

Sensors

Photoelectric, Proximity and Ultrasonic Sensors
and Connector Cables

Catalog
9006CT0606R12/076

File 9006

08



Schneider
 **Electric**
Building a New Electric World

A complete range of **innovative** and much more **simple to use** sensors

Benefit from Telemecanique's and Hyde Park major innovations:

Osiconcept™

Offering **simplicity** through **innovation**

A worldwide detection first for improving productivity.

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.

Improve performance by making your machines **less complicated** and **more intelligent**.

Improve customer expertise with an efficient product line offering **simplified** selection and improved selling potential.

Reduce maintenance time with products that are **simpler** and unequalled in **flexibility**.



Select the sensor according to your specific requirements

Universal Series

Multi-purpose products providing multiple functions.

Osiconcept products are included in this series.

Optimum Series

Designed for essential and repetitive functions.

Application Series

Offers functions specifically for specialist needs, thus providing the ideal solution for your more complex applications.

Telemecanique®

Photo-electric sensors



> A single product that automatically adapts to all conditions

A simple press on the button automatically configures the sensor and provides optimal performance for the particular conditions.

Telemecanique

Inductive proximity sensors



> A single product that automatically adapts to all installation environments

A simple press on the button automatically configures the sensor and provides optimal performance irrespective of the installation method (flush, non flush).

Ositrack®

RFID Identification System



> A single product that adapts to all application situations

Hyde Park®

Ultrasonic sensors



> A single product that automatically learns both its detection mode and detection zone

A simple press on the button automatically configures the sensor to its correct detection mode and optimal detection zone.

Contents

■ Osiris® Photo-electric sensors 2

Detection without contact of objects whatever their shape or material

- > Detection from a few millimeters to several tens of meters
- > 3D adjustable fixing accessories
- > Specific products for particular applications

■ Osiprox® Inductive proximity sensors 12

Detection without contact of metal objects

- > Sensor/object distance ≤ 60 mm (2.4")
- > Generic cylindrical and flat form products
- > Specific products for particular applications

■ Osiprox Capacitive proximity sensors 27

Detection of objects or liquids with a variety of mounting options

- > Smaller, compact rectangular and barrel style bodies
- > Sensor/object distance ≤ 20 mm (0.79")
- > Specific products for particular applications

■ Ositrack Radio Frequency Identification System 28

Offering object traceability, identification, and access control

- > Logistics: dispatch, receipt, transit, etc
- > Tracking and sorting of components
- > Access Control

■ Hyde Park Ultrasonic sensors 30

Detection without contact of any object of any material

- > Detection from a few millimeters up to 8 m (26.2')
- > Extra large range to ensure finding the right product
- > Specific products for particular applications

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

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Osiconcept™
Offering simplicity through innovation

A single product that automatically adapts to all conditions.

Programmable NO / NC
NO: object present = output ON
NC: no object present = output ON



Osiconcept



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| | | Design 18 plastic | Design 18 metal |
|---|-------------------------------|---|-----------------|
| Usable sensing distance | Diffuse | 0.3 m (0.98') | 0.3 m (0.98') |
| | Diffuse with background supp. | 0.12 m (0.39') | 0.12 m (0.39') |
| | Polarized retroreflective | 2 m (6.6') | 2 m (6.6') |
| | Thru-beam | 15 m (49') | 15 m (49') |
| Mounting (mm) | | M18 x 1 | M18 x 1 |
| Case M (metal) P (plastic) / Dimensions (mm) Ø x L or W x H x D | | P / M18 x 64 | M / M18 x 64 |
| Common characteristics | | Adjustment of sensing distance: using teach mode / Setting-up assistance LEDs (⊗): yes / Temperature | |

