# The essential guide of Detection

## helping you easily select the right product

# 2010

Schneider Electric

A complete offer for resolving your most commonly encountered detection problems:
- product selection simplified
- product availability simplified
- installation and setting-up simplified
- maintenance simplified
- detection simplified using a single supplier.

Improved simplicity for improved productivity.

## OsiSense

It's the schneider Electric range name of all the detection products.
Select the sensor according to your specific requirements, in a selection of selling products.

# Detection

**Limit switches** ..... 2 to 11
***Detection by contact of rigid objects***
Object speed ≤ 1.5 m/s, **OsiSense XC**

**Sensors for pressure control** ..... 12 to 17
***Detection by contact with fluid***
Electronic or electromechanical pressure and vacuum switches, pressure sensors -1…600 bars, **OsiSense XM**

**Inductive proximity sensors** ..... 18 to 28
***Detection without contact of metal objects***
Sensor / object distance ≤ 60 mm, **OsiSense XS**

**Capacitive proximity sensors** ..... 29
***Detection without contact of insulating materials or conductive materials***
Sensor / object distance ≤ 20 mm, **OsiSense XT**

**Photo-electric sensors** ..... 30 to 41
***Detection without contact of any object***
Detection from a few millimetres to several tens of metres, **OsiSense XU**

**Ultrasonic sensors** ..... 42 and 43
***Detection without contact of any object of any material***
Detection from a few millimetres up to 8 metres, **OsiSense XX**

**Rotary encoders** ..... 44 and 45
***Opto-electronic detection***
Incremental or absolute - single turn and multiturn, **OsiSense XCC**

**Radio frequency identification** ..... 46 and 47
***13.56 MHz RFID detection***
Complete range of RFID tags and compact stations, **OsiSense XG**

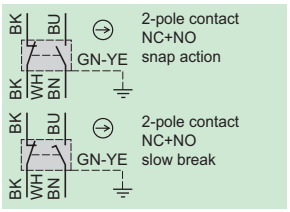
**Safety switches** ..... 48
**Preventa XCS**

# Limit switches

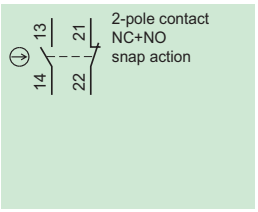
## Compact and miniature, complete switches

(variable composition, see pages 34-35)

**XCMD**




**XCKT**



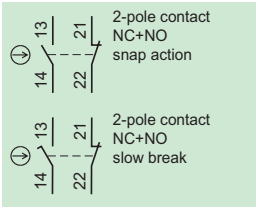
### Miniature XCMD metal, pre-cabled; fixing by the body or by the head

| Type of operator | | Metal end plunger | Steel roller plunger | Thermoplastic roller lever | Steel roller lever | Variable length thermoplastic roller lever | M12 head metal end plunger |
|---|---|---|---|---|---|---|---|
| Mechanical durability (millions of operating cycles) | | 10 | 10 | 10 | 10 | 10 | 10 |
| Actuation speed (in m/s) | | 0.5 | 0.5 | 1.5 | 1.5 | 1.5 | 0.5 |
| Switches conforming to standard IEC 947-5-1 section 3 | | ⊖ | ⊖ | ⊖ | ⊖ | ⊖ | ⊖ |
| Product certification | | CE - UL - CSA - CCC | | | | | |
| Degree of protection conforming to IEC 60529 | | IP 66 and IP 67 | | | | | |
| Rated operational characteristics | | AC-15; B300 (Ue = 240 V, Ie = 1.5 A) / DC-13; R300 (Ue = 250 V, Ie = 0.1 A) | | | | | |
| Fixing centres (mm) | | 20 | | | | | M12 x 1 |
| Body dimensions (mm) W x D x H | | 30 x 16 x 50 | | | | | |
| **Connection** | Cable | Pre-cabled, adjustable direction, length = 1 m (other lengths available on request) | | | | | |
| Complete switch | 2-pole NC+NO snap action | **XCMD2110L1** | **XCMD2102L1** | **XCMD2115L1** | **XCMD2116L1** | **XCMD2145L1** | **XCMD21F0L1** |
| | 2-pole NC+NO break before make, slow break | **XCMD2510L1** | **XCMD2502L1** | **XCMD2515L1** | **XCMD2516L1** | **XCMD2545L1** | **XCMD25F0L1** |
| | Connector | M12 | | | | | |
| Complete switch | NC+NO snap action (M12-5 pins) | **XCMD2110C12** | **XCMD2102C12** | **XCMD2115C12** | **XCMD2116C12** | **XCMD2145C12** | **XCMD21F0C12** |
| | 1C/O snap action (M12-4 pins) (1) | **XCMD2110M12** | **XCMD2102M12** | **XCMD2115M12** | **XCMD2116M12** | **XCMD2145M12** | **XCMD21F0M12** |

(1) Although their design is identical to the pre-cabled switches, the switches incorporating an M12 4-pin connector cannot be marked with the symbol because they are single-pole C/O.
⊖ Positive opening operation.

ISO entry (to EN 50262)

**XCKP/XCKD**




⊖ Positive opening operation.

### Compact XCKD metal and XCKP plastic conforming to standard EN 50047

| Type of operator | | Metal end plunger | Steel roller plunger | Thermoplastic roller lever plunger, horizontal actuation in 1 direction | M18 head metal end plunger | M18 head steel roller plunger |
|---|---|---|---|---|---|---|
| Mechanical durability (millions of operating cycles) | | 15 | 10 | 15 | 10 | 10 |
| Actuation speed (in m/s) | | 0.5 | 0.5 | 1 | 0.5 | 0.5 |
| Switches conforming to standard IEC 947-5-1 section 3 | | ⊖ | ⊖ | ⊖ | ⊖ | ⊖ |
| Product certification | | CE - CSA - CCC - GOST | | | | |
| Degree of protection conforming to IEC 60529 | | IP 66 and IP 67 | | | | |
| Rated operational characteristics | | AC-15; A300 (Ue = 240 V, Ie = 3 A) / DC-13; Q300 (Ue = 250 V, Ie = 0.27 A) | | | | |
| Cable entry | | 1 tapped entry for ISO M16 x 1.5 cable gland (3) or M12 connector | | | | |
| Fixing centres (mm) | | 20 | 20 | 20 | M18 x 1 | M18 x 1 |
| Body dimensions (mm) W x D x H | | 31 x 30 x 65 | | | | |
| **Metal switches** | | | | | | |
| Complete switch | 2-pole NC+NO snap action | **XCKD2110P16** | **XCKD2102P16** | **XCKD2121P16** | **XCKD21H0P16** | **XCKD21H2P16** |
| | 2-pole NC+NO break before make, slow break | **XCKD2510P16** | **XCKD2502P16** | **XCKD2521P16** | **XCKD25H0P16** | **XCKD25H2P16** |
| | 2-pole NC+NO snap action (M12-5 pins) | **XCKD2110M12** | **XCKD2102M12** | **XCKD2121M12** | **XCKD21H0M12** | **XCKD21H2M12** |
| **Plastic, double insulated switches** | | | | | | |
| Complete switch | 2-pole NC+NO snap action | **XCKP2110P16** | **XCKP2102P16** | **XCKP2121P16** | **XCKP21H0P16** | **XCKP21H2P16** |
| | 2-pole NC+NO break before make, slow break | **XCKP2510P16** | **XCKP2502P16** | **XCKP2521P16** | **XCKP25H0P16** | **XCKP25H2P16** |
| | 2-pole NC+NO snap action (M12-4 pins) | **XCKP2110M12** | **XCKP2102M12** | **XCKP2121M12** | **XCKP21H0M12** | **XCKP21H2M12** |

(3) For Pg 11 cable entries, replace P16 by G11. Example: XCKD2110**P16** becomes XCKD2110**G11**.
For other cable entries, see customised assembly on page 1/34.



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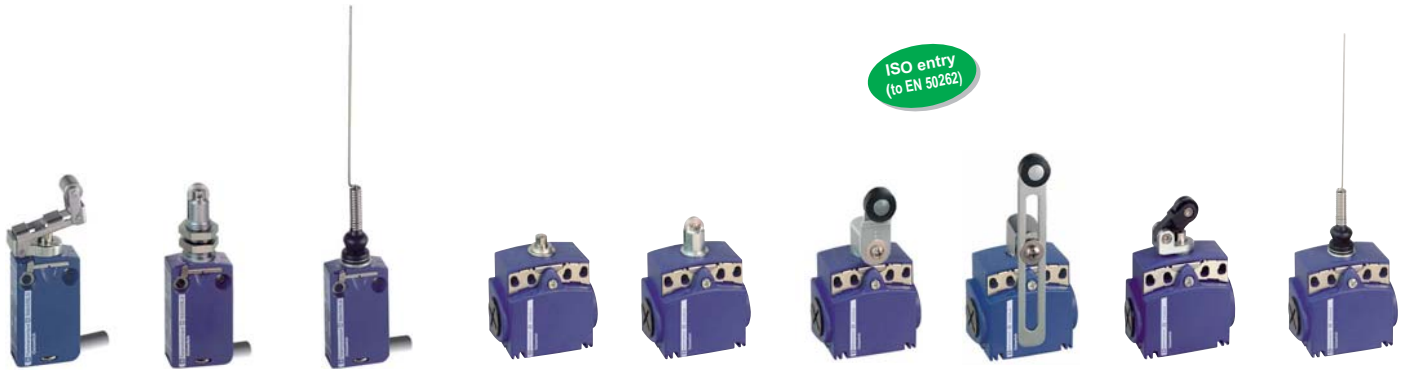
Other versions: **please consult your Schneider Electric agency.**




## Compact XCKT plastic, 2 cable entries

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Retractable steel roller lever plunger | M12 head steel roller plunger | "Cat's whisker" | Metal end plunger | Steel roller plunger | Thermoplastic roller lever | Thermoplastic roller lever plunger, horizontal actuation | "Cat's whisker" | "Cat's whisker" |
| 10 | 10 | 5 | 15 | 10 | 10 | 15 | 5 | 5 |
| 0,5 | 0.1 | 1 | 0.5 | 0.5 | 1.5 | 1 | 1 | 1 |
| ⊖ | ⊖ | – | ⊖ | ⊖ | ⊖ | ⊖ | – | – |
| | | | CE - CSA - CCC - GOST | | | | | |
| | | | IP 66 and IP 67 | | | | | |
| | | | AC-15; A300 (Ue = 240 V, Ie = 3 A) / DC-13; Q300 (Ue = 250 V, Ie = 0.27 A) | | | | | |
| 20 | M12 x 1 | 20 | 20 or 40 | | | | | |
| | | | 58 x 30 x 51 | | | | | |
| | | | 2 tapped entries for ISO M16 x 1.5 cable gland (2) | | | | | |
| **XCMD2124L1** | **XCMD21F2L1** | **XCMD2106L1** | **XCKT2110P16** | **XCKT2102P16** | **XCKT2118P16** | **XCKT2145P16** | **XCKT2121P16** | **XCKT2106P16** |
| **XCMD2524L1** | **XCMD25F2L1** | **XCMD2506L1** | – | – | – | – | – | – |
| **XCMD2124C12** | **XCMD21F2C12** | **XCMD2106C12** | – | – | – | – | – | – |
| **XCMD2124M12** | **XCMD21F2M12** | **XCMD2106M12** | – | – | – | – | – | – |

(2) For Pg 11 cable entries, replace P16 by G11. Example: XCKT2110**P16** becomes XCKT2110**G11**.

## Application - XCPR and XCDR with manual reset

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Thermoplastic roller lever | Variable length Thermoplastic roller lever | Thermoplastic roller lever Ø 50 mm | "Cat's whisker" | Metal end plunger | Steel roller plunger | Thermoplastic roller lever plunger, horizontal actuation in 1 direction | Thermoplastic roller lever plunger, vertical actuation in 1 direction | Thermoplastic roller lever |
| 10 | 10 | 10 | 5 | 1 | 1 | 1 | 1 | 1 |
| 1.5 | 1.5 | 1.5 | 1 | 0.5 | 0.5 | 1 | 1 | 1.5 |
| ⊖ | ⊖ | ⊖ | – | ⊖ | ⊖ | ⊖ | ⊖ | ⊖ |
| | | | | CE - CSA - CCC - GOST | | | | |
| | | | | IP 66 and IP 67 | | | | |
| | | | | AC-15; A300 (Ue = 240 V, Ie = 3 A) / DC-13; Q300 (Ue = 250 V, Ie = 0.27 A) | | | | |
| | | | | 1 tapped entry for ISO M20 x 1.5 cable gland (4) | | | | |
| 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| | | | | 31 x 30 x 95 | | | | |
| **XCKD2118P16** | **XCKD2145P16** | **XCKD2139P16** | **XCKD2106P16** | **XCDR2110P20** | **XCDR2102P20** | **XCDR2121P20** | **XCDR2127P20** | **XCDR2118P20** |
| **XCKD2518P16** | **XCKD2545P16** | **XCKD2539P16** | **XCKD2506P16** | **XCDR2510P20** | **XCDR2502P20** | **XCDR2521P20** | **XCDR2527P20** | **XCDR2518P20** |
| **XCKD2118M12** | **XCKD2145M12** | **XCKD2139M12** | **XCKD2106M12** | – | – | – | – | – |
| **XCKP2118P16** | **XCKP2145P16** | **XCKP2139P16** | **XCKP2106P16** | **XCPR2110P20** | **XCPR2102P20** | **XCPR2121P20** | **XCPR2127P20** | **XCPR2118P20** |
| **XCKP2518P16** | **XCKP2545P16** | **XCKP2539P16** | **XCKP2506P16** | **XCPR2510P20** | **XCPR2502P20** | **XCPR2521P20** | **XCPR2527P20** | **XCPR2518P20** |
| **XCKP2118M12** | **XCKP2145M12** | **XCKP2139M12** | **XCKP2106M12** | – | – | – | – | – |

(4) For Pg 13.5 cable entries, replace P20 by G13. Example: XCDR2110**P20** becomes XCDR2110**G13**.
For other cable entries, see customised assembly on page 1/34.

# Limit switches
## Customised assembly of miniature and compact

## **Heads** - common to miniature and compact bodies

### Metal plunger and multi-directional heads

| Description | Metal end plunger | Metal end plunger with protective elastomer boot | Steel roller plunger | Retractable steel roller lever plunger | Thermoplastic roller lever plunger, horizontal actuation |
|---|---|---|---|---|---|
| | | | | | |
| Reference | ⊖ **ZCE10** | ⊖ **ZCE11** | ⊖ **ZCE02** | ⊖ **ZCE24** (2) | ⊖ **ZCE21** |

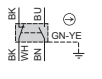
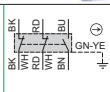
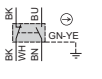
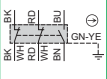
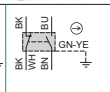
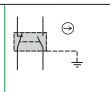
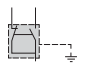
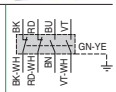
### Metal rotary heads and levers

| Description | Rotary head without lever, spring return, for actuation from LH or RH side | Thermoplastic roller lever, track: 24/31 mm (ZCMD) 29/36 mm (ZCD/P/T) | Steel roller lever, track: 24/31 mm (ZCMD) 29/36 mm (ZCD/P/T) | Thermoplastic roller lever, track: 16/39 mm (ZCMD) 21/44 mm (ZCD/P/T) | Steel roller lever, track: 16/39 mm (ZCMD) 21/44 mm (ZCD/P/T) |
|---|---|---|---|---|---|
| | | | | | |
| Reference | ⊖ **ZCE01** | ⊖ **ZCY15** (2) | ⊖ **ZCY16** (2) | ⊖ **ZCY25** (2) | ⊖ **ZCY25** (2) |

(1) Recommended for use with bodies: **ZCD... / ZCP... / ZCT...** (2) Recommended for use with bodies: **ZCMD...**

## **Bodies**

### Miniature

| Type of contact |  2-pole NO+NC Snap action |  3-pole NC+NC+NO Snap action |  2-pole NC+NO Slow break |  3-pole NC+NC+NO Slow break |  2-pole NO+NC Snap action |  2-pole NC+NO Snap action Connector 5 pin |  1-pole 1C/O Snap action Connector 4 pin |  4-pole NC+NC+NO+NO Snap action |
|---|---|---|---|---|---|---|---|---|
| Reference of metal body | **ZCMD21** | **ZCMD39** | **ZCMD25** | **ZCMD37** | – | **ZCMD21C12** | **ZCMD21M12** | – |
| Cable L = 1 m | – | – | – | – | **ZCMD21L1** (3) | – | – | **ZCMD41L1** |
| Cable L = 2 m | – | – | – | – | **ZCMD21L2** (3) | – | – | **ZCMD41L2** |
| Cable L = 5 m | – | – | – | – | **ZCMD21L5** (3) | – | – | **ZCMD41L5** |

(3) For contact 2-pole NC+NO slow break, replace 21 by 25. Example: ZCMD**21**L1 becomes ZCMD**25**L1

## **Connection** of miniature bodies

| Specific pre-cabled connection components | for ZCMD21 | for ZCMD39 | for ZCMD25 | for ZCMD37 | **Option:** pre-wired M12 connector, L = 2 m 5-pin | 4-pin |
|---|---|---|---|---|---|---|
| L = 1 m | **ZCMC21L1** | **ZCMC39L1** | **ZCMC25L1** | **ZCMC37L1** | | |
| L = 2 m | **ZCMC21L2** | **ZCMC39L2** | **ZCMC25L2** | **ZCMC37L2** | | |
| L = 5 m | **ZCMC21L5** | **ZCMC39L5** | **ZCMC25L5** | **ZCMC37L5** | **XZCP1164L2** | **XZCP1141L2** |

⊖ Positive opening operation.



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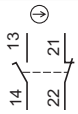
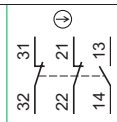
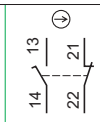
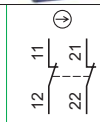
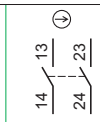
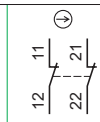
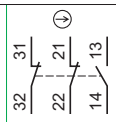
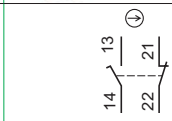
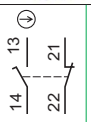
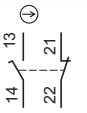
Other versions: **please consult your Schneider Electric agency.**

| Thermoplastic roller lever plunger, vertical actuation | M12 head metal end plunger | M18 head metal end plunger | M12 head steel roller plunger | M18 head steel roller plunger | Spring rod | Spring rod with plastic end | "Cat's whisker" |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| → **ZCE27** | → **ZCEF0**(2) | → **ZCEH0**(1) | → **ZCEF2**(2) | → **ZCEH2**(1) | **ZCE08** | **ZCE07** | **ZCE06** |

| Thermoplastic roller lever, track: 20/36 mm (ZCMD) 24/40 mm (ZCD/P/T) | Steel roller lever, track: 20/36 mm (ZCMD) 24/40 mm (ZCD/P/T) | Ceramic roller lever | Variable length thermoplastic roller lever | Round, glass fibre rod lever Ø 3 mm L = 125 mm | Metal spring-rod lever | Thermoplastic roller lever Ø 50 mm | Adjustable thermo-plastic roller lever Ø 50 mm |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| → **ZCY18**(1) | → **ZCY19**(1) | → **ZCY22** | → **ZCY45** | **ZCY55** | **ZCY91** | → **ZCY39** | → **ZCY49** |

## Compact

| Type of contact |  |  |  |  |  |  |  |  | |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2-pole NC+NO Snap action | 3-pole NC+NC+NO Snap action | 2-pole NC+NO Slow break | 2-pole NC+NC Slow break | 2-pole NO+NO Slow break | 2-pole NC+NC Snap action | 3-pole NC+NC+NO Slow break | 2-pole NC+NO - Snap action Connector 5-pin | Connector 4-pin | 2-pole NC+NO Snap action | 2-pole NC+NO Slow break |
| Ref. metal body | **ZCD21** | **ZCD39** | **ZCD25** | **ZCD27** | **ZCD28** | **ZCD29** | **ZCD37** | **ZCD21M12** | **–** | **–** | **–** |
| Ref. plastic body | **ZCP21** | **ZCP39** | **ZCP25** | **ZCP27** | **ZCP28** | **ZCP29** | **ZCP37** | **–** | **ZCP21M12** | **ZCT21P16** (1) | **ZCT25P16** (1) |

(1)

## **Connection** of compact bodies

| Interchangeable outlet for cable gland | | | | | | |
|---|---|---|---|---|---|---|
| Description | For ISO M16 cable gland | For ISO M20 cable gland | For Pg 11 cable gland | For Pg 13.5 cable gland | For 1/2" NPT cable gland | For PF 1/2 (G12) cable gland |
| Metal | **ZCDEP16** | **ZCDEP20** | **ZCDEG11** | **ZCDEG13** | **ZCDEN12** | **ZCDEF12** |
| Plastic | **ZCPEP16** | **ZCPEP20** | **ZCPEG11** | **ZCPEG13** | **ZCPEN12** | **ZCPEF12** |

Option: pre-wired M12 connector, L = 2 m

5-pin

4-pin

**XZCP1164L2** **XZCP1141L2**

ZCT Pg 11 cable gland versions: replace the suffix P16 by G11.
Example:
ZCT21**P16** becomes ZCT21**G11**

ZCT 1/2" NPT versions: replace the suffix P16 by N12 (adaptor).
Example:
ZCT21**P16** becomes ZCT21**N12**

1 Cable entry 1/2" NPT
1 Cable entry Pg11

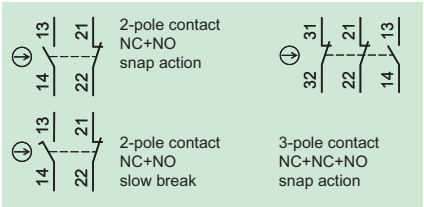
Other versions: **please consult your Schneider Electric agency.**

# Limit switches

## Classic - XCKM, XCKL, complete switches

ISO entry (to EN 50262)

### XCKM




### Type XCKM metal, 3 cable entries, XCKL metal, 1 cable entry

| Type of operator | | Metal end plunger | Steel roller plunger | Roller lever plunger, horizontal actuation in 1 direction | Thermoplastic roller lever | "Cat's whisker" |
|---|---|---|---|---|---|---|
| Mechanical durability (millions of operating cycles) | | 20 | 20 | 20 | 15 | 10 |
| Actuation speed (in m/s) | | 0.5 | 0.5 | 1.5 | 1.5 | 0.5 |
| Product certification | | CE - UL - CSA - CCC - GOST - C-TICK - BV | | | | |
| Degree of protection conforming to IEC 60529 | | IP 665 | | | | |
| Rated operational characteristics | | AC-15; A300 (Ue = 240 V, Ie = 3 A) / DC-13; Q300 (Ue = 250 V, Ie = 0.27 A) | | | | |
| Cable entry (1) | XCKM | 3 tapped entries for ISO M20 x 1.5 cable gland (2 entries fitted with blanking plugs) | | | | |
| | XCKL | 1 cable entry with cable gland | | | | |
| Fixing centres (mm) | | 41 | | | | |
| Body dimensions (mm) W x D x H | XCKM / XCKL | 64 x 30 x 64 / 52 x 30 x 72 | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Complete switch** | **XCKM** | | | | | |
| | 2-pole NC+NO snap action | ⊖ **XCKM110H29** | ⊖ **XCKM102H29** | ⊖ **XCKM121H29** | ⊖ **XCKM115H29** | **XCKM106H29** |
| | 2-pole NC+NO, break before make, slow break | ⊖ **XCKM510H29** | ⊖ **XCKM502H29** | ⊖ **XCKM521H29** | ⊖ **XCKM515H29** | – |
| **Complete switch** | **XCKL** | | | | | |
| | 2-pole NC+NO snap action | ⊖ **XCKL110** | ⊖ **XCKL102** | ⊖ **XCKL121** | ⊖ **XCKL115** | **XCKL106** |

(1) For Pg 13.5 cable entries delete the reference suffix H29. Example: XCKM110**H29** becomes XCKM110.
⊖ Positive opening operation.

## Classic - XCKM, XCKL,
## Customised assembly - Body/contact sub-assemblies

### Type XCKM metal, 3 cable entries

Type of contact

| | 2-pole NC+NO snap action | 2-pole NC+NO slow break | 3-pole NC+NC+NO snap action | 3-pole NC+NC+NO slow break |
|---|---|---|---|---|
| Reference of body with contact block | ⊖ **ZCKM1H29** | ⊖ **ZCKM5H29** | ⊖ **ZCKMD39H29** | ⊖ **ZCKMD37H29** |
| XCKL reference of body with contact block (2) | ⊖ **ZCKL1** | ⊖ **ZCKL5** | – | – |
| Reference of contact block only | ⊖ **XE2SP2151** | ⊖ **XE2NP2151** | ⊖ **XE3SP2141** | ⊖ **XE3NP2141** |

(2) For cable entry 1/2" NPT, add H7. Example: XCKL1 becomes XCKL1**H7**



Schneider Electric

Other versions: **please consult your Schneider Electric agency.**

# Operating heads, complete or for customer assembly

Complete switch

=

Body/contact assembly

+

Head

+

Lever

## Rotary or multi-directional heads

| | with thermoplastic roller lever (2) | with steel roller lever (2) | with variable length thermoplastic roller lever (2) | with Ø 6 mm thermoplastic rod L = 200 mm (3) | with thermoplastic roller lever (3) for actuation from left **AND** right or left **OR** right | with "Cat's whisker" | with spring rod |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| Reference | ⊖ **ZCKD15** | ⊖ **ZCKD16** | **ZCKD41** | **ZCKD59** | ⊖ **ZCKD31** | **ZCKD06** | **ZCKD08** |

## Plunger heads

| | with metal end plunger | with metal end plunger and protective boot | with steel roller plunger | with steel roller plunger and protective boot | with thermoplastic roller lever plunger, horizontal actuation in 1 direction | with steel roller lever plunger, horizontal actuation in 1 direction |
|---|---|---|---|---|---|---|
| | | | | | | |
| Reference | ⊖ **ZCKD10** | ⊖ **ZCKD109** | ⊖ **ZCKD02** | ⊖ **ZCKD029** | ⊖ **ZCKD21** | ⊖ **ZCKD23** |

## Rotary heads and separate levers

| | spring return, for actuation from left **AND** right or left **OR** right | lever with thermoplastic roller (2) | lever with steel roller (2) | variable length lever with thermoplastic roller (2) | variable length lever with steel roller (2) | rod, Ø 6 mm thermoplastic L = 200 mm (3) |
|---|---|---|---|---|---|---|
| | | | | | | |
| Reference | ⊖ **ZCKD05** | ⊖ **ZCKY31** | ⊖ **ZCKY33** | **ZCKY41** | **ZCKY43** | **ZCKY59** |

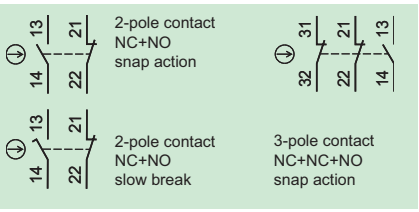
(2) Adjustable throughout 360° in 5° steps, or in 90° steps by reversing the notched washer.

(3) Adjustable throughout 360° in 5° steps, or in 45° steps by reversing the lever mounting.

