518B1DBL01B | 0.120 | (0.26) | |
| Ø 30, threaded M30 x 1.5 | | | | | |
| 10 (0.39) | NO | Pre-cabled (1) | XS530B1DAL2 | 0.205 | (0.45) |
| | | Low temperature version (-40 °C) | XS530B1DAL2TF (4) | 0.120 | (0.26) |
| | | M12 connector | XS530B1DAM12 | 0.145 | (0.32) |
| | | Remote screw terminal connector (2) | XS530B1DAL01B | 0.205 | (0.45) |
| | Remote DIN 43650A connector | | XS530B1DAL01C | 0.205 | (0.45) |
| | | Remote M18 connector | XS530B1DAL01G | 0.205 | (0.45) |
| | NO terminals 1 & 4 (3) | M12 connector | XS530B1CAM12 | 0.145 | (0.32) |
| | | Remote M12 connector | XS530B1CAL08M12 | 0.170 | (0.37) |
| | NC | Pre-cabled (1) | XS530B1DBL2 | 0.205 | (0.45) |
| | | M12 connector | XS530B1DBM12 | 0.145 | (0.32) |
| Remote M12 connector | | XS530B1DBL08M12 | 0.205 | (0.45) | |
| Remote screw terminal connector (2) | | XS530B1DBL01B | 0.205 | (0.37) | |
| Accessories | | | | | |
| Description | For use with sensors | Catalog Number | Weight kg | Weight (lb) | |
| Mounting clamps | Ø 8 | XSZB108 | 0.006 | (0.01) | |
| | Ø 12 | XSZB112 | 0.006 | (0.01) | |
| | Ø 18 | XSZB118 | 0.010 | (0.02) | |
| | Ø 30 | XSZB130 | 0.020 | (0.04) | |

(1) For a 5 m cable replace L2 with L5; for a 10 m long cable replace L2 with L10.
Example: XS508B1DAL2 becomes XS508B1DAL5 with a 5 m long cable.

(2) Protective cable gland included with remote screw terminal connector.

(3) The NO output is connected to terminals 1 and 4 of the M12 connector.

(4) For a 5 m long cable replace L2 with L5.
Example: XS518B1DAL2TF becomes XS518B1DAL5TF with a 5 m long cable.
For PUR cable, replace the letter L in the reference with P.

Example: XS518B1DAL2TF becomes XS518B1DAP2TF with PUR cable.

For a 5 m long PUR cable replace P2 with P5.

Example: XS518B1DAP2TF becomes XS518B1DAP5TF with a 5 m long PUR cable.

OsiSense® Inductive proximity sensors

General purpose


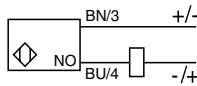
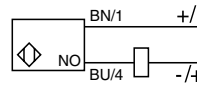
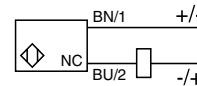
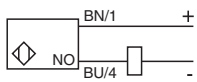
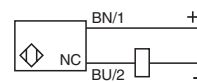
Cylindrical, standard range, flush mountable

Two-wire DC

| Specifications | | | |
|-----------------------------------|------------------------------|---|---|
| Sensor type | | XS5●●B1●●M12, XS5●●BS●●M12 | XS5●●B1D●L2, XS5●●BSD●L2 |
| Product certifications | | UL, CSA, CE | |
| Connection | Connector | M12 | – |
| | Pre-cabled | – | Length 2 m |
| | Remote connector | Remote M12 connector (L01M12), screw terminal (L01B), DIN 43650A (L01C) and remote M18 connector (L01G) on 0.15 m flying lead. Remote M12 (L08M12) or 7/8" (L08U78) connector on 0.80 m flying lead. | |
| Operating zone | Ø 6.5 | mm | 0–1.2 (0–0.05 in.) |
| | Ø 8 | mm | 0–1.2 (0–0.05 in.) |
| | Ø 12 | mm | 0–1.6 (0–0.06 in.) |
| | Ø 18 | mm | 0–4 (0–0.16 in.) |
| | Ø 30 | mm | 0–8 (0–0.31 in.) |
| Differential travel | | % | 1–15 of effective sensing distance (Sr) |
| Degree of protection | Conforming to IEC 60529 | IP 65 and IP 67 | IP 65 and ☐ IP 68, double insulation (except Ø 6.5 and Ø 8: IP 67) |
| Storage temperature | | °C | -40 to +85 (-40 to +185 °F) |
| Operating temperature | | °C | -25 to +70 (-13 to +158 °F) ; TF products: -40 to +70 (-40 to +158 °F) |
| Materials | Case | Nickel plated brass (except XS506 and XS508B1: stainless steel, grade 303) | |
| | Sensing face | PPS | |
| | Cable | – | PvR 2 x 0.34 mm ² (22 AWG) except XS506 and XS508: 2 x 0.11 mm ² (27 AWG) PUR available (1) |
| Vibration resistance | Conforming to IEC 60068-2-6 | 25 gn, amplitude ± 2 mm (f = 10 to 55 Hz) | |
| Shock resistance | Conforming to IEC 60068-2-27 | 50 gn, duration 11 ms | |
| Output state indication | | Yellow LED: 4 viewing ports at 90° | |
| Rated supply voltage | | V | --- 12–48 non-polarized for XS5●●B1D, --- 12–24 non-polarized for XS5●●BS (except Ø 6.5 and Ø 8 short case models, which are polarized) with protection against reverse polarity |
| Voltage limits (including ripple) | | V | --- 10–58 for XS5●●B1D, --- 10–36 for XS5●●BS |
| Switching capacity | | mA | 1.5–100 with overload and short-circuit protection |
| Voltage drop, closed state | | V | ≤ 4 |
| Residual current, open state | | mA | ≤ 0.5 |
| Maximum switching frequency | XS506, XS508, XS512 | Hz | 4000 |
| | XS518 | Hz | 3000 |
| | XS530 | Hz | 2000 |
| Delays | First-up | ms | ≤ 10 |
| | Response | ms | ≤ 0.2 : XS506, XS508 and XS512 ≤ 0.15 : XS518 ≤ 0.3 : XS530 |
| | Recovery | ms | ≤ 0.2 (except XS530B1: ≤ 0.3) |

(1) For PUR cable, replace the letter L in the reference with P. Example: XS506BSDAL2 becomes XS5 06BSDAP2 with PUR cable.

Wiring diagrams

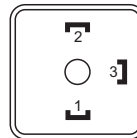
| Connector | Pre-cabled | 2-wire $\overline{\text{---}}$ non-polarized | | |
|--|-----------------------|--|--|--|
| M12  | BU: Blue BN: Brown | NO output | | |
| | | XS500B1DA000  | XS500B1CA000  | XS500B1DB000  |
| | | 2-wire $\overline{\text{---}}$ polarized | | |
| | | NO output | | NC output |
| | | XS508BSCA000  | XS508BSCB000  | |

Remote connectors LO1B, LO1C, LO1G

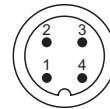
Screw terminal (LO1B)

The terminal numbering differs according to the version ($\overline{\text{---}}$ 2-wire, $\overline{\text{---}}$ 3-wire, \approx 2-wire).

DIN 43650 A (LO1C)



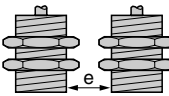
M18 (LO1G)



The NO or NC outputs are connected to terminal 2.

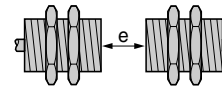
Setup

Minimum mounting distances (mm)



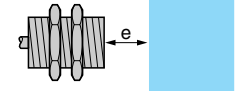
Side by side

| | |
|-------|-------------|
| Ø 6.5 | $e \geq 3$ |
| Ø 8 | $e \geq 3$ |
| Ø 12 | $e \geq 4$ |
| Ø 18 | $e \geq 10$ |
| Ø 30 | $e \geq 20$ |



Face to face

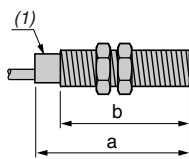
| |
|--------------|
| $e \geq 18$ |
| $e \geq 18$ |
| $e \geq 24$ |
| $e \geq 60$ |
| $e \geq 120$ |



Facing a metal object

| |
|--------------|
| $e \geq 4.5$ |
| $e \geq 4.5$ |
| $e \geq 6$ |
| $e \geq 15$ |
| $e \geq 30$ |

Dimensions (mm)



(1) LED

| Sensors | | Pre-cabled (mm) | | M8 connector (mm) | | M12 connector (mm) | |
|-------------------------|---------|------------------------|----------|---------------------------|----------|--------------------|----------|
| Short case model | | a | b | a | b | a | b |
| Ø 6.5 | XS506BS | 33 | – | 42 | – | 45 | – |
| Ø 8 | XS508BS | 33 | 25 | 42 | 26 | 45 | 24 |
| Ø 12 | XS512BS | 35 | 25 | – | – | 50 | 30 |
| Ø 18 | XS518BS | 39 | 28 | – | – | 50 | 28 |
| Ø 30 | XS530BS | 43 | 32 | – | – | 55 | 32 |
| Sensors | | Pre-cabled (mm) | | M12 connector (mm) | | | |
| Long case model | | a | b | a | b | | |
| Ø 8 | XS508B1 | 51 | 42 | 62 | 40 | | |
| Ø 12 | XS512B1 | 53 | 42 | 62 | 42 | | |
| Ø 18 | XS518B1 | 62 | 52 | 74 | 52 | | |
| Ø 30 | XS530B1 | 62 | 52 | 74 | 52 | | |