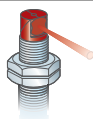
Sensors for DC applications (solid-state output: transistor)

| Connection | | Pre-cabled, PvR (2 m) | |
|--|---------------------------------------|---|--------------|
| T / R 3-wire | PNP programmable NO / NC | XUB0APSNL2 | XUB0BPSNL2 |
| | NPN programmable NO / NC | XUB0ANSNL2 | XUB0BNSNL2 |
| | PNP / NPN programmable NO / NC | - | - |
| Connection | | M12 connector | |
| T / R 3-wire | PNP programmable NO / NC | XUB0APSNM12 | XUB0BPSNM12 |
| | NPN programmable NO / NC | XUB0ANSNM12 | XUB0BNSNM12 |
| | PNP / NPN programmable NO / NC | - | - |
| Connection | | Screw terminals | |
| T / R 3-wire | PNP / NPN programmable NO / NC | - | - |
| Switching capacity (mA) main output / alarm output | | 100 / - | XUB0BPSNL2 |
| Common characteristics | | Supply voltage limits, min/max (V) including ripple: 10 - 36 (except XUM 10 - 30) / Switching | |
| Thru-beam transmitter | pre-cabled (2 m) | XUB0AKSNL2T | XUB0BKSNL2T |
| | connector | XUB0AKSNM12T | XUB0BKSNM12T |
| | screw terminals, ISO 16 cable gland | - | - |

Multi-current/multi-voltage sensors for AC/DC applications 10 - 36 V DC / 20 - 264 V AC including ripple on DC (relay output, 1 C/O, 3 A)

| Connection | | Pre-cabled, PvR (2 m) | |
|---|--|------------------------------|---|
| T / R | programmable, NO / NC with time delay | - | - |
| Connection | | Screw terminals | |
| T / R | programmable, NO / NC with time delay | - | - |
| LED output state indicator (⊗) / power on LED (⊗) | | - | - |
| Switching frequency (Hz) | | - | - |
| Time delay(s) | | - | - |
| Thru-beam transmitter | pre-cabled, PUR (2 m) | - | - |
| | screw terminals, ISO 16 cable gland | - | - |

Also available in Design 18 metal, 2-wire type multi-current/multi-voltage AC/DC version. Please refer to www.SESensors.com



90° head

All the above Osiris Design 18 sensors are available with an integral 90° head. To order, replace the letter "N" in the reference by "W".
Example: For pre-cabled versions: XUB0APSNL2 becomes XUB0APSWL2.
For connector versions: XUB0APSNM12 becomes XUB0APSWM12.
Sensing distances: refer to www.SESensors.com

Accessories

| Reflectors | | | 3D Mounting with ball joint | | |
|------------|--------|--------|-----------------------------|----------------|----------------|
| | | | | | |
| XUZC24 | XUZC80 | XUZC50 | | for | for |
| | | | | XUB - XUZH2003 | XUM - XUZH2004 |
| | | | | XUM - XUZH2003 | XUK - XUZH2004 |
| | | | | XUK - XUZH2003 | XUX - XUZH2004 |
| | | | | XUX - XUZH2003 | |
| | | | | | |
| | | | | | XUZ2001 |



Osiconcept



Osiconcept



Osiconcept



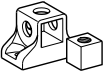
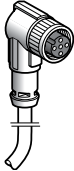
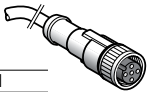
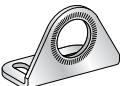
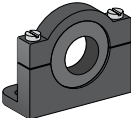
Osiconcept

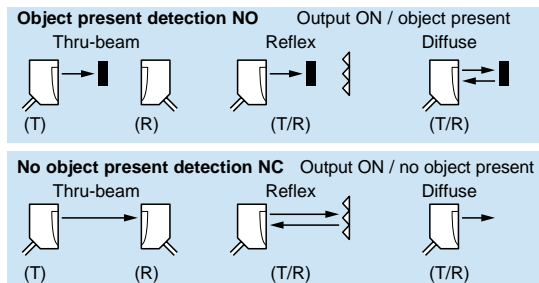
| | Miniature design | Compact design 50 x 50 | Compact design | PhotoVirtu |
|--|---|--|--|--|
| | 0.4 m (1.3') | 1.0 m (3.28') | 2 m (6.6') | 0.3 m (0.98') |
| | 0.10 m (0.32') | 0.3 m (0.98') | 1.3 m (4.3') | 0.12 m (0.39') |
| | 3 m (9.8') | 4 m (13.1') | 11 m (36') | 2 m (6.6') |
| | 14 m (45.8') | 30 m (98.4') | 40 m (131.2') | 15 m (49') |
| | direct: centers 25.5, M3 screws P / 12 x 34 x 20 | direct: centers 40 x 40, M4 screws P / 18 x 50 x 50 | direct: centers 30/38 to 40/50/74, M5 screws P / 30 x 92 x 71 | M18 x 1 or direct: centers 24.1, M3 screws P / 65 x 44 x 18 |
| | range (°C): - 25 to + 55 (-13 to 131° F) / Degree of protection (conforming to IEC 60529): IP65, IP67 (XUK: IP65) | | | |