# Limit switches

## Industrial - XCKJ, complete switches

**XCKJ**



### Type XCKJ metal, fixed body, conforming to standard EN 50041

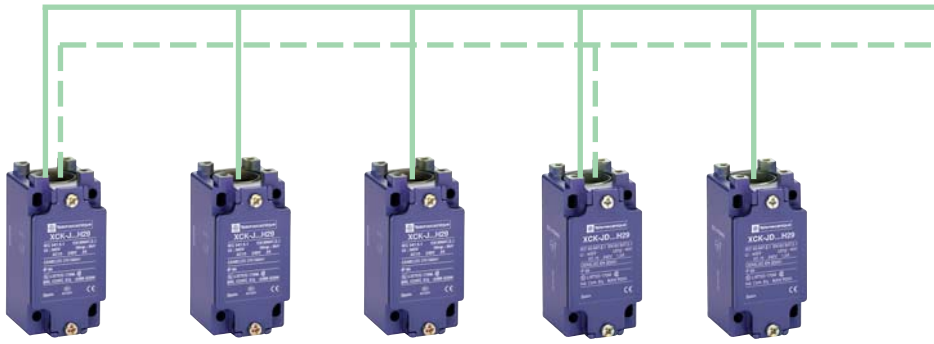
| Type of operator | Metal end plunger | Steel roller plunger | Thermoplastic roller lever | Steel roller lever | Variable length thermoplastic roller lever | Polyamide Ø 6 mm rod lever L = 200 mm |
|---|---|---|---|---|---|---|
| Mechanical durability (millions of operating cycles) | 30 | 25 | 30 | 30 | 30 | 30 |
| Actuation speed (in m/s) | 0.5 | 1 | 1.5 | 1,5 | 1.5 | 1.5 |
| Product certification | CE - UL - CSA - CCC - GOST - C-TICK - BV | | | | | |
| Degree of protection conforming to IEC 60529 | IP 667 | | | | | |
| Rated operational characteristics | AC-15; A300 (Ue = 240 V, Ie = 3 A) / DC-13; Q300 (Ue = 250 V, Ie = 0.27 A) | | | | | |
| Cable entry (1) | 1 tapped entry for ISO M20 x 1.5 cable gland | | | | | |
| Fixing centres (mm) | 30 x 60 | | | | | |
| Body dimensions (mm) W x D x H | 40 x 44 x 77 | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Complete switch** | **M20** | N2-pole NC+NO snap action | ⊖ **XCKJ161H29** | ⊖ **XCKJ167H29** | ⊖ **XCKJ10511H29** | ⊖ **XCKJ10513H29** | **XCKJ10541H29** | **XCKJ10559H29** |
| | | 2-pole NC+NO break before make, slow break | ⊖ **XCKJ561H29** | ⊖ **XCKJ567H29** | ⊖ **XCKJ50511H29** | ⊖ **XCKJ50513H29** | **XCKJ50541H29** | **XCKJ50559H29** |
| | **1/2" NPT** | 2-pole NC+NO snap action | ⊖ **XCKJ161H7** | ⊖ **XCKJ167H7** | ⊖ **XCKJ10511H7** | ⊖ **XCKJ10513H7** | **XCKJ10541H7** | **XCKJ10559H7** |
| | **M12 5P** | 2-pole NC+NO snap action | ⊖ **XCKJ161D** | ⊖ **XCKJ167D** | ⊖ **XCKJ10511D** | ⊖ **XCKJ10513D** | **XCKJ10541D** | **XCKJ10559D** |

(1) For Pg 13.5 cable entry delete the reference suffix H29. Example: XCKJ161**H29** becomes XCKJ161.

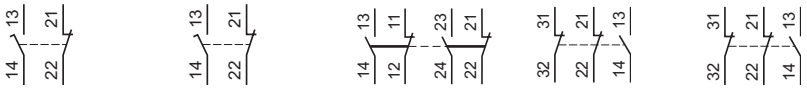
⊖ Positive opening operation.

## Industrial - XCKJ, Customised assembly - Body/contact sub-assemblies



### Type XCKJ metal, 1 cable entry

Type of contact



| | | 2-pole NC+NO snap action | 2-pole NC+NO slow break | 2 C/O snap action Simultaneous | 3-pole NC+NC+NO snap action | 3-pole NC+NC+NO slow break |
|---|---|---|---|---|---|---|
| Cable entry (1) | | 1 tapped entry for ISO M20 x 1.5 cable gland | | | | |
| Reference of body with contact block | M20 | ⊖ **ZCKJ1H29** | ⊖ **ZCKJ5H29** | **ZCKJ2H29** | ⊖ **ZCKJD39H29** | ⊖ **ZCKJD37H29** |
| | Pg13 | ⊖ **ZCKJ1** | ⊖ **ZCKJ5** | **ZCKJ2** | – | – |
| | 1/2" NPT | ⊖ **ZCKJ1H7** | ⊖ **ZCKJ5H7** | **ZCKJ2H7** | – | – |
| | M12 (5 pin) | ⊖ **ZCKJ1D** | ⊖ **ZCKJ5D** | – | – | – |
| Reference of contact block only | | ⊖ **XE2SP2151** | ⊖ **XE2NP2151** | – | ⊖ **XE3SP2141** | ⊖ **XE3NP2141** |



Other versions: **please consult your Schneider Electric agency.**

# Operating heads, complete or for customer assembly

Complete switch

=

Body/contact assembly

+

Head

+

Lever

## Plunger or multi-directional heads

| | with reinforced steel roller end plunger | with metal end plunger | with thermoplastic roller lever plunger, 1 direct. of actuation | with steel roller lever plunger, 1 direct. of actuation | with steel roller end plunger | with steel ball bearing end plunger | End steel roller plunger with protective boot |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| Référence | ZCKE67 | ZCKE61 | ZCKE21 | ZCKE23 | ZCKE62 | ZCKE66 | ZCKE629 |

| | with metal side plunger | Side steel roller plunger, horizontal | Side steel roller plunger, vertical | with spring rod | with “Cat’s whisker” |
|---|---|---|---|---|---|
| | | | | | |
| Reference | ZCKE63 | ZCKE64 | ZCKE65 | ZCKE08 | ZCKE06 |

## Separate rotary heads and levers

| | spring return for actuation from left **AND** right or left **OR** right | lever with thermoplastic roller (2) | lever with steel roller (2) | variable length lever with thermoplastic roller (2) | variable length lever with steel roller (2) | rod, Ø 6 mm thermoplastic L = 200 mm (2) | square rod lever, steel, ⍁ 3 mm L = 125 mm (2) | round rod lever, steel, Ø 3 mm L = 125 mm (2) | spring lever with thermoplastic end (3) | spring-metal rod lever (3) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |
| Reference | ZCKE05 | ZCKY11 | ZCKY13 | ZCKY41 | ZCKY43 | ZCKY59 | ZCKY51 | ZCKY53 | ZCKY81 | ZCKY91 |

| | stay put for actuation from left **AND** right | forked arm lever with thermoplastic rollers, 1 track (2) | forked arm lever with thermoplastic rollers, 2 track (2) |
|---|---|---|---|
| | | | |
| Reference | ZCKE09 | ZCKY71 | ZCKY61 |

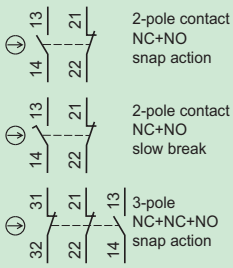
(2) Adjustable throughout 360° in 5° steps, or in 45° steps by reversing the lever mounting.
(3) Adjustable throughout 360° in 5° steps, or in 90° steps by reversing the notched washer.

# OsiSense XC

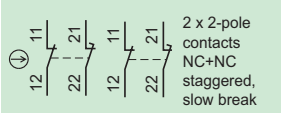
# Limit switches

## Classic - XCKS, complete switches

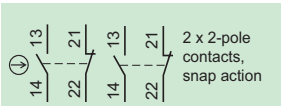
**XCKS**




**XCKMR**




**XCR**




ISO entry (to EN 50262)

**Type XCKS plastic, double insulated, conforming to standard EN 50041**

| Type of operator | Metal end plunger | Steel roller plunger | Thermoplastic roller lever | Variable length thermoplastic roller lever | Rubber roller lever Ø 50 mm | Polyamide Ø 6 mm rod lever L = 200 mm |
|---|---|---|---|---|---|---|
| Mechanical durability (millions of operating cycles) | 25 | 15 | 20 | 20 | 20 | 20 |
| Actuation speed (in m/s) | 0.5 | 0.5 | 1.5 | 1.5 | 1 | 1 |
| Product certification | CE - UL - CSA - CCC - GOST - C-TICK | | | | | |
| Degree of protection conforming to IEC 60529 | IP 653 | | | | | |
| Rated operational characteristics | AC-15; A300 (Ue = 240 V, Ie = 3 A) / DC-13; Q300 (Ue = 250 V, Ie = 0.27 A) | | | | | |
| Cable entry (1) | 1 tapped entry for ISO M20 x 1.5 cable gland | | | | | |
| Fixing centres (mm) | 30 x 60 | | | | | |
| Body dimensions (mm) W x D x H | 40 x 36 x 72.5 | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Complete switch** | 2-pole NC+NO snap action | ⊖ **XCKS101H29** | ⊖ **XCKS102H29** | ⊖ **XCKS131H29** | **XCKS141H29** | **XCKS139H29** | **XCKS159H29** |
| | 2-pole NC+NO break before make, slow break | ⊖ **XCKS501H29** | ⊖ **XCKS502H29** | ⊖ **XCKS531H29** | **XCKS541H29** | **XCKS539H29** | **XCKS559H29** |
| Body | 2-pole NC+NO snap action | ⊖ **ZCKS1H29** | ⊖ **ZCKS1H29** | ⊖ **ZCKS1H29** | ⊖ **ZCKS1H29** | ⊖ **ZCKS1H29** | ⊖ **ZCKS1H29** |
| | 2-pole NC+NO break before make, slow break | ⊖ **ZCKS5H29** | ⊖ **ZCKS5H29** | ⊖ **ZCKS5H29** | ⊖ **ZCKS5H29** | ⊖ **ZCKS5H29** | ⊖ **ZCKS5H29** |
| | 3-pole NC+NC+NO snap action | ⊖ **ZCKSD39H29** | ⊖ **ZCKSD39H29** | ⊖ **ZCKSD39H29** | ⊖ **ZCKSD39H29** | ⊖ **ZCKSD39H29** | ⊖ **ZCKSD39H29** |
| Associated head (including operator) | | ⊖ **ZCKD01** | ⊖ **ZCKD02** | ⊖ **ZCKD31** | **ZCKD41** | **ZCKD39** | **ZCKD59** |
| Operating lever for rotary head | | – | – | ⊖ **ZCKY31** | **ZCKY41** | **ZCKY39** | **ZCKY59** |
| **Complete switch** | with 2-pole snap action contacts | | | | | | |
| | 2 x NC+NO contacts actuated in each direction | – | – | – | – | – | – |
| | 1 x NC+NO contact actuated in each direction | – | – | – | – | – | – |
| **Complete switch** | 2 x single-pole C/O snap action contacts | – | – | – | – | – | – |
| | 2 x 2-pole NC+NC staggered, slow break contacts | – | – | – | – | – | – |

⊖ Positive opening operation.

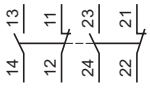
(1) For Pg 13.5 cable entry delete the reference suffix H29. Example: XCKJ161**H29** becomes XCKJ161.

## For severe applications - XC2J, Customised assembly - Body/contact sub-assemblies

**Type XC2J metal, fixed body, 1 cable entry incorporating cable gland**

Type of contact

Single-pole
1 C/O contact
snap action




Double-pole
2 C/O simultaneous contacts
snap action

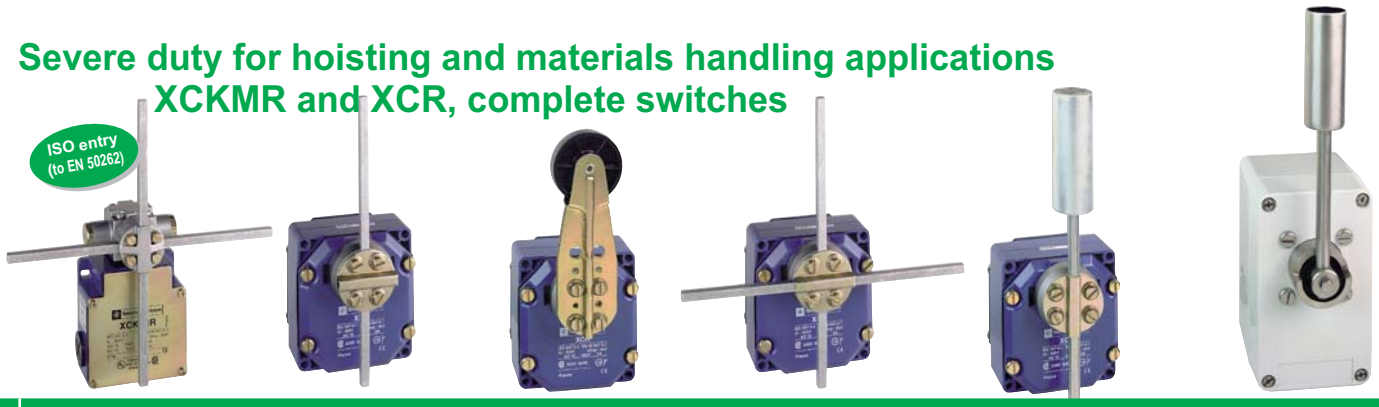
| | | |
|---|---|---|
| Reference of body with contact block | **ZC2JC1** | **ZC2JC2** |
| Reference of contact block only | **XCKZ01** | **XESP1021** |



Schneider Electric

Other versions: **please consult your Schneider Electric agency.**

# Severe duty for hoisting and materials handling applications
## XCKMR and XCR, complete switches




### Types XCKMR and XCR "Application - hoisting, materials handling, conveying"

| Square rod levers 6 mm, "crossed" | Square rod lever 6 mm | Large roller rod lever Ø 50 mm | Square rod levers 6 mm, "crossed" or "T" | Conveyor belt shift monitoring switches Galvanised steel operating lever | Conveyor belt shift monitoring switches Stainless steel operating lever |
|---|---|---|---|---|---|
| 2 | 10 | 10 | 10 | 0.3 | 0.3 |
| 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| CE - UL - CSA - GOST | CE - CSA - CCC - GOST | | | | |
| IP 545 | | | | IP 665 | |
| AC-15; A300 (Ue = 240 V, Ie = 3 A) / DC-13; Q300 (Ue = 250 V, Ie = 0.27 A) | | | | | |
| 3 x ISO M20 x 1.5 entries | 1 tapped entry for n° 13 cable gland (for ISO M20 x 1.5, adaptor DE9RA1620 must be ordered separately) | | | | |
| 61.5 | 85 x 75 | | | | 105 x 70 |
| 118 x 59 x 77 | 85 x 75 x 95 | | | | 85 x 87 x 146 |
| – | – | – | – | – | – |
| – | – | – | – | – | – |
| – | – | – | – | – | – |
| – | – | – | – | – | – |
| – | – | – | – | – | – |
| – | – | – | – | – | – |
| – | – | – | – | – | – |
| – | ⇒ **XCRA11**(2) | ⇒ **XCRA15** | ⇒ **XCRE18**(2) | – | – |
| – | ⇒ **XCRB11**(2) | – | ⇒ **XCRF17**(3) | – | – |
| – | | | | **XCRT115** | **XCRT315** (4) |
| **XCKMR54D1H29** (2) | – | – | – | – | – |

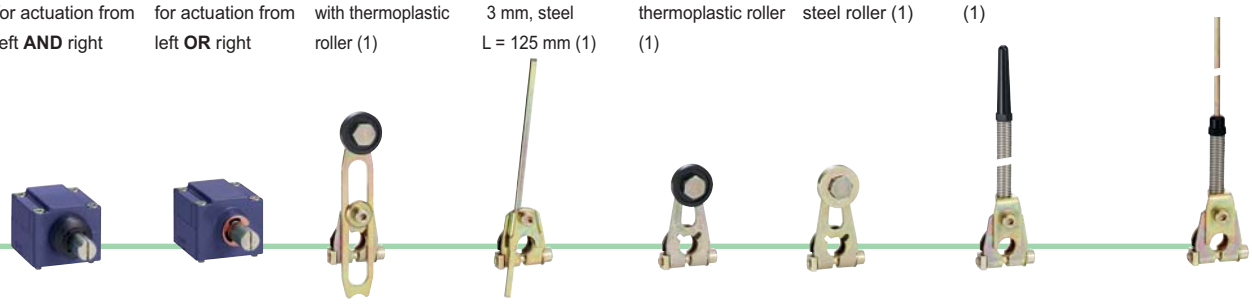
(2) Steel rods, L = 200 mm (3) Steel "T" rods, L = 200 mm, W = 300 mm. (4) Polyester enclosure

## Operating heads, complete or for customer assembly

### Plunger heads

| Reference | with metal end plunger | with steel roller end plunger |
|---|---|---|
| | **ZC2JE61** | **ZC2JE62** |

### Rotary heads and separate levers



| Reference | spring return for actuation from left **AND** right | spring return for actuation from left **OR** right | variable length lever with thermoplastic roller (1) | rigid rod 3 mm, steel L = 125 mm (1) | lever with thermoplastic roller (1) | lever with steel roller (1) | spring lever (1) | spring-rod lever |
|---|---|---|---|---|---|---|---|---|
| | **ZC2JE01** | **ZC2JE05** | **ZC2JY31** | **ZC2JY51** | **ZC2JY11** | **ZC2JY13** | **ZC2JY81** | **ZC2JY91** |

(1) Adjustable throughout 360°.

# Sensors for pressure control

## Electronic sensors XMLG

### Electrical connection by M12 connector

| Pressure range (bar) (1) | | -1…0 | 0…1 | 0…6 | 0…10 | 0…16 | 0…25 | 0…100 | 0…250 | 0…400 |
|---|---|---|---|---|---|---|---|---|---|---|
| Fluids controlled | | Hydraulic oils, air, fresh water, sea water, corrosive fluids from -15…+125°C | | | | | | | | |
| Ambient air temperature | | - 15…+ 85°C | | | | | | | | |
| Degree of protection (conforming to IEC 60529) | | IP 66 and IP 67 | | | | | | | | |
| Product certification | | CE - UL - CSA - GOST | | | | | | | | |
| Voltage limits | | 12…24 V DC, 8…33 V DC for 4…20 mA, 11.4…33V DC for 0…10 V | | | | | | | | |
| Dimensions (mm) Ø x L | | Ø 22.8 x 70 (not including connector) | | | | | | | | |
| Fluid connection (2) | | G 1/4" A (male) | | | | | | | | |
| Electrical connection (3) | | M12 connector | | | | | | | | |
| Type of output (4) | | 4…20 mA, 2-wire technique, 0…10V, 3-wire technique | | | | | | | | |
| Analogue output | 4…20 mA | **XMLGM01D21** | **XMLG001D21** | **XMLG006D21** | **XMLG010D21** | **XMLG016D21** | **XMLG025D21** | **XMLG100D21** | **XMLG250D21** | **XMLG400D21** |
| | 0…10 V | **XMLGM01D71** | **XMLG001D71** | **XMLG006D71** | **XMLG010D71** | **XMLG016D71** | **XMLG025D71** | **XMLG100D71** | **XMLG250D71** | **XMLG400D71** |

Available in bulk packs for selling in lots, please consult us.

**The XMLG range also includes pressure switches, please consult us.**

## Electronic sensors XMLE

### Electrical connection by DIN 43650 connector

| Setting range (bar) (1) | | -1…0 | 0…1 | 0…10 | 0…25 | 0…100 | 0…250 | 0…600 |
|---|---|---|---|---|---|---|---|---|
| Fluids controlled | | Hydraulic oils, air, fresh water, sea water, corrosive fluids from -15…+80°C | | | | | | |
| Ambient air temperature | | - 15…+ 80°C | | | | | | |
| Degree of protection (conforming to IEC 60529) | | IP 65 | | | | | | |
| Product certification | | CE - UL - CSA - GOST | | | | | | |
| Voltage limits | | 24 V DC, 11…33 V DC | | | | | | |
| Dimensions (mm) Ø x L | | Ø 40 x 90 (not including connector) | | | | | | |
| Fluid connection (2) | | G 1/4" A (male) | | | | | | |
| Electrical connection (3) | | DIN 43650 connector | | | | | | |
| Type of output (4) | Transmitter | 4…20 mA, 2-wire technique | | | | | | |
| | Pressure switch | PNP or NPN, normally closed (NC) | | | | | | |
| Analogue output | 4…20 mA | **XMLEM01U1C21** | **XMLE001U1C21** | **XMLE010U1C21** | **XMLE025U1C21** | **XMLE100U1C21** | **XMLE250U1C21** | **XMLE600U1C21** |
| NPN output | | **XMLEM01U1C31** | **XMLE001U1C31** | **XMLE010U1C31** | **XMLE025U1C31** | **XMLE100U1C31** | **XMLE250U1C31** | **XMLE600U1C31** |
| PNP output | | **XMLEM01U1C41** | **XMLE001U1C41** | **XMLE010U1C14** | **XMLE025U1C41** | **XMLE100U1C41** | **XMLE250U1C41** | **XMLE600U1C41** |

(1) Other sizes, please consult us.

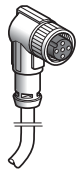
(2) Other fluid connections, please consult us.

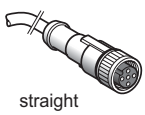
(3) Other types of connection, please consult us.

(4) Other types of output; 0…5 V, 0…10 V, etc., please consult us.

## Suitable female plug-in connectors

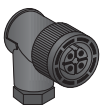
**Pre-wired connectors, L = 5 m** (without LED)

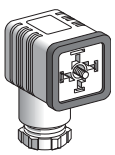




| | elbowed | straight |
|---|---|---|
| M12 | **XZCP1241L5** | **XZCP1141L5** |

**Other connectors**





| Screw terminal | DIN 43650A |
|---|---|
| **XZCC12FCM40B** | **XZCC43FCP40B** |



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Other versions: **please consult your Schneider Electric agency.**

# Electronic sensors XMLF

| Setting range (bar) of lower limit (PB): vacuum switches<br>of upper limit (PH): pressure switches | | -0.08…-1 | 0.08...1 | 0.2…2.5 | 0.8…10 | 3.2...40 |
|---|---|---|---|---|---|---|
| **Fluids controlled** | | Hydraulic oils, air, fresh water, sea water, corrosive fluids from -15…+80°C | | | | |
| Ambient air temperature | | - 25…+ 80°C | | | | |
| Degree of protection (conforming to IEC 60529) | | IP 67 | | | | |
| Product certification | | CE - UL - CSA - VIT-SEPRO - GOST | | | | |
| Voltage limits (V) | | 24 V DC (17…33 V DC) | | | | |
| Dimensions (mm) H x W x D | | 113 x 46 x 58 | | | | |
| Fluid connection | | G 1/4" (female) (1) | | | | |
| Electrical connection | | M12 connector (2) | | | | |
| **Configurable with digital display, connection by M12 connector** (3) | | | | | | |
| Universal sensors, | 4...20 mA | **XMLFM01D2025** | **XMLF001D2025** | **XMLF002D2025** | **XMLF010D2025** | **XMLF040D2025** |
| solid-state output, 200 mA (4) | 0...10 V | **XMLFM01D2125** | **XMLF001D2125** | **XMLF002D2125** | **XMLF010D2125** | **XMLF040D2125** |
| Dual stage pressure switches, solid-state output, 200 mA | | **XMLFM01D2035** | **XMLF001D2035** | **XMLF002D2035** | **XMLF010D2035** | **XMLF040D2035** |
| Analogue sensors | 4...20 mA | **XMLFM01D2015** | **XMLF001D2015** | **XMLF002D2015** | **XMLF010D2015** | **XMLF040D2015** |
| | 0...10 V | **XMLFM01D2115** | **XMLF001D2115** | **XMLF002D2115** | **XMLF010D2115** | **XMLF040D2115** |
| Possible differential (bar) | Min. at low setting | 0.03 | 0.03 | 0.08 | 0.3 | 1.2 |
| (pressure switches) | Min. at high setting | 0.03 | 0.03 | 0.08 | 0.3 | 1.2 |
| | Max. at high setting | 0.95 | 0.95 | 2.38 | 9.5 | 38 |

| Setting range (bar) of upper limit (PH): pressure switches | | 8…100 | 12.8...160 | 20...250 | 32...400 | 48...600 |
|---|---|---|---|---|---|---|
| **Fluids controlled** | | Hydraulic oils, air, fresh water, sea water, corrosive fluids from -15…+80°C | | | | |
| Ambient air temperature | | - 25…+ 80°C | | | | |
| Degree of protection (conforming to IEC 60529) | | IP 67 | | | | |
| Product certification | | CE - UL - CSA - VIT-SEPRO - GOST | | | | |
| Voltage limits (V) | | 24 V DC (17…33 V DC) | | | | |
| Dimensions (mm) H x W x D | | 113 x 46 x 58 | | | | |
| Fluid connection | | G 1/4" (female) (1) | | | | |
| Electrical connection | | M12 connector (2) | | | | |
| **Configurable with digital display, connection by M12 connector** (3) | | | | | | |
| Universal sensors, | 4...20 mA | **XMLF100D2025** | **XMLF160D2025** | **XMLF250D2025** | **XMLF400D2025** | **XMLF600D2025** |
| solid-state output, 200 mA (4) | 0...10 V | **XMLF100D2125** | **XMLF160D2125** | **XMLF250D2125** | **XMLF400D2125** | **XMLF600D2125** |
| Dual stage pressure switches, solid-state output, 200 mA | | **XMLF100D2035** | **XMLF160D2035** | **XMLF250D2035** | **XMLF400D2035** | **XMLF600D2035** |
| Analogue sensors | 4...20 mA | **XMLF100D2015** | **XMLF160D2015** | **XMLF250D2015** | **XMLF400D2015** | **XMLF600D2015** |
| | 0...10 V | **XMLF100D2115** | **XMLF160D2115** | **XMLF250D2115** | **XMLF400D2115** | **XMLF600D2115** |
| Possible differential (bar) | Min. at low setting | 3 | 4.8 | 7.5 | 12 | 18 |
| (pressure switches) | Min. at high setting | 3 | 4.8 | 7.5 | 12 | 18 |
| | Max. at high setting | 95 | 152 | 237.5 | 380 | 570 |

(1) Available with other fluid connections: 1/4" NPT female and SAE 7/16-20 UNF.

(2) For M12 connection accessories, see previous page.

(3) AC 120 V version with 2.5 A relay output and SAE 7/8-16 UN connector also available.

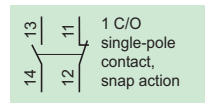
(4) Programmable NPN or PNP and NO or NC.