OsiSense® Inductive proximity sensors

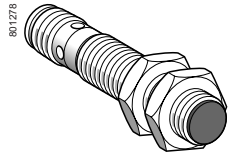
General purpose

Cylindrical, standard range, flush mountable

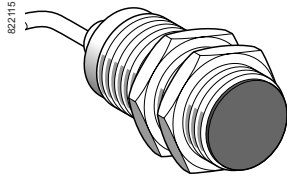
Two-wire AC or DC ⁽¹⁾



XS512B1MAL2



XS512B1MAU20



XS518B1MAL2



XSZB112

Sensors, 2-wire 24–240 V $\bar{\sim}$, long case model

Ø 12, threaded M12 x 1

| Sensing distance Sn, mm (in.) | Function | Connection | Catalog Number | Weight kg (lb) |
|----------------------------------|----------|---------------------------|---------------------|-------------------|
| 2 (0.08) | NO | Pre-cabled ⁽¹⁾ | XS512B1MAL2 | 0.075 (0.17) |
| | | 1/2"-20UNF connector | XS512B1MAU20 | 0.025 (0.06) |
| | NC | Pre-cabled ⁽¹⁾ | XS512B1MBL2 | 0.075 (0.17) |
| | | 1/2"-20UNF connector | XS512B1MBU20 | 0.025 (0.06) |

Ø 18, threaded M18 x 1

| Sensing distance Sn, mm (in.) | Function | Connection | Catalog Number | Weight kg (lb) |
|----------------------------------|----------|---------------------------|---------------------|-------------------|
| 5 (0.20) | NO | Pre-cabled ⁽¹⁾ | XS518B1MAL2 | 0.100 (0.22) |
| | | 1/2"-20UNF connector | XS518B1MAU20 | 0.060 (0.13) |
| | NC | Pre-cabled ⁽¹⁾ | XS518B1MBL2 | 0.100 (0.22) |
| | | 1/2"-20UNF connector | XS518B1MBU20 | 0.060 (0.13) |

Ø 30, threaded M30 x 1.5

| Sensing distance Sn, mm (in.) | Function | Connection | Catalog Number | Weight kg (lb) |
|----------------------------------|----------|---------------------------|---------------------|-------------------|
| 10 (0.39) | NO | Pre-cabled ⁽¹⁾ | XS530B1MAL2 | 0.205 (0.45) |
| | | 1/2"-20UNF connector | XS530B1MAU20 | 0.145 (0.32) |
| | NC | Pre-cabled ⁽¹⁾ | XS530B1MBL2 | 0.205 (0.45) |
| | | 1/2"-20UNF connector | XS530B1MBU20 | 0.145 (0.32) |

Accessories

| Description | For use with sensors | Catalog Number | Weight kg (lb) |
|-----------------|-------------------------|-------------------|-------------------|
| Mounting clamps | Ø 12 | XSZB112 | 0.006 (0.01) |
| | Ø 18 | XSZB118 | 0.010 (0.02) |
| | Ø 30 | XSZB130 | 0.020 (0.04) |

⁽¹⁾ For a 5 m long cable replace L2 with L5; for a 10 m cable replace L2 with L10.

Example: XS512B1MAL2 becomes **XS512B1MAL5** with a 5 m cable.

OsiSense® Inductive proximity sensors

General purpose
Cylindrical, standard range, flush mountable
Two-wire AC or DC

| Specifications | | | XS5●●B1M●U20 | XS5●●B1M●L2 |
|-----------------------------------|------------------------------|----|---|---------------------------------------|
| Sensor type | | | | |
| Product certifications | | | UL, CSA, CE | |
| Connection | Connector | | 1/2"-20UNF | — |
| | Pre-cabled | | — | Length 2 m |
| Operating zone | Ø 12 | mm | 0–1.6 (0–0.05 in.) | |
| | Ø 18 | mm | 0–4 (0–0.16 in.) | |
| | Ø 30 | mm | 0–8 (0–0.31 in.) | |
| Differential travel | | % | 1–15 of effective sensing distance (Sr) | |
| Degree of protection | Conforming to IEC 60529 | | IP 65 and IP 67 | IP 65 and IP 68, double insulation ☐ |
| | Conforming to DIN 40050 | | IP 69K | |
| Storage temperature | | °C | -40 to +85 (-40 to +185 °F) | |
| Operating temperature | | °C | -25 to +70 (-13 to +158 °F) | |
| Materials | Case | | Nickel plated brass | |
| | Sensing face | | PPS | |
| | Cable | | — | PvR 2 x 0.34 mm ² (22 AWG) |
| Vibration resistance | Conforming to IEC 60068-2-6 | | 25 gn, amplitude ± 2 mm (f = 10 to 55 Hz) | |
| Shock resistance | Conforming to IEC 60068-2-27 | | 50 gn, duration 11 ms | |
| Output state indication | | | Yellow LED: 4 viewing ports at 90° | Yellow LED: circular |
| Rated supply voltage | | V | ~ or --- 24–240 (~ 50/60 Hz) | |
| Voltage limits (including ripple) | | V | ~ or --- 20–264 | |
| Switching capacity | XS512B1M●●● | mA | 5–200 (1) | |
| | XS518B1M●●●, XS530B1M●●● | mA | ~ 5–300 or --- 5–200 (1) | |
| Voltage drop, closed state | | V | ≤ 5.5 | |
| Residual current, open state | | mA | ≤ 0.8 | |
| Maximum switching frequency | XS512B1●●●, XS518B1M●●● | Hz | ~ 25 or --- 1000 | |
| | XS530B1M●●● | Hz | ~ 25 or --- 500 | |
| Delays | First-up | ms | ≤ 20 XS512B1M●●●, ≤ 25 XS518B1M●●● and XS530B1M●●● | |
| | Response | ms | ≤ 0.5 | |
| | Recovery | ms | ≤ 0.2 XS512B1M●●●, ≤ 0.5 XS518B1M●●●, ≤ 2 XS530B1M●●● | |

(1) A 0.4 A "fast-acting" fuse must be connected in series with the load.

Wiring diagrams

| Connector | Pre-cabled | 2-wire ~ or --- |
|------------|-----------------------|-----------------------------|
| 1/2"-20UNF | BU: Blue BN: Brown | NO or NC output |
| | | |
| | | ±: on connector models only |

Setup

Minimum mounting distances (mm)

| Sensor | Side by side | Face to face | Facing a metal object |
|--------|--------------|--------------|-----------------------|
| Ø 12 | e ≥ 8 | e ≥ 48 | e ≥ 12 |
| Ø 18 | e ≥ 16 | e ≥ 100 | e ≥ 25 |
| Ø 30 | e ≥ 30 | e ≥ 180 | e ≥ 45 |

Dimensions (mm)

| Sensor | Pre-cabled (mm) | | Connector (mm) | |
|----------|-----------------|----|----------------|----|
| | a | b | a | b |
| XS512B1M | 53 | 42 | 62 | 42 |
| XS518B1M | 62 | 52 | 73 | 52 |
| XS530B1M | 62 | 52 | 73 | 52 |