| | | | | |
|--|---|----------------------|--------------|----------------------|
| | XUM0APSAL2 | - | - | - |
| | XUM0ANSAL2 | - | - | - |
| | - | XUK0AKSAL2 | - | - |
| | M8 connector | M12 connector | | M12 connector |
| | XUM0APSAM8 | - | - | XUN0APSNM12 |
| | XUM0ANSAM8 | - | - | XUN0ANSNM12 |
| | - | XUK0AKSAM12 | XUX0AKSAM12 | - |
| | - | - | XUX0AKSAT16 | - |
| | 100 / 50 | 100 / 50 | 100 / 100 | - |
| | frequency (Hz): 250 / Overload and short-circuit protection (★) / LED output state indicator (⊗): yes / power on LED (⊗): yes | | | |
| | XUM0AKSAL2T | XUK0AKSAL2T | - | - |
| | XUM0AKSAM8T | XUK0AKSAM12T | XUX0AKSAM12T | - |
| | - | - | XUX0AKSAT16T | - |

| | | | | |
|--|---|--|--------------|---|
| | - | XUK0ARCTL2 | - | - |
| | - | - | XUX0ARCTT16 | - |
| | - | ⊗ / ⊗ | ⊗ / ⊗ | - |
| | - | 20 | 20 | - |
| | - | Adjustment from 0 to 15 s, on energization, on de-energization or monostable | | |
| | - | XUK0ARCTL2T | - | - |
| | - | - | XUX0ARCTT16T | - |



| Simple Mounting | | | Suitable female plug-in connectors, including pre-wired versions | | |
|---|---|--|--|---|--|
| Mounting support for M12 rod  XUZ2003 | Single bracket | | length 2 m without LED | pre-wired, 90°  | pre-wired, straight  |
| |  for standard |  with ball joint | | | |
| | XUB - XUZA118 (stnls. steel) | XUZA218 (plastic) | | | |
| | XUM - XUZA50 | - | | | |
| | XUK - XUZA51 | - | | | |
| | XUX - XUZX2000 | - | M8 | XSZCS151 | XSZCS141 |
| | | | M12 | XSZCD111Y | XSZCD101Y |



| | | Design 18 plastic | Design 18 metal |
|---|---|-------------------|-----------------|
| Usable sensing distance | Diffuse | 0.6 m (1.9') | 0.6 m (1.9') |
| | Polarized reflex | 2 m (6.6') | 2 m (6.6') |
| | Reflex | 4 m (13.1') | 4 m (13.1') |
| | Thru-beam | 15 m (49') | 15 m (49') |
| Mounting (mm) | M18 x 1 | M18 x 1 | |
| Case M (metal) P (plastic) / Dimensions (mm) Ø x L or W x H x D | P / M18 x 46 | M / M18 x 46 | |
| Setting-up assistance LEDs ☉ | - | - | |
| Common characteristics | Temperature range (°C): - 25 to + 55 (-13 to 131° F) / Degree of protection (conforming to IEC 60529): IP65, IP67 (XUK: IP65) | | |

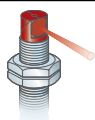
Sensors for DC applications (solid-state output: transistor)