# OsiSense XM — Sensors for pressure control

## Electromechanical pressure and vacuum switches

## XMLA and B

ISO entry (to EN 50262)



1 C/O single-pole contact, snap action

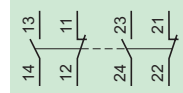
| Size (bar) | -1 | 5 | 1 | 2.5 |
|---|---|---|---|---|
| Environmental characteristics | Ambient air temperature (°C): - 25…+ 70 Degree of protection (conforming to IEC 60529): IP 66 | | | |
| Rated operational characteristics | AC-15; B300 (Ue = 240 V, Ie = 1.5 A - Ue = 120 V, Ie = 3 A) / DC-13; R300 (Ue = 250 V, Ie = 0.1 A) | | | |
| Product certification | CE - UL - CSA - CCC - BV - LROS - RINA - GL - DNV - VIT-SEPRO - GOST | | | |
| Fluid connection | G 1/4" (female) (other connections possible, please consult us) | | | |
| Electrical connection | Screw terminals (1), tapped entry for ISO M20 x 1.5 cable gland - **For n° 13 (DIN Pg 13.5) cable gland** | | | |

| Fluids controlled | | Hydraulic oils, fresh water, sea water, air up to 70°C | | Hydraulic oils, air up to 160°C | Hydraulic oils, fresh water, sea water, air up to 70°C |
|---|---|---|---|---|---|
| **Type XMLA - fixed differential, single threshold detection** | | | | | |
| **Setting range (bar) of upper limit (PH): pressure switches** | | -0.28…-1 (4) | – | 0.03…1 | 0.15…2.5 |
| Dimensions (mm) H x W x D | | 113 x 35 x 75 | 113 x 35 x 75 | 162 x 110 x 110 | 158 x 55 x 77.5 |
| With setting scale | 1 C/O single-pole, snap action contact | **XMLAM01V2S12** | **–** | **XMLA001R2S12** | **XMLA002A2S12** |
| Natural differential (bar) | at low setting | 0.24 (2) | – | 0.02 | 0.13 |
| subtract from PH to give PB | at high setting | 0.24 (2) | – | 0.04 | 0.13 |
| **Type XMLB - adjustable differential, regulation between 2 thresholds** | | | | | |
| **Setting range (bar) of upper limit (PH): pressure switches** | | -0.14...-1 (4) | -0.5...5 | 0.05...1 | 0.3...2.5 |
| **With setting scale** | 1 C/O single-pole, snap action contact | **XMLBM02V2S12** | **XMLBM05A2S12** | **XMLB001R2S12** | **XMLB002A2S12** |
| Possible differential (bar) | Min. at low setting | 0.13 (3) | 0.5 | 0.04 | 0.16 |
| subtract from PH to give PB | Min. at high setting | 0.13 (3) | 0.5 | 0.06 | 0.21 |
| | Max. at high setting | 0.8 (3) | 6 | 0.75 | 1.75 |

## XMLC and D

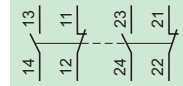
ISO entry (to EN 50262)

**XMLC**



2 C/O single-pole contacts, simultaneous snap action

**XMLD**



2 C/O single-pole contacts, snap action (1 per stage)

| Fluids controlled | | Hydraulic oils, fresh water, sea water, air up to 70°C | | Hydraulic oils, air up to 160°C | Hydraulic oils, fresh water, sea water, air up to 160°C |
|---|---|---|---|---|---|
| **Type XMLC - adjustable differential, regulation between 2 thresholds** | | | | | |
| **Setting range (bar) of upper limit (PH): pressure switches** | | -0.14...-1 (4) | -0.55...5 | 0.05...1 | 0.3...2.5 |
| Dimensions (mm) H x W x D | | 113 x 46 x 85 | 113 x 46 x 85 | 175 x 110 x 110 | 158 x 55 x 90 |
| **With setting scale** | 2 C/O single-pole, snap action contacts | **XMLCM02V2S12** | **XMLCM05A2S12** | **XMLC001R2S12** | **XMLC002B2S12** |
| Possible differential (bar) | Min. at low setting | 0.13 (4) | 0.45 | 0.03 | 0.13 |
| subtract from PH to give PB | Min. at high setting | 0.14 (4) | 0.45 | 0.04 | 0.17 |
| | Max. at high setting | 0.8 (4) | 6 | 0.8 | 2 |
| **Type XMLD - fixed differential, dual stage, for detection at each threshold** | | | | | |
| **Setting range** (bar) | 2nd stage switching point (PB2) | -0.12...-1 (4) | – | 0.12...1 | 0.34...2.5 |
| | 1st stage switching point (PB1) | -0.10...-0.98 | – | 0.04...0.92 | 0.2...2.36 |
| | Spread between 2 stages (PB2 – PB1) | -0.02...-0.88 | – | 0.08...0.73 | 0.14...1.5 |
| **Without setting scale** | 2 C/O single-pole, snap action contacts (1 per stage) | **XMLDM02V1S12** | **–** | **XMLD001R1S12** | **XMLD002B1S12** |
| Natural differential (bar) | at low setting | 0.1 (2) | – | 0.03 | 0.14 |
| subtract from PH 1/2 to give PB 1/2 | at high setting | 0.1 (2) | – | 0.07 | 0.19 |



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Other versions: **please consult your Schneider Electric agency.**

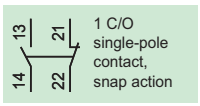
| | 4 | 10 | 20 | 35 | 70 | 160 | 300 | 500 |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | conforming to IEC 947-5-1 Appendix A, EN 60 947-5-1 | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | **tapped entry, replace the last number of the reference** (2) **by 1** (example: XMLA010A2S**1**2 becomes XMLA010A2S**1**1) | | | | | | | |
| | Hydraulic oils, fresh water, sea water, air up to 70°C | | | | Hydraulic oils up to 160°C | | | |
| | 0.4…4 | 0.6…10 | 1…20 | 1.5…35 | 5…70 | 10…160 | 20…300 | 30…500 |
| | 113 x 35 x 75 | 113 x 35 x 75 | 113 x 35 x 75 | 113 x 35 x 75 | 113 x 35 x 75 | 113 x 35 x 75 | 113 x 35 x 75 | 113 x 35 x 75 |
| | **XMLA004A2S12** | **XMLA010A2S12** | **XMLA020A2S12** | **XMLA035A2S12** | **XMLA070D2S12** | **XMLA160D2S12** | **XMLA300D2S12** | **XMLA500D2S12** |
| | 0.35 | 0.5 | 0.4 | 1.25 | 3 | 5.5 | 16.5 | 20 |
| | 0.35 | 0.5 | 1 | 1.25 | 7.5 | 18 | 35 | 45 |
| | | | | | | | | |
| | 0.25...4 | 0.7...10 | 1.3...20 | 3.5...35 | 7...70 | 10...160 | 22...300 | 30...500 |
| | **XMLB004A2S12** | **XMLB010A2S12** | **XMLB020A2S12** | **XMLB035A2S12** | **XMLB070D2S12** | **XMLB160D2S12** | **XMLB300D2S12** | **XMLB500D2S12** |
| | 0.02 | 0.57 | 1 | 1.7 | 4.7 | 9.3 | 19.4 | 23 |
| | 0.25 | 0.85 | 1.6 | 2.55 | 8.8 | 20.8 | 37 | 52.6 |
| | 2.4 | 7.5 | 11 | 20 | 50 | 100 | 200 | 300 |

(1) For electrical connection by DIN 43650A connector (IP 65), replace the suffix "**S12**" in the reference by "**C11**". Example: XMLB010A2**S12** becomes XMLB010A2**C11**.
(2) For vacuum switch: natural differential to be added to PB to give PH.
(3) For vacuum switch: possible differential to be added to PB to give PH.
(4) Setting range (bar) of lower limit (PB): vacuum switch.

| | Hydraulic oils, fresh water, sea water, air up to 160°C | | | | Hydraulic oils up to 160°C | | | |
|---|---|---|---|---|---|---|---|---|
| | 0.3...4 | 0.7...10 | 1.3...20 | 3.5...35 | 7...70 | 12...160 | 22...300 | 30...500 |
| | 113 x 46 x 85 | 113 x 46 x 85 | 113 x 46 x 85 | 113 x 46 x 85 | 113 x 46 x 85 | 113 x 46 x 85 | 113 x 46 x 85 | 113 x 46 x 85 |
| | **XMLC004B2S12** | **XMLC010B2S12** | **XMLC020B2S12** | **XMLC035B2S12** | **XMLC070D2S12** | **XMLC160D2S12** | **XMLC300D2S12** | **XMLC500D2S12** |
| | 0.15 | 0.45 | 0.7 | 1 | 4.5 | 9 | 16 | 19 |
| | 0.17 | 0.7 | 1 | 1.5 | 8.9 | 21 | 35 | 52 |
| | 2.5 | 8 | 11 | 22 | 60 | 110 | 240 | 340 |
| | | | | | | | | |
| | 0.40...4 | 1.2...10 | 2.14...20 | 4.4...35 | 9.4...70 | 16.5...160 | 36...300 | 41...500 |
| | 0.19...3.79 | 0.52...9.32 | 0.9...18.76 | 1.9...32.5 | 6.6...67.2 | 10.5...154 | 25...289 | 25...484 |
| | 0.21...2.18 | 0.68...5.8 | 1.24...9.55 | 2.5...20.4 | 2.8...46 | 6...83 | 11...189 | 16...244 |
| | **XMLD004B1S12** | **XMLD010B1S12** | **XMLD020B1S12** | **XMLD035B1S12** | **XMLD070D1S12** | **XMLD160D1S12** | **XMLD300D1S12** | **XMLD500D1S12** |
| | 0.15 | 0.45 | 0.7 | 1.5 | 5 | 8.8 | 17 | 21 |
| | 0.19 | 0.6 | 1.3 | 2.6 | 9.5 | 20 | 42 | 65 |

# Sensors for pressure control

## Electromechanical pressure switches XMX, XMA

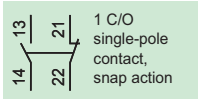



1 C/O single-pole contact, snap action

| Setting range of upper limit (PH) (bar) | 1…6 | 1.3…12 | 3.5…25 |
|---|---|---|---|
| **Fluids controlled** | **Air, water** (fresh water, sea water) from 0…+70°C | | |
| Ambient air temperature | - 25…+ 70°C | | |
| Degree of protection (conforming to IEC 60529) | IP 54 | | |
| Rated operational characteristics | AC-15; B300 (Ue = 240 V, Ie = 1.5 A - Ue = 120 V, Ie = 3 A) / DC-13; R300 (Ue = 250 V, Ie = 0.1 A) | | |
| Product certification | CE - UL - CSA - CCC | | |
| Dimensions (mm) H x W x D | 106 x 57 x 98 | | 126 x 57 x 98 |
| Fluid connection | 1/4" BSP female | | |
| Electrical connection | Screw terminals, 2 tapped entries for n° 13 (DIN Pg 13.5) cable gland | | |

### Type XMX with internal setting screw

| Without setting scale, screw terminal connections | | | | |
|---|---|---|---|---|
| 1 C/O single-pole, snap action contact | | **XMXA06L2135** | **XMXA12L2135** | **XMXA25L2135** |
| Possible differential (bar) | Min. at low setting | 0.8 | 1 | 3.4 |
| subtract from PH to give PB | Min. at high setting | 1.2 | 1.7 | 4.5 |
| | Max. at high setting | 4.2 | 8.4 | 20 |




1 C/O single-pole contact, snap action

| Setting range of upper limit (PH) (bar) | 1…6 | 1.3…12 | 3.5…25 |
|---|---|---|---|
| **Fluids controlled** | **Air, water** (fresh water, sea water) from 0…+70°C | | |
| Ambient air temperature | - 25…+ 70°C | | |
| Degree of protection (conforming to IEC 60529) | IP 54 | | |
| Rated operational characteristics | AC-15; B300 (Ue = 240 V, Ie = 1.5 A - Ue = 120 V, Ie = 3 A) / DC-13; R300 (Ue = 250 V, Ie = 0.1 A) | | |
| Product certification | CE - UL - CSA - CCC | | |
| Dimensions (mm) H x W x D | 113 x 57 x 98 | | 133 x 57 x 98 |
| Fluid connection | 1/4" BSP female | | |
| Electrical connection | Screw terminals, tapped entry for n° 13 (DIN Pg 13.5) cable gland | | |

### Type XMA with external setting screw (transparent cover)

| Without setting scale, screw terminal connections | | | | |
|---|---|---|---|---|
| 1 C/O single-pole, snap action contact | | **XMAV06L2135** | **XMAV12L2135** | **XMAV25L2135** |
| Possible differential (bar) | Min. at low setting | 0.8 | 1 | 3.4 |
| subtract from PH to give PB | Min. at high setting | 1.2 | 1.7 | 4.5 |
| | Max. at high setting | 4.2 | 8.4 | 20 |



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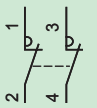
Other versions: **please consult your Schneider Electric agency.**

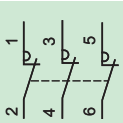
# Electromechanical pressure switches for power circuits, adjustable differential for regulation between 2 thresholds



2 NC 2-pole contact, snap action

| Degree of protection | | | IP 20 | | | IP 65 | | |
|---|---|---|---|---|---|---|---|---|
| Size (bar) | | | 4.6 | 7 | 10.5 | 4.6 | 7 | 10.5 |
| **Setting range of upper limit (PH)** (bar) | | | **1.4…4.6** | **2.8…7** | **5.6…10.5** | **1.4…4.6** | **2.8…7** | **5.6…10.5** |
| **Fluids controlled** | | | **Water** (fresh water, sea water) from 0…+55°C | | | | | |
| Electrical connection | | | Screw terminals, 2 cable entries with grommet | | | Screw terminals, 2 tapped entries for n° 13 (DIN Pg 13.5) cable gland | | |
| Product certification | | | CE | | | | | |
| Ambient air temperature | | | For operation: 0…+ 50°C. For storage: - 30…+ 80°C | | | | | |
| Rated operational characteristics | | | Ie = 10 A, Ue = 250 V AC | | | | | |
| **Power rating of controlled motors** | 110 V | AC 2-pole, single-phase | 0.75 kW (1 HP) | | | 0.75 kW (1 HP) | | |
| | | AC 2-pole, 3-phase | 1.1 kW (1.5 HP) | | | 1.1 kW (1.5 HP) | | |
| | 230 / 400 V | AC 2-pole, single-phase | 1.5 kW (2 HP) | | | 1.5 kW (2 HP) | | |
| | | AC 2-pole, 3-phase | 2.2 kW (3 HP) | | | 2.2 kW (3 HP) | | |
| Dimensions (mm) H x W x D | | | 96/105 x 72 x 102 | 94 x 72 x 102 | | 115 x 72 x 106 | 115 x 72 x 106 | |
| Fluid connection | G 1/4 (BSP female) | | **FSG2** | **FYG22** | **FYG32** | **FSG2NE** | **FYG22NE** | **FYG32NE** |
| | R 1/4 (BSP male) | | **FSG9** | **FYG29** | **FYG39** | – | – | – |
| | G 3/8 (BSP female) rotating nut | | – | – | – | **FSG2NEG** | – | – |
| **Possible differential** (bar) subtract from PH to give PB | | At low setting | 1 min. - 2.1 max. | 1.2 min. - 2.3 max. | 1.9 min. - 3 max. | 1 min. - 2.1 max. | 1.2 min. - 2.3 max. | 1.9 min. - 3 max. |
| | | At middle setting | 1.1 min. - 2.2 max. | 1.4 min. - 2.5 max. | 2.1 min. - 3.2 max. | 1.1 min. - 2.2 max. | 1.4 min. - 2.5 max. | 2.1 min. - 3.2 max. |
| | | At high setting | 1.2 min. - 2.3 max. | 1.6 min. - 2.7 max. | 2.3 min. - 3.4 max. | 1.2 min. - 2.3 max. | 1.6 min. - 2.7 max. | 2.3 min. - 3.4 max. |

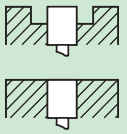
2 NC 2-pole contact, snap action



3 NC 3-pole contact, snap action

| Size (bar) | | | 6 | | 12 | | 25 |
|---|---|---|---|---|---|---|---|
| **Setting range of upper limit (PH)** (bar) | | | **1…6** | | **1.3….12** | | **3.5…25** |
| **Fluids controlled** | | | **Air, water** (fresh water, sea water) from 0…+70°C | | | | |
| Ambient air temperature | | | For operation: - 25…+ 70°C. For storage: - 40…+ 70°C | | | | |
| Decompression valve / ONOff knob | | | without | with | without | with | without |
| Fluid connection | | | G 1/4 (BSP female) | 4 x G 1/4 (BSP female) | G 1/4 (BSP female) | 4 x G 1/4 (BSP female) | G 1/4 (BSP female) |
| Electrical connection | | | Screw terminals, 2 tapped entries for n° 13 (DIN Pg 13.5) cable gland | | | | |
| Degree of protection | | | IP 54 | | IP 54 | | IP 54 |
| Product certification | | | CE - CCC | | | | |
| Rated insulation voltage | | | Ui = 500 V | | | | |
| **Electrical durability** | Power | 1.5 kW | 400 V AC 3-phase: 1 000 000 operating cycles | | | | |
| | | | 230 V AC 3-phase: 600 000 operating cycles | | | | |
| | | 2.2 kW | 400 V AC 3-phase: 700 000 operating cycles | | | | |
| | | 3 kW | 400 V AC 3-phase: 500 000 operating cycles | | | | |
| Dimensions (mm) H x W x D | | | 106 x 57 x 97.5 | 138 x 57 x 97.5 | 106 x 57 x 97.5 | 138 x 57 x 97.5 | 126 x 57 x 97.5 |
| Type of contacts | 2 NC 2-pole, snap action contact | | **XMPA06B2131** | **XMPE06B2431** | **XMPA12B2131** | **XMPE12B2431** | **XMPA25B2131** |
| | 3 NC 3-pole, snap action contact | | **XMPA06C2131** | **XMPE06C2431** | **XMPA12C2131** | **XMPE12C2431** | **XMPA25C2131** |
| **Possible differential** (bar) subtract from PH to give PB | | Min. at low setting | 0.8 | 0.8 | 1 | 1 | 3.4 |
| | | Min. at high setting | 1.2 | 1.2 | 1.7 | 1.7 | 4.5 |
| | | Max. at high setting | 4.2 | 4.2 | 8.4 | 8.4 | 20 |

# Inductive proximity sensors
## Cylindrical metal



| | | | Flush standard and increased range | | | |
|---|---|---|---|---|---|---|
| | | | M8 | | M12 | |
| **Nominal sensing distance Sn** | | | 1.5 mm | 2.5 mm | 2 mm | 4 mm |
| Usable sensing distance S (mm) flush mountable / non flush mountable | | | 0…1.2 | 0…2 | 0…1.6 | 0…3.2 |
| Temperature range (°C) | | | - 25…+ 70 | | | |
| Product certification | | | CE - UL - CSA - CCC (in progress) - C-TICK | | | |
| Degree of protection (conforming to IEC 60529) | | | IP 67 | | pre-cabled: IP 69K conforming to DIN 40050, IP 68 | |

## Sensors for DC applications

| | | | | | | |
|---|---|---|---|---|---|---|
| **Output function** | **NO** | | **A** | **A** | **A** | **A** |
| | **NC** | | **B** | **B** | **B** | **B** |
| Dimensions (mm) Ø x L Cable / Connector | | | M8 x 33 / M8 x 42 | | M12 x 35 / M12 x 50 | |
| **3-wire** | **PNP** | Cable (2 m) | **XS508B1PAL2** | **XS108B3PAL2** | **XS512B1PAL2** | **XS112B3PAL2** |
| | | Connector M8 / M12 | **XS508B1PAM8** | **XS108B3PAM8** | **XS512B1PAM12** | **XS112B3PAM12** |
| | **NPN** | Cable (2m) | **XS508B1NAL2** | **XS108B3NAL2** | **XS512B1NAL2** | **XS112B3NAL2** |
| | | Connector M8 / M12 | **XS508B1NAM8** | **XS108B3NAM8** | **XS512B1NAM12** | **XS112B3NAM12** |
| **2-wire** | **non polarised** (1) | Cable (2 m) | **XS508BSCAL2** | **XS608B3CAL2** | **XS512BSDAL2** | **XS612B3DAL2** |
| | | Connecteur M12 | **XS508BSCAL01M12** | **XS608B3CAL01M12** | **XS512BSDAM12** | **XS612B3DAM12** |
| Supply voltage limits, min./max. (V) including ripple | | | 10…36 | 10…36 | 10…36 | 10…36 |
| Switching capacity, max. (mA) 3-wire / 2-wire | | | 200 / 100 | 200 / 100 | 200 / 100 | 200 / 100 |
| Overload and short-circuit protection (★) / LED output state indicator (⊗) | | | ★ / ⊗ | ★ / ⊗ | ★ / ⊗ | ★ / ⊗ |
| Residual current, open state (mA) | | | ≤ 0.5 | ≤ 0.5 | ≤ 0.5 | ≤ 0.5 |
| Voltage drop, closed state (V) at I nominal 3-wire / 2-wire | | | ≤ 2 / ≤ 4 | ≤ 2 / ≤ 4 | ≤ 2 / ≤ 4 | ≤ 2 / ≤ 4 |
| Switching frequency (Hz) 3-wire / 2-wire | | | 5000 / 4000 | 2500 / 3000 | 5000 / 4000 | 2500 / 2000 |
| Dimensions (mm) Ø x L Cable / connector | | | M8 x 51 / M8 x 62 | | M12 x 53 / M12 x 62 | |
| **3-wire** | **PNP** | Cable (2 m) | **XS508BLPAL2** | **XS608B1PAL2** | **XS512BLPAL2** | **XS612B1PAL2** |
| | | Connector M12 | **XS508BLPAM12** | **XS608B1PAM12** | **XS512BLPAM12** | **XS612B1PAM12** |
| | **NPN** | Cable (2 m) | **XS508BLNAL2** | **XS608B1NAL2** | **XS512BLNAL2** | **XS612B1NAL2** |
| | | Connector M12 | **XS508BLNAM12** | **XS608B1NAM12** | **XS512BLNAM12** | **XS612B1NAM12** |
| **2-wire** | **non polarised** | Cable (2 m) | **XS508B1DAL2** | **XS608B1DAL2** | **XS512B1DAL2** | **XS612B1DAL2** |
| | | Connector M12 | **XS508B1DAM12** | **XS608B1DAM12** | **XS512B1DAM12** | **XS612B1DAM12** |
| Supply voltage limits, min./max. (V) including ripple | | | 10…58 | 10…58 | 10…58 | 10…58 |
| Switching capacity, max. (mA) 3-wire / 2-wire | | | 200 / 100 | 200 / 100 | 200 / 100 | 200 / 100 |
| Overload and short-circuit protection (★) / LED output state indicator (⊗) | | | ★ / ⊗ | ★ / ⊗ | ★ / ⊗ | ★ / ⊗ |
| Residual current, open state (mA) 2-wire | | | ≤ 0.5 | ≤ 0.5 | ≤ 0.5 | ≤ 0.5 |
| Voltage drop, closed state (V) at I nominal 3-wire / 2-wire | | | ≤ 2 / ≤ 4 | ≤ 2 / ≤ 4 | ≤ 2 / ≤ 4 | ≤ 2 / ≤ 4 |
| Switching frequency (Hz) 3-wire / 2-wire | | | 5000 / 4000 | 2500 / 3000 | 5000 / 4000 | 2500 / 2000 |

## Multi-current/multi-voltage sensors for AC/DC applications

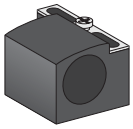
| | | | | | | |
|---|---|---|---|---|---|---|
| Dimensions (mm) Ø x L Cable / connector | | | – | – | M12 x 53 / M12 x 62 | |
| **2-wire** | | Cable (2 m) | – | – | **XS512B1MAL2** | **XS612B1MAL2** |
| | | Connector 1/2"-20 UNF | – | – | **XS512B1MAU20** | **XS612B1MAU20** |
| Supply voltage limits, min./max. (V) including ripple | | | – | – | 20…264 | 20…264 |
| Switching capacity, max. (mA) | | | – | – | 200 | 200 |
| LED output state indicator (⊗) | | | – | – | ⊗ | ⊗ |
| Residual current, open state (mA) | | | – | – | ≤ 0,8 | ≤ 0,8 |
| Voltage drop, closed state (V) at I nominal | | | – | – | ≤ 5.5 | ≤ 5.5 |
| Switching frequency (Hz) | | | – | – | 25 AC / 1000 DC | 25 AC / 1000 DC |

(1) polarised for M8 short

## Accessories

### Fixing for cylindrical sensors

Fixing clamp with indexing pin for cylindrical sensors



| | |
|---|---|
| M8 | **XSZB108** |
| M12 | **XSZB112** |
| M18 | **XSZB118** |
| M30 | **XSZB130** |

### Suitable female plug-in connectors

| **M8** | Straight | Elbowed |
|---|---|---|
| Metal ring | **XZCC8FDM30S** | **XZCC8FCM30S** |
| **M12** (4 pin) | | |
| Metal ring | **XZCC12FDM40B** | **XZCC12FCM40B** |
| Plastic ring | **XZCC12FDP40B** | **XZCC12FCP40B** |

Schneider Electric

Other versions: **please consult your Schneider Electric agency.**

| M18 | | M30 | | Non flush increased range M12 | M18 | M30 |
|---|---|---|---|---|---|---|
| 5 mm | 8 mm | 10 mm | 15 mm | 7 mm | 12 mm | 22 mm |
| 0…4 | 0…6.4 | 0…8 | 0…12 | 0…5.6 | 0…9.6 | 0…17.6 |
| - 25…+ 70 | | | | - 25…+ 70 | | |
| CE - UL - CSA - CCC (in progress) - C-TICK | | | | CE - UL - CSA - CCC (in progress) - C-TICK | | |
| (with connector: IP 67) | | | | pre-cabled: IP 69K conforming to DIN 40050, IP 68 (with connector: IP 67) | | |

| A<br>B | A<br>B | A<br>B | A<br>B | A<br>B | A<br>B | A<br>B |
|---|---|---|---|---|---|---|
| M18 x 39 / M18 x 50 | | M30 x 43 / M30 x 55 | | – | | |
| **XS518B1PAL2** | **XS118B3PAL2** | **XS530B1PAL2** | **XS130B3PAL2** | – | | |
| **XS518B1PAM12** | **XS118B3PAM12** | **XS530B1PAM12** | **XS130B3PAM12** | – | | |
| **XS518B1NAL2** | **XS118B3NAL2** | **XS530B1NAL2** | **XS130B3NAL2** | – | | |
| **XS518B1NAM12** | **XS118B3NAM12** | **XS530B1NAM12** | **XS130B3NAM12** | – | | |
| **XS518BSDAL2** | **XS618B3DAL2** | **XS530BSDAL2** | **XS630B3DAL2** | – | | |
| **XS518BSDAM12** | **XS618B3DAM12** | **XS530BSDAM12** | **XS630B3DAM12** | – | | |
| 10…36 | 10…36 | 10…36 | 10…36 | – | | |
| 200 / 100 | 200 / 100 | 200 / 100 | 200 / 100 | – | | |
| ★ / ⊗ | ★ / ⊗ | ★ / ⊗ | ★ / ⊗ | – | | |
| ≤ 0.5 | ≤ 0.5 | ≤ 0.5 | ≤ 0.5 | – | | |
| ≤ 2 / ≤ 4 | ≤ 2 / ≤ 4 | ≤ 2 / ≤ 4 | ≤ 2 / ≤ 4 | – | | |
| 2000 / 3000 | 1000 / 1000 | 1000 / 2000 | 500 / 500 | – | | |
| M18 x 62 / M18 x 74 | | M30 x 62 | | M12 x 55 / M12 x 65 | M18 x 62 / M18 x 74 | M30 x 62 / M30 x 74 |
| **XS518BLPAL2** | **XS618B1PAL2** | **XS530BLPAL2** | **XS630B1PAL2** | **XS612B4PAL2** | **XS618B4PAL2** | **XS630B4PAL2** |
| **XS518BLPAM12** | **XS618B1PAM12** | **XS530BLPAM12** | **XS630B1PAM12** | **XS612B4PAM12** | **XS618B4PAM12** | **XS630B4PAM12** |
| XS518BLNAL2 | XS618B1NAL2 | XS530BLNAL2 | XS630B1NAL2 | **XS612B4NAL2** | **XS618B4NAL2** | **XS630B4NAL2** |
| XS518BLNAM12 | XS618B1NAM12 | XS530BLNAM12 | XS630B1NAM12 | **XS612B4NAM12** | **XS618B4NAM12** | **XS630B4NAM12** |
| XS518B1DAL2 | XS618B1DAL2 | XS530B1DAL2 | XS630B1DAL2 | – | – | – |
| XS518B1DAM12 | XS618B1DAM12 | XS530B1DAM12 | XS630B1DAM12 | – | – | – |
| 10…58 | 10…58 | 10…58 | 10…58 | 10…58 | 10…58 | 10…58 |
| 200 / 100 | 200 / 100 | 200 / 100 | 200 / 100 | 200 / – | 200 / – | 200 / – |
| ★ / ⊗ | ★ / ⊗ | ★ / ⊗ | ★ / ⊗ | ★ / ⊗ | ★ / ⊗ | ★ / ⊗ |
| ≤ 0.5 | ≤ 0.5 | ≤ 0.5 | ≤ 0.5 | – | – | – |
| ≤ 2 / ≤ 4 | ≤ 2 / ≤ 4 | ≤ 2 / ≤ 4 | ≤ 2 / ≤ 4 | ≤ 2 / – | ≤ 2 / – | ≤ 2 / – |
| 2000 / 3000 | 1000 / 1000 | 1000 / 2000 | 500 / 500 | 2500 / – | 1000 / – | 500 / – |
| M18 x 62 / M18 x 73 | | M30 x 62 / M30 x 73 | | – | M18 x 60 / M18 x 72 | M30 x 63 / M30 x 74 |
| **XS518B1MAL2** | **XS618B1MAL2** | **XS530B1MAL2** | **XS630B1MAL2** | – | **XS618B4MAL2** | **XS630B4MAL2** |
| **XS518B1MAU20** | **XS618B1MAU20** | **XS530B1MAU20** | **XS630B1MAU20** | – | **XS618B4MAU20** | **XS630B4MAU20** |
| 20…264 | 20…264 | 20…264 | 20…264 | – | 20…264 | 20…264 |
| 300 AC / 200 DC | 300 AC / 200 DC | 300 AC / 200 DC | 300 AC / 200 DC | – | 300 AC / 200 DC | 300 AC / 200 DC |
| ⊗ | ⊗ | ⊗ | ⊗ | – | ⊗ | ⊗ |
| ≤ 0.8 | ≤ 0.8 | ≤ 0.8 | ≤ 0.8 | – | ≤ 0.8 | ≤ 0.8 |
| ≤ 5.5 | ≤ 5.5 | ≤ 5.5 | ≤ 5.5 | – | ≤ 5.5 | ≤ 5.5 |
| 25 AC / 1000 DC | 25 AC / 1000 DC | 25 AC / 500 DC | 25 AC / 500 DC | – | 25 AC / 1000 DC | 25 AC / 300 DC |