(1) LED

OsiSense® Inductive proximity sensors

General purpose

Cylindrical, increased range, flush mountable

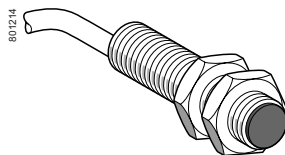
Three-wire DC, solid-state output



XS106B3●●L2



XS108B3●●M8



XS112B3●●L2

Sensors, 3-wire 12–24 V $\overline{\text{DC}}$, short case model

| Sensing distance Sn, mm (in.) | Function | Output | Connection | Sold in lots of | Catalog Number | Weight kg | Weight (lb) | |
|-------------------------------------|----------|---------------|----------------|--------------------|-------------------|----------------|----------------|--------|
| Ø 6.5, plain | | | | | | | | |
| 2.5 (0.10) | NO | PNP | Pre-cabled (1) | 1 | XS106B3PAL2 | 0.060 | (0.13) | |
| | | | M8 connector | 1 | XS106B3PAM8 | 0.030 | (0.07) | |
| | | | M12 connector | 1 | XS106B3PAM12 | 0.050 | (0.11) | |
| | | Pre-cabled | 20 | XS106B3PAL2TQ | 0.980 | (2.16) | | |
| | | M8 connector | 20 | XS106B3PAM8TQ | 0.320 | (0.71) | | |
| | | NPN | Pre-cabled | 1 | XS106B3NAL2 | 0.060 | (0.13) | |
| | NC | PNP | Pre-cabled (1) | 1 | XS106B3PBL2 | 0.060 | (0.13) | |
| | | | M8 connector | 1 | XS106B3PBM8 | 0.030 | (0.07) | |
| | | | M12 connector | 1 | XS106B3PBM12 | 0.030 | (0.07) | |
| | | NPN | Pre-cabled | 1 | XS106B3NBL2 | 0.060 | (0.13) | |
| | | M8 connector | 1 | XS106B3NBM8 | 0.030 | (0.07) | | |
| | | M12 connector | 1 | XS106B3NBM12 | 0.030 | (0.07) | | |
| Ø 8, threaded M8 x 1 | | | | | | | | |
| 2.5 (0.10) | NO | PNP | Pre-cabled (1) | 1 | XS108B3PAL2 | 0.070 | (0.15) | |
| | | | M8 connector | 1 | XS108B3PAM8 | 0.030 | (0.07) | |
| | | | M12 connector | 1 | XS108B3PAM12 | 0.060 | (0.13) | |
| | | | Pre-cabled | 20 | XS108B3PAL2TQ | 1.120 | (2.47) | |
| | | | M8 connector | 20 | XS108B3PAM8TQ | 0.460 | (1.01) | |
| | | | M12 connector | 20 | XS108B3PAM12TQ | 0.940 | (2.07) | |
| | | NPN | Pre-cabled (1) | 1 | XS108B3NAL2 | 0.070 | (0.15) | |
| | | | M8 connector | 1 | XS108B3NAM8 | 0.030 | (0.07) | |
| | | | M12 connector | 1 | XS108B3NAM12 | 0.060 | (0.13) | |
| | | | Pre-cabled | 20 | XS108B3NAL2TQ | 1.120 | (2.47) | |
| | | | M8 connector | 20 | XS108B3NAM8TQ | 0.460 | (1.01) | |
| | | | M12 connector | 20 | XS108B3NAM12TQ | 0.940 | (2.07) | |
| | NC | PNP | Pre-cabled (1) | 1 | XS108B3PBL2 | 0.070 | (0.15) | |
| | | | M8 connector | 1 | XS108B3PBM8 | 0.030 | (0.07) | |
| | | | M12 connector | 1 | XS108B3PBM12 | 0.060 | (0.13) | |
| | | | Pre-cabled | 20 | XS108B3PBL2TQ | 1.120 | (2.47) | |
| | | | M8 connector | 20 | XS108B3PBM8TQ | 0.460 | (1.01) | |
| | | | M12 connector | 20 | XS108B3PBM12TQ | 0.940 | (2.07) | |
| | | NPN | Pre-cabled (1) | 1 | XS108B3NBL2 | 0.070 | (0.15) | |
| | | | M8 connector | 1 | XS108B3NBM8 | 0.030 | (0.07) | |
| | | | M12 connector | 1 | XS108B3NBM12 | 0.060 | (0.13) | |
| | | | Pre-cabled | 20 | XS108B3NBL2TQ | 1.120 | (2.47) | |
| | | | M8 connector | 20 | XS108B3NBM8TQ | 0.460 | (1.01) | |
| | | | M12 connector | 20 | XS108B3NBM12TQ | 0.940 | (2.07) | |
| Ø 12, threaded M12 x 1 | | | | | | | | |
| 4 (0.16) | NO | PNP | Pre-cabled (1) | 1 | XS112B3PAL2 | 0.090 | (0.20) | |
| | | | M12 connector | 1 | XS112B3PAM12 | 0.030 | (0.07) | |
| | | | Pre-cabled | 20 | XS112B3PAL2TQ | 1.600 | (3.53) | |
| | | NPN | Pre-cabled (1) | 1 | XS112B3NAL2 | 0.090 | (0.20) | |
| | | | M12 connector | 1 | XS112B3NAM12 | 0.030 | (0.07) | |
| | | | Pre-cabled | 20 | XS112B3NAL2TQ | 1.600 | (3.53) | |
| | | NC | PNP | Pre-cabled (1) | 1 | XS112B3PBL2 | 0.090 | (0.20) |
| | | | | M12 connector | 1 | XS112B3PBM12 | 0.030 | (0.07) |
| | | | | M12 connector | 20 | XS112B3PBM12TQ | 0.470 | (1.04) |
| | NPN | | Pre-cabled (1) | 1 | XS112B3NBL2 | 0.090 | (0.20) | |
| | | | M12 connector | 1 | XS112B3NBM12 | 0.030 | (0.07) | |
| | | | M12 connector | 1 | XS112B3NBM12 | 0.030 | (0.07) | |

(1) For a 5 m cable replace L2 with L5.

Example: XS106B3PAL2 becomes XS106B3PAL5 with a 5 m cable.

OsiSense® Inductive proximity sensors

General purpose

Cylindrical, increased range, flush mountable

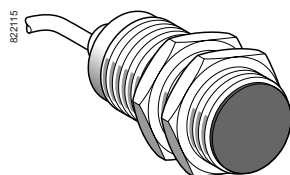
Three-wire DC, solid-state output



XS118B3●●M12



XS118B3●●L2



XS130B3●●L2



XSZB1●●

Sensors, 3-wire 12–24 V DC, short case model (continued)

| Sensing distance Sn, mm (in.) | Function | Output | Connection | Sold in lots of | Catalog Number | Weight kg | Weight (lb) |
|-------------------------------------|----------|----------------|----------------|-----------------|----------------|--------------|----------------|
| Ø 18, threaded M18 x 1 | | | | | | | |
| 8 (0.31) | NO | PNP | Pre-cabled (1) | 1 | XS118B3PAL2 | 0.110 | (0.24) |
| | | | M12 connector | 1 | XS118B3PAM12 | 0.060 | (0.13) |
| | | | Pre-cabled | 20 | XS118B3PAL2TQ | 2.000 | (4.41) |
| | NPN | PNP | M12 connector | 20 | XS118B3PAM12TQ | 1.140 | (2.51) |
| | | | Pre-cabled (1) | 1 | XS118B3NAL2 | 0.110 | (0.24) |
| | | | M12 connector | 1 | XS118B3NAM12 | 0.060 | (0.13) |
| NC | PNP | Pre-cabled | 20 | XS118B3NAL2TQ | 2.000 | (4.41) | |
| | | M12 connector | 20 | XS118B3NAM12TQ | 1.140 | (2.51) | |
| | | Pre-cabled (1) | 1 | XS118B3PBL2 | 0.110 | (0.24) | |
| NPN | PNP | M12 connector | 1 | XS118B3PBM12 | 0.060 | (0.13) | |
| | | Pre-cabled (1) | 1 | XS118B3NBL2 | 0.110 | (0.24) | |
| | | M12 connector | 1 | XS118B3NBM12 | 0.060 | (0.13) | |
| Ø 30, threaded M30 x 1.5 | | | | | | | |
| 15 (0.59) | NO | PNP | Pre-cabled (1) | 1 | XS130B3PAL2 | 0.180 | (0.40) |
| | | | M12 connector | 1 | XS130B3PAM12 | 0.130 | (0.29) |
| | | | Pre-cabled | 20 | XS130B3PAL2TQ | 3.360 | (7.41) |
| | NPN | PNP | M12 connector | 20 | XS130B3PAM12TQ | 2.000 | (4.41) |
| | | | Pre-cabled (1) | 1 | XS130B3NAL2 | 0.180 | (0.40) |
| | | | M12 connector | 1 | XS130B3NAM12 | 0.130 | (0.29) |
| NC | PNP | Pre-cabled | 20 | XS130B3NAM12TQ | 2.000 | (4.41) | |
| | | M12 connector | 1 | XS130B3PBL2 | 0.180 | (0.40) | |
| | | M12 connector | 1 | XS130B3PBM12 | 0.130 | (0.29) | |
| NPN | PNP | Pre-cabled (1) | 1 | XS130B3NBL2 | 0.180 | (0.40) | |
| | | M12 connector | 1 | XS130B3NBM12 | 0.130 | (0.29) | |

Accessories

| Description | For use with sensors | Catalog Number | Weight kg | Weight (lb) |
|-----------------|----------------------|----------------|--------------|----------------|
| Mounting clamps | Ø 6.5 (plain) | XSZB165 | 0.005 | (0.01) |
| | Ø 8 (M8 x 1) | XSZB108 | 0.006 | (0.01) |
| | Ø 12 (M12 x 1) | XSZB112 | 0.006 | (0.01) |
| | Ø 18 (M18 x 1) | XSZB118 | 0.010 | (0.02) |
| | Ø 30 (M30 x 1.5) | XSZB130 | 0.020 | (0.04) |

(1) For a 5 m long cable replace L2 with L5.
Example: XS118B3PAL2 becomes XS118B3PAL5 with a 5 m long cable.