| Connection | | Pre-cabled, PvR, L = 2 m | M12 connector | Pre-cabled, PvR, L = 2 m | M12 connector |
|---|-------------------------|--|---------------|--------------------------|---------------|
| Transmitter | | XUB2AKSNL2T | XUB2AKSNM12T | XUB2BKSNL2T | XUB2BKSNM12T |
| Receiver or T/R, 3-wire PNP (1) | Diffuse, adjustable (2) | NO | XUB5APANL2 | XUB5APANM12 | XUB5BPANL2 |
| | | NC | XUB5APBNL2 | XUB5APBNM12 | XUB5BPBNL2 |
| | Polarized reflex | NO | XUB9APANL2 | XUB9APANM12 | XUB9BPANL2 |
| | | NC | XUB9APBNL2 | XUB9APBNM12 | XUB9BPBNL2 |
| | Reflex | NO | XUB1APANL2 | XUB1APANM12 | XUB1BPANL2 |
| | | NC | XUB1APBNL2 | XUB1APBNM12 | XUB1BPBNL2 |
| | Thru-beam receiver | NO | XUB2APANL2R | XUB2APANM12R | XUB2BPANL2R |
| | | NC | XUB2APBNL2R | XUB2APBNM12R | XUB2BPBNL2R |
| Supply voltage limits, min/max (V) including ripple | | 10 - 36 | 10 - 36 | 10 - 36 | 10 - 36 |
| Switching frequency (Hz) | | 500 | 500 | 500 | 500 |
| Common characteristics for DC versions | | Switching capacity, max (mA): 100 / Overload and short-circuit protection (★) / LED output state | | | |

Multi-current/multi-voltage sensors for AC/DC applications 10 - 36 V DC / 20 - 264 V AC including ripple on DC (relay output, 1 C/O, 3 A)

| Connection | | - | - | - | - |
|---|------------------|---------|---|---|---|
| Transmitter | | - | - | - | - |
| Receiver or T/R | Diffuse | NO + NC | - | - | - |
| | Polarized reflex | NO + NC | - | - | - |
| | Reflex | NO + NC | - | - | - |
| | Thru-beam | NO + NC | - | - | - |
| Switching frequency (Hz) | | - | - | - | - |
| LED output state indicator (☉) / power on LED (☉) | | - | - | - | - |

Also available in Design 18 metal, 2-wire type multi-current/multi-voltage AC/DC version. Please refer to www.SESensors.com



90° head

All the above Osiris Design 18 sensors are available with an integral 90° head.

To order, replace the letter "N" in the reference by "W".

Example: For pre-cabled versions: XUB5APSNL2 becomes XUB5APSWL2.

For connector versions: XUB5APSNM12 becomes XUB5APSWM12.

Sensing distances: refer to www.SESensors.com

Accessories

| Reflectors | | | 3D Mounting with ball joint | | | | | | | | | | | | | | | | | | |
|--|---------|--------|-----------------------------|--|--|--------|---------|--------|------|--------|------|--------|------|--------|---------|--------|-----------|---------|--|--|--|
| | | | | | | | | | | | | | | | | | | | | | |
| XUZC24 | XUZC80 | XUZC50 | | for XUB - XUZH2003 XUM - XUZH2003 XUK - XUZH2003 XUX - XUZH2003 | for XUM - XUZH2004 XUK - XUZH2004 XUX - XUZH2004 | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th colspan="2">Reflectors (mm)</th> </tr> </thead> <tbody> <tr> <td>Ø 21</td> <td>XUZC21</td> </tr> <tr> <td>24 x 21</td> <td>XUZC24</td> </tr> <tr> <td>Ø 31</td> <td>XUZC31</td> </tr> <tr> <td>Ø 39</td> <td>XUZC39</td> </tr> <tr> <td>Ø 80</td> <td>XUZC80</td> </tr> <tr> <td>50 x 50</td> <td>XUZC50</td> </tr> <tr> <td>100 x 100</td> <td>XUZC100</td> </tr> </tbody> </table> | | | Reflectors (mm) | | Ø 21 | XUZC21 | 24 x 21 | XUZC24 | Ø 31 | XUZC31 | Ø 39 | XUZC39 | Ø 80 | XUZC80 | 50 x 50 | XUZC50 | 100 x 100 | XUZC100 | | | |
| Reflectors (mm) | | | | | | | | | | | | | | | | | | | | | |
| Ø 21 | XUZC21 | | | | | | | | | | | | | | | | | | | | |
| 24 x 21 | XUZC24 | | | | | | | | | | | | | | | | | | | | |
| Ø 31 | XUZC31 | | | | | | | | | | | | | | | | | | | | |
| Ø 39 | XUZC39 | | | | | | | | | | | | | | | | | | | | |
| Ø 80 | XUZC80 | | | | | | | | | | | | | | | | | | | | |
| 50 x 50 | XUZC50 | | | | | | | | | | | | | | | | | | | | |
| 100 x 100 | XUZC100 | | | | | | | | | | | | | | | | | | | | |
| | | | | | XUZ2001 | | | | | | | | | | | | | | | | |