## Pre-wired connectors

Straight

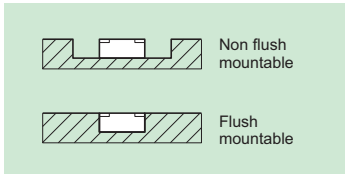
Elbowed

| M8 (3 pin) | | |
|---|---|---|
| | Straight | Elbowed |
| 2 m | **XZCP0566L2** | **XZCP0666L2** |
| 5 m | **XZCP0566L5** | **XZCP0666L5** |
| 10 m | **XZCP0566L10** | **XZCP0666L10** |

| 1/2" | | |
|---|---|---|
| | Straight | Elbowed |
| 2 m | **XZCP1865L2** | **XZCP1965L2** |
| 5 m | **XZCP1865L5** | **XZCP1965L5** |
| 10 m | **XZCP1865L10** | **XZCP1965L10** |

| M12 (4 pin) | | | |
|---|---|---|---|
| | Straight | Elbowed | Elbowed PNP LED |
| 2 m | **XZCP1141L2** | **XZCP1241L2** | **XZCP1340L2** |
| 5 m | **XZCP1141L5** | **XZCP1241L5** | **XZCP1340L5** |
| 10 m | **XZCP1141L10** | **XZCP1241L10** | **XZCP1340L10** |

# OsiSense XS — Inductive proximity sensors
## Rectangular plastic



| | Ø 8 x 22 x 8 | Ø 15 x 32 x 8 | Ø 26 x 26 x 13 | Ø 40 x 40 x 15 | Ø 80 x 80 x 26 |
|---|---|---|---|---|---|
| **Nominal sensing distance Sn** | **2.5** mm | **5** mm | **10** mm | **15** mm | **40** mm |
| Usable sensing distance S (mm) flush mountable / non flush mountable | 0...2 | 0...4 | 0…8 | 0…12 | 0…32 |
| Fine adjustment zone (mm) flush mountable / non flush mountable | – | – | – | – | – |
| Suitability for flush mounting (metal environment) | flush mountable | flush mountable | flush mountable | flush mountable | flush mountable |
| Temperature range (°C) | - 25…+ 70 | - 25…+ 70 | - 25…+ 70 | - 25…+ 70 | - 25…+ 70 |
| Product certification | CE | CE - UL - CSA - C-TICK | | | |
| Degree of protection (conforming to IEC 60529) | pre-cabled: IP 68 (with connector: IP 67) | | | | |

## Sensors for DC applications

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Connection** | | | | **Pre-cabled, PvR (2 m)** | | | | |
| **2-wire** (non polarised) | | **NO or NC** | programmable | – | – | – | – | – |
| **2-wire** | **non polarised** | NO function | | **XS7J1A1DAL2** | **XS7F1A1DAL2** | **XS7E1A1DAL2** | **XS7C1A1DAL2** | **XS7D1A1DAL2** |
| | | NC function | | **XS7J1A1DBL2** | **XS7F1A1DBL2** | **XS7E1A1DBL2** | **XS7C1A1DBL2** | **XS7D1A1DBL2** |
| **4-wire** | **PNP** | **NO + NC** | complementary outputs | – | – | – | – | – |
| | **NPN** | **NO + NC** | complementary outputs | – | – | – | – | – |
| **3-wire** | **PNP** | **NO** function | | **XS7J1A1PAL2** | **XS7F1A1PAL2** | **XS7E1A1PAL2** | **XS7C1A1PAL2** | **XS7D1A1PAL2** |
| | | **NC** function | | **XS7J1A1PBL2** | **XS7F1A1PBL2** | **XS7E1A1PBL2** | **XS7C1A1PBL2** | **XS7D1A1PBL2** |
| | **NPN** | **NO** function | | **XS7J1A1NAL2** | **XS7F1A1NAL2** | **XS7E1A1NAL2** | **XS7C1A1NAL2** | **XS7D1A1NAL2** |
| | | **NC** function | | **XS7J1A1NBL2** | **XS7F1A1NBL2** | **XS7E1A1NBL2** | **XS7C1A1NBL2** | **XS7D1A1NBL2** |
| **Connection** | | | | **M8 connector** | | | | **M12 connector** |
| **2-wire** | **non polarised** | NO function | | **XS7J1A1DAL01M8** (1) | **XS7F1A1DAL01M8** (1) | **XS7E1A1DAM8** | **XS7C1A1DAM8** | **XS7D1A1DAM12** |
| | | NC function | | **XS7J1A1DBL01M8** (1) | **XS7F1A1DBL01M8** (1) | **XS7E1A1DBM8** | **XS7C1A1DBM8** | **XS7D1A1DBM12** |
| **3-wire** | **PNP** | **NO** function | | **XS7J1A1PAL01M8** (1) | **XS7F1A1PAL01M8** (1) | **XS7E1A1PAM8** | **XS7C1A1PAM8** | **XS7D1A1PAM12** |
| | | **NC** function | | **XS7J1A1PBL01M8** (1) | **XS7F1A1PBL01M8** (1) | **XS7E1A1PBM8** | **XS7C1A1PBM8** | **XS7D1A1PBM12** |
| | **NPN** | **NO** function | | **XS7J1A1NAL01M8** (1) | **XS7F1A1NAL01M8** (1) | **XS7E1A1NAM8** | **XS7C1A1NAM8** | **XS7D1A1NAM12** |
| | | **NC** function | | **XS7J1A1NBL01M8** (1) | **XS7F1A1NBL01M8** (1) | **XS7E1A1NBM8** | **XS7C1A1NBM8** | **XS7D1A1NBM12** |
| Supply voltage limits, min./max. (V) including ripple | | | | 10…36 | 10…36 | 10…36 | 10…36 | 10…36 |
| Switching capacity, max. (mA) | | | | 100 | 100 | 100 | 100 | 100 |
| Short-circuit protect. (★) / LED output state indicator (⊗) / Power on LED (⊗) | | | | ★ / ⊗ / – | ★ / ⊗ / – | ★ / ⊗ / – | ★ / ⊗ / – | ★ / ⊗ / – |
| Voltage drop, closed state (V) at I nominal cable / Connector | | | | ≤ 4 / ≤ 2 | ≤ 4 / ≤ 2 | ≤ 2 | ≤ 2 | ≤ 2 |
| Switching frequency (Hz) cable / Connector | | | | 4000 / 2000 | 5000 / 2000 | 1000 | 1000 | 100 |

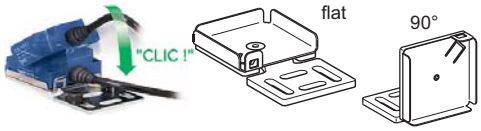
## Multi-current/multi-voltage sensors for AC/DC applications

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Connection** | | | | | | | | |
| **2-wire** | | **AC/DC** | **NO** function | – | – | – | – | – |
| | | | **NC** function | – | – | – | – | – |
| | | **AC** | **NO** or **NC** programmable | – | – | – | – | – |
| | | **AC/DC** | **NO** or **NC** programmable | – | – | – | – | – |
| **Connection** | | | | | | | | |
| **2-wire** | | AC/DC | **NO** function | – | – | – | – | – |
| | | | **NC** function | – | – | – | – | – |
| Supply voltage limits, min./max. (V) including ripple | | | | – | – | – | – | – |
| Switching capacity, max. (mA) | | | | – | – | – | – | – |
| Short-circuit protect. (★) / LED output state indicator (⊗) / Power on LED (⊗) | | | | – | – | – | – | – |
| Residual current, open state (mA) | | | | – | – | – | – | – |
| Voltage drop, closed state (V) at I nominal | | | | – | – | – | – | – |
| Switching frequency (Hz) | | | | – | – | – | – | – |

(1) M8 connector on flying lead (L = 0.15 m).

## Accessories

### Fixing for flat sensors




| | flat | 90° |
|---|---|---|
| 8x22x8 | **XSZBJ00** | **XSZBJ90** |
| 15x32x8 | **XSZBF00** | **XSZBF90** |
| 26x26x13 | **XSZBE00** | **XSZBE90** |
| 40x40x15 | **XSZBC00** | **XSZBC90** |

### Suitable female plug-in connectors

| **M8** | Straight | Elbowed |
|---|---|---|
| Metal ring | **XZCC8FDM30S** | **XZCC8FCM30S** |
| **M12 (4 pin)** | | |
| Metal ring | **XZCC12FDM40B** | **XZCC12FCM40B** |
| Plastic ring | **XZCC12FDP40B** | **XZCC12FCP40B** |

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Other versions: **please consult your Schneider Electric agency.**

| Ø 40 x 40 x 117 | | | | Ø 26 x 26 x 13 | Ø 40 x 40 x 15 | Ø 80 x 80 x 26 |
|---|---|---|---|---|---|---|
| **15** mm | **20** mm increased range | **20** mm | **40** mm increased range | **15** mm | **25** mm | **60** mm |
| 0…12 | 0…16 | 0…16 | 0…32 | 0…8 / 0...12 | 0…12 / 0...20 | 0…32 / 0...48 |
| | | | | 5...10 / 5...15 | 8...15 / 8...25 | 20...40 / 20...60 |
| flush mountable | | non flush mountable | | flush mountable or non flush mountable via teach mode | | |
| - 25…+ 70 | | | | - 25…+ 70 | | |
| CE - UL - CSA - CCC - C-TICK | | | | CE - UL - CSA - CCC - C-TICK | | |
| IP 67 | | | | pre-cabled: IP 68 (with connector: IP 67) | | |
| **Screw terminals** (2) | | | | **Pre-cabled (2 m)** | | |
| **XS7C40DP210** | – | **XS8C40DP210** | – | – | – | – |
| **XS7C40DA210** | – | **XS8C40DA210** | – | – | – | – |
| – | – | – | – | – | – | – |
| **XS7C40PC440** | **XS7C40PC449** | **XS8C40PC440** | **XS8C40PC449** | – | – | – |
| **XS7C40NC440** | **XS7C40NC449** | **XS8C40NC440** | **XS8C40NC449** | – | – | – |
| – | – | – | – | **XS8E1A1PAL2** | **XS8C1A1PAL2** | **XS8D1A1PAL2** |
| – | – | – | – | **XS8E1A1PBL2** | **XS8C1A1PBL2** | **XS8D1A1PBL2** |
| – | – | – | – | **XS8E1A1NAL2** | **XS8C1A1NAL2** | **XS8D1A1NAL2** |
| – | – | – | – | **XS8E1A1NBL2** | **XS8C1A1NBL2** | **XS8D1A1NBL2** |
| **M8 connector** | | | | **M8 connector** | | **M12 connector** |
| – | – | – | – | – | – | – |
| – | – | – | – | – | – | – |
| – | – | – | – | **XS8E1A1PAM8** | **XS8C1A1PAM8** | **XS8D1A1PAM12** |
| – | – | – | – | **XS8E1A1PBM8** | **XS8C1A1PBM8** | **XS8D1A1PBM12** |
| – | – | – | – | **XS8E1A1NAM8** | **XS8C1A1NAM8** | **XS8D1A1NAM12** |
| – | – | – | – | **XS8E1A1NBM8** | **XS8C1A1NBM8** | **XS8D1A1NBM12** |
| 12…48 | | | | 10…36 | 10…36 | 10…36 |
| 4-wire version = 200 – 2-wire version = 1.5…100 | | | | 100 | 200 | 200 |
| 4-wire version = ★ / ⊗ / ⊗ – 2-wire version = ★ / ⊗ / – | | | | ★ / ⊗ / ⊗ | ★ / ⊗ / ⊗ | ★ / ⊗ / ⊗ |
| 4-wire version = ≤ 2 – 2-wire version = ≤ 4 | | | | ≤ 2 | ≤ 2 | ≤ 2 |
| 2-wire = 1500 / 4-wire = 1000 | | 2-wire = 800 / 4-wire = 1000 (20mm) 500 (40mm) | | 2000 | 1000 | 150 |
| **Screw terminals** (2) | | | | **Pre-cabled (2 m)** | | |
| – | – | – | – | **XS8E1A1MAL2** | **XS8C1A1MAL2** | **XS8D1A1MAL2** |
| – | – | – | – | **XS8E1A1MBL2** | **XS8C1A1MBL2** | **XS8D1A1MBL2** |
| **XS7C40FP260** | – | **XS8C40FP260** | – | – | – | – |
| **XS7C40MP230** | – | **XS8C40MP230** | – | – | – | – |
| | | | | **1/2"-20 UNF connector** | | |
| – | – | – | – | **XS8E1A1MAL01U20** | **XS8C1A1MAL01U20** | **XS8D1A1MAU20** |
| – | – | – | – | **XS8E1A1MBL01U20** | **XS8C1A1MBL01U20** | **XS8D1A1MBU20** |
| 20…264 | | | | 20…264 | 20…264 | 20…264 |
| AC version = 500 – AC/DC version = 300 / 200 | | | | 200 AC or DC | 300 AC / 200 DC | 300 AC / 200 DC |
| – / ⊗ / – | | | | – / ⊗ / ⊗ | – / ⊗ / ⊗ | – / ⊗ / ⊗ |
| AC version = ≤ 1.5 – AC/DC version = ≤ 0.8 / 1.5 | | | | ≤ 1.5 | ≤ 1.5 | ≤ 1.5 |
| ≤ 5.5 | | | | ≤ 5.5 | ≤ 5.5 | ≤ 5.5 |
| 25 AC / 50 DC | | | | 2000 | 1000 | 150 |

(2) Sensors supplied without cable gland. Suitable cable gland: 13P. Also available in M20, 1/2" NPT output and M12, 7/8" connectors.

## Pre-wired connectors

Straight

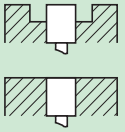
Elbowed

| M8 (3 pin) | | |
|---|---|---|
| | Straight | Elbowed |
| 2 m | **XZCP0566L2** | **XZCP0666L2** |
| 5 m | **XZCP0566L5** | **XZCP0666L5** |
| 10 m | **XZCP0566L10** | **XZCP0666L10** |

| 1/2" | | |
|---|---|---|
| | Straight | Elbowed |
| 2 m | **XZCP1865L2** | **XZCP1965L2** |
| 5 m | **XZCP1865L5** | **XZCP1965L5** |
| 10 m | **XZCP1865L10** | **XZCP1965L10** |

| M12 (4 pin) | | | |
|---|---|---|---|
| | Straight | Elbowed | Elbowed PNP LED |
| 2 m | **XZCP1141L2** | **XZCP1241L2** | **XZCP1340L2** |
| 5 m | **XZCP1141L5** | **XZCP1241L5** | **XZCP1340L5** |
| 10 m | **XZCP1141L10** | **XZCP1241L10** | **XZCP1340L10** |

# Inductive proximity sensors
## Cylindrical Plastic



| | M8 | M12 | M18 | M30 |
|---|---|---|---|---|
| **Nominal sensing distance Sn** | **2.5** mm | **4** mm | **8** mm | **15** mm |
| Operating zone (mm) | 0…2 | 0…3.2 | 0…6.4 | 0…12 |
| Suitability for flush mounting (metal environment) | non flush mountable | | | |
| Temperature range (°C) | - 25…+ 70 | | | |
| Product certification | CE - UL - CSA - CCC - C-TICK | | | |
| Degree of protection (conforming to IEC 60529) | IP 67 | pre-cabled: IP 68 (with connector: IP 67) | | |

## Sensors for DC applications

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Connection** | | | | **Pre-cabled, PvR (2 m)** | | | |
| Dimensions (mm) Ø x L or W x H x D | | | | M8 x 33 | M12 x 33 | M18 x 33.5 | M30 x 40.5 |
| **2-wire** (non polarised) | | **NO or NC** | programmable | – | – | – | – |
| **4-wire** | **PNP** | **NO + NC** | complementary outputs | – | – | – | – |
| | **NPN** | **NO + NC** | complementary outputs | – | – | – | – |
| **3-wire** | **PNP** | **NO** function | | **XS4P08PA340** | **XS4P12PA340** | **XS4P18PA340** | **XS4P30PA340** |
| | | **NC** function | | **XS4P08PB340** | **XS4P12PB340** | **XS4P18PB340** | **XS4P30PB340** |
| | **NPN** | **NO** function | | **XS4P08NA340** | **XS4P12NA340** | **XS4P18NA340** | **XS4P30NA340** |
| | | **NC** function | | **XS4P08NB340** | **XS4P12NB340** | **XS4P18NB340** | **XS4P30NB340** |
| **Connection** | | | | **M8 connector** | **M12 connector** | | |
| Dimensions (mm) Ø x L or W x H x D | | | | M8 x 42 | M12 x 48 | M18 x 48 | M30 x 50 |
| **3-wire** | **PNP** | **NO** function | | **XS4P08PA340S** | **XS4P12PA340D** | **XS4P18PA340D** | **XS4P30PA340D** |
| | | **NC** function | | **XS4P08PB340S** | **XS4P12PB340D** | **XS4P18PB340D** | **XS4P30PB340D** |
| | **NPN** | **NO** function | | **XS4P08NA340S** | **XS4P12NA340D** | **XS4P18NA340D** | **XS4P30NA340D** |
| | | **NC** function | | **XS4P08NB340S** | **XS4P12NB340D** | **XS4P18NB340D** | **XS4P30NB340D** |
| Supply voltage limits, min./max. (V) including ripple | | | | 10…38 | 10…38 | 10…38 | 10…38 |
| Switching capacity, max. (mA) | | | | 200 | 200 | 200 | 200 |
| Short-circuit protect. (★) / LED output state indicator (⊗) | | | | ★ / ⊗ | ★ / ⊗ | ★ / ⊗ | ★ / ⊗ |
| Voltage drop, closed state (V) at I nominal | | | | ≤ 2 | ≤ 2 | ≤ 2 | ≤ 2 |
| Switching frequency (Hz) | | | | 5000 | 5000 | 2000 | 1000 |

## Multi-current/multi-voltage sensors for AC/DC applications

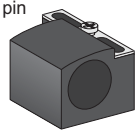
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Connection** | | | | **Pre-cabled, PvR (2 m)** | | | |
| Dimensions (mm) Ø x L or W x D x H | | | | M8 x 50 | M12 x 50 | M18 x 60 | M30 x 60 |
| **2-wire** | | **AC/DC** | **NO** function | **XS4P08MA230** | **XS4P12MA230** | **XS4P18MA230** | **XS4P30MA230** |
| not short-circuit protected (1) | | | **NC** function | **XS4P08MB230** | **XS4P12MB230** | **XS4P18MB230** | **XS4P30MB230** |
| | | **AC** | **NO** or **NC** programmable | – | – | – | – |
| | | **AC/DC** | **NO** or **NC** programmable | – | – | – | – |
| **Connection** | | | | **1/2" connector** | | | |
| Dimensions (mm) Ø x L or W x H x D | | | | M8 x 61 | M12 x 61 | M18 x 70 | M30 x 70 |
| **2-wire** | | AC/DC | **NO** function | **XS4P08MA230K** | **XS4P12MA230K** | **XS4P18MA230K** | **XS4P30MA230K** |
| not short-circuit protected (1) | | | **NC** function | **XS4P08MB230K** | **XS4P12MB230K** | **XS4P18MB230K** | **XS4P30MB230K** |
| Supply voltage limits, min./max. (V) including ripple | | | | 20…264 | 20…264 | 20…264 | 20…264 |
| Switching capacity, max. (mA) | | | | 100 | 200 | 300 AC / 200 DC | 300 AC / 200 DC |
| LED output state indicator (⊗) | | | | ⊗ | ⊗ | ⊗ | ⊗ |
| Residual current, open state (mA) | | | | ≤ 0.6 | ≤ 0.6 | ≤ 0.6 | ≤ 0.6 |
| Voltage drop, closed state (V) at I nominal | | | | ≤ 5.5 | ≤ 5.5 | ≤ 5.5 | ≤ 5.5 |
| Switching frequency (Hz) | | | | 25 AC / 3000 DC | 25 AC / 3000 DC | 25 AC / 2000 DC | 25 AC / 1000 DC |

(1) For these sensors without short-circuit protection, it is essential to connect a 0.4 A quick-blow fuse in series with the load.

## Accessories

### Fixing for cylindrical sensors

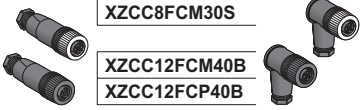
Fixing clamp with indexing pin for cylindrical sensors



| | | | |
|---|---|---|---|
| M4 | **XSZB104** | M12 | **XSZB112** |
| M5 | **XSZB105** | M18 | **XSZB118** |
| M6.5 | **XSZB165** | M30 | **XSZB130** |
| M8 | **XSZB108** | | |

### Suitable female plug-in connectors

| **M8** | Straight | Elbowed |
|---|---|---|
| Metal ring | **XZCC8FDM30S** | **XZCC8FCM30S** |
| **M12 (4 pin)** | | |
| Metal ring | **XZCC12FDM40B** | **XZCC12FCM40B** |
| Plastic ring | **XZCC12FDP40B** | **XZCC12FCP40B** |





Schneider Electric

Other versions: **please consult your Schneider Electric agency.**

# Miniature cylindrical metal (assembly)

| | | | Ø 4 | M5 | Ø 6.5 | |
|---|---|---|---|---|---|---|
| **Nominal sensing distance Sn** | | | **1** mm | **1** mm | **1.5** mm | **2.5** mm |
| Operating zone (mm) | | | 0…0.8 | 0…0.8 | 0…1.2 | 0…2 |
| Suitability for flush mounting (metal environment) | | | flush mountable | | | |
| Temperature range (°C) | | | - 25…+ 70 | | | |
| Product certification | | | CE - UL - CSA - CCC - C-TICK | | | |
| Degree of protection (conforming to IEC 60529) | | | IP 67 | | | |

## Sensors for DC applications

| | | | | | | |
|---|---|---|---|---|---|---|
| Dimensions (mm) Ø x L | | | Ø 4 x 29 | M5 x 29 | Ø 6.5 x 33 | |
| **Connection** | | | **Pre-cabled, PvR (2 m)** | | | |
| **3-wire** | **PNP** | **NO** function | **XS1L04PA310** | **XS1N05PA310** | **XS506B1PAL2** | **XS106B3PAL2** |
| | | **NC** function | **–** | **–** | **XS506B1PBL2** | **XS106B3PBL2** |
| | **NPN** | **NO** function | **XS1L04NA310** | **XS1N05NA310** | **XS506B1NAL2** | **XS106B3NAL2** |
| | | **NC** function | **–** | **–** | **XS506B1NBL2** | **XS106B3NBL2** |
| **2-wire** (polarised) | | **NO** function | **–** | **–** | **XS506BSCAL2** | **XS606B3CAL2** |
| | | **NC** function | **–** | **–** | **XS506BSCBL2** | **XS606B3CBL2** |
| Dimensions (mm) Ø x L | | | Ø 4 x 41 | M5 x 41 | Ø 6.5 x 42 | |
| **Connection** | | | **M8** | | | |
| **3-wire** | **PNP** | **NO** function | **XS1L04PA310S** | **XS1N05PA311S** (1) | **XS506B1PAM8** | **XS106B3PAM8** |
| | | **NC** function | **–** | **–** | **XS506B1PBM8** | **XS106B3PBM8** |
| | **NPN** | **NO** function | **XS1L04NA310S** | **XS1N05NA311S** (1) | **XS506B1NAM8** | **XS106B3NAM8** |
| | | **NC** function | **–** | **–** | **XS506B1NBM8** | **XS106B3NBM8** |
| **Connection** | | | **M12** | | | |
| **2-wire** (polarised) | | fonction **NO** | **–** | **–** | **XS506BSCAL01M12** | **XS506B3CAL01M12** |
| Supply voltage limits, min./max. (V) including ripple | | | 5…30 | 5…30 | 10…36 | |
| Switching capacity, max. (mA) 3-wire / 2-wire | | | 100 / – | 100 / – | 200 / 100 | |
| Short-circuit protect. (★) / LED output state indicator (⊗) | | | ★ / ⊗ | ★ / ⊗ | ★ / ⊗ | |
| Voltage drop, closed state (V) at I nominal 3-wire / 2-wire | | | ≤ 2 / – | ≤ 2 / – | ≤ 2 / ≤ 4 | |
| Switching frequency (Hz) 3-wire / 2-wire | | | 5000 / – | 5000 / – | 5000 / 4000 | 2500 / 3000 |

(1) Stainless steel sensors, Sn = 0.8 mm

## Pre-wired connectors

Straight

Elbowed

**M8 (3 pin)**

| | Straight | Elbowed |
|---|---|---|
| 2 m | **XZCP0566L2** | **XZCP0666L2** |
| 5 m | **XZCP0566L5** | **XZCP0666L5** |
| 10 m | **XZCP0566L10** | **XZCP0666L10** |

**1/2"**

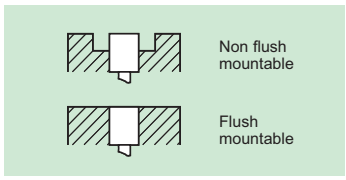
| | Straight | Elbowed |
|---|---|---|
| 2 m | **XZCP1865L2** | **XZCP1965L2** |
| 5 m | **XZCP1865L5** | **XZCP1965L5** |
| 10 m | **XZCP1865L10** | **XZCP1965L10** |