OsiSense® Inductive proximity sensors

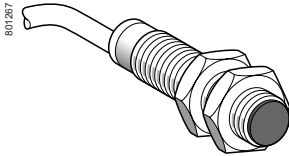
General purpose

Cylindrical, increased range, flush mountable

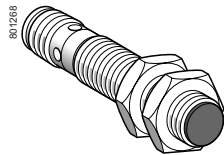
Three-wire DC, solid-state output

Sensors, 3-wire 12–48 V $\overline{\text{DC}}$, long case model

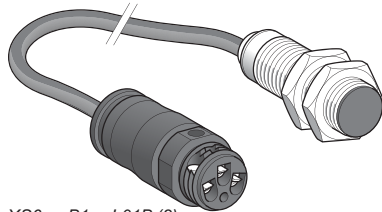
| Sensing dist. Sn, mm (in.) | Function | Output | Connection | Catalog Number | Weight kg (lb) |
|---------------------------------|----------------------|------------------------------|------------------------------|--------------------------|-------------------|
| Ø 8, threaded M8 x 1 | | | | | |
| 2.5 (0.10) | NO | PNP | Pre-cabled (1) | XS608B1PAL2 | 0.035 (0.08) |
| | | | M12 connector | XS608B1PAM12 | 0.015 (0.03) |
| | NPN | PNP | Pre-cabled (1) | XS608B1NAL2 | 0.035 (0.08) |
| | | | M12 connector | XS608B1NAM12 | 0.015 (0.03) |
| | NC | PNP | Pre-cabled (1) | XS608B1PBL2 | 0.035 (0.08) |
| | | | M12 connector | XS608B1PBM12 | 0.015 (0.03) |
| NPN | PNP | Pre-cabled (1) | XS608B1NBL2 | 0.035 (0.08) | |
| | | M12 connector | XS608B1NBM12 | 0.015 (0.03) | |
| Ø 12, threaded M12 x 1 | | | | | |
| 4 (0.16) | NO | PNP | Pre-cabled (1) | XS612B1PAL2 | 0.075 (0.17) |
| | | | M12 connector | XS612B1PAM12 | 0.020 (0.04) |
| | NPN | PNP | Pre-cabled (1) | XS612B1NAL2 | 0.075 (0.17) |
| | | | M12 connector | XS612B1NAM12 | 0.020 (0.04) |
| | NC | PNP | Pre-cabled (1) | XS612B1PBL2 | 0.075 (0.17) |
| | | | M12 connector | XS612B1PBM12 | 0.020 (0.04) |
| NPN | PNP | Pre-cabled (1) | XS612B1NBL2 | 0.075 (0.17) | |
| | | M12 connector | XS612B1NBM12 | 0.020 (0.04) | |
| Ø 18, threaded M18 x 1 | | | | | |
| 8 (0.31) | NO | PNP | Pre-cabled (1) | XS618B1PAL2 | 0.100 (0.22) |
| | | | M12 connector | XS618B1PAM12 | 0.040 (0.09) |
| | | | Remote screw term. connector | XS618B1PAL01B (2) | 0.100 (0.22) |
| | | | Remote DIN 43650 connector | XS618B1PAL01C | 0.100 (0.22) |
| | | | Remote M18 connector | XS618B1PAL01G | 0.100 (0.22) |
| | | | M12 connector | XS618B1NAM12 | 0.040 (0.09) |
| | NPN | PNP | Pre-cabled (1) | XS618B1NAL2 | 0.100 (0.22) |
| | | | M12 connector | XS618B1NAM12 | 0.040 (0.09) |
| | | | Remote screw term. connector | XS618B1NAL01B (2) | 0.100 (0.22) |
| | | | Remote DIN 43650 connector | XS618B1NAL01C | 0.100 (0.22) |
| | | | Remote M18 connector | XS618B1NAL01G | 0.100 (0.22) |
| | | | M12 connector | XS618B1NBM12 | 0.040 (0.09) |
| | NC | PNP | Pre-cabled (1) | XS618B1PBL2 | 0.100 (0.22) |
| | | | M12 connector | XS618B1PBM12 | 0.040 (0.09) |
| | | | Remote screw term. connector | XS618B1PBL01B (2) | 0.100 (0.22) |
| | | | Remote DIN 43650 connector | XS618B1PBL01C | 0.100 (0.22) |
| | | | Remote M18 connector | XS618B1PBL01G | 0.100 (0.22) |
| | | | M12 connector | XS618B1NBL2 | 0.100 (0.22) |
| NPN | PNP | Pre-cabled (1) | XS618B1NBL2 | 0.100 (0.22) | |
| | | M12 connector | XS618B1NBM12 | 0.040 (0.09) | |
| | | Remote screw term. connector | XS618B1NBL01B (2) | 0.100 (0.22) | |
| | | Remote DIN 43650 connector | XS618B1NBL01C | 0.100 (0.22) | |
| | | Remote M18 connector | XS618B1NBL01G | 0.100 (0.22) | |
| | | M12 connector | XS618B1NBL01C | 0.100 (0.22) | |
| Ø 30, threaded M30 x 1.5 | | | | | |
| 15 (0.59) | NO | PNP | Pre-cabled (1) | XS630B1PAL2 | 0.205 (0.45) |
| | | | M12 connector | XS630B1PAM12 | 0.145 (0.32) |
| | | | Remote screw term. connector | XS630B1PAL01B (2) | 0.205 (0.45) |
| | | | Remote DIN 43650 connector | XS630B1PAL01C | 0.205 (0.45) |
| | | | Remote M18 connector | XS630B1PAL01G | 0.205 (0.45) |
| | | | M12 connector | XS630B1NAM12 | 0.145 (0.32) |
| | NPN | PNP | Pre-cabled (1) | XS630B1NAL2 | 0.205 (0.45) |
| | | | M12 connector | XS630B1NAM12 | 0.145 (0.32) |
| | | | Remote screw term. connector | XS630B1NAL01B (2) | 0.205 (0.45) |
| | | | Remote DIN 43650 connector | XS630B1NAL01C | 0.205 (0.45) |
| | | | Remote M18 connector | XS630B1NAL01G | 0.205 (0.45) |
| | | | M12 connector | XS630B1NBM12 | 0.145 (0.32) |
| | NC | PNP | Pre-cabled (1) | XS630B1PBL2 | 0.205 (0.45) |
| | | | M12 connector | XS630B1PBM12 | 0.145 (0.32) |
| | | | Remote screw term. connector | XS630B1PBL01B (2) | 0.205 (0.45) |
| | | | Remote DIN 43650 connector | XS630B1PBL01C | 0.205 (0.45) |
| | | | Remote M18 connector | XS630B1PBL01G | 0.205 (0.45) |
| | | | M12 connector | XS630B1NBL2 | 0.205 (0.45) |
| NPN | PNP | Pre-cabled (1) | XS630B1NBL2 | 0.205 (0.45) | |
| | | M12 connector | XS630B1NBM12 | 0.145 (0.32) | |
| | | Remote screw term. connector | XS630B1NBL01B (2) | 0.205 (0.45) | |
| | | Remote DIN 43650 connector | XS630B1NBL01C | 0.205 (0.45) | |
| | | Remote M18 connector | XS630B1NBL01G | 0.205 (0.45) | |
| | | M12 connector | XS630B1NBL01C | 0.205 (0.45) | |
| Accessories | | | | | |
| Description | For use with sensors | Catalog Number | Weight kg (lb) | | |
| Mounting clamps | Ø 8 | XSZB108 | 0.006 (0.01) | | |
| | Ø 12 | XSZB112 | 0.006 (0.01) | | |
| | Ø 18 | XSZB118 | 0.010 (0.02) | | |
| | Ø 30 | XSZB130 | 0.020 (0.02) | | |



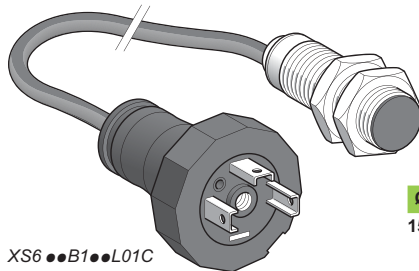
XS608B1L2



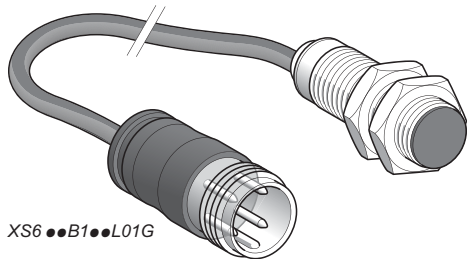
XS612B1L2



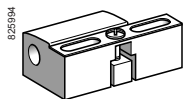
XS618B1L2



XS630B1L2



XS630B1L2



XSZB108

(1) For a 5 m cable replace L2 with L5; for a 10 m cable replace L2 with L10.

Example: XS608B1PAL2 becomes XS608B1PAL5 with a 5 m cable.

(2) Protective cable gland included with remote screw terminal connector.

OsiSense® Inductive proximity sensors

General purpose

Cylindrical, increased range, flush mountable

Three-wire DC, solid-state output

| Specifications | | XS1/XS6●●B●●M8 | XS1/XS6●●B●●M12 | XS1/XS6●●B●●L2 |
|-----------------------------------|------------------------------|--|--|--|
| Sensor type | | | | |
| Product certifications | | UL, CSA, CE | | |
| Connection | Connector | M8 | M12 | – |
| | Pre-cabled | – | – | Length 2 m |
| | Remote connector | Remote screw terminal (L01B), DIN 43650 (L01C) or M18 connector (L01G) on 0.15 m flying lead | | |
| Operating zone | Ø 6.5 and Ø 8 | mm | 0–2 (0–0.08 in.) | |
| | Ø 12 | mm | 0–3.2 (0–0.13 in.) | |
| | Ø 18 | mm | 0–6.4 (0–0.25 in.) | |
| | Ø 30 | mm | 0–12 (0–0.47 in.) | |
| Differential travel | | % | 1–15 of effective sensing distance (Sr) | |
| Degree of protection | Conforming to IEC 60529 | | IP 65 and IP 67 | IP 65 and IP 68, double insulation  except Ø 6.5 and Ø 8: IP 67 |
| | Conforming to DIN 40050 | | IP 69K for Ø 12, 18 and 30 sensors | |
| Storage temperature | | °C | –40 to +85 (–40 to +185 °F) | |
| Operating temperature | | °C | –25 to +70 (–13 to +158 °F) | |
| Materials | Case | Nickel plated brass (except XS608: stainless steel, grade 303) | | |
| | Sensing face | PPS | | |
| | Cable | – | PvR 3 x 0.34 mm ² (22 AWG) except Ø 6.5 and 8: 3 x 0.11 mm (27 AWG) ² | |
| Vibration resistance | Conforming to IEC 60068-2-6 | 25 gn, amplitude ± 2 mm (f = 10 to 55 Hz) | | |
| Shock resistance | Conforming to IEC 60068-2-27 | 50 gn, duration 11 ms | | |
| Output state indication | | | Yellow LED, 4 viewing ports at 90° | Yellow LED, circular |
| Rated supply voltage | | V | XS1: ∴ 12–24 with protection against reverse polarity XS6: ∴ 12–48 with protection against reverse polarity | |
| Voltage limits (including ripple) | | V | XS1: ∴ 10–36; XS6: ∴ 10–58 | |
| Switching capacity | | mA | ≤ 200 with overload and short-circuit protection | |
| Voltage drop, closed state | | V | ≤ 2 | |
| Current consumption, no-load | | mA | ≤ 10 | |
| Maximum switching frequency | Ø 6.5, Ø 8 and Ø 12 | Hz | 2500 | |
| | Ø 18 | Hz | 1000 | |
| | Ø 30 | Hz | 500 | |
| Delays | First-up | ms | ≤ 10 | |
| | Response | ms | ≤ 0.2 for Ø 6.5, Ø 8 and Ø 12, ≤ 0.3 for Ø 18, ≤ 0.6 for Ø 30 | |
| | Recovery | ms | ≤ 0.2 for Ø 6.5, Ø 8 and Ø 12, ≤ 0.7 for Ø 18, ≤ 1.4 for Ø 30 | |