| Miniature design | Compact design 50 x 50 | Compact design | PhotoVirtu |
|--|---|---|--|
| 0.4 m (1.3') | 1 m (3.2') DC or AC | 2.1 m (7.9') | 0.1 m (0.3') / 0.6 m (2') |
| 2 m (6.6') | 5 m (16.4') DC or 4 m (13.1') AC | 11 m (36') | 2 m (6.56') |
| 4 m (13.1') | 9 m (29.5') DC or 17 m (22.4') AC | 14 m (45') | - |
| 8 m (26.2') | 30 m (98') DC or 20 m (65.6') AC | 40 m (131.2') | 15 m (49.21') |
| direct: fixing centers 25.5, M3 screws P / 12 x 34 x 27 | direct: fixing centers 40 x 40, M4 screws P / 18 x 50 x 50 | direct: fixing centers 30/38 to 40/50/74, M5 screws P / 30 x 92 x 71 | M18 x 1 or direct: centers 24.1, M3 screws P / 65 x 44 x 18 |
| ⊗ | ⊗ | ⊗ | - |
| / LED output state indicator and power on LED (⊗): yes | | | |

| Pre-cabled, PvR, L = 2 m | M8 connector | Pre-cabled, PvR, L = 2 m | M12 connector | Screw trmls., ISO 16 cbl.gland | M12 connector | M12 connector |
|--|--------------|--------------------------|---------------|--------------------------------|---------------|-----------------|
| XUM2AKSNL2T | XUM2AKSNM8T | XUK2AKSNL2T | XUK2AKSNM12T | XUX0AKSAT16T | XUX0AKSAM12T | XUN0AKSNM12T |
| XUM5APANL2 | XUM5APANM8 | XUK5APANL2 | XUK5APANM12 | XUX5APANT16 | XUX5APANM12 | XUN4APANM12 (3) |
| XUM5APBNL2 | XUM5APBNM8 | XUK5APBNL2 | XUK5APBNM12 | XUX5APBNT16 | XUX5APBNM12 | XUN4APBNM12 (3) |
| XUM9APANL2 | XUM9APANM8 | XUK9APANL2 | XUK9APANM12 | XUX9APANT16 | XUX9APANM12 | XUN9APANM12 |
| XUM9APBNL2 | XUM9APBNM8 | XUK9APBNL2 | XUK9APBNM12 | XUX9APBNT16 | XUX9APBNM12 | XUN9APBNM12 |
| XUM1APANL2 | XUM1APANM8 | XUK1APANL2 | XUK1APANM12 | XUX1APANT16 | XUX1APANM12 | - |
| XUM1APBNL2 | XUM1APBNM8 | XUK1APBNL2 | XUK1APBNM12 | XUX1APBNT16 | XUX1APBNM12 | - |
| XUM2APANL2R | XUM2APANM8R | XUK2APANL2R | XUK2APANM12R | XUX2APANT16R | XUX2APANM12R | XUN0APSNM12 |
| XUM2APBNL2R | XUM2APBNM8R | XUK2APBNL2R | XUK2APBNM12R | XUX2APBNT16R | XUX2APBNM12R | XUN0ANSNM12 |
| 10 - 30 | 10 - 30 | 10 - 30 | 10 - 30 | 10 - 36 | 10 - 36 | 10 - 36 |
| 500 | 500 | 500 | 500 | 500 | 500 | 500 |
| indicator (⊗): yes / power on LED (⊗): yes | | | | | | |

| | | | | | | |
|---|---|---------------------|---|--------------------------------|---|---|
| - | - | Pre-cabled, L = 2 m | - | Screw trmls., ISO 16 cbl.gland | - | - |
| - | - | XUK2ARCNTL2T | - | XUX0ARCTT16T | - | - |
| - | - | XUK5ARCNTL2 | - | XUX5ARCNT16 | - | - |
| - | - | XUK9ARCNTL2 | - | XUX9ARCNT16 | - | - |
| - | - | XUK1ARCNTL2 | - | XUX1ARCNT16 | - | - |
| - | - | XUK2ARCNTL2R | - | XUX2ARCNT16R | - | - |
| - | - | 20 | - | 20 | - | - |
| - | - | ⊗ / ⊗ | - | ⊗ / ⊗ | - | - |