**M12 (4 pin)**

| | Straight | Elbowed | Elbowed PNP LED |
|---|---|---|---|
| 2 m | **XZCP1141L2** | **XZCP1241L2** | **XZCP1340L2** |
| 5 m | **XZCP1141L5** | **XZCP1241L5** | **XZCP1340L5** |
| 10 m | **XZCP1141L10** | **XZCP1241L10** | **XZCP1340L10** |

# OsiSense XS Inductive proximity sensors

## Multi-voltage with short-circuit protection



| | | | M12 | M18 | M30 |
|---|---|---|---|---|---|
| **Sensing distance Sn** | | flush mountable | 2 mm | 5 mm | 10 mm |
| | | non flush mountable | 4 mm | 8 mm | 15 mm |
| Operating zone (mm) | | flush mountable | 0…1.6 | 0…4 | 0…8 |
| | | non flush mountable | 0…3.2 | 0…6.4 | 0…12 |
| Suitability for flush mounting (metal environment) | | | flush mountable or non flush mountable depending on model | | |
| Case M (metal) P (plastic) | | | M | | |
| Temperature range (°C) | | | - 25…+ 70 | | |
| Degree of protection (conforming to IEC 60529) | | | IP 68 (with connector: IP 67) | | |
| Product certification | | | CE - UL - CSA - CCC - C-TICK | | |
| Dimensions (mm) Ø x L Cable (Connector) | | | M12 x 55 (M12 x 66) | M18 x 60 (M18 x 72) | M30 x 60 (M30 x 72) |

## Sensors for DC applications

| **Connection** | | | | | | |
|---|---|---|---|---|---|---|
| **4-wire** | **PNP** | **NO + NC** | flush mountable | – | – | – |
| | | | non flush mountable | – | – | – |
| | **NPN** | **NO + NC** | flush mountable | – | – | – |
| | | | non flush mountable | – | – | – |
| | **PNP+NPN** | **NO/NC** | flush mountable (metal) | – | – | – |
| | programmable | | non flush mntbl. (metal) | – | – | – |
| | | | non flush mntbl. (plastic) | – | – | – |
| **Connection** | | | | | | |
| **4-wire** | **PNP** | **NO + NC** | flush mountable | – | – | – |
| | | | non flush mountable | – | – | – |
| | **NPN** | **NO + NC** | flush mountable | – | – | – |
| | | | non flush mountable | – | – | – |
| | **PNP+NPN** | **NO/NC** | flush mountable (metal) | – | – | – |
| | programmable | | non flush mntbl. (metal) | – | – | – |
| | | | non flush mntbl. (plastic) | – | – | – |
| Supply voltage limits, min./max. (V) including ripple | | | | – | – | – |
| Switching capacity, max. (mA) | | | | – | – | – |
| Short-circuit protection (★) / LED output state indicator (⊗) | | | | – | – | – |
| Voltage drop, closed state (V) at I nominal | | | | – | – | – |
| Switching frequency (Hz) | | | | – | – | – |

## Multi-current/multi-voltage sensors for AC/DC applications

| **Connection** | | | **Pre-cabled, PvR (2 m)** | | |
|---|---|---|---|---|---|
| **2-wire AC/DC** | **NO** function | flush mountable | **XS1M12MA250** | **XS1M18MA250** | **XS1M30MA250** |
| | | non flush mountable | **XS2M12MA250** | **XS2M18MA250** | **XS2M30MA250** |
| | **NC** function | flush mountable | **XS1M12MB250** | **XS1M18MB250** | **XS1M30MB250** |
| | | non flush mountable | **XS2M12MB250** | **XS2M18MB250** | **XS2M30MB250** |
| **Connection** | | | **1/2"-20 UNF connector** | | |
| **2-wire AC/DC** | **NO** function | flush mountable | **XS1M12MA250K** | **XS1M18MA250K** | **XS1M30MA250K** |
| | | non flush mountable | **XS2M12MA250K** | **XS2M18MA250K** | **XS2M30MA250K** |
| | **NC** function | flush mountable | **XS1M12MB250K** | **XS1M18MB250K** | **XS1M30MB250K** |
| | | non flush mountable | **XS2M12MB250K** | **XS2M18MB250K** | **XS2M30MB250K** |
| Supply voltage limits, min./max. (V) 50-60 Hz | | | 20…264 | | |
| Switching capacity, max. (mA) | | | 5…200 | 5…200 AC, 5…300 DC | |
| LED output state indicator (⊗) / Power on LED (⊗) | | | ⊗ / ⊗ | | |
| Residual current, open state (mA) | | | ≤ 1.5 | | |
| Voltage drop, closed state (V) at I nominal | | | ≤ 5.5 | | |
| Switching frequency (Hz) | | | 25 AC, 4000 DC | 25 AC, 2000 DC | 25 AC, 2000 DC (1) |

(1) 25 AC, 1000 DC for non flush mountable Ø 30 mm.



Schneider Electric

Other versions: **please consult your Schneider Electric agency.**

## PNP or NPN
## NO + NC Complementary outputs

## PNP + NPN outputs,
## NO or NC programmable

| | M8 | M12 | M18 | M30 | M12 | M18 | M30 |
|---|---|---|---|---|---|---|---|
| | 1.5 mm | 2 mm | 5 mm | 10 mm | 2 mm | 5 mm | 10 mm |
| | 2.5 mm | 4 mm | 8 mm | 15 mm | 4 mm | 8 mm | 15 mm |
| | 0…1.2 | 0…1.6 | 0…4 | 0…8 | 0…1.6 | 0…4 | 0…8 |
| | 0…2 | 0…3.2 | 0…6.4 | 0…12 | 0…3.2 | 0…6.4 | 0…12 |
| | flush mountable or non flush mountable depending on model | | | | flush mountable or non flush mountable depending on model | | |
| | M | | | | M or P depending on model | | |
| | - 25…+ 70 | | | | - 25…+ 70 | | |
| | IP 67 | IP 68 (with connector: IP 67) | | | IP 68 (with connector: IP 67) | | |
| | CE - UL - CSA - CCC - C-TICK | | | | CE - UL - CSA - CCC - C-TICK | | |
| | M8 x 50 (M8 x 61) | M12 x 33 (M12 x 48) | M18 x 36.5 (M18 x 49) | M30 x 40.5 (M30 x 53) | M12 x 50 (M12 x 61) | M18 x 60 (M18 x 72) | M30 x 60 (M30 x 72) |
| | **Pre-cabled, PvR (2 m)** | | | | **Pre-cabled, PvR (2 m)** | | |
| | **XS1M08PC410** | **XS1N12PC410** | **XS1N18PC410** | **XS1N30PC410** | – | – | – |
| | **XS2M08PC410** | **XS2N12PC410** | **XS2N18PC410** | **XS2N30PC410** | – | – | – |
| | **XS1NM08NC410** | **XS1N12NC410** | **XS1N18NC410** | **XS1N30NC410** | – | – | – |
| | **XS2M08NC410** | **XS2N12NC410** | **XS2N18NC410** | **XS2N30NC410** | – | | |
| | – | – | – | – | **XS1M12KP340** | **XS1M18KP340** | **XS1M30KP340** |
| | – | – | – | – | **XS2M12KP340** | **XS2M18KP340** | **XS2M30KP340** |
| | – | – | – | – | **XS4P12KP340** | **XS4P18KP340** | **XS4P30KP340** |
| | **M12 connector** | | | | **M12 connector** | | |
| | **XS1M08PC410D** | **XS1N12PC410D** | **XS1N18PC410D** | **XS1N30PC410D** | – | – | – |
| | **XS2M08PC410D** | **XS2N12PC410D** | **XS2N18PC410D** | **XS2N30PC410D** | – | – | – |
| | **XS1M08NC410D** | **XS1N12NC410D** | **XS1N18NC410D** | **XS1N30NC410D** | – | – | – |
| | **XS2M08NC410D** | **XS2N12NC410D** | **XS2N18NC410D** | **XS2N30NC410D** | – | – | – |
| | – | – | – | – | **XS1M12KP340D** | **XS1M18KP340D** | **XS1M30KP340D** |
| | – | – | – | – | **XS2M12KP340D** | **XS2M18KP340D** | **XS2M30KP340D** |
| | – | – | – | – | **XS4P12KP340D** | **XS4P18KP340D** | **XS4P30KP340D** |
| | 10…36 | | | | 10…36 | | |
| | 200 | | | | 200 | | |
| | ★ / ⊗ | | | | ★ / – | | |
| | ≤ 2 | | | | ≤ 2.6 | | |
| | 5000 | 5000 | 2000 | 1000 | 5000 | 2000 | 1000 |

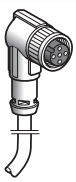
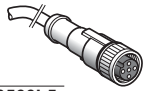
## Accessories

### Fixing clamps

With indexing pin for cylindrical sensors

| | |
|---|---|
| M8 | **XSZB108** |
| M12 | **XSZB112** |
| M18 | **XSZB118** |
| M30 | **XSZB130** |

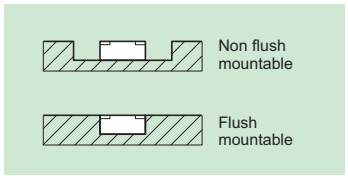
### Suitable female plug-in connectors, including pre-wired versions

| | length 5 m without LED | pre-wired, elbowed | pre-wired, straight | screw terminal |
|---|---|---|---|---|
| | |  |  | |
| M8 (or S) | | **XZCP0666L5** | **XZCP0566L5** | **XZCC8FCM30S** |
| M12 (or D) | | **XZCP1241L5** | **XZCP1141L5** | **XZCC12FCM40B** |
| 1/2" (or K) | | **XZCP1965L5** | **XZCP1865L5** | **XZCC20FCM30B** |

# OsiSense XS — Inductive proximity sensors - Application

## Rotation control

## Fixed sensing distance
(for ferrous or non ferrous materials)



| | 26 x 26 x 13 | 40 x 40 x 15 | M30 | M18 | M30 |
|---|---|---|---|---|---|
| **Nominal sensing distance Sn** | **10** mm | **15** mm | **10** mm | **5** mm | **10** mm |
| Operating zone (mm) | 0...8 | 0...12 | 0...8 | 0...4 | 0...8 |
| Suitability for flush mounting (metal environment) | flush mountable | | | flush mountable | |
| Case M (metal) P (plastic) | P | P | M | M | M |
| Temperature range (°C) | - 25…+ 70 | | | 0…+ 50 | |
| Degree of protection (conforming to IEC 60529) | IP 67 | | | pre-cabled: IP 68 (with connector: IP 67) | |
| Product certification | CE - UL - CSA - CCC - C-TICK | | | CE - UL - CSA - CCC - C-TICK | |
| Dimensions (mm) Ø x L or W x H x D Cable (Connector) | 26 x 26 x 13 | 40 x 40 x 15 | M30 x 81 | M18 x 60 (M18 x 70) | M30 x 60 |
| Maximum speed of passing object (impulses/min) | 48000 | 48000 | 6000...48000 (1) | – | – |
| Adjustable frequency range (impulses/min) | 6...6000 | 6...6000 | 6...150 / 120...3000 (1) | – | – |

## Sensors for DC applications

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Connection** | | | **Pre-cabled, PvR (2 m)** | | | | |
| **4-wire** | **PNP/NPN NO/NC** | programmable | – | – | – | **XS1M18KPM40** | **XS1M30KPM40** |
| **3-wire** | **PNP** **NC** function | slow version | – | – | **XSAV11373** | – | – |
| | | fast version | – | – | **XSAV12373** | – | – |
| | **0…10 V output** | plastic | – | – | – | – | – |
| | **4…20 mA output** | metal, flush mountable | – | – | – | – | – |
| | | plastic, flush mountable | – | – | – | – | – |
| | | plastic, non flush mountable | – | – | – | – | – |
| **Connection** | | | **M8 or M12 connector** | | | | **M12** on 0.8 m flying lead |
| **4-wire** | **PNP/NPN NO/NC** | programmable | – | – | – | **XS1M18KPM40D** | **XS1M30KPM40LD** |
| **3-wire** | **PNP** **NC** function | | **XS9E11RPBL01M12** (3) | **XS9C11RPBL01M12** (3) | – | – | – |
| | **0…10 V output** | | – | – | – | – | – |
| | **4…20 mA output** | | – | – | – | – | – |
| Supply voltage limits, min./max. (V) including ripple | | | 10...36 | 10...36 | 10...58 | 10...38 | |
| Switching capacity, max. (mA) | | | 100 | 200 | 200 | 200 | |
| Short-circuit protect. (★) / LED output state indicator (⊗) / Power on LED (⊗) | | | (⊗) | ★ / ⊗ / ⊗ | ★ / ⊗ / ⊗ | ★ / ⊗ / – | ★ / ⊗ / – |
| Linearity error | | | – | – | – | – | |
| Voltage drop, closed state (V) at I nominal | | | ≤ 2 | ≤ 2 | ≤ 2 | ≤ 2.6 | |
| Switching frequency (Hz) | | | – | – | – | 1000 | |
| Operating frequency (Hz) | | | – | – | – | – | |

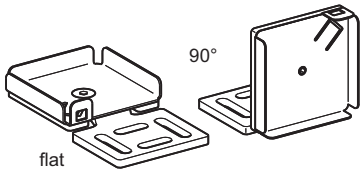
## Multi-current/multi-voltage sensors for AC/DC applications

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Connection** | | | **Pre-cabled, PvR (2 m)** | | | | |
| **2-wire** | **AC/DC** **NC** function | | **XS9E11RMBL01U20** (5) | **XS9C11RMBL01U20** (5) | – | – | – |
| not short-circuit protected (2) | **NC** function | slow version | – | – | **XSAV11801** | – | – |
| | | fast version | – | – | **XSAV12801** | – | – |
| Supply voltage limits, min./max. (V) 50-60 Hz | | | 20...264 | 20...264 | 20...264 | – | – |
| Switching capacity, max. (mA) | | | 100 | 300 AC / 200 DC | 300 AC / 200 DC | – | – |
| LED output state indicator (⊗) / Power on LED (⊗) | | | ⊗ / ⊗ | ⊗ / ⊗ | ⊗ / – | – | – |
| Residual current, open state (mA) | | | ≤ 1.5 | ≤ 1.5 | ≤ 1.5 | – | – |
| Voltage drop, closed state (V) at I nominal | | | ≤ 5.5 | ≤ 5.5 | ≤ 5.7 | – | – |
| Switching frequency (Hz) | | | – | – | – | – | – |

## Accessories

### Fixing

for flat sensors




| | flat | 90° | substitution of block type sensors XSE / XSC / XSD |
|---|---|---|---|
| 8x22x8 | **XSZBJ00** | **XSZBJ90** | – |
| 15x32x8 | **XSZBF00** | **XSZBF90** | **XSZBE10** |
| 26x26x13 | **XSZBE00** | **XSZBE90** | **XSZBC10** |
| 40x40x15 | **XSZBC00** | **XSZBC90** | **XSZBD10** |

Fixing clamp with indexing pin for cylindrical sensors

| | |
|---|---|
| M12 | **XSZB112** |
| M18 | **XSZB118** |
| M30 | **XSZB130** |

Other versions: **please consult your Schneider Electric agency.**

# **Analogue** (Position control)

| | 8 x 32 x 8 | 26 x 26 x 13 | 40 x 40 x 15 | 80 x 80 x 26 | M12 | M18 | M30 |
|---|---|---|---|---|---|---|---|
| | **5** mm | **10** mm | **15** mm | **40** mm | M: **2** mm / P: **4** mm | M: **5** mm / P: **8** mm | M: **10** mm / P: **15** mm |
| | 1...4 | 1...10 | 2...15 | 5...40 | M: 0.2…2 / P: 0.4…4 | M: 0.5…5 / P: 0.8…8 | M: 1…10 / P: 1.5…15 |
| | flush mountable | flush mountable | flush mountable | flush mountable | flush / non flush mountable | flush / non flush mountable | flush / non flush mountable |
| | P | P | P | P | M or P | M or P | M or P |
| | - 25…+ 70 | - 25…+ 70 | - 25…+ 70 | - 25…+ 70 | - 25…+ 70 | - 25…+ 70 | - 25…+ 70 |
| | pre-cabled: IP 68 (with connector: IP 67) | | | | IP 67 | | |
| | CE - UL - CSA - CCC - C-TICK | | | | | | |
| | 15 x 32 x 8 | 26 x 26 x 13 | 40 x 40 x 15 | 80 x 80 x 26 | Ø 12 x 50 | Ø 18 x 50 | Ø 30 x 52.5 |
| | – | – | – | – | – | – | – |
| | – | – | – | – | – | – | – |
| | | | | | | | |
| | – | – | – | – | – | – | – |
| | – | – | – | – | – | – | – |
| | – | – | – | – | – | – | – |
| | **XS9F111A1L2** | **XS9E111A1L2** | **XS9C111A1L2** | **XS9D111A1L2** | **XS4P12AB110** | **XS4P18AB110** | **XS4P30AB110** |
| | – | – | – | – | **XS1M12AB120** | **XS1M18AB120** | **XS1M30AB120** |
| | **XS9F111A2L2** | **XS9E111A2L2** | **XS9C111A2L2** | **XS9D111A2L2** | – | – | – |
| | – | – | – | – | **XS4P12AB120** | **XS4P18AB120** | **XS4P30AB120** |
| | **M8 or M12 connector** | | | | | | |
| | – | – | – | – | – | – | – |
| | – | – | – | – | – | – | – |
| | **XS9F111A1L01M8** (4) | **XS9E111A1L01M12** (4) | **XS9C111A1L01M12** (4) | **XS9D111A1M12** | – | – | – |
| | **XS9F111A2L01M8** (4) | **XS9E111A2L01M12** (4) | **XS9C111A2L01M12** (4) | **XS9D111A2M12** | – | – | – |
| | 10...36 | 10...36 | 10...36 | 10...36 | 10…38 | 10…38 | 10…38 |
| | – | – | – | – | – | – | – |
| | – | – | – | – | – | – | – |
| | ± 1 V for 0…10 V version / ± 2 mA for 4…20 mA version | | | | | | |
| | – | – | – | – | – | – | – |
| | – | – | – | – | – | – | – |
| | 2000 | 1000 | 1000 | 100 | 1500 | 500 | 300 |

(1) 6...150 and 6000 impulses/min for XSAV11373 and XSAV11801 (slow version); 120...3000 and 48000 impulses/min for XSAV12373 and XSAV12801 (fast version).

(2) For these sensors without short-circuit protection, it is essential to connect a 0.4 A quick-blow fuse in series with the load.

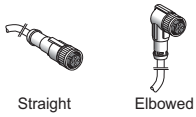
(3) Flying lead (L = 0.15 m) with end mounted remote control incorporating M12 connector.

(4) Flying lead (L = 0.15 m) with end connector.

(5) Flying lead (L = 0.15 m) with end mounted remote control incorporating 1/2"-20 UNF connector.

## Accessories

**Pre-wired connectors**

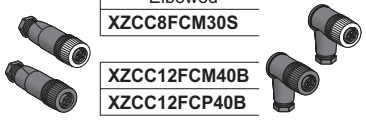


Straight Elbowed

| | M8 (3 pin) | | 1/2" | | M12 (4 pin) | | |
|---|---|---|---|---|---|---|---|
| | Straight | Elbowed | Straight | Elbowed | Straight | Elbowed | Elbowed PNP LED |
| 2 m | **XZCP0566L2** | **XZCP0666L2** | **XZCP1865L2** | **XZCP1965L2** | **XZCP1141L2** | **XZCP1241L2** | **XZCP1340L2** |
| 5 m | **XZCP0566L5** | **XZCP0666L5** | **XZCP1865L5** | **XZCP1965L5** | **XZCP1141L5** | **XZCP1241L5** | **XZCP1340L5** |
| 10 m | **XZCP0566L10** | **XZCP0666L10** | **XZCP1865L10** | **XZCP1965L10** | **XZCP1141L10** | **XZCP1241L10** | **XZCP1340L10** |

**Suitable female plug-in connectors**

| | Straight | Elbowed |
|---|---|---|
| **M8** | | |
| Steel ring | **XZCC8FDM30S** | **XZCC8FCM30S** |
| **M12 (4 pin)** | | |
| Steel ring | **XZCC12FDM40B** | **XZCC12FCM40B** |
| Plastic ring | **XZCC12FDP40B** | **XZCC12FCP40B** |



# Inductive proximity sensors - Application
## Food and beverage processing

| Type | M12 | M18 | Ø 18 plain | M30 |
|---|---|---|---|---|
| **Nominal sensing distance Sn** | **7** mm | **12** mm | **12** mm | **22** mm |
| Operating zone (mm) | 0 …5.6 | 0 … 9.6 | 0 … 9.6 | 0 … 17.6 |
| Suitability for flush mounting (metal environment) | non flush mountable | | | |
| Case M (metal) (1) | M stainless steel 316 L | | | |
| Product certification | CE - UL - CSA - CCC - C-TICK | | | |
| Temperature range (°C) | - 25…+ 85 | | | |
| Degree of protection (conforming to IEC 60529) | pre-cabled: IP 68 (with connector: IP 67) and IP 69K conforming to DIN 40050 | | | |

## Sensors for DC applications (solid-state output: transistor)

| | | | | | | |
|---|---|---|---|---|---|---|
| **Connection** | | | **Pre-cabled, non poisonous PVC (2 m)** | | | |
| Dimensions (mm) | | | M12 x 55 | M18 x 60 | Ø 18 x 60 | M30 x 62 |
| **3-wire** | **PNP** | **NO** function | **XS212SAPAL2** | **XS218SAPAL2** | **XS2L2SAPAL2** | **XS230SAPAL2** |
| | **NPN** | **NO** function | **XS212SANAL2** | **XS218SANAL2** | **XS2L2SANAL2** | **XS230SANAL2** |
| **Connection** | | | **M12 connector** | | | |
| Dimensions (mm) | | | M12 x 61 | M18 x 70 | Ø 18 x 70 | M30 x 70 |
| **3-wire** | **PNP** | **NO** function | **XS212SAPAM12** | **XS218SAPAM12** | **XS2L2SAPAM12** | **XS230SAPAM12** |
| | **NPN** | **NO** function | **XS212SANAM12** | **XS218SANAM12** | **XS2L2SANAM12** | **XS230SANAM12** |
| Supply voltage limits, min./max. (V) including ripple | | | 10…36 | | | |
| Switching capacity, max. (mA) | | | ≤ 200 | | | |
| Switching frequency (Hz) | | | 2500 | 1000 | 1000 | 500 |
| Short-circuit protection (★) / LED output state indicator (⊗) | | | ★ / ⊗ | ★ / ⊗ | ★ / ⊗ | ★ / ⊗ |
| Voltage drop, closed state (V) at I nominal | | | ≤ 2 | | | |

## Multi-current/multi-voltage sensors for AC/DC applications

| | | | | | | |
|---|---|---|---|---|---|---|
| **Connection** | | | **Pre-cabled, non poisonous PVC (2 m)** | | | |
| Dimensions (mm) | | | – | M18 x 60 | – | M30 x 62 |
| **2-wire** (2) | **AC/DC** | **NO** function | **–** | **XS218SAMAL2** | **–** | **XS230SAMAL2** |
| **Connection** | | | **1/2"-20 UNF connector** | | | |
| Dimensions (mm) | | | – | M18 x 72 | – | M30 x 74 |
| **2-wire** (2) | **AC/DC** | **NO** function | **–** | **XS218SAMAU20** | **–** | **XS230SAMAU20** |
| Supply voltage limits, min./max. (V) 50-60 HZ | | | – | 20 … 264 | – | 20 … 264 |
| Switching capacity, max. (mA) | | | – | 300 AC / 200 DC | – | 300 AC / 200 DC |
| Switching frequency (Hz) | | | – | 25 AC / 1000 DC | – | 25 AC / 300 DC |
| LED output state indicator (⊗) | | | – | ⊗ | – | ⊗ |
| Voltage drop, closed state (V) at I nominal | | | – | ≤ 5.5 | – | ≤ 5.5 |
| Residual current, open state (mA) | | | – | ≤ 0.8 | – | ≤ 0.8 |

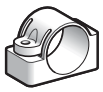
(1) Plastic range available. M12, M18, M30:
To order, replace the second letter **S** in the reference by **A**
(example: XS212**S**APAL2 becomes XS212**A**APAL2).

(2) For these sensors without short-circuit protection, it is essential to connect a 0.4 A quick-blow fuse in series with the load.