| Wiring diagrams | | Setup | | | | |
|---|---|--|--|--|---|--|
| Connector M8:  M12:  BU: Blue BN: Brown BK: Black | Pre-cabled BU/1 BN/1 BK/4 (NO) BK/2 (NC) BU/3 | Minimum mounting distances (mm)  | Sensors Ø 6.5 Ø 8 Ø 12 Ø 18 Ø 30 | Side by side e ≥ 5 e ≥ 5 e ≥ 8 e ≥ 16 e ≥ 30 | Face to face e ≥ 30 e ≥ 30 e ≥ 50 e ≥ 100 e ≥ 180 | Facing a metal object e ≥ 8 e ≥ 8 e ≥ 12 e ≥ 24 e ≥ 45 |
| PNP  | NPN  | For M8 connector, NO and NC outputs on terminal 4 | | | | |

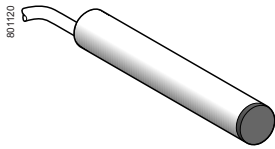
| Dimensions (mm) | | Sensors | | | | | | |
|--|---|-----------------|--------------------|-------------------|----|--------------------|----|----|
|  (1) LED | Sensors Short case model | Pre-cabled (mm) | | M8 connector (mm) | | M12 connector (mm) | | |
| | Ø 6.5 | XS106B3 | a | b | a | b | a | b |
| | Ø 8 | XS108B3 | 33 | 25 | 42 | 26 | 45 | 24 |
| | Ø 12 | XS112B3 | 35 | 25 | – | – | 50 | 30 |
| | Ø 18 | XS118B3 | 39 | 28 | – | – | 50 | 28 |
| | Ø 30 | XS130B3 | 43 | 32 | – | – | 55 | 32 |
| Sensors Long case model | Pre-cabled (mm) | | M12 connector (mm) | | | | | |
| Ø 8 | XS6 08B1 | a | b | a | b | | | |
| Ø 12 | XS612B1 | 51 | 42 | 62 | 42 | | | |
| Ø 18 | XS618B1 | 53 | 42 | 62 | 42 | | | |
| Ø 30 | XS630B1 | 62 | 52 | 74 | 52 | | | |

OsiSense® Inductive proximity sensors

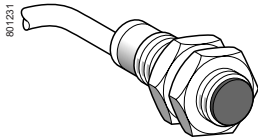
General purpose

Cylindrical, increased range, flush mountable

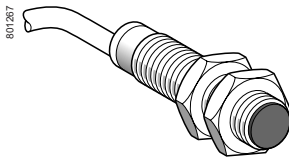
Two-wire DC, solid-state output



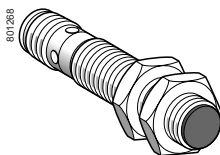
XS606B3●●L2



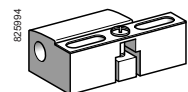
XS612B3●●L2



XS6●●B1●●L2



XS6●●B1●●M12



XSZB1●●

Sensors, 2-wire 12–24 V DC, short case model

| Sensing dist. Sn, mm (in.) | Function | Connection | Catalog Number | Weight kg (lb) |
|---------------------------------|----------|----------------------|-------------------|-------------------|
| Ø 6.5, plain | | | | |
| 2.5 (0.10) | NO | Pre-cabled (1) | XS606B3CAL2 | 0.060 (0.13) |
| | | Remote M12 connector | XS606B3CAL01M12 | 0.070 (0.15) |
| | NC | Pre-cabled (1) | XS606B3CBL2 | 0.060 (0.13) |
| Ø 8, threaded M8 x 1 | | | | |
| 2.5 (0.10) | NO | Pre-cabled (1) | XS608B3CAL2 | 0.070 (0.15) |
| | | Remote M12 connector | XS608B3CAL01M12 | 0.070 (0.15) |
| | NC | Pre-cabled (1) | XS608B3CBL2 | 0.070 (0.15) |
| | | Remote M12 connector | XS608B3CBL01M12 | 0.070 (0.15) |
| Ø 12, threaded M12 x 1 | | | | |
| 4 (0.16) | NO | Pre-cabled (1) | XS612B3DAL2 | 0.090 (0.20) |
| | | M12 connector | XS612B3DAM12 | 0.030 (0.07) |
| | NC | Pre-cabled (1) | XS612B3DBL2 | 0.090 (0.20) |
| | | M12 connector | XS612B3DBM12 | 0.030 (0.07) |
| Ø 18, threaded M18 x 1 | | | | |
| 8 (0.31) | NO | Pre-cabled (1) | XS618B3DAL2 | 0.110 (0.24) |
| | | M12 connector | XS618B3DAM12 | 0.060 (0.13) |
| | NC | Pre-cabled (1) | XS618B3DBL2 | 0.110 (0.24) |
| | | M12 connector | XS618B3DBM12 | 0.060 (0.13) |
| Ø 30, threaded M30 x 1.5 | | | | |
| 15 (0.59) | NO | Pre-cabled (1) | XS630B3DAL2 | 0.180 (0.40) |
| | | M12 connector | XS630B3DAM12 | 0.130 (0.29) |
| | NC | Pre-cabled (1) | XS630B3DBL2 | 0.180 (0.40) |
| | | M12 connector | XS630B3DBM12 | 0.180 (0.40) |

Sensors, 2-wire 12–48 V DC, long case model

| Sensing dist. Sn, mm (in.) | Function | Connection | Catalog Number | Weight kg (lb) |
|---------------------------------|----------|----------------|-------------------|-------------------|
| Ø 6.5, plain | | | | |
| 2.5 (0.10) | NO | Pre-cabled (1) | XS606B1DAL2 | 0.060 (0.13) |
| | | NC | Pre-cabled (1) | XS606B1DBL2 |
| Ø 8, threaded M8 x 1 | | | | |
| 2.5 (0.10) | NO | Pre-cabled (1) | XS608B1DAL2 | 0.035 (0.08) |
| | | M12 connector | XS608B1DAM12 | 0.015 (0.03) |
| | NC | Pre-cabled (1) | XS608B1DBL2 | 0.035 (0.08) |
| | | M12 connector | XS608B1DBM12 | 0.015 (0.03) |
| Ø 12, threaded M12 x 1 | | | | |
| 4 (0.16) | NO | Pre-cabled (1) | XS612B1DAL2 | 0.180 (0.40) |
| | | M12 connector | XS612B1DAM12 | 0.020 (0.44) |
| | NC | Pre-cabled (1) | XS612B1DBL2 | 0.075 (0.17) |
| | | M12 connector | XS612B1DBM12 | 0.020 (0.44) |
| Ø 18, threaded M18 x 1 | | | | |
| 8 (0.31) | NO | Pre-cabled (1) | XS618B1DAL2 | 0.100 (0.22) |
| | | M12 connector | XS618B1DAM12 | 0.040 (0.09) |
| | NC | Pre-cabled (1) | XS618B1DBL2 | 0.100 (0.22) |
| | | M12 connector | XS618B1DBM12 | 0.040 (0.09) |
| Ø 30, threaded M30 x 1.5 | | | | |
| 15 (0.59) | NO | Pre-cabled (1) | XS630B1DAL2 | 0.205 (0.45) |
| | | M12 connector | XS630B1DAM12 | 0.145 (0.32) |
| | NC | Pre-cabled (1) | XS630B1DBL2 | 0.205 (0.45) |
| | | M12 connector | XS630B1DBM12 | 0.145 (0.32) |

Accessories

| Description | For use with sensors | Catalog Number | Weight kg (lb) |
|-----------------|-------------------------|-------------------|-------------------|
| Mounting clamps | Ø 6.5 (plain) | XSZB165 | 0.005 (0.01) |
| | Ø 8 (M8 x 1) | XSZB108 | 0.006 (0.01) |
| | Ø 12 (M12 x 1) | XSZB112 | 0.006 (0.01) |
| | Ø 18 (M18 x 1) | XSZB118 | 0.010 (0.02) |
| | Ø 30 (M30 x 1.5) | XSZB130 | 0.020 (0.04) |

(1) For a 5 m cable replace L2 with L5.