- (1) For versions with NPN output, replace "P" by "N". Example: XUB1APANL2 becomes XUB1ANANL2
 (2) XUN model is not adjustable
 (3) For versions with 0.6 m (2') sensing distance, replace "4" by "5". Example: XUN4APANM12 becomes XUN5APANM12

Simple Mounting

Mounting support for M12 rod

Single bracket

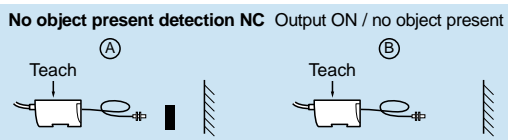
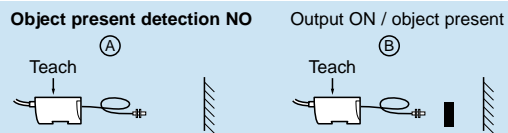
for

| | standard | with ball joint |
|-------|------------------------|-------------------|
| XUB - | XUZA118 (stnls. steel) | XUZA218 (plastic) |
| XUM - | XUZA50 | - |
| XUK - | XUZA51 | - |
| XUX - | XUXZ2000 | - |

XUZ2003

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

| length 2 m without LED | pre-wired, 90° | pre-wired, straight |
|------------------------|----------------|---------------------|
| M8 | XSZCS151 | XSZCS141 |
| M12 | XSZCD111Y | XSZCD101Y |



(1) Suitable for use with XUFZ01 and XUFZ02

| | Optimum | Universal |
|--|--|-----------------------|
| System | For plastic fibers | |
| Max / usable sensing distance (mm) | Depending on fiber | |
| Mounting (mm) | DIN rail or direct: fixing centers 25, M3 screws | |
| Dimensions (mm) H x W x D | 40 x 10 x 65 | |
| Case: P (plastic) | P | |
| Sensitivity adjustment | Using teach mode | |
| Setting-up assistance LEDs ☉ | ☉ | ☉ and 4-digit display |
| Temperature range (°C) | - 10 to + 55 (14 to 131° F) | |
| Degree of protection (conforming to IEC 60529) | IP65 with Ø 1 fiber / IP64 with Ø 0.5 fiber | |

| System |
|--|
| Sensing distance (mm) |
| Fiber cross-section |
| Fiber Ø (mm) |
| Sheath Ø |
| Temperature range (°C) |
| References |
| Mounting |
| (2) With XUFZ04 fixing clamp with lens |
| (3) Depending on length and lens fixing clamps |

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

| Connection | Pre-cabled, PVC (2 m) | |
|---|---|--|
| References | 3-wire PNP programmable NO / NC | XUDA1PSML2 |
| Amplifier | 3-wire PNP programmable NO / NC | XUDA1NSML2 |
| References | 3-wire PNP programmable NO / NC | XUDA2PSML2 |
| Amplifier | 3-wire PNP programmable NO / NC | XUDA2NSML2 |
| Connection | M8 connector | |
| References | 3-wire PNP programmable NO / NC | XUDA1PSMM8 |
| Amplifier | 3-wire PNP programmable NO / NC | XUDA1NSMM8 |
| References | 3-wire PNP programmable NO / NC | XUDA2PSMM8 |
| Amplifier | 3-wire PNP programmable NO / NC | XUDA2NSMM8 |
| Supply voltage limits, min/max (V) including ripple | 10.8 - 26.4 | |
| Switching capacity (mA) main output | 100 | |
| Alarm output (switching capacity mA) | - | 50 |
| Overload and short-circuit protection (★) | ★ | ★ |
| LED output state indicator (☉) | ☉ | ☉ |
| Switching frequency (Hz) | 1000 | 1000 (standard mode) 5000 (fast mode). Sensing distance halved in fast mode |
| Programmable timer | - | 40 ms on beam break |
| Anti-interference | - | in standard mode |