## Accessories

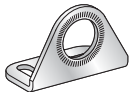
### Fixing clamps

**Plastic** fixing centres 24.1 mm, with locking screw



| for sensor | |
|---|---|
| Ø 18 plain | **XUZB2005** |

**Stainless steel**



| for sensor | |
|---|---|
| Ø 12 | **XSZBS12** |
| Ø 18 | **XUZA118** |
| Ø 30 | **XSZBS30** |

### M12 pre-wired connector

female, 4-pin, stainless steel clamping ring

Straight connector

| 5 m cable | **XZCPA1141L5** |
|---|---|

Elbowed connector

| 5 m cable | **XZCPA1241L5** |
|---|---|

### M12 jumper cable

male, 3-pin, stainless steel clamping ring

| Straight connector | 5 m | **XZCRA151140A5** |
|---|---|---|

### 1/2" pre-wired connector

| Straight | 5 m | **XZCP1865L5** |
|---|---|---|
| Elbowed | 5 m | **XZCP1965L5** |

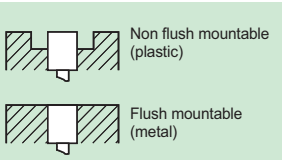


Schneider Electric

Other versions: **please consult your Schneider Electric agency.**

# OsiSense XT — Capacitive proximity sensors

## Detection of insulating materials or conductive materials



| Suitability for flush mtg. | | M12 | M18 | M30 | Ø 32 | 40 x 40 x 117 |
|---|---|---|---|---|---|---|
| **Nominal sensing distance Sn** | flush mountable | 2 mm | 5 mm | 10 mm | 15 mm | 15 mm |
| | non flush mountable | – | 8 mm | 15 mm | 20 mm | – |
| Operating zone Sa (mm) (2) | flush mountable | 0…1.44 | 0…3.6 | 0…7.2 | 0…10 | 0…11 |
| | non flush mountable | – | 0…5.8 | 0…11 | 0…15 | – |
| Case M (metal) P (plastic) | flush mountable | M | M | M | M | P |
| | non flush mountable | – | P | P | P | – |
| Product certification | | CE | | | | CE - UL - CSA |
| Temperature range (°C) | | - 25…+ 70 | | | | |
| Degree of protection (conforming to IEC 60529) | | IP 67 | | | | |
| Dimensions (mm) Ø x L or H x W x D | | M12 x 70 | M18 x 80 | M30 x 80 | M32 x 80 | 117 x 40 x 40 |

## Sensors for DC applications

| Connection | | | | Pre-cabled, PVC (2 m) | | | | |
|---|---|---|---|---|---|---|---|---|
| **3-wire** | **PNP** | **NO** function | flush mountable | **XT112S1PAL2** | **XT118B1PAL2** | **XT130B1PAL2** | – | – |
| | | | non flush mountable | – | **XT218A1PAL2** | **XT230A1PAL2** | – | – |
| | | **NO + NC** functions | flush mountable | **XT112S1PCL2** | **XT118B1PCL2** | **XT130B1PCL2** | – | – |
| | | | non flush mountable | – | – | – | – | – |
| | **NPN** | **NO** function | flush mountable | **XT112S1NAL2** | **XT118B1NAL2** | **XT130B1NAL2** | – | – |
| | | | non flush mountable | – | **XT218A1NAL2** | **XT230A1NAL2** | – | – |
| **Connection** | | | | **M12 connector** | | | | **Screw terminals** |
| **3-wire** | **PNP** | **NO + NC** functions | flush mountable | **XT112S1PCM12** | **XT118B1PCM12** | **XT130B1PCM12** | – | **XT7C40PC440** (3) |
| | | | non flush mountable | – | **XT218A1PCM12** | **XT230A1PCM12** | – | – |
| | **NPN** | **NO + NC** functions | flush mountable | – | – | – | – | **XT7C40NC440** (3) |
| Supply voltage limits, min./max. (V) including ripple | | | | 10...38 | | | | 10...58 |
| Switching capacity, max. (mA) | | | | 200 | | | | 200 |
| Short circuit-protection (★) / LED output state indicator (⊗) | | | | ★ / ⊗ | | | | ★ / ⊗ |
| Voltage drop, closed state (V) at I nominal | | | | ≤ 2 | | | | ≤ 2 |
| Switching frequency (Hz) | | | | 300 | 100 (XT2) / 200 (XT1) | 100 (XT2) / 150 (XT1) | – | 100 |

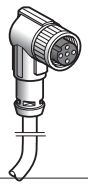
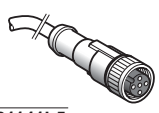
## Multi-current/multi-voltage sensors for AC applications

| Connection | | | | Pre-cabled, PVC (2 m) | | | | |
|---|---|---|---|---|---|---|---|---|
| **2-wire AC** (1) | | **NO** function | flush mountable | – | **XT118B1FAL2** | **XT130B1FAL2** | **XT132B1FAL2** | – |
| | | | non flush mountable | – | **XT218A1FAL2** | **XT230A1FAL2** | **XT232A1FAL2** | – |
| | | **NO** function | flush mountable | – | **XT118B1FBL2** | **XT130B1FBL2** | **XT132B1FBL2** | – |
| | | | non flush mountable | – | – | XT230A1FBL2 | XT232A1FBL2 | – |
| **Connection** | | | | | | | | **Screw terminals** |
| **2-wire AC** (1) | | **NO or NC** programmable | flush mountable | – | – | – | – | **XT7C40FP262** |
| Supply voltage limits, min./max. (V) 50-60 Hz | | | | – | 20…264 | 20…264 | 20…264 | 20…264 |
| Switching capacity, max. (mA) | | | | – | 300 | | | 350 |
| LED output state indicator (⊗) / Power on LED (⊗) | | | | ⊗ / – | | | | |
| Voltage drop, closed state (V) at I nominal | | | | – | ≤ 5.5 | ≤ 5.5 | ≤ 9 | ≤ 5.5 |
| Switching frequency (Hz) | | | | – | 25 | 25 | 25 | 25 |

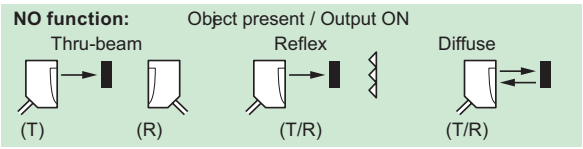
(1) For these sensors without short-circuit protection, it is essential to connect a 0.4 A quick-blow fuse in series with the load.
(2) The operating distance depends on the objet material.
(3) Only for detecting insulating materials.

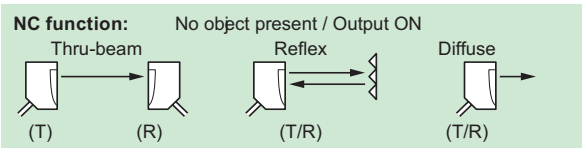
## Accessories

**Suitable female plug-in connectors, including pre-wired versions**

| | length 5 m without LED | pre-wired, elbowed | pre-wired, straight | screw terminal |
|---|---|---|---|---|
| | |  |  | |
| M12 | | **XZCP1241L5** | **XZCP1141L5** | **XZCC12FCM40B** |

# OsiSense XU Photo-electric sensors
## General Purpose



| | | | M18 Metal (1) | | M18 Plastic | |
|---|---|---|---|---|---|---|
| | | | Cable | M12 connector | Cable | M12 connector |
| **Diffuse** | **Sensing distance** | | **0.6 m** (2) (3) | | **0.6 m** (2) (3) | |
| Output type | DC3 NO | PNP | **XUB5BPANL2** | **XUB5BPANM12** | **XUB5APANL2** | **XUB5APANM12** |
| | | NPN | **XUB5BNANL2** | **XUB5BNANM12** | **XUB5ANANL2** | **XUB5ANANM12** |
| | | PNP/NPN | – | – | – | – |
| | AC/DC 1C/O relay | | – | – | – | – |
| **Reflex Polarised** | **Sensing distance** (4) | | **2 m** | | **2 m** | |
| Output type | DC3 NO | PNP | **XUB9BPANL2** | **XUB9BPANM12** | **XUB9APANL2** | **XUB9APANM12** |
| | | NPN | **XUB9BNANL2** | **XUB9BNANM12** | **XUB9ANANL2** | **XUB9ANANM12** |
| | | PNP/NPN | – | – | – | – |
| | AC/DC 1C/O relay | | – | – | – | – |
| **Reflex** | **Sensing distance** (4) | | **4 m** | | **4 m** | |
| Output type | DC3 NO | PNP | **XUB1BPANL2** | **XUB1BPANM12** | **XUB1APANL2** | **XUB1APANM12** |
| | | NPN | **XUB1BNANL2** | **XUB1BNANM12** | **XUB1ANANL2** | **XUB1ANANM12** |
| | AC/DC 1C/O relay | | – | – | – | – |
| **Thru beam** | **Sensing distance** | | **15 m** | | **15 m** | |
| Output type | DC3 NO | PNP | **XUB2BPANL2R** | **XUB2BPANM12R** | **XUB2APANL2R** | **XUB2APANM12R** |
| | | NPN | **XUB2BNANL2R** | **XUB2BNANM12R** | **XUB2ANANL2R** | **XUB2ANANM12R** |
| | | PNP/NPN | – | – | – | – |
| | AC/DC 1C/O relay | | – | – | – | – |
| **Output function** | **NO** | | **A** | **A** | **A** | **A** |
| | **NC** | | **B** | **B** | **B** | **B** |
| **Thru beam Transmitter** | | DC | **XUB0BKSNL2T** | **XUB0BKSNM12T** | **XUB0AKSNL2T** | **XUB0AKSNM12T** |
| | | AC/DC | – | – | – | – |
| **Multimode** | Sensing distance | | Background suppression: **0.12 m** - Diffuse: **0.3 m**<br>Reflex polarised: **2 m** - Thru beam: **18 m** | | | |
| Output type | DC3 NO/NC | PNP | **XUB0BPSNL2** | **XUB0BPSNM12** | **XUB0APSNL2** | **XUB0APSNM12** |
| | | NPN | **XUB0BNSNL2** | **XUB0BNSNM12** | **XUB0ANSNL2** | **XUB0ANSNM12** |
| | | PNP/NPN | – | – | – | – |
| | AC/DC 1C/O relay | | – | – | – | – |
| **Thru beam Transmitter** | | DC | **XUB0BKSNL2T** | **XUB0BKSNM12T** | **XUB0AKSNL2T** | **XUB0AKSNM12T** |
| | | AC/DC | – | – | – | – |

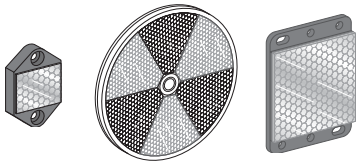
(1) Brass metal, aivailable also in stainless steel, see page food/beverage processing series

(2) For a sensing distance 0,1 m without sensitivity adjustment, change digit 5 by 4 into the reference (ex: XUB**5**BPANL2 becomes XUB**4**BPANL2)

| | | |
|---|---|---|
| **Fixing** | M18 x1 | M18 x1 |
| **Dimensions** | M18 x 64 mm / M18 x 78 mm | |
| **Product certifications** | CE, UL, CSA, C-Tick | CE, UL, CSA, C-Tick |
| **DC common characteristics** | | |
| Supply voltage limits, min./max. (V) including ripple | 10…36 | 10…36 |
| Switching frequency (Hz) | 500 | 500 |
| Common characteristics for DC versions | Switching capacity, max. (mA): 100 / Overload and short-circuit protection (★) / LED output state | |
| **AC/DC common characteristics** | | |
| Supply voltage limits, min./max. (V) including ripple | – | – |
| Switching frequency (Hz) | – | – |
| LED output state indicator (⊗) / power on LED (⊗) | – | – |

## Accessories

### Reflectors



**XUZC24** **XUZC80** **XUZC50**

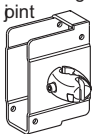
| Reflectors (mm) | |
|---|---|
| Ø 21 | **XUZC21** |
| 24 x 21 | **XUZC24** |
| 11 x 33 | **XUZC08** |
| Ø 39 | **XUZC39** |
| Ø 80 | **XUZC80** |
| 50 x 50 | **XUZC50** |
| 100 x 100 | **XUZC100** |

### 3D fixings with ball joint

Bracket with ball pint for sensors and reflector XUZC50

| for | |
|---|---|
| XUB… | **XUZB2003** |
| XUM0… | **XUZM2003** |
| XUK… | **XUZK2003** |
| XUX… | **XUZX2003** |

Protective housing with ball pint



| for | |
|---|---|
| XUK… | **XUZK2004** |
| XUX… | **XUZX2004** |

M12 rod for ball pint

**XUZ2001**

Other versions: **please consult your Schneider Electric agency.**

| Miniature | | Compact 50 x 50 mm | | Compact 92 x 71 mm | |
|---|---|---|---|---|---|
| Cable | M8 connector | Cable | M12 connector | Screw terminal | M12 connector |
| **1** m (3) | | **1** m (3) | | **2.1** m (3) | |
| – | – | **XUK5AP ANL2** | **XUK5AP ANM12** | **XUX5AP ANT16** | **XUX5AP ANM12** |
| – | – | **XUK5AN ANL2** | **XUK5AN ANM12** | **XUX5AN ANT16** | **XUX5AN ANM12** |
| **XUM5APCNL2** | **XUM5APCNM8** | – | – | – | – |
| – | – | **XUK5ARCNL2** | – | **XUX5ARCNT16** | – |
| **5** m (3) | | **5** m | | **11** m (3) | |
| – | – | **XUK9AP ANL2** | **XUK9AP ANM12** | **XUX9AP ANT16** | **XUX9AP ANM12** |
| – | – | **XUK9AN ANL2** | **XUK9AN ANM12** | **XUX9AN ANT16** | **XUX9AN ANM12** |
| **XUM9APCNL2** | **XUM9APCNM8** | – | – | – | – |
| – | – | **XUK9ARCNL2** | – | **XUX9ARCNT16** | – |
| – | | **7** m | | **14** m (3) | |
| – | – | **XUK1AP ANL2** | **XUK1AP ANM12** | **XUX1AP ANT16** | **XUX1AP ANM12** |
| – | – | **XUK1AN ANL2** | **XUK1AN ANM12** | **XUX1AN ANT16** | **XUX1AN ANM12** |
| – | – | **XUK1ARCNL2** | – | **XUX1ARCNT16** | – |
| **15** m (3) | | **30** m | | **40** m (3) | |
| – | – | **XUK2AP ANL2R** | **XUK2AP ANM12R** | **XUX2AP ANT16R** | **XUX2AP ANM12R** |
| – | – | **XUK2AN ANL2R** | **XUK2AN ANM12R** | **XUX2AN ANT16R** | **XUX2AN ANM12R** |
| **XUM2APCNL2R** | **XUM2APCNM8R** | – | – | – | – |
| – | – | **XUK2ARCNL2R** | – | **XUX2ARCNT16R** | – |
| **NO or NC** | **NO or NC** | **A** | **A** | **A** | **A** |
| | | **B** | **B** | **B** | **B** |
| **XUM2AKCNL2T** | **XUM2AKCNM8T** | **XUK2AKSNL2T** | **XUK2AKSNM12T** | **XUX0AKSAT16T** | **XUX0AKSAM12T** |
| – | – | **XUK2ARCNL2T** | – | **XUX2ARCTT16T** | – |
| Background suppression: **0.1** m - Diffuse: **0.4** m<br>Reflex polarised: **3** m - Thru beam: **10** m | | Background suppression: **0.28** m - Diffuse: **0.8** m<br>Reflex polarised: **4** m - Thru beam: **30** m | | Background suppression: **1.3** m - Diffuse: **2** m<br>Reflex polarised: **11** m - Thru beam: **40** m | |
| **XUM0APSAL2** | **XUM0APSAM8** | – | – | – | – |
| **XUM0ANSAL2** | **XUM0ANSAM8** | – | – | – | – |
| – | – | **XUK0AKSAL2** | **XUK0AKSAM12** | **XUX0AKSAT16** | **XUX0AKSAM12** |
| – | – | **XUK0ARCTL2** | – | **XUX0ARCTT16** | – |
| **XUM0AKSAL2T** | **XUM0AKSAM8T** | **XUK0AKSAL2T** | **XUK0AKSAM12T** | **XUX0AKSAT16T** | **XUX0AKSAM12T** |
| – | – | **XUK0ARCTL2T** | – | **XUX0ARCTT16T** | – |

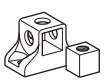
(3) With sensitivity adjustment

(4) With reflector XUZC50

| | | |
|---|---|---|
| Direct fixing centres 25.5, M3 screws | Direct fixing centres 40 x 40, M4 screws | Direct fixing centres 30/38 to 40/50/74, M5 screws |
| 12 x 34 x 20 | 18 x 50 x 50 | 30 x 92 x 71 |
| CE, UL, CSA, C-Tick | CE, UL, CSA, CCC, C-Tick | CE, UL, CSA, CCC, C-Tick |
| | | |
| 10…30 | 10…30 | 10…36 |
| 1000 | 500 | 500 |
| indicator (⊗): yes / power on LED (⊗): yes | | |
| | | |
| – | 20…264 | 20…264 |
| – | 20 | 20 |
| – | ⊗ / ⊗ | ⊗ / ⊗ |

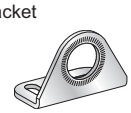
## Simple fixings

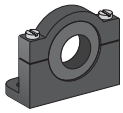
Fixing support for M12 rod



**XUZ2003**

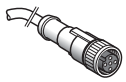
Single bracket





| for | standard | with ball joint |
|---|---|---|
| XUB... | **XUZA118** (stnls. steel) | **XUZA218** (plastic) |
| XUM... | **XUZAM02** | – |
| XUK... | **XUZA51** | – |
| XUX... | **XUZX2000** | – |

## Suitable female plug-in connectors, including pre-wired versions



| length 5 m without LED | pre-wired, elbowed | pre-wired, straight | screw terminal |
|---|---|---|---|
| M8 | **XZCP1041L5** | **XZCP0941L5** | **XZCC8FCM40S** |
| M12 | **XZCP1241L5** | **XZCP1141L5** | **XZCC12FCM40B** |

Other versions: **please consult your Schneider Electric agency.**

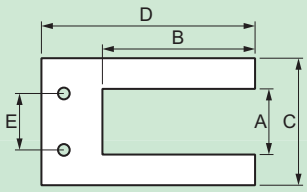
# Photo-electric sensors

## Optical forks without setting and frames

New

| System | Thru-beam with modular red LED light source |
|---|---|
| **Sensing distance** | **2…180** mm |
| Fixing (mm) | (see column E below) |
| Minimum size of objet detected | 0,8 mm |
| Case M (metal) | M |
| Temperature range (°C) / Degree of protection (conforming to IEC 60529) | - 10…+ 60 / IP65 & IP67 |
| Product certification | CE - cULus |

### Sensors for DC applications (solid-state output: transistor)




| Connection | | | | M8 connector 3-pin | | | | | | Pre-cabled L = 2 m. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dimensions (mm) | | | | | A | B | C | D | E | | A | B | C | D | E |
| **Transmitter / Receiver** | 3 wire | NO function | PNP | **XUVR0605PANM8** | 50 | 60 | 74 | 77,5 | 40 | **XUVR0303PANL2** | 30 | 40 | 54 | 57,5 | 30 |
| | | | NPN | **XUVR0605NANM8** | | | | | | | | | | | |
| | | NO function | PNP | **XUVR0608PANM8** | 80 | 60 | 104 | 77,5 | 70 | | | | | | |
| | | | NPN | **XUVR0608NANM8** | | | | | | | | | | | |
| | | NO function | PNP | **XUVR1212PANM8** | 120 | 120 | 144 | 142 | 100 | | | | | | |
| | | | NPN | **XUVR1212NANM8** | | | | | | | | | | | |
| | | NO function | PNP | **XUVR1218PANM8** | 180 | 120 | 204 | 142 | 152 | | | | | | |
| | | | NPN | **XUVR1218NANM8** | | | | | | | | | | | |
| **Output function** | | **NO** | | **A** | | | | | | | | | | | |
| | | **NC** | | **B** | | | | | | | | | | | |
| Supply voltage limits, min./max. (V) including ripple | | | | 10…30 | | | | | | | | | | | |
| Switching capacity, max. (mA) / Switching frequency (Hz) | | | | 100/4kHz | | | | | | | | | | | |
| Overload and short-circuit protection (★) / LED output state indicator (⊗) | | | | ★ / ⊗ | | | | | | | | | | | |

| System | | Thru-beam with infrared emission | | | | |
|---|---|---|---|---|---|---|
| Passageway dimensions | | 30 x 30 mm | 60 x 60 mm | 200 x 120 mm | 200 x 180 mm | 200 x 250 mm |
| Connection | | M8 (4 pin) | | M12 (4 pin) | | |
| Minimum size of object to be detected | Ø 2 mm | **XUVF30M8** | **XUVF60M8** | – | – | – |
| | Ø 4 mm | – | – | **XUVF120M12** | **XUVF180M12** | **XUVF250M12** |
| | Ø 10 mm | – | – | **XUYFRS120S** | **XUYFRS180S** | **XUYFRS250S** |
| Type and output function | | 4-wire, PNP and NPN Output function ON or OFF on passage of object, programmable | | | | |
| Supply voltage limits, min./max. (V) including ripple | | 18…30 | | | | |
| Switching capacity, max. (mA) / Switching frequency (Hz) | | ≤ 100 mA / 500 Hz | | | | |
| Overload and short-circuit protection (★) / LED output state indicator (⊗) | | ★ / ⊗ | | | | |

## Accessories

**Suitable female pre-wired plug-in connectors**

Straight

Elbowed

| **M8** (3 pin) For optical forks without setting | | |
|---|---|---|
| | Straight | Elbowed |
| 2 m | **XZCP0566L2** | **XZCP0666L2** |
| 5 m | **XZCP0566L5** | **XZCP0666L5** |

| **M8** (4 pin) For optical forks and frame with setting | | |
|---|---|---|
| | Straight | Elbowed |
| 2 m | **XZCP0941L2** | **XZCP1041L2** |
| 5 m | **XZCP0941L5** | **XZCP1041L5** |

| **M12** (4 pin) For frame with setting | | |
|---|---|---|
| | Straight | Elbowed |
| 2 m | **XZCP1141L2** | **XZCP1241L2** |
| 5 m | **XZCP1141L5** | **XZCP1241L5** |



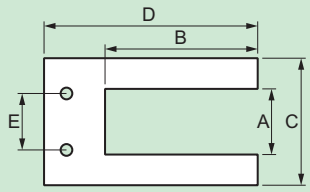
Schneider Electric

Other versions: **please consult your Schneider Electric agency.**

# Forks with teach mode (1)

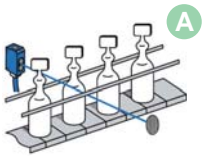
| System, with teach mode | Thru-beam | Thru-beam laser |
|---|---|---|
| **Sensing distance** | **2…120** mm | **2…120** mm |
| Fixing (mm) | (see column E below) | |
| Minimum size of objet detected | 0,2 mm | 0,05 mm |
| Case M (metal) / Setting-up assistance LEDs ⊗ | M / ⊗ | |
| Temperature range (°C) / Degree of protection (conforming to IEC 60529) | - 25…+ 60 / IP 65 | |
| Product certification | CE - cULus | |

## Sensors for DC applications (solid-state output: transistor)

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Connection** | **M8 connector** - 4 Pin | | | | | | | | | | | | |
| **Type of output** | 3-wire PNP/NPN programmable NO/NC | | | | | | | | | | | | |
| Dimensions (mm) | | A | B | C | D | E | | A | B | C | D | E | |
| **Transmitter / Receiver**   | **XUYFANEP40002** | 2 | 42 | 32 | 57 | 14 | **XUYFALNEP40002** | 2 | 42 | 41 | 57 | 14 | |
| | **XUYFANEP60002** | 2 | 59 | | 77 | | **XUYFALNEP60002** | 2 | 59 | | 77 | | |
| | **XUYFANEP100002** | 2 | 95 | | 110 | | **XUYFALNEP100002** | 2 | 95 | | 110 | | |
| | **XUYFANEP40005** | 5 | 42 | 35 | 57 | 14 | **XUYFALNEP40005** | 5 | 42 | 44 | 57 | 14 | |
| | **XUYFANEP60005** | 5 | 59 | | 77 | | **XUYFALNEP60005** | 5 | 59 | | 77 | | |
| | **XUYFANEP100005** | 5 | 95 | | 110 | | **XUYFALNEP100005** | 5 | 95 | | 110 | | |
| | **XUYFANEP40015** | 15 | 42 | 45 | 57 | 27 | **XUYFALNEP40015** | 15 | 42 | 54 | 57 | 27 | |
| | **XUYFANEP60015** | 15 | 59 | | 77 | | **XUYFALNEP60015** | 15 | 59 | | 77 | | |
| | **XUYFANEP100015** | 15 | 95 | | 110 | | **XUYFALNEP100015** | 15 | 95 | | 110 | | |
| | **XUYFANEP40030** | 30 | 42 | 60 | 57 | 42 | **XUYFALNEP40030** | 30 | 42 | 69 | 57 | 42 | |
| | **XUYFANEP60030** | 30 | 59 | | 77 | | **XUYFALNEP60030** | 30 | 59 | | 77 | | |
| | **XUYFANEP100030** | 30 | 95 | | 110 | | **XUYFALNEP100030** | 30 | 95 | | 110 | | |
| | **XUYFANEP40050** | 50 | 42 | 80 | 57 | 40 | **XUYFALNEP40050** | 50 | 42 | 89 | 57 | 40 | |
| | **XUYFANEP60050** | 50 | 59 | | 77 | | **XUYFALNEP60050** | 50 | 59 | | 77 | | |
| | **XUYFANEP100050** | 50 | 95 | | 110 | | **XUYFALNEP100050** | 50 | 95 | | 110 | | |
| | **XUYFANEP40080** | 80 | 42 | 110 | 57 | 70 | **XUYFALNEP40080** | 80 | 42 | 119 | 57 | 70 | |
| | **XUYFANEP60080** | 80 | 59 | | 77 | | **XUYFALNEP60080** | 80 | 59 | | 77 | | |
| | **XUYFANEP100080** | 80 | 95 | | 110 | | **XUYFALNEP100080** | 80 | 95 | | 110 | | |
| | **XUYFANEP40120** | 120 | 42 | 150 | 57 | 110 | **XUYFALNEP40120** | 120 | 42 | 159 | 57 | 110 | |
| | **XUYFANEP60120** | 120 | 59 | | 77 | | **XUYFALNEP60120** | 120 | 59 | | 77 | | |
| | **XUYFANEP100120** | 120 | 95 | | 110 | | **XUYFALNEP100120** | 120 | 95 | | 110 | | |
| Supply voltage limits, min./max. (V) including ripple | 10…30 | | | | | | 10…30 | | | | | | |
| Switching capacity, max. (mA) / Switching frequency (Hz) | 100/10 kHz | | | | | | 100/10 kHz | | | | | | |
| Overload and short-circuit protection (★) / LED output state indicator (⊗) | ★ / ⊗ | | | | | | ★ / ⊗ | | | | | | |

(1) To order a fork without teach mode, delete **A** of the reference. Ex: XUYF**A**NEP40002 becomes XUYFNEP40002

| System | | Ultrasonic thru-beam<br>Special transparent labels | Thru-beam<br>For all other opaque labels |
|---|---|---|---|
| **Sensing distance** | 3 mm version | **XUVU06M3KCNM8** | **XUYFA983003COS** |
| | 5 mm version | – | **XUYFA983005COS** |
| Switching frequency (Hz) | | 500 | 10 000 |
| Sensitivity adjustment | | Numerical +/- button | Teach button |
| Connection | | M8 (4 pin) | |
| Case M (metal) / Setting-up assistance LEDs ⊗ | | M / ⊗ | |
| Temperature range (°C) / Degree of protection (conforming to IEC 60529) | | - 5…+ 55 / IP 65 | - 20…+ 60 / IP 65 |
| Product certification | | CE | CE - cULus |



Accurate detection or very long sensing distance

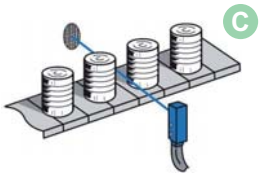
Robustness and compactness

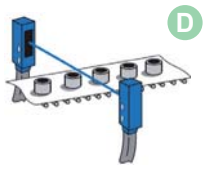
| Application | | | | | A | B |
|---|---|---|---|---|---|---|
| **System** | **Thru-beam** | **Diffuse** | **Diffuse** (1) | **Reflex** | **Diffuse contrast** |
| **Sensing distance** | **100** m (2) | **0.07** m | **0.07** m | **10…1000** mm (3) | **40…150** mm |
| Fixing (mm) | M18 x 1 | M8 x 1 | Direct, 2 M3 holes, fxg. ctrs. 20 mm | Direct, 2 M3 holes, fixing centres 24 mm | |
| Sensitivity adjustment | Teach mode | – | Potentiometer | Teach mode | |
| Case M (metal) P (plastic) / Setting-up assistance LEDs ⊗ | P / ⊗ | M / – | M / ⊗ | P | |
| Temperature range (°C) / Degree of protection (conforming to IEC 60529) | - 10…+ 45°C | - 25…+ 55 | - 25…+ 60 | - 20…+ 60°C | |
| Degree of protection (conforming to IEC 60529) | IP 67 | IP 67 | IP 67, IP 69K | IP 67 | |
| Product certification | CE - UL - CSA | CE - cULus | CE - cULus - C-TICK | CE - cULus | |
| Dimensions (mm) Ø x L or H x W x D | Ø 18 x 64 | Ø 8 x 40 | 40.8 x 16.2 x 29.5 | 35.8 x 12 x 20 | |

## Sensors for DC applications (solid-state output: transistor)

| **Connection** | | **Pre-cabled** | | **PVR (2 m)** | **PVC (2 m)** | | |
|---|---|---|---|---|---|---|---|
| **Transmitter / Receiver** | 3-wire PNP | NO function | – | **XUAH0515** | **XUM5BPANL2** | – | – |
| **Connection** | | **Connector** | **M12** | **M8** 4-pin | | | |
| **Transmitter / Receiver** | 3-wire PNP | NO function | – | **XUAH0515S** | – | – | – |
| | 3-wire PNP | programmable NO / NC | **XUBLAPCNM12** | – | – | **XUYBCO929LSP** | **XUYPCCO929LSP** |
| | 3-wire NPN | programmable NO / NC | **XUBLANCNM12** | – | – | – | – |
| Supply voltage limits, min./max. (V) including ripple | | | 10…30 | 10…30 | 10…30 | 10…30 | 10…30 |
| Switching capacity, max. (mA) / Switching frequency (Hz) | | | 100 / 1500 | 100 / 700 | 100 / 1000 | 100 / 1000 | 100 / 1000 |
| Overload and short-circuit protection (★) / LED output state indicator (⊗) | | | ★ / ⊗ | ★ / ⊗ | ★ / ⊗ | ★ / ⊗ | ★ / ⊗ |

(1) Reflex and thru-beam systems also available.
(2) or min. size of object: 0.2 mm
(3) With specific reflector XUY1111, format 50 x 50 mm. To be ordered separately.