Example: XS606B3CAL2 becomes XS606B3CAL5 with a 5 m cable.

OsiSense® Inductive proximity sensors

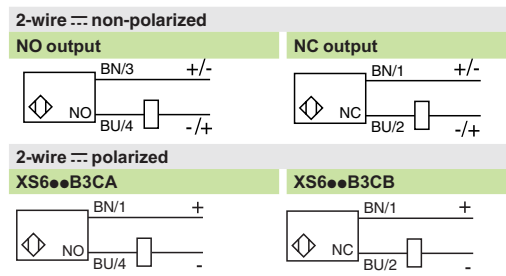
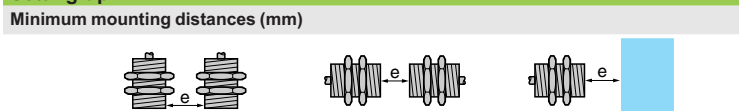
General purpose

Cylindrical, increased range, flush mountable

Two-wire DC, solid-state output

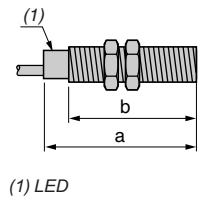
| Specifications | | | |
|-----------------------------------|------------------------------|---|---|
| Sensor type | | XS6●●B3D●M12, XS6●●B1D●M12 | XS6●●B3D●L2, XS6●●B1D●L2 |
| Product certifications | | UL, CSA, CE | |
| Connection | Connector | M12 or remote M12 connector (L01M12) on 0.15 m flying lead | |
| | Pre-cabled | Length 2 m | |
| Operating zone | ∅ 6.5 and ∅ 8 | mm | 0–2 (0–0.08 in.) |
| | ∅ 12 | mm | 0–3.2 (0–0.13 in.) |
| | ∅ 18 | mm | 0–6.4 (0–0.25 in.) |
| | ∅ 30 | mm | 0–12 (0–0.47 in.) |
| Differential travel | % | 1–15 of effective sensing distance (Sr) | |
| Degree of protection | Conforming to IEC 60529 | IP 65 and IP 67 | IP 65 and IP 68 double isolation ☐ (except ∅ 6.5 and ∅ 8: IP 67) |
| | Conforming to DIN 40050 | IP 69K | |
| Storage temperature | °C | -40 to +85 (-40 to +185 °F) | |
| Operating temperature | °C | -25 to +70 (-13 to +158 °F) | |
| Materials | Case | Nickel plated brass (except XS606B1D or XS608B1D: stainless steel, grade 303) | |
| | Sensing face | PPS | |
| | Cable | PvR 2 x 0.34 mm ² (22 AWG) except ∅ 6.5 and ∅ 8: 2 x 0.11 mm ² (27 AWG) | |
| Vibration resistance | Conforming to IEC 60068-2-6 | 25 gn, amplitude ± 2 mm (f = 10 to 55 Hz) | |
| Shock resistance | Conforming to IEC 60068-2-27 | 50 gn, duration 11 ms | |
| Output state indication | | Yellow LED, 4 viewing ports at 90° | |
| Rated supply voltage | V | --- 12–48 non-polarized for XS6●●B1D, --- 12–24 non-polarized for XS6●●B3D (except ∅ 6.5 and ∅ 8 short case models, which are polarized), with protection against reverse polarity | |
| Voltage limits (including ripple) | V | --- 10–58 for XS6●●B1D --- 10–36 for XS6●●B3D | |
| Switching capacity | mA | ≤ 100 with overload and short-circuit protection | |
| Voltage drop, closed state | V | 4 | |
| Current consumption, no-load | mA | ≤ 0.5 mA | |
| Maximum switching frequency | ∅ 6.5, ∅ 8 | Hz | 3000 |
| | ∅ 12 | Hz | 2000 |
| | ∅ 18 | Hz | 1000 |
| | ∅ 30 | Hz | 500 |
| Delays | First-up | ms | ≤ 10 |
| | Response | ms | ≤ 0.3 |
| | Recovery | ms | ≤ 0.3 |

Wiring diagrams Setting-up



| Sensors | Side by side | Face to face | Facing a metal object |
|---------|--------------|--------------|-----------------------|
| ∅ 6.5 | e ≥ 5 | e ≥ 30 | e ≥ 8 |
| ∅ 8 | e ≥ 5 | e ≥ 30 | e ≥ 8 |
| ∅ 12 | e ≥ 8 | e ≥ 50 | e ≥ 12 |
| ∅ 18 | e ≥ 16 | e ≥ 100 | e ≥ 25 |
| ∅ 30 | e ≥ 30 | e ≥ 180 | e ≥ 45 |

Dimensions (mm)



| Sensors | Pre-cabled (mm) | | M12 connector (mm) | |
|-------------------------|-----------------|----|--------------------|----|
| | a | b | a | b |
| Short case model | | | | |
| ∅ 6.5 | XS606B3D | 33 | – | – |
| ∅ 8 | XS608B3D | 33 | 25 | 24 |
| ∅ 12 | XS612B3D | 35 | 25 | 50 |
| ∅ 18 | XS618B3D | 39 | 28 | 50 |
| ∅ 30 | XS630B3D | 43 | 32 | 55 |
| Long case model | | | | |
| ∅ 6.5 | XS606B1D | 51 | – | – |
| ∅ 8 | XS608B1D | 51 | 42 | 62 |
| ∅ 12 | XS612B1D | 53 | 42 | 62 |
| ∅ 18 | XS618B1D | 62 | 52 | 74 |
| ∅ 30 | XS630B1D | 62 | 52 | 74 |

OsiSense® Inductive proximity sensors

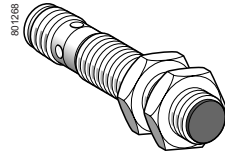
General purpose

Cylindrical, increased range, flush mountable

Two-wire AC or DC ⁽¹⁾



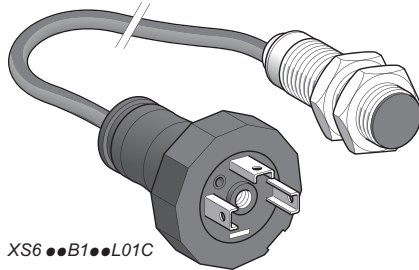
XS6●●B1M●L2



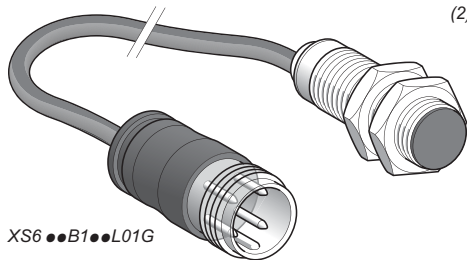
XS6●●B1●●U20



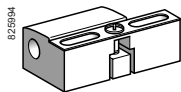
XS6●●B1●●L01B (2)



XS6●●B1●●L01C



XS6●●B1●●L01G



XSZB1●●

Sensors, 2-wire 24–240 V $\bar{\sim}$, long case model

| Sensing distance Sn, mm (in.) | Function | Connection | Catalog Number | Weight kg (lb) |
|----------------------------------|----------|---------------------------|---------------------|-------------------|
| Ø 12, threaded M12 x 1 | | | | |
| 4 (0.16) | NO | Pre-cabled ⁽¹⁾ | XS612B1MAL2 | 0.075 (0.17) |
| | | 1/2"-20UNF connector | XS612B1MAU20 | 0.025 (0.06) |
| | NC | Pre-cabled ⁽¹⁾ | XS612B1MBL2 | 0.075 (0.17) |
| | | 1/2"-20UNF connector | XS612B1MBU20 | 0.025 (0.06) |

Ø 18, threaded M18 x 1

| | | | | |
|----------|----|---------------------------------|--------------------------|--------------|
| 8 (0.31) | NO | Pre-cabled ⁽¹⁾ | XS618B1MAL2 | 0.100 (0.22) |
| | | 1/2"-20UNF connector | XS618B1MAU20 | 0.060 (0.13) |
| | | Remote screw terminal connector | XS618B1MAL01B (2) | 0.100 (0.22) |
| | | Remote DIN 43650A connector | XS618B1MAL01C | 0.100 (0.22) |
| | NC | Pre-cabled ⁽¹⁾ | XS618B1MBL2 | 0.100 (0.22) |
| | | 1/2"-20UNF connector | XS618B1MBU20 | 0.060 (0.13) |
| | | Remote screw terminal connector | XS618B1MBL01B (2) | 0.100 (0.22) |
| | | Remote DIN 43650A connector | XS618B1MBL01C | 0.100 (0.22) |
| | | Remote M18 connector | XS618B1MBL01G | 0.100 (0.22) |

Ø 30, threaded M30 x 1.5

| | | | | |
|-----------|----|---------------------------------|---------------------------|--------------|
| 15 (0.59) | NO | Pre-cabled ⁽²⁾ | XS630B1MAL2 | 0.205 (0.45) |
| | | 1/2"-20UNF connector | XS630B1MAU20 | 0.145 (0.32) |
| | | Remote screw terminal connector | XS630B1MAL01B (2) | 0.205 (0.45) |
| | | Remote DIN 43650A connector | XS630B1MAL01C | 0.205 (0.45) |
| | NC | Pre-cabled ⁽²⁾ | XS630B1MBL2 | 0.205 (0.45) |
| | | 1/2"-20UNF connector | XS630B1MBU20 | 0.145 (0.32) |
| | | Remote screw terminal connector | XS6 30B1MBL01B (2) | 0.205 (0.45) |
| | | Remote DIN 43650A connector | XS6 30B1MBL01C | 0.205 (0.45) |
| | | Remote M18 connector | XS6 30B1MBL01G | 0.205 (0.45) |

Accessories

| Description | For use with sensors | Catalog Number | Weight kg (lb) |
|-----------------|----------------------|----------------|-------------------|
| Mounting clamps | Ø 12 | XSZB112 | 0.006 (0.01) |
| | Ø 18 | XSZB118 | 0.010 (0.02) |
| | Ø 30 | XSZB130 | 0.020 (0.04) |

(1) For a 5 m cable replace L2 with L5; for a 10 m cable replace L2 with L10.
Example: XS612B1MAL2 becomes **XS612B1MAL5** with a 5 m cable.