(1) Suitable for use with XUFZ01 and XUFZ02

| System |
|------------------------|
| Sensing distance (mm) |
| Fiber cross-section |
| Fiber Ø (mm) |
| Sheath Ø |
| Temperature range (°C) |
| References |
| Mounting |

Accessories

Suitable female pre-wired plug-in connectors for use with amplifier XUD - M8



Fig. 1

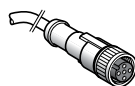


Fig. 2

| | |
|---------------------|----------|
| length 2 m | |
| 90° Elbowed, fig. 1 | XSZCS151 |
| Straight, fig. 2 | XSZCS141 |

For thru-beam system plastic fiber optics

| | | |
|---------------------------------------|---|--------|
| Lenses | For increasing sensing distance (pair) | XUFZ01 |
| | With 90° mirror (pair) | XUFZ02 |
| Mounting bracket with lens (set of 2) | Front screw fixing for fiber optics XUFZ920 | XUFZ04 |

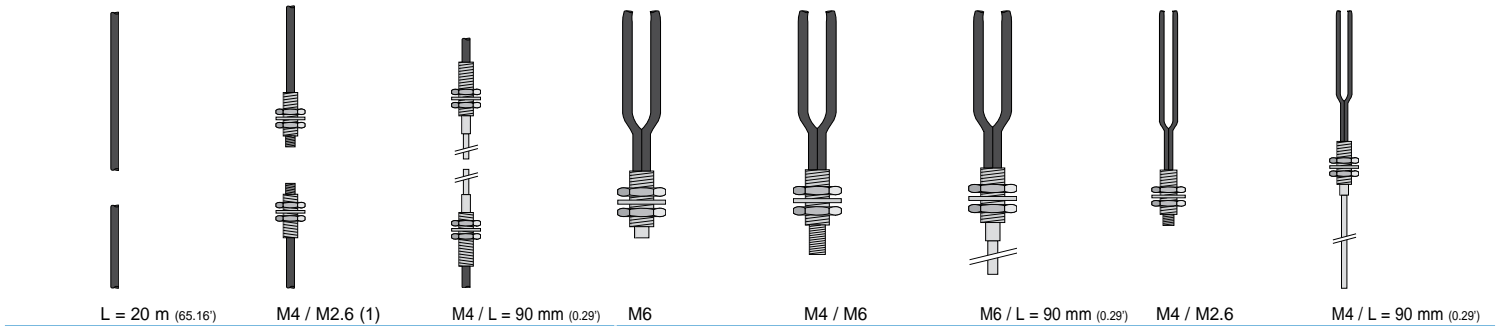
For all system plastic fiber optics

| | | |
|-------------------------|--|---------|
| Fiber trimmer | For trimming fibers to length (included with all fiber optics) | XUFZ11 |
| Protective metal tubing | Length 1 m, for plastic fibers with threaded end fittings | |
| | For M4 thread | XUFZ210 |
| | For M6 thread | XUFZ310 |

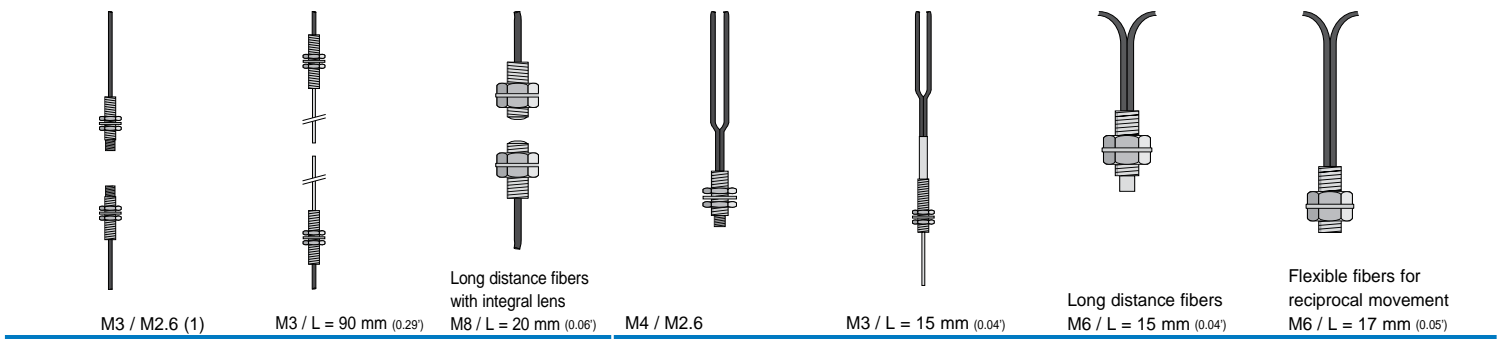
(1) Suitable for use with XUFZ01 and XUFZ02