Miniature series sensors

| Application | C | D |
|---|---|---|
| **System** | **Polarised reflex** 50 x 50 reflector included | **Thru-beam** |
| **Sensing distance** | **1…1.5** m | **4** m |
| Fixing (mm) | 2 x Ø 3 holes / fixing centres 9.5 | 3 x Ø 3 holes / fixing centres 9.5 |
| Sensitivity adjustment | Potentiometer | Potentiometer |
| Case P (plastic) / Setting-up assistance LEDs ⊗ | P / ⊗ | P / ⊗ |
| Temperature range (°C) / Degree of protection (conforming to IEC 60529) | 0…+ 50 / IP 65 & IP 67 | 0…+ 50 / IP 65 & IP 67 |
| Product certification | CE - cULus | CE - cULus |
| Dimensions (mm) H x W x D | 40 x 10 x 13.5 | 40 x 10 x 13.5 |

## Sensors for DC applications (solid-state output: transistor)

| **Connection** | | | **M8 connector** (1) - 4 Pin | |
|---|---|---|---|---|
| | **PNP** | **NO** function | **XUYBCO989SP** | **XUYRCO989SP** (receiver) |
| | **NPN** | **NO** function | **XUYBCO989SN** | **XUYRCO989SN** (receiver) |
| | **PNP/NPN** | programmable **NO / NC** | – | **XUYECO989** (transmitter) |
| Supply voltage limits, min./max. (V) including ripple | | | 10…30 | 10…30 |
| Switching capacity, max. (mA) / Switching frequency (Hz) | | | 100 / 500 | 100 / 500 |
| Overload and short-circuit protection (★) / LED output state indicator (⊗) | | | ★ / ⊗ | ★ / ⊗ |

(1) For 2 m pre-cabled version delete CO from the reference. Example: XUYPS**CO**989SP becomes XUYPS989SP.

E

| Application | E Analogue output Position control | E | High access gain for resistance to accumulation of dirt |
|---|---|---|---|
| **System** | **Diffuse** | **Diffuse** | **Thru-beam** |
| **Sensing distance** | **0.20...0.80** m | **0.05...0.40** m | **50** m |
| Fixing (mm) | fixing ctrs: 30 - 11P cable gland | M18 x 1 | M18 x 1 |
| Sensitivity adjustment | – | Potentiometer | Potentiometer |
| Case M (metal) P (plastic) / Setting-up assistance LEDs ⊗ | P / ⊗ | M / ⊗ | M / ⊗ |
| Temperature range (°C) / Degree of protection (conforming to IEC 60529) | - 25…+ 60 / IP 67 | - 25…+ 55 / IP 67 | - 25…+ 55 / IP 67 |
| Product certification | CE - UL - CSA | CE - UL - CSA | CE - UL - CSA - C-TICK |
| Dimensions (mm) Ø x L or H x W x D | 86 x 27 x 83 | M18 x 95 | M18 x 95 |

## Sensors for DC applications

| Connection | | Screw terminals | M12 connector | M12 connector |
|---|---|---|---|---|
| **Transmitter / Receiver** | analogue 4-20 mA / 0-10 V | **XUJK803538** (5) | – | – |
| | analogue 4-20 mA | – | **XU5M18AB20D** | **XU2M18AP20D** (5) |
| Supply voltage limits, min./max. (V) including ripple | | 20…30 | 10…30 | 10…30 |
| Switching capacity, max. (mA) / Switching frequency (Hz) | | max: 20, min: 4 / 10000 | max: 20, min: 4 / 20 | 100 / 30 |
| Overload and short-circuit protection (★) / LED output state indicator (⊗) | | ★ / ⊗ | ★ / ⊗ | ★ / ⊗ |

(5) With 3-wire PNP output.

F G

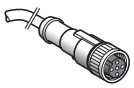
| Application | F G | F G | F G |
|---|---|---|---|
| **System** | **Diffuse, 0-10 V analogue output** | | **Diffuse, 4-20 mA analogue output** |
| | **Sensing distance 1** | **Sensing distance 2** | |
| **Sensing distance** | **40...60** mm | **45...85** mm | **80...300** mm |
| Minimum size of object | 1 mm | 0.8 mm | 1.5 x 3.5 mm |
| Fixing (mm) | direct: 3 M4 holes, fixing centres 40 mm | | |
| Sensitivity adjustment | Potentiometer | | |
| Case P (plastic) / Setting-up assistance LEDs ⊗ | P / ⊗ | | |
| Temperature range (°C) | 0…+ 45° | | |
| Product certification | CE - cULus | | |
| Dimensions (mm) H x W x D | 50 x 17 x 50 | | |

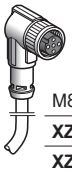
## Sensors for DC applications (solid-state output: transistor)

| Connection | M12 connector | M12 connector | M12 connector |
|---|---|---|---|
| **Transmitter / Receiver** 0…10 V | **XUYPCO925L1ANSP** | **XUYPCO925L2ANSP** | **XUYPCO925L3ANSP** |
| Supply voltage limits, min./max (V) including ripple | 18…28 | | 18…28 |
| Switching capacity, max. | 3 mA / 0…10 V analogue output | | 3 mA / 4…20 mA analogue output |
| Switching frequency (Hz) | 40 | | 40 |
| Overload and short-circuit protection (★) / LED output state indicator (⊗) | ★ / ⊗ | | ★ / ⊗ |

## Accessories

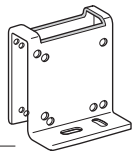
### Suitable female pre-wired plug-in connectors





| | M8 straight | M12 straight | M8 elbowed | M12 elbowed |
|---|---|---|---|---|
| 2 m | **XZCP0941L2** | **XZCP1141L2** | **XZCP1041L2** | **XZCP1241L2** |
| 5 m | **XZCP0941L5** | **XZCP1141L5** | **XZCP1041L5** | **XZCP1241L5** |

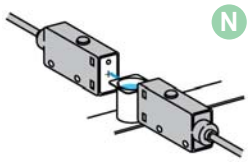
### Fixing, for XUYPCO925



With protective cover
**XUY 9251-DF525567**

Simple
**XUY 925-DF525568**

# **Packaging** series



| **Application** | Colour sensors | | Ⓝ Detection of aqueous liquids |
|---|---|---|---|
| **System** | **Diffuse** | **Diffuse** (with integral amplifier) | **Thru-beam infrared** |
| **Sensing distance** | **0.02** m | **0.040...0.060** m | **0.2** m (1) |
| Fixing (mm) | direct: fixing ctrs. 40x40 | drct: fxg ctrs. 68x42, M5 screws | direct: fixing ctrs. 20 |
| Sensitivity adjustment | Teach button | Teach button | Potentiometer |
| Case M (metal) P (plastic) / Setting-up assistance LEDs ⊗ | P / ⊗ | M / ⊗ | P / ⊗ |
| Temperature range (°C) / Degree of protection (conforming to IEC 60529) | - 10…+ 55 / IP 65 | - 10…+ 55 / IP 67 | 0…+ 40 / IP 65 |
| Product certification | CE - cULus | CE | CE |
| Dimensions (mm) Ø x L or H x W x D | 50 x 25 x 50 | 80 x 30 x 57 | 47 x 13 x 33 |

## Sensors for DC applications (solid-state output: transistor)

| **Connection** | | | **M12 connector** - 8 pin | **Pre-cabled (2 m)** | **Pre-cabled (2 m)** |
|---|---|---|---|---|---|
| **Transmitter / Receiver** | 3-wire PNP | NO function | **XUKC1PSMM12** | **XURC3PPML2** | – |
| | 3-wire NPN | NO function | **XUKC1NSMM12** | **XURC3NPML2** | – |
| | 3-wire PNP / NPN | programmable NO / NC | – | – | **XUMW1KSNL2** |
| Supply voltage limits, min./max. (V) including ripple | | | 10…30 | 10…30 | 10.8…26.4 |
| Switching capacity, max. (mA) / Switching frequency (Hz) | | | 100 / 1500 | 100 / 1200 | 100 / 1000 |

(1) Nominal sensing distance 50 m. Use between 10 and 20 cm, depending on application.

# **Food/beverage processing** series

Stainless steel version for resistance to harsh agents

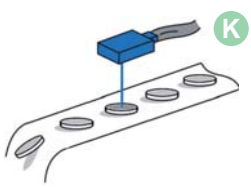
| **System** | **Multimode** (3) | **Polarised relex** (2) | **Diffuse** (2) | **Thru-beam** (2) |
|---|---|---|---|---|
| **Sensing distance** | (4) | **3 / 2** m | **0.15 / 0.10** m | **20 / 15** m |
| Fixing (mm) | M18 x 1 | M18 x 1 | M18 x 1 | M18 x 1 |
| Case M (metal) | M (stainless steel) | M (stainless steel) | M (stainless steel) | M (stainless steel) |
| Temperature range (°C) / Degree of protection (conforming to IEC 60529) | | - 25…+ 55 / IP 67 | - 25…+ 55 / IP 67 | - 25…+ 55 / IP 67 |
| Product certification | CE - UL - CSA - C-TICK | | | |
| Dimensions (mm) Ø x L | Ø 18 x 64 | Ø 18 x 62 | Ø 18 x 62 | Ø 18 x 64 |

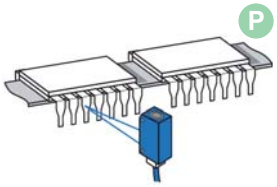
## Sensors for DC applications (solid-state output: transistor)

| **Connection** | | | **Pre-cabled, PvR (2 m)** | | | |
|---|---|---|---|---|---|---|
| **Transmitter / Receiver** | 3-wire PNP | programmable NO / NC | **XUB0SPSNL2** | **XU9N18PP341** | **XU5N18PP341** | **XU2N18PP341** |
| | 3-wire NPN | programmable NO / NC | **XUB0SNSNL2** | **XU9N18NP341** | **XU5N18NP341** | **XU2N18NP341** |
| **Connection** | | | **M12 connector** | | | |
| **Transmitter / Receiver** | 3-wire PNP | programmable NO / NC | **XUB0SPSNM12** | **XU9N18PP341D** | **XU5N18PP341D** | **XU2N18PP341D** |
| | 3-wire NPN | programmable NO / NC | **XUB0SNSNM12** | **XU9N18NP341D** | **XU5N18NP341D** | **XU2N18NP341D** |
| Thru-beam transmitter accessory | | pre-cabled (2 m) | **XUB0SKSNL2T** | – | – | |
| | | connector | **XUB0SKSNM12T** | – | – | |
| Supply voltage limits, min./max. (V) including ripple | | | 10…36 | 10…30 | 10…30 | |
| Switching capacity, max. (mA) / Switching frequency (Hz) | | | 100 / 250 | 100 / 500 | 100 / 500 | |

(2) Also available with 90° head. To order, add the letter **W** after the numbers 341 in the reference. Example: XU9N18PP341 becomes XU9N18PP341**W** or XU9N18PP341D**W**.
(3) 0…0.8 m for versions with 90° head, to order replace the 8e digit **N** by **W**. Example XUB0SPS**N**L2 becomes XUB0SPS**W**L2
(4) Background suppression: **0.12 m** - Diffuse: **0.3 m** - Reflex polarised: **2 m** - Thru beam: **18 m**

# OsiSense XU Photo-electric sensors
## with background suppression



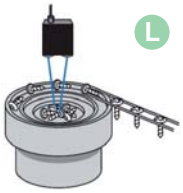



| Application | K | P | K |
|---|---|---|---|
| **System** | **Background suppression** | **Diffuse with background suppression** | |
| | | **Sensing distance 1** | **Sensing distance 2** |
| **Sensing distance** | **1.5…80** mm | **10…60** mm | **30…110** mm |
| Minium size of object | – | 0.3 mm | 0.7 mm |
| Fixing (mm) | 2 x Ø 3 holes / fxg. ctrs. 14.5 | direct: 2 M3 holes, fixing centres 24 mm | |
| Sensitivity adjustment | Potentiometer | Teach mode | |
| Case P (plastic) / Setting-up assistance LEDs ⊗ | P / ⊗ | P | |
| Temperature range (°C) / Degree of protection (conforming to IEC 60529) | 0…+ 50 / IP 65 & IP 67 | - 20…+ 60°C / IP 67 | |
| Product certification | CE - cULus | CE - cULus | |
| Dimensions (mm) H x W x D | 32 x 13 x 20 | 35.8 x 12 x 20 | |

## Sensors for DC applications (solid-state output: transistor)

| **Connection** | | | **M8 connector** (1) - 4 Pin | **M8 connector**- 4 Pin | **M8 connector**- 4 Pin |
|---|---|---|---|---|---|
| **Transmitter / Receiver** | **PNP** | **NO** function | **XUYPSCO989SP** | – | – |
| | **NPN** | **NO** function | **XUYPSCO989SN** | – | – |
| | **PNP** | programmable **NO / NC** | – | **XUYPSCO929L1SP** | **XUYPSCO929L2SP** |
| Supply voltage limits, min./max. (V) including ripple | | | 10…30 | 10…30 | 10…30 |
| Switching capacity, max. (mA) / Switching frequency (Hz) | | | 100 / 500 | 100 / 1000 | 100 / 1000 |
| Overload and short-circuit protection (★) / LED output state indicator (⊗) | | | ★ / ⊗ | ★ / ⊗ | ★ / ⊗ |

(1) For 2 m pre-cabled connection delete CO from the reference. Example: XUYPS**CO**989SP becomes XUYPS989SP.



| Application | M | L |
|---|---|---|
| **System** | **Background suppression** | **Background suppression, 2 chnls.** |
| **Sensing distance** | **50…300** mm | **50…600** mm |
| Minimum size of object | 0.5 mm | – |
| Fixing (mm) | direct: 2 M4 holes, ctrs. 54 mm | 2 x Ø 4 holes, fixing ctrs. 54 |
| Sensitivity adjustment | Potentiometer | Potentiometer |
| Case P (plastic) / Setting-up assistance LEDs ⊗ | P / ⊗ | P / ⊗ |
| Temperature range (°C) / Degree of protection (conforming to IEC 60529) | 0…+ 50 / IP 65 | 0…+ 60 / IP 40 |
| Product certification | CE - cULus | |
| Dimensions (mm) H x W x D | 60 x 18 x 60 | 60 x 18 x 60 |

## Sensors for DC applications (solid-state output: transistor). Sensors with overload and short-circuit protection

| **Connection** | | | **M8 connector** | |
|---|---|---|---|---|
| **Transmitter / Receiver** | 3-wire PNP / NPN | programmable NO / NC | **XUYPS1LCO965S** | **XUYPS2CO945S** |
| Supply voltage limits, min./max. (V) including ripple | | | 10…30 | 10…30 |
| Switching capacity, max. (mA) / Switching frequency (Hz) | | | 100 / 5000 | 100 / 370 |

## Accessories

**Pre-wired connectors**

Straight

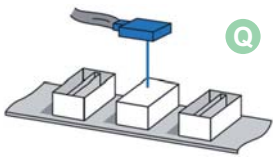
Elbowed

| | **M8** (4 pin) | | **M12** (4 pin) | | **7/8"** (5 pin) | |
|---|---|---|---|---|---|---|
| | Straight | Elbowed | Straight | Elbowed | Straight | |
| 2 m | **XZCP0941L2** | **XZCP1041L2** | **XZCP1141L2** | **XZCP1241L2** | **XZCP1764L2** | |
| 5 m | **XZCP0941L5** | **XZCP1041L5** | **XZCP1141L5** | **XZCP1241L5** | **XZCP1764L5** | |



Schneider Electric

Other versions: **please consult your Schneider Electric agency.**



Objets sur convoyeur

| Application | Q | | |
|---|---|---|---|
| **System** | **Diffuse with adjustable background suppression** | | |
| **Sensing distance** | **0…1** m | **1.2** m | **2** m |
| Fixing (mm) | direct: fixing ctrs. 40 x 40 | M30 x 1.5 or M5, fixing ctrs. 30 | direct: fixing ctrs. 30/38 to 40/50/74 M5 screw |
| Sensitivity adjustment | – | Potentiometer | – |
| Case P (plastic) / Setting-up assistance LEDs ⊗ | P / ⊗ | P / ⊗ | P / ⊗ |
| Temperature range (°C) / Degree of protection (conforming to IEC 60529) | - 25…+ 55 / IP 65 | - 25…+ 55 / IP 67, Nema 4X | - 25...+ 55 / IP 67 |
| Product certification | CE - UL - CSA | CE - UL - CSA | CE - UL - CSA |
| Dimensions (mm) H x W x D | 50 x 18 x 50 | 95 x 45 x 44 | 92 x 30,5 x 71 |

## Sensors for DC applications (solid-state output: transistor). Sensors with overload and short-circuit protection

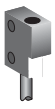
| **Connection** | | | **Pre-cabled, PVC** (2 m) | | **Screw terminals** |
|---|---|---|---|---|---|
| **Transmitter / Receiver** | 3-wire PNP / NPN | programmable NO / NC | **XUK8AKSNL2** | **XUC8AKSNL2** (3) | **XUX8AKSAT16** (3) |
| **Connection** | | | **M12 connector** | | |
| **Transmitter / Receiver** | 3-wire PNP / NPN | programmable NO / NC | **XUK8AKSNM12** | **XUC8AKSNM12** (3) | **XUX8AKSAM12** |
| Supply voltage limits, min./max. (V) including ripple | | | 10…36 | 10…38 | 10…36 |
| Switching capacity, max. (mA) / Switching frequency (Hz) | | | 100 / 250 | 100 / 500 | 100 / 150 |

| Système | Diffuse with adjustable background suppression | | |
|---|---|---|---|
| **Sensing distance** | **70…120** mm | **1.2** m | **2** m |
| Fixing (mm) | M18 x 1 | M30 x 1.5 or M5, fixing ctrs. 30 | direct: fixing ctrs. 30/38 to 40/50/74 M5 screw |
| Sensitivity adjustment | Potentiometer | Potentiometer | – |
| Case M (metal) P (plastic) / Setting-up assistance LEDs ⊗ | M / ⊗ | P / ⊗ | P / ⊗ |
| Temperature range (°C) / Degree of protection (conforming to IEC 60529) | - 25…+ 55°C / IP 67 | - 25…+ 55 / IP 67, Nema 4X | - 25...+ 55 / IP 67 |
| Product certification | CE - UL - CSA | CE - UL - CSA | CE - UL - CSA |
| Dimensions (mm) Ø x L or H x W x D | M18 x 82 | 95 x 45 x 44 | 92 x 30,5 x 71 |

## Multi-current/multi-voltage sensors for AC/DC applications

| **Connection** | | | **Cable L = 2m** | **Cable 2m / Connector 7/8"** | **Screw terminals** |
|---|---|---|---|---|---|
| **Transmitter / Receiver** | **AC/DC** | **NO** function | **XU8M18MA230** | **–** | **–** |
| | | programmable **NO / NC** | **–** | **XUC8ARCTL2 / XUC8ARCTU78** | **XUX8ARCTT16** |
| Supply voltage limits, min./max. (V) including ripple | | | 20…264 | 20…264 | 20…264 |
| Switching capacity, max. (mA) / Switching frequency (Hz) | | | 200 / 25 | 3000 / 20 | 3000 / 20 |
| Overload and short-circuit protection (★) / LED output state indicator (⊗) | | | (2) / ⊗ | – | – |

(2) Sensor not short-circuit protected. Therefore, it is essential to connect a 0.4 A quick-blow fuse in series with the load.



# Plastic fibre optic light guides (length 2 m)

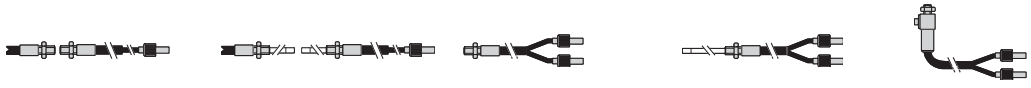
| | M4 / M2.6 (1) | M4 / L = 90 mm | M3 / M2.6 (1) | Long range fibres with integrated lens M8 / L = 20 mm | Long range fibres M4 / M2.6 (1) | Flexible fibres M4 / M2.6 (1) |
|---|---|---|---|---|---|---|
| **System** | **Thru-beam** | | | | | |
| **Sensing distance** (mm) | **200 or 1500** (2) | **180** | **50 or 1000** (2) | **2500** | **300 or 2000** (2) | **100 or 750** (2) |
| Fibre cross-section | | | | | | |
| Fibre Ø (mm) | Ø 1 | Ø 1 | Ø 0.5 | Ø 1 | Ø 1.5 | Ø 1 |
| Sheath Ø (mm) | Ø 2.2 | Ø 2.2 | Ø 1 | Ø 2.2 | Ø 2.2 | Ø 2.2 |
| Temperature range (°C) | - 25...+ 60 | - 25...+ 60 | - 25...+ 60 | - 25...+ 60 | - 25...+ 60 | - 25...+ 60 |
| References | **XUFN12301** | **XUFN12311** | **XUFN35301** | **XUFN2L01L2** | **XUFN2P01L2** | **XUFN2S01L2** |
| Fixing | M4 x 0.7 | M4 x 0.7 | M3 x 0.5 | M8 x 1.25 | M2.6 x 0.45 / M4 x 0.7 | M2.6 x 0.45 / M4 x 0.7 |

(1) Can be used with 90° mirror XUFZ02 (see preceding page).
(2) With lens accessory XUFZ01 (see preceding page)

| | M6 | M4 / M6 | M6/L = 90 mm | M4 / M2.6 |
|---|---|---|---|---|
| **System** | **Diffuse** | | | |
| **Sensing distance** (mm) | **70** | **60** | **60** | **15** |
| Fibre cross-section | | | | |
| Fibre Ø (mm) | Ø 1 | Ø 1+16 Ø 0.265 | Ø 1 | Ø 0.5 + 4 Ø 0.23 |
| Sheath Ø (mm) | Ø 2.2 x 2 | Ø 2.2 x 2 | Ø 2.2 x 2 | Ø 1 x 2 |
| Temperature range (°C) | - 25...+ 60 | - 25...+ 60 | - 25...+ 60 | - 25...+ 60 |
| References | **XUFN05321** | **XUFN05323** | **XUFN05331** | **XUFN02323** |
| Fixing | M6 x 0.75 | M6 x 0.75 / M4 x 0.7 | M6 x 0.75 | M4 x 0.7 |

| | M4 / L = 90 mm | M4 / M2.6 | Long range fibres M6 / L = 15 mm |
|---|---|---|---|
| **System** | **Diffuse** | | |
| **Sensing distance** (mm) | **18** | **18** | **95** |
| Fibre cross-section | | | |
| Fibre Ø (mm) | Ø 0.5 | Ø 0.5 | Ø 1.5 |
| Sheath Ø (mm) | Ø 1 x 2 | Ø 1 x 2 | Ø 2.2 x 2 |
| Temperature range (°C) | - 25...+ 60 | - 25...+ 60 | - 25...+ 60 |
| References | **XUFN01331** | **XUFN01321** | **XUFN5P01L2** |
| Fixing | M4 x 0.7 | M4 x 0.7 | M6 x 0.75 |

# Glass fibre optic light guides (length 0.6 m)



| | | M4 | M4 / Ø 2.5 x 89 | M4 | M4 / Ø 2.5 x 89 | M4 |
|---|---|---|---|---|---|---|
| **System** | | **Thru-beam** | | **Diffuse** | | |
| **Sensing distance** (mm) | | **200** | | **80** | | |
| Fibre cross- section | | | | | | |
| End fitting | | Straight | Adaptable | Straight | Adaptable | 90° |
| Fibre Ø (mm) | | 1 | | 1 | | |
| Sheath Ø (mm) | | 2.2 | | 2.2 | | |
| Temperature range (°C) | | PVC sheath: - 25…+ 60 / Metal wound: - 25…+ 120 / Flexible stainless steel: - 25…+ 200 | | | | |
| References | PVC sheath | **XUYFVERSD61** | **XUYFVERSC61** | **XUYFVPSD61** | **XUYFVPSC61** | **XUYFVPSL61** |
| | Metal wound | **XUYFVERMD61** | **XUYFVERSC61** | **XUYFVPMD61** | **XUYFVPMC61** | **XUYFVPML61** |
| | Flexible stnl. steel | **XUYFVERTD61** | **XUYFVERTC61** | **XUYFVPTD61** | **XUYFVPTC61** | **XUYFVPTL61** |

# OsiSense XX Ultrasonic sensors
## Detection of any material

| | Mini flat | Flat | Combined multi-fixing |
|---|---|---|---|
| **Nominal sensing distance Sn** | **10** cm | **25** cm | **50** cm |
| Operating zone (cm) | 0.62…10.2 | 5.1…25.4 | 5.1…50.8 |
| | – | – | – |
| Sensitivity adjustment | Fixed | Fixed | Adjustable using remote control |
| Case P (plastic) | P | P | P |
| Product certification | CE | CE | CE |
| Temperature range (°C) | - 20…+ 65 | 0…+ 50 | - 20…+ 65 |
| Degree of protection (conforming to IEC 60529) | IP 67 | | |
| Dimensions (mm) Ø x L or H x W x D | 33 x 19 x 7.6 | 74 x 30 x 16 | M 18 / 18 x 33 x 60 |

## Sensors with “Discrete” output for DC applications (24 V)

| | | | | | |
|---|---|---|---|---|---|
| **Connection** | | | **M12** on 0.15 m flying lead | **M12 connector** | |
| **3-wire** | **PNP** | **NO** function | **XX7F1A2PAL01M12** | **XX7K1A2PAM12** | **XX7V1A1PAM12** |
| | **NPN** | **NO** function | **XX7F1A2NAL01M12** | **XX7K1A2NAM12** | **XX7V1A1NAM12** |
| **4-wire** | **PNP/NPN** | **NO** function | – | – | – |
| | **PNP** | **NO + NC** function | – | – | – |
| | **NPN** | **NO + NC** function | – | – | – |
| Application - monitoring levels | | | | | |
| | **2 emptying levels** | **PNP NO** function | – | – | – |
| | **2 filling levels** | **PNP NO** function | – | – | – |
| Supply voltage limits, min./max. (V) including ripple | | | 10…28 | | |
| Switching capacity, max. (mA) | | | <100 | | |
| Short-circuit protection (★) | | | ★ | | |
| LED output state indicator (⊗) / Power on LED (⊗) | | | ⊗ / ⊗ | | |
| Voltage drop, closed state (V) at I nominal | | | <1 | | |
| Switching frequency (Hz) | | | 100 | 80 | 40 |
| Transmission frequency (Hz) | | | 500 | 500 | 300 |

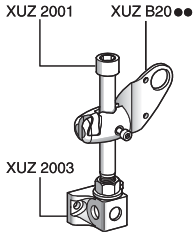
## Sensors with “Analogue” output for DC applications (24 V)

| | | | | |
|---|---|---|---|---|
| **Connection** | | | – | **M12 connector** |
| **4-wire** | **Analogue** | **0…10 V** output | – | **XX9V1A1F1M12** |
| | | **4…20 mA** output | – | **XX9V1A1C2M12** |
| Supply voltage limits, min./max. (V) including ripple | | | – | 10…28 |
| Short-circuit protection (★) | | | – | ★ |
| LED output state indicator (⊗) / Power on LED (⊗) | | | – | ⊗ / ⊗ |
| Transmission frequency (Hz) | | | – | 300 |