(2) Protective cable gland included with remote screw terminal connector.

OsiSense® Inductive proximity sensors

General purpose

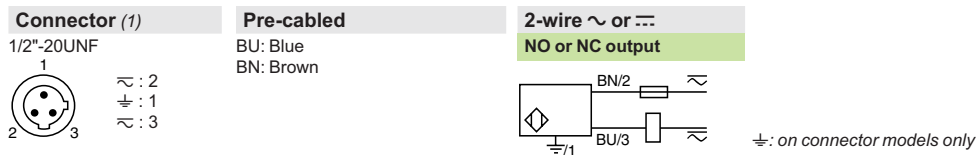
Cylindrical, increased range, flush mountable

Two-wire AC or DC

| Specifications | | XS6●●B1M●U20 | XS6●●B1M●L● |
|---|-----------------------------|---|--|
| Sensor type | | | |
| Product certifications | | UL, CSA, CE | |
| Connection | Connector | 1/2" - 20 UNF | – |
| | Pre-cabled | – | Length 2 m |
| | Remote connector | Remote screw terminal (L01B), DIN 43650A (L01C) or M18 connector (L01G) on 0.15 m flying lead | |
| Operating zone | Ø 12 | mm | 0–3.2 (0–0.13 in.) |
| | Ø 18 | mm | 0–6.4 (0–0.25 in.) |
| | Ø 30 | mm | 0–12 (0–0.47 in.) |
| Differential travel | | % | 1–15 of effective sensing distance (Sr) |
| Degree of protection | Conforming to IEC 60529 | IP 65 and IP 67 | |
| | Conforming to DIN 40050 | IP 69K | |
| Storage temperature | | °C | -40 to +85 (-40 to +185 °F) |
| Operating temperature | | °C | -25 to +70 (-13 to +158 °F) |
| Materials | Case | Nickel plated brass | |
| | Sensing face | PPS | |
| | Cable | PvR 2 x 0.34 mm ² (22 AWG) | |
| Vibration resistance | To IEC 60068-2-6 | 25 gn, amplitude ± 2 mm (f = 10 to 55 Hz) | |
| Shock resistance | To IEC 60068-2-27 | 50 gn, duration 11 ms | |
| Output state indication | | Yellow LED: circular on pre-cabled version Yellow LED with 4 viewing ports at 90° on connector version | |
| Rated supply voltage | | V | ≈ 24–240 (~ 50/60 Hz) |
| Voltage limits (including ripple) | | V | ≈ 20–264 |
| Switching capacity | XS612B1M●●● | mA | 5–200 (2) |
| | XS618B1M●●●, XS630B1M●●● | mA | ~ 5–300 or ~ 5–200 (1) |
| | | | |
| Voltage drop, closed state | | V | ≤ 5.5 |
| Current consumption, no-load | | mA | ≤ 0.8 |
| Maximum switching frequency (a.c./d.c. supply) | Ø 12 | Hz | ~ 1000 / ~ 25 |
| | Ø 18 | Hz | ~ 1000 / ~ 25 |
| | Ø 30 | Hz | ~ 500 / ~ 25 |
| Delays | First-up | ms | ≤ 25 for Ø 18 and Ø 30 sensors; ≤ 20 for Ø 12 sensors |
| | Response | ms | ≤ 0.5 |
| | Recovery | ms | ≤ 0.2 for Ø 12 sensors; ≤ 0.5 for Ø 18 sensors; ≤ 2 for Ø 30 sensors |

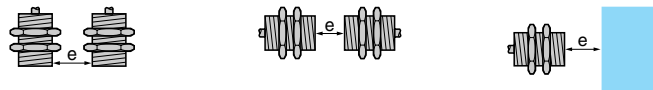
(1) A 0.4 A "fast-acting" fuse must be connected in series with the load.

Wiring diagrams



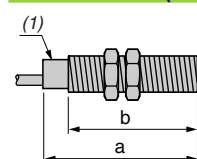
Setup

Minimum mounting distances (mm)



| Sensors | Side by side | Face to face | Facing a metal object |
|---------|--------------|--------------|-----------------------|
| Ø 12 | e ≥ 8 | e ≥ 50 | e ≥ 12 |
| Ø 18 | e ≥ 16 | e ≥ 100 | e ≥ 25 |
| Ø 30 | e ≥ 30 | e ≥ 180 | e ≥ 45 |

Dimensions (mm)



(1) LED

| Sensors | Pre-cabled (mm) | | Connector (mm) | |
|----------------|-----------------|----|----------------|----|
| | a | b | a | b |
| Ø 12 XS612B1M● | 53 | 42 | 62 | 42 |
| Ø 18 XS618B1M● | 62 | 52 | 73 | 52 |
| Ø 30 XS630B1M● | 62 | 52 | 73 | 52 |

OsiSense® Inductive proximity sensors

General purpose

Cylindrical, increased range, non-flush mountable

Three-wire DC, solid-state output



XS612B4●●L2



XS618B4●●M12



XS630B4●●M12



XSZB●●●

Sensors, 3-wire 12–48 V, long case model

Ø 12, threaded M12 x 1

| Sensing distance Sn, mm (in.) | Function | Output | Connection | Catalog Number | kg | Weight (lb) |
|----------------------------------|----------|----------------|----------------|----------------|--------|-------------|
| 7 (0.28) | NO | PNP | Pre-cabled (1) | XS612B4PAL2 | 0.075 | (0.17) |
| | | | M12 connector | XS612B4PAM12 | 0.020 | (0.04) |
| | NPN | PNP | Pre-cabled (1) | XS612B4NAL2 | 0.075 | (0.17) |
| | | | M12 connector | XS612B4NAM12 | 0.020 | (0.04) |
| | NC | PNP | Pre-cabled (1) | XS612B4PBL2 | 0.075 | (0.17) |
| | | | M12 connector | XS612B4PBM12 | 0.020 | (0.04) |
| NPN | PNP | Pre-cabled (1) | XS612B4NBL2 | 0.075 | (0.17) | |
| | | M12 connector | XS612B4NBM12 | 0.020 | (0.04) | |

Ø 18, threaded M18 x 1

| Sensing distance Sn, mm (in.) | Function | Output | Connection | Catalog Number | kg | Weight (lb) |
|----------------------------------|----------|----------------|----------------|----------------|--------|-------------|
| 12 (0.47) | NO | PNP | Pre-cabled (1) | XS618B4PAL2 | 0.100 | (0.22) |
| | | | M12 connector | XS618B4PAM12 | 0.040 | (0.09) |
| | NPN | PNP | Pre-cabled (1) | XS618B4NAL2 | 0.100 | (0.22) |
| | | | M12 connector | XS618B4NAM12 | 0.040 | (0.09) |
| | NC | PNP | Pre-cabled (1) | XS618B4PBL2 | 0.100 | (0.22) |
| | | | M12 connector | XS618B4PBM12 | 0.040 | (0.09) |
| NPN | PNP | Pre-cabled (1) | XS618B4NBL2 | 0.100 | (0.22) | |
| | | M12 connector | XS618B4NBM12 | 0.040 | (0.09) | |

Ø 30, threaded M30 x 1.5

| Sensing distance Sn, mm (in.) | Function | Output | Connection | Catalog Number | kg | Weight (lb) |
|----------------------------------|----------|----------------|----------------|----------------|--------|-------------|
| 22 (0.87) | NO | PNP | Pre-cabled (1) | XS630B4PAL2 | 0.205 | (0.45) |
| | | | M12 connector | XS630B4PAM12 | 0.145 | (0.32) |
| | NPN | PNP | Pre-cabled (1) | XS630B4NAL2 | 0.205 | (0.45) |
| | | | M12 connector | XS630B4NAM12 | 0.145 | (0.32) |
| | NC | PNP | Pre-cabled (1) | XS630B4PBL2 | 0.205 | (0.45) |
| | | | M12 connector | XS630B4PBM12 | 0.145 | (0.32) |
| NPN | PNP | Pre-cabled (1) | XS630B4NBL2 | 0.205 | (0.45) | |
| | | M12 connector | XS630B4NBM12 | 0.145 | (0.32) | |

Accessories

| Description | For use with sensors | Catalog Number | kg | Weight (lb) |
|-----------------|----------------------|----------------|-------|-------------|
| Mounting clamps | Ø 12 | XSZB112 | 0.006 | (0.01) |
| | Ø 18 | XSZB118 | 0.010 | (0.02) |
| | Ø 30 | XSZB130 | 0.020 | (0.04) |

(1) For a 5 m cable replace L2 with L5; for a 10 m cable replace L2 with L10.
Example: XS612B4PAL2 becomes XS612B4PAL5 with a 5 m cable.