| System |
|------------------------|
| Sensing distance (mm) |
| Fiber cross-section |
| Fiber Ø (mm) |
| Sheath Ø |
| Temperature range (°C) |
| References |
| Mounting |

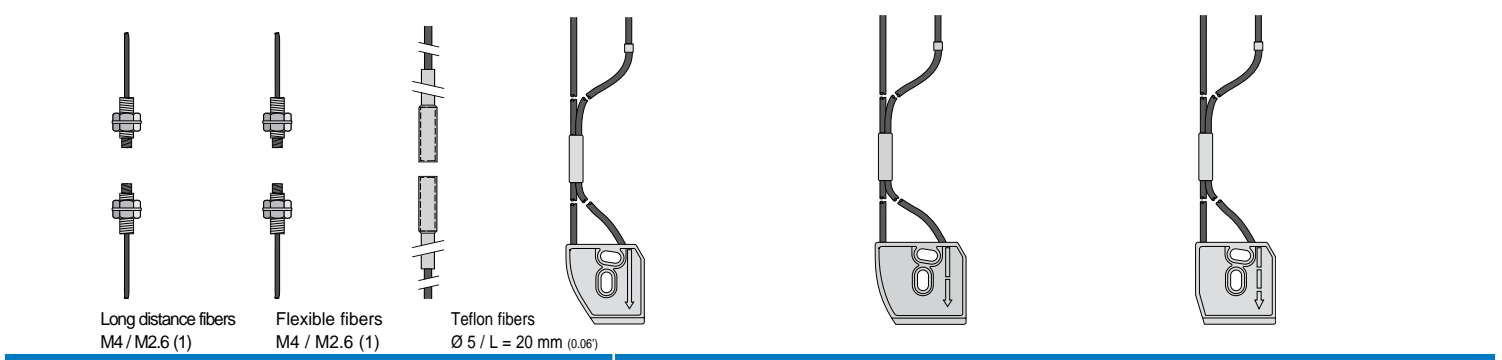
Plastic fiber optic light guides (length 2 m)



| Thru-beam | | | Diffuse | | | | |
|-----------------------------------|------------------------------------|------------------------------|------------------------------|-----------------------------------|------------------------------|------------------------------|------------------------------|
| L = 20 m (65.16) | M4 / M2.6 (1) | M4 / L = 90 mm (0.29) | M6 | M4 / M6 | M6 / L = 90 mm (0.29) | M4 / M2.6 | M4 / L = 90 mm (0.29) |
| 250 to 900 (0.82-2.95) (3) | 200 or 1500 (0.65-4.92) (1) | 180 (0.59) | 70 (0.22) | 60 (0.19) | 60 (0.19) | 15 (0.04) | 18 (0.05) |
| | | | | | | | |
| Ø 1 Ø 2.2 | Ø 1 Ø 2.2 | Ø 1 Ø 2.2 | Ø 1 Ø 2.2 x 2 | Ø 1+16 Ø 0.265 Ø 2.2 x 2 | Ø 1 Ø 2.2 x 2 | Ø 0.5 + 4 Ø 0.23 | Ø 0.5 Ø 1 x 2 |
| - 25 to + 60 (-13 to 140° F) | - 25 to + 60 (-13 to 140° F) | - 25 to + 60 (-13 to 140° F) | - 25 to + 60 (-13 to 140° F) | - 25 to + 60 (-13 to 140° F) | - 25 to + 60 (-13 to 140° F) | - 25