## Accessories

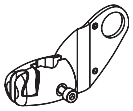
### Fixings

**3D fixings with ball joint**




3D kit example

Bracket with ball joint for cylindrical sensors

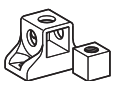


| for | |
|---|---|
| Ø 12 | **XUZB2012** |
| Ø 18 | **XUZB2003** |
| Ø 30 | **XUZB2030** |

M12 rod for ball joint

**XUZ2001**

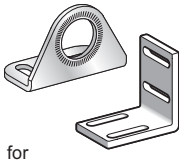
Fixing support for M12 rod



**XUZ2003**

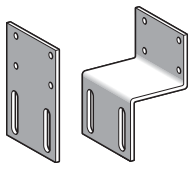
**Simple fixings**

90° fixing brackets



| for | |
|---|---|
| Ø 12 | **XXZ12** |
| Ø 18 | **XUZA118** |
| Ø 30 | **XXZ30** |
| XX7F | **XXZ1933** |

Mounting plates for XX7K



| | |
|---|---|
| flat | **XXZ3074F** |
| cranked | **XXZ3074S** |



Schneider Electric

Other versions: **please consult your Schneider Electric agency.**

New

| | M12 | M18 | | M30 | | | M30 Long range |
|---|---|---|---|---|---|---|---|
| | 5 or 10 cm depending on model | 15 or 50 cm depending on model | | 1 m | 1 m | 2 m | 8 m |
| | 0.64…5.1 (XX512A1…)<br>0.64…10.2 (XX512A2…) | 1.9…15.2 (XX518A1…)<br>5.1…50.8 (XX518A3…) | | 10…100<br>– | 5.1…99.1<br>– | 12…200 | 20.3…800<br>– |
| | Fixed | Adjustable using remote control | | | Adjustable using teach mode | | |
| | P | P | | P | | | P |
| | CE | CE | | CE | | | CE |
| | - 20…+ 65 | 0…+ 50 (XX518A1…) / - 20…+ 65 (XX518A3…) | | 0…+ 70 | 0…+ 70 | | - 20…+ 60 |
| | IP 67 | | | IP 67 | IP 65 | | |
| | M12 x 50 | M18 x 65 | | M30 x 78 | M30 x 85 | | M30 x 106 |
| | **M8 connector** | **M12 connector** | **Pre-cabled, PVC (2 m)** | **M12 connector** | | | **M12 connector** |
| | **XX512A2PAM8** (10 cm) | **XX518A3PAM12** (50 cm) | **XX518A3PAL2** | **XX6V3A1PAM12** | – | – | – |
| | **XX512A2NAM8** (10 cm) | **XX518A3NAM12** (50 cm) | **XX518A3NAL2** | **XX6V3A1NAM12** | – | – | – |
| | **XX512A1KAM8** (5 cm) | **XX518A1KAM12** (15 cm) | – | – | **XX630A1KAM12** | – | – |
| | – | – | – | – | **XX630A1PCM12** (1) | – | **XX630A3PCM12** |
| | – | – | – | – | **XX630A1NCM12** (1) | – | **XX630A3NCM12** |
| | – | **XX218A3PHM12** (3) | – | – | **XX230A10PA00M12** (2) | **XX230A20PA00M12** (2) | – |
| | – | **XX218A3PFM12** (3) | – | – | **XX230A11PA00M12** (2) | **XX230A21PA00M12** (2) | – |
| | 10...28 | | | | | | |
| | <100 | | | | | | |
| | ★ | | | | | | |
| | ⊗ / ⊗ | ⊗ / ⊗ except XX518A1.. (- / -) | | ⊗ / ⊗ | ⊗ / ⊗ | | ⊗ / ⊗ |
| | <1 | | | | | | |
| | 125 | 40 / 80 (XX518A1..) | | 70 | 10 | | 2 |
| | 500 | 300 | | 180 | 200 | | 75 |
| | **M12 connector** | | | | | | |
| | – | **XX918A3F1M12** | – | **XX9V3A1F1M12** | **XX930A1A1M12** (1) | – | **XX930A3A1M12** |
| | – | **XX918A3C2M12** | – | **XX9V3A1C2M12** | **XX930A1A2M12** (1) | – | **XX930A3A2M12** |
| | – | 10…28 | – | 10…28 | 10…28 | – | 10…28 |
| | – | ★ | – | ★ | ★ | – | ★ |
| | – | ⊗ / ⊗ | – | ⊗ / ⊗ | ⊗ / ⊗ | – | ⊗ / ⊗ |
| | – | 300 | – | 180 | 200 | – | 75 |

(1) Stainless steel 303 version also available. To order, replace the first letter **A** in the reference by **S**. Example: XX630**A**1PCM12 becomes XX630**S**1PCM12.

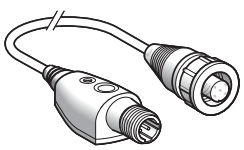
(2) 2 NO

(3) 1 NO

## Programming

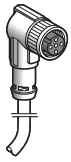
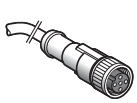
**Remote control**

teach button for use with sensors XX●18A3●●●, XX●V1●●● and XX●V3●●●



**XXZPB100**

## Suitable female plug-in connectors

| | | Pre-wired connectors elbowed | Pre-wired connectors straight | Other connectors screw terminal |
|---|---|---|---|---|
| | |  |  | |
| **L = 5 m** (without LED) | | | | |
| M8 | for XX512A1… | **XZCP1041L5** | **XZCP0941L5** | **XZCC8FCM40V** |
| | for XX512A2… | **XZCP0666L5** | **XZCP0566L5** | **XZCC8FCM30V** |
| M12 | for all sensors except XX512... | **XZCP1241L5** | **XZCP1141L5** | **XZCC12FCM40B** |

Other versions: **please consult your Schneider Electric agency.**

# OsiSense XCC — Opto-electronic rotary encoders
## Incremental

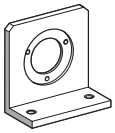
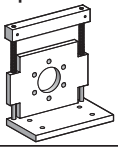
| **Diameter of housing** (mm) | | **Ø 40** | **Ø 40** | **Ø 58** | **Ø 58** | **Ø 58 Parametrable** | **Ø 90** |
|---|---|---|---|---|---|---|---|
| **Shaft Ø** (mm) | | **Ø 6** | **Ø 6** | **Ø 6** | **Ø 10** | **Ø 14** (1) | **Ø 12** |
| **Type of shaft** (2) | | **solid shaft** | **through shaft** | **solid shaft** | **solid shaft** | **through shaft** | **solid shaft** |
| Maximum rotational speed (rpm) | | 9000 | 9000 | 9000 | 9000 | 6000 | 6000 |
| Maximum frequency (kHz) | | 100 | 100 | 300 | 300 | 300 | 100 |
| Maximum load (daN) | | 2 | 2 | 10 | 10 | 5 | 20 |
| Torque (N.cm) | | 0.2 | 0.25 | 0.4 | 0.4 | 0.6 | 1 |
| Product certification | | CE | CE | CE | CE | CE | CE |
| Temperature range (°C) | | - 20…+ 80 | - 20…+ 80 | - 30…+ 100 | - 30…+ 100 | - 30…+ 70 | - 20…+ 80 |
| Degree of protection (conforming to IEC 60529) | | IP 54 | IP 52 | IP 65 / IP 67 (3) | IP 65 / IP 67 (3) | IP 65 | IP 66 |
| Supply voltage | 5 V, RS 422 | 4.5…5.5 V | 4.5…5.5 V | 4.75…30 V | 4.75…30 V | 4.75…30 V | 4.5…5.5 V |
| | Push-pull | 11…30 V | 11…30 V | 5…30 V | 5…30 V | 5…30 V | 11…30 V |
| **Connection** | | **Pre-cabled (2 m)**, radial | | **M23 male connector**, radial | | | |
| Resolution (Points) | Output stage | | | | | | |
| 100 | 5 V, RS 422 | **XCC1406PR01R** | **XCC1406TR01R** | **XCC1506PS01X** | **XCC1510PS01X** | – | **XCC1912PS01RN** |
| | Push-pull | **XCC1406PR01K** | **XCC1406TR01K** | **XCC1506PS01Y** | **XCC1510PS01Y** | – | **XCC1912PS01KN** |
| 360 | 5 V, RS 422 | **XCC1406PR03R** | **XCC1406TR03R** | **XCC1506PS03X** | **XCC1510PS03X** | – | **XCC1912PS03RN** |
| | Push-pull | **XCC1406PR03K** | **XCC1406TR03K** | **XCC1506PS03Y** | **XCC1510PS03Y** | – | **XCC1912PS03KN** |
| 500 | 5 V, RS 422 | **XCC1406PR05R** | **XCC1406TR05R** | **XCC1506PS05X** | **XCC1510PS05X** | – | **XCC1912PS05RN** |
| | Push-pull | **XCC1406PR05K** | **XCC1406TR05K** | **XCC1506PS05Y** | **XCC1510PS05Y** | – | **XCC1912PS05KN** |
| 1000 | 5 V, RS 422 | **XCC1406PR10R** | **XCC1406TR10R** | **XCC1506PS10X** | **XCC1510PS10X** | – | **XCC1912PS10RN** |
| | Push-pull | **XCC1406PR10K** | **XCC1406TR10K** | **XCC1506PS10Y** | **XCC1510PS10Y** | – | **XCC1912PS10KN** |
| 1024 | 5 V, RS 422 | **XCC1406PR11R** | **XCC1406TR11R** | **XCC1506PS11X** | **XCC1510PS11X** | – | **XCC1912PS11RN** |
| | Push-pull | **XCC1406PR11K** | **XCC1406TR11K** | **XCC1506PS11Y** | **XCC1510PS11Y** | – | **XCC1912PS11KN** |
| 2500 | 5 V, RS 422 | – | – | **XCC1506PS25X** | **XCC1510PS25X** | – | **XCC1912PS25RN** |
| | Push-pull | – | – | **XCC1506PS25Y** | **XCC1510PS25Y** | – | **XCC1912PS25KN** |
| 3600 | 5 V, RS 422 | – | – | – | – | – | **XCC1912PS36RN** |
| | Push-pull | – | – | – | – | – | **XCC1912PS36KN** |
| 256…4096 | 5 V, RS 422 | – | – | – | – | **XCC1514TSM02X** | – |
| | Push-pull | – | – | – | – | **XCC1514TSM02Y** | – |
| 5000 | 5 V, RS 422 | – | – | **XCC1506PS50X** | **XCC1510PS50X** | – | **XCC1912PS50RN** |
| | Push-pull | – | – | **XCC1506PS50Y** | **XCC1510PS50Y** | – | **XCC1912PS50KN** |
| 360…5760 | 5 V, RS 422 | – | – | – | – | **XCC1514TSM03X** | – |
| | Push-pull | – | – | – | – | **XCC1514TSM03Y** | – |
| 500…8000 | 5 V, RS 422 | – | – | – | – | **XCC1514TSM05X** | – |
| | Push-pull | – | – | – | – | **XCC1514TSM05Y** | – |
| 10 000 | 5 V, RS 422 | – | – | – | – | – | **XCC1912PS00RN** |
| | Push-pull | – | – | – | – | – | **XCC1912PS00KN** |
| 1024…16 384 | 5 V, RS 422 | – | – | – | – | **XCC1514TSM11X** | – |
| | Push-pull | – | – | – | – | **XCC1514TSM11Y** | – |
| 5000…80 000 | 5 V, RS 422 | – | – | – | – | **XCC1514TSM50X** | – |
| | Push-pull | – | – | – | – | **XCC1514TSM50Y** | – |

## Accessories

### Shaft couplings

| | | Bore diameter (encoder side) | Bore diameter (machine side) | Reference |
|---|---|---|---|---|
| **with spring** | | 6 mm | 6 mm | **XCCRAR0606** |
| | | 6 mm | 8 mm | **XCCRAR0608** |
| | | 6 mm | 10 mm | **XCCRAR0610** |
| | | 10 mm | 10 mm | **XCCRAR1010** |
| | | 10 mm | 12 mm | **XCCRAR1012** |
| **elastic** | | 6 mm | 6 mm | **XCCRAE0606** |

### Fixing brackets

| | | | |
|---|---|---|---|
| **Plain bracket** |  | for Ø 58 mm | **XCCRE5SN** |
| | | for Ø 90 mm | **XCCRE9SN** |
| **Bracket with play compensator** |  | for Ø 58 mm | **XCCRE5RN** |
| | | for Ø 90 mm | **XCCRE9RN** |

Other versions: **please consult your Schneider Electric agency.**

## Absolute - single turn

## Absolute - multiturn

## Communicating multiturn absolute

| **Diameter of housing** (mm) | | | **Ø 58** | **Ø 90** | **Ø 58** | **Ø 90** | **Ø 58 CANopen** | **Ø 58 PROFIBUS-DP** |
|---|---|---|---|---|---|---|---|---|
| **Shaft Ø** (mm) | | | **Ø 6** | **Ø 12** | **Ø 10** | **Ø 12** | **Ø 10** | **Ø 10** |
| **Type of shaft** (2) | | | **solid shaft** | **solid shaft** | **solid shaft** | **solid shaft** | **solid shaft** (4) | **solid shaft** (4) |
| Maximum rotational speed (rpm) | | | 9000 | 6000 | 6000 | 6000 | 6000 | 6000 |
| Maximum frequency (kHz) | | | 100 | 100 (1000 SSI) | 100 (500 SSI) | 100 (500 SSI) | 800 | 800 |
| Maximum load (daN) | | | 10 | 20 | 10 | 20 | 11 | 11 |
| Torque (N.cm) | | | 0.4 | 1 | 0.4 | 1 | 0.3 | 0.3 |
| Product certification | | | CE | CE | CE | CE | CE | CE |
| Temperature range (°C) | | | - 20…+ 90 | - 20…+ 85 | - 20…+ 85 | - 20…+ 85 | - 40…+ 85 | - 40…+ 85 |
| Degree of protection (conforming to IEC 60529) | | | IP 65 | IP 66 | IP 65 / IP 67 (3) | IP 66 | IP 64 | IP 64 |
| Supply voltage | | | 11…30 V | | | | | |
| **Connection** | | | **M23 male connector**, radial | | | | **2** x **M12** + **1** x **Pg 9** | **3** x **Pg 9** |
| Resolution | Output stage | Code | | | | | | |
| … 8192 points | Push-pull | Binary | **XCC2506PS81KB** | **XCC2912PS81KBN** | – | – | – | – |
| | | Gray | **XCC2506PS81KGN** | **XCC2912PS81KGN** | – | – | – | – |
| | SSI, 13-bit | Binary | **XCC2506PS81SBN** | **XCC2912PS81SBN** | – | – | – | – |
| | | Gray | **XCC2506PS81SGN** | **XCC2912PS81SGN** | – | – | – | – |
| 4096 points / 8192 turns | SSI, 25-bit (5) | Gray | – | – | **XCC3510PS48SGN** | – | – | – |
| 8192 points / 4096 turns | SSI, 25-bit (5) | Binary | | | **XCC3510PS84SBN** | **XCC3912PS84SBN** | | |
| | | Gray | – | – | **XCC3510PS84SGN** | **XCC3912PS84SGN** | | |
| 8192 points / 4096 turns | CANopen, 25-bit | Binary | | | – | – | **XCC3510PS84CB** | – |
| | PROFIBUS-DP, 25-bit | Binary | – | – | – | – | – | **XCC3510PV84FB** |

(1) Anti-rotation device included with through shaft version encoders. To achieve Ø 6, 8, 10 or 12 mm through shafts, use the reduction collars.

(2) All versions are also available with through shaft and anti-rotation device.

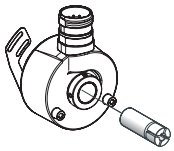
(3) IP 67 with sealed collar XCCRB3.

(4) Versions available with hollow shaft and anti-rotation device.

(5) “Parallel” outputs possible for multiturn absolute encoders using derserialisation jumper cables XCCRM23SUB37●●.

## Reduction collars

**For Ø 58 mm incremental encoders with through shaft**



| | |
|---|---|
| Ø 14 to Ø 6 mm | **XCCR158RDA06** |
| Ø 14 to Ø 8 mm | **XCCR158RDA08** |
| Ø 14 to Ø 10 mm | **XCCR158RDA10** |
| Ø 14 to Ø 12 mm | **XCCR158RDA12** |

**IP 67 sealed collar**

For encoders XCC1510, 2510, 3510

| | |
|---|---|
| Ø 58 mm | **XCCRB3** |

## Pre-wired connectors and jumper cables

**Pre-wired M23 female connectors (cable length 5 m)**

| | |
|---|---|
| 8-wire for SSI encoders | **XCCPM23122L5** |
| 10-wire for incremental encoders | **XCCPM23121L5** |
| 16-wire for parallel single turn absolute encoders | **XCCPM23161L5** |

**Deserialisation jumper cables (M23 F - SUB-D37 M) (L = 0.5 m)**

| | |
|---|---|
| SSI Gray - // Gray PNP | **XCCRM23SUB37PG** |
| SSI binary - // binary NPN | **XCCRM23SUB37PB** |

# Radio frequency identification
## 13.56 MHz RFID

### Presentation
OsiSense XG is open to the majority of ISO 18000-3, ISO 15693 and ISO 14443 electronic tags.
OsiSense XG integrates Modbus RTU, Uni-Telway, Modbus TCP/IP (using Ethernet box XGSZ33ETH) and Profibus DP (with box XGSZ33PDP) protocols.
The OsiSense XG RFID offer comprises:
- 2 models of 13.56 MHz compact stations (read/write)
- 6 models of 13.56 MHz electronic tags
- 1 portable RFID diagnostics terminal
- 3 models of network connection boxes plus connection and mounting accessories.

### Setting-up
OsiSense XG compact stations are simple to set-up:
- Integrated RFID and network functions
- No programming
- Automatic detection of the RFID electronic tags (read or write)
- Automatic setting of the communication parameters (speed, format, parity, protocol, etc.)
- Configuration of the network address (1 to 15) using badge included with the station
- Low sensitivity to metal environments.

### Installation
OsiSense XG stations easily integrate in flexible manufacturing production lines:
- quick connection using M12 connector
- screw fixing or clip-on mounting.

| Compact stations, 13.56 MHz | | C format | D format |
|---|---|---|---|
| Dimensions (mm), W x H x D | | 40 x 40 x 15 | 80 x 80 x 26 |
| Nominal sensing distance depending on tag (mm) | | 18 to 70 | 20 to 100 |
| Type of associated tag | | ISO 15693 and ISO 14443 standard tags. Automatic detection of the type of tag. | |
| Display | | 1 dual colour LED for the communication network, 1 dual colour LED for the RFID communication | |
| Conformity to standards | | CE, EN 301489-1, EN 301489-3, ETS 300330-1 and ETS 300330-2, FCC part 15 - UL | |
| Degree of protection conforming to IEC 60529 | | IP 67 | |
| Serial link | Type | RS 485 | |
| | Protocol | Modbus and Uni-Telway | |
| | Speed (Bauds) | 9600…115 200 (automatic detection) | |
| Ambient air temperature (°C) | | For operation: - 25…+ 70 °C, for storage: - 40…+ 85 °C | |
| Nominal supply voltage | | 24 VDC PELV (Protective Extra Low Voltage) | |
| Connection | | M12, 5-pin male, shielded connector on flying lead. Only for connection to the communication network and the supply | |
| **References** | | **XGCS4901201** | **XGCS8901201** |

| Electronic tags | | C format | | ISO badge (1) | Disc | E format | Cylindrical |
|---|---|---|---|---|---|---|---|
| Dimensions (mm), W x H x D | | 40 x 40 x 15 | | 54 x 85.5 x 0.8 | Ø 30 x 3 | 26 x 26 x 13 | M18 x 1 x 12 |
| Type of memory | | EEPROM | | | | | |
| Memory capacity (bytes) | | 3 408 | 13 632 | 256 | 112 | 256 | 256 |
| Nominal sensing distance (mm) | With station XGCS49● | 33 | 30 | 70 | 48 | 40 | 18 |
| (Read/Write) | With station XGCS89● | 48 | 40 | 100 | 65 | 55 | 20 |
| Time (ms) | Read | 9.25 + 0.375 x n (2) | 16.25 + 0.375 x n (2) | 12 + 0.825 x n (2) | | | |
| | Write | 13 + 0.8 x n (2) | 20 + 0.8 x n (2) | 20 + 11.8 x n (2) | 12 + 5.6 x n (2) | 20 + 11.8 x n (2) | 19 + 4.1 x n (2) |
| Degree of protection conforming to IEC 60529 | | IP 68 | | IP 65 | | IP 68 | |
| Standard supported | | ISO 14443 | | ISO 15693 | | | |
| Mounting on metal support | | Yes | | No | | Yes | No |
| **References** | | **XGHB444345** | **XGHB445345** | **XGHB90E340** | **XGHB320345** | **XGHB221346** | **XGHB211345** |

(1) Customised versions on request. (2) n = number of 16-bit words.



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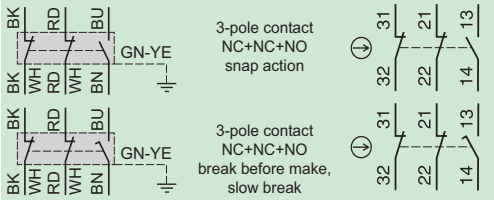
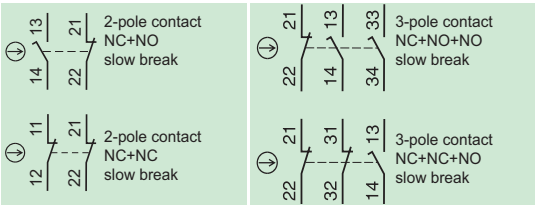
Other versions: **please consult your Schneider Electric agency.**

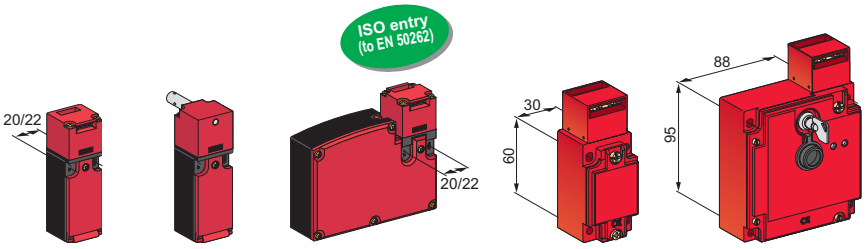
**XCSM** **XCSP/D**



| Safety limit switches | | Miniature | | | Compact | | |
|---|---|---|---|---|---|---|---|
| Maximum actuation speed | | 0.5 m/s | 0.5 m/s | 1.5 m/s | 0.5 m/s | 0.5 m/s | 1.5 m/s |
| Minimum force or torque (actuation / positive opening) | | 8.5 N / 42.5 N | 7 N / 35 N | 0.5 N.m / 0.1 N.m | 15 N / 45 N | 12 N / 36 N | 10 N.m / 0.1 N.m |
| Degree of protection | | IP 66 + IP 67 + IP 68 | | | IP 66 + IP 67 | | |
| **Complete switch, metal** | NC+NC+NO snap action | **XCSM3910L1** | **XCSM3902L1** | **XCSM3915L1** | **XCSD3910P20** | **XCSD3902P20** | **XCSD3918P20** |
| | NC+NC+NO slow break | **XCSM3710L1** | **XCSM3702L1** | **XCSM3715L1** | **XCSD3710P20** | **XCSD3702P20** | **XCSD3718P20** |
| **Complete switch, plastic** | NC+NC+NO snap action | – | – | – | **XCSP3910P20** | **XCSP3902P20** | **XCSP3918P20** |
| | NC+NC+NO slow break | – | – | – | **XCSP3710P20** | **XCSP3702P20** | **XCSP3718P20** |

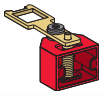
**XCSPA/PR/TE** **XCSA/E/PA/PR/TE**

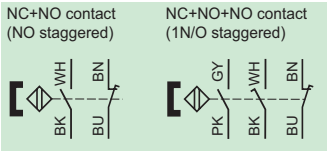


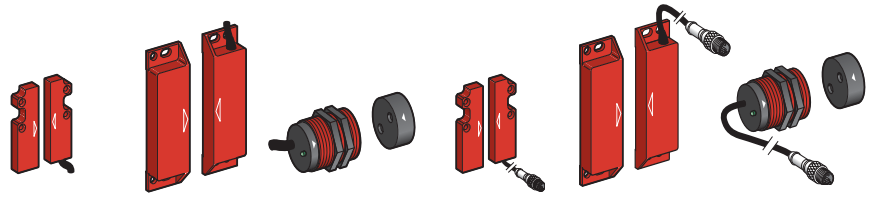




| Safety switches | | | | | | | |
|---|---|---|---|---|---|---|---|
| Actuation speed (min. —> max.) | | 0.1 –> 0.5 m/s | – | 0.1 –> 0.5 m/s | 0.1 –> 0.5 m/s | 0.1 –> 0.5 m/s | |
| Degree of protection conforming to IEC 60529 | | IP 67 | | | | | |
| Body + head dimensions (mm) W x D x H | | 30 x 30 x 93.5 | 30 x 30 x 96 | 110 x 333 x 93.5 | 40 x 44 x 113.5 | 98 x 44 x 146 | |
| Solenoid and pilot light supply voltage | | – | – | ∿ or ⎓ 24 V | – | ∿ or ⎓ 24 V | ∿ or ⎓ 220/240 V |
| **Complete switch** | NC+NO (NO staggered) | **XCSPA592** | **XCSPR552** | **XCSTE5312** | – | – | – |
| | NC+NC | **XCSPA792** | **XCSPR752** | **XCSTE7312** | – | – | – |
| **Complete switch** | NC+NO+NO (2 NO staggered) | **XCSPA892** | – | – | **XCSA502** | **XCSE5312** | **XCSE5342** |
| | NC+NC+NO (NO staggered) | **XCSPA992** | **XCSPR952** | – | **XCSA702** | **XCSE7312** | **XCSE7342** |

## Accessories for safety switches

| | for XCSPA / PR / TE | | | for XCSA / E | | |
|---|---|---|---|---|---|---|
| | | | | | |  |
| Actuators | **XCSZ11** | **XCSZ12** | **XCSZ13** | **XCSZ01** | **XCSZ02** | **XCSZ03** |



| Coded magnetic switches | Pre-cabled, L = 2 m | | | Connector on flying lead, L = 15 cm | | |
|---|---|---|---|---|---|---|
| Switches for actuation | Face to face, face to side, side to side | | Face to face | Face to face, face to side, side to side | | Face to face |
| Degree of protection conforming to IEC 60529 / Type of contact | IP 66 + IP 67 / REED | | | IP 67 / REED | | |
| Dimensions (mm) W x D x H or Ø x L | 16 x 7 x 51 | 25 x 13 x 88 | M30 x 38.5 | 16 x 7 x 51 | 25 x 13 x 88 | M30 x 38.5 |
| Switch with coded magnet (NC+NO, NO staggered) | **XCSDMC5902** | **XCSDMP5902** | **XCSDMR5902** | **XCSDMC590L01M8** | **XCSDMP590L01M12** | **XCSDMR590L01M12** |
| Switch with coded magnet (NC+NO+NO, 1 NO staggered) | – | **XCSDMP5002** | – | – | **XCSDMP500L01M12** | – |



Other versions: **please consult your Schneider Electric agency.**

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