OsiSense® Inductive proximity sensors

General purpose

Cylindrical, increased range, non-flush mountable

Three-wire DC, solid-state output

| Specifications | | | XS6●●B4●●M12 | XS6●●B4●●L2 |
|-----------------------------------|------------------------------|----|--|---|
| Sensor type | | | | |
| Product certifications | | | UL, CSA, CE | |
| Connection | Connector | | M12 | – |
| | Pre-cabled | | – | Length 2 m |
| Operating zone | Ø 12 | mm | 0–5.6 (0–0.22 in.) | |
| | Ø 18 | mm | 0–9.6 (0–0.38 in.) | |
| | Ø 30 | mm | 0–17.6 (0–0.69 in.) | |
| Differential travel | | % | 1–15 of effective sensing distance (Sr) | |
| Degree of protection | Conforming to IEC 60529 | | IP 65 and IP 67 | IP 65 and IP 68, double insulation <input type="checkbox"/> |
| Storage temperature | | °C | –40 to +85 (–40 to +185 °F) | |
| Operating temperature | | °C | –25 to +70 (–13 to +158 °F) | |
| Materials | Case | | Nickel plated brass | |
| | Sensing face | | PPS | |
| | Cable | | – | PvR 3 x 0.34 mm ² (22 AWG) |
| Vibration resistance | Conforming to IEC 60068-2-6 | | 25 gn, amplitude ± 2 mm (f = 10 to 55 Hz) | |
| Shock resistance | Conforming to IEC 60068-2-27 | | 50 gn, duration 11 ms | |
| Output state indication | | | Yellow LED: 4 viewing ports at 90° | Yellow LED: circular |
| Rated supply voltage | | V | 12–48 with protection against reverse polarity | |
| Voltage limits (including ripple) | | V | 10–58 | |
| Switching capacity | | mA | ≤ 200 with overload and short-circuit protection | |
| Voltage drop, closed state | | V | ≤ 2 | |
| Current consumption, no-load | | mA | ≤ 10 | |
| Maximum switching frequency | XS612B4●●●● | Hz | 2500 | |
| | XS618B4●●●● | Hz | 1000 | |
| | XS630B4●●●● | Hz | 500 | |
| Delays | First-up | ms | ≤ 10 | |
| | Response | ms | ≤ 0.2 for Ø 12, ≤ 0.3 for Ø 18, ≤ 0.6 for Ø 30 | |
| | Recovery | ms | ≤ 0.2 for Ø 12, ≤ 0.7 for Ø 18, ≤ 1.4 for Ø 30 | |

Wiring diagrams

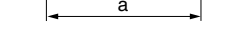
| Connector | Pre-cabled | PNP | NPN |
|-------------------------|------------------------------------|-----|-----|
| M12 4 3 2 1 | BU: Blue BN: Brown BK: Black | | |

Setup

| Minimum mounting distances (mm) | Side by side | | | Face to face | | | Facing a metal object | | | | | |
|---------------------------------|--------------|------|------|--------------|--------|---------|-----------------------|---------|---------|--------|--------|--------|
| | Ø 12 | Ø 18 | Ø 30 | e ≥ 48 | e ≥ 72 | e ≥ 120 | e ≥ 84 | e ≥ 144 | e ≥ 264 | e ≥ 21 | e ≥ 36 | e ≥ 66 |
| | | | | | | | | | | | | |

Dimensions (mm)

| | Pre-cabled (mm) | | Connector (mm) | | |
|------|-----------------|----|----------------|----|----|
| | a | b | a | b | c |
| XS6 | | | | | |
| Ø 12 | 55 | 42 | 66 | 42 | 5 |
| Ø 18 | 60 | 44 | 72 | 44 | 8 |
| Ø 30 | 63 | 41 | 74 | 41 | 13 |



(1) LED

OsiSense® Inductive proximity sensors

General purpose

Cylindrical, increased range, non-flush mountable

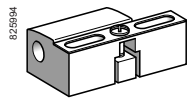
Two-wire AC or DC



XS6●●B4M●L2



XS6●●B4M●U20



XSZB1●●

Sensors, 2-wire ~ 24–240 V, long case model

Ø 18, threaded M18 x 1

| Sensing distance Sn, mm (in.) | Function | Connection | Catalog Number | kg | Weight (lb) |
|----------------------------------|----------|----------------------|---------------------|-------|-------------|
| 12 (0.47) | NO | Pre-cabled (1) | XS618B4MAL2 | 0.120 | (0.26) |
| | | 1/2"-20UNF connector | XS618B4MAU20 | 0.060 | (0.13) |
| | NC | Pre-cabled (1) | XS618B4MBL2 | 0.120 | (0.26) |
| | | 1/2"-20UNF connector | XS618B4MBU20 | 0.060 | (0.13) |

Ø 30, threaded M30 x 1.5

| Sensing distance Sn, mm (in.) | Function | Connection | Catalog Number | kg | Weight (lb) |
|----------------------------------|----------|----------------------|---------------------|-------|-------------|
| 22 (0.87) | NO | Pre-cabled (1) | XS630B4MAL2 | 0.205 | (0.45) |
| | | 1/2"-20UNF connector | XS630B4MAU20 | 0.145 | (0.32) |
| | NC | Pre-cabled (1) | XS630B4MBL2 | 0.205 | (0.45) |
| | | 1/2"-20UNF connector | XS630B4MBU20 | 0.145 | (0.32) |

Accessories

| Description | For use with sensors | Catalog Number | kg | Weight (lb) |
|-----------------|----------------------|----------------|-------|-------------|
| Mounting clamps | Ø 18 | XSZB118 | 0.010 | (0.02) |
| | Ø 30 | XSZB130 | 0.020 | (0.04) |

(1) For a 5 m cable replace L2 with L5; for a 10 m cable replace L2 with L10.
Example: XS618B4MAL2 becomes **XS618B4MAL5** with a 5 m cable.

| Specifications | | XS6●●B4M●U20 | XS6●●B4M●L2 |
|-----------------------------------|------------------------------|---|---------------------------------------|
| Sensor type | | | |
| Product certifications | | UL, CSA, CE | |
| Connection | Connector | 1/2"-20UNF | — |
| | Pre-cabled | — | Length 2 m |
| Operating zone | Ø 18 | mm 0–9.6 (0–0.38 in.) | |
| | Ø 30 | mm 0–17.6 (0–0.69 in.) | |
| Differential travel | | % 1–15 of effective sensing distance (Sr) | |
| Degree of protection | Conforming to IEC 60529 | IP 65 and IP 67 | IP 65 and IP 68, double insulation □ |
| Storage temperature | | °C -40 to +85 (-40 to +185 °F) | |
| Operating temperature | | °C -25 to +70 (-13 to +158 °F) | |
| Materials | Case | Nickel plated brass | |
| | Sensing face | PPS | |
| | Cable | — | PvR 2 x 0.34 mm ² (22 AWG) |
| Vibration resistance | Conforming to IEC 60068-2-6 | 25 gn, amplitude ± 2 mm (f = 10 to 55 Hz) | |
| Shock resistance | Conforming to IEC 60068-2-27 | 50 gn, duration 11 ms | |
| Output state indication | | Yellow LED: 4 viewing ports at 90° | Yellow LED: circular |
| Rated supply voltage | | V ~ or — 24–240 (~ 50/60 Hz) | |
| Voltage limits (including ripple) | | V ~ or — 20–264 | |
| Switching capacity | | mA ~ 5–300 or — 5–200 (1) | |
| Voltage drop, closed state | | V ≤ 5.5 | |
| Residual current, open state | | mA ≤ 0.8 | |
| Maximum switching frequency | XS618B4M●●● | Hz ~ 25 or — 1000 | |
| | XS630B4M●●● | Hz ~ 25 or — 300 | |
| Delays | First-up | ms ≤ 30 XS618B4M●●● and XS630B4M●●● | |
| | Response | ms ≤ 0.5 | |
| | Recovery | ms ≤ 0.5 XS618B4M●●●, ≤ 2 XS630B4M●●● | |

(1) A 0.4 A "fast-acting" fuse must be connected in series with the load.

Wiring diagrams

| Connector | Pre-cabled | 2-wire ~ or — |
|------------|-----------------------|-----------------------------|
| 1/2"-20UNF | BU: Blue BN: Brown | NO or NC output |
| | | |
| | | ±: on connector models only |

Setup

Minimum mounting distances (mm)

| | Side by side | Face to face | Facing a metal object |
|------|--------------|--------------|-----------------------|
| Ø 18 | e ≥ 72 | e ≥ 144 | e ≥ 36 |
| Ø 30 | e ≥ 120 | e ≥ 264 | e ≥ 66 |

Dimensions (mm)

| XS6 | Pre-cabled (mm) | | Connector (mm) | | |
|------|-----------------|----|----------------|----|----|
| | a | b | a | b | c |
| Ø 18 | 60 | 44 | 72 | 44 | 8 |
| Ø 30 | 63 | 41 | 74 | 41 | 13 |

(1) LED

Schneider Electric USA, Inc.

www.SeSensors.com

Schneider Electric Sensor
Competency Center
1875 Founders Drive
Dayton OH 45420
(800) 435-2121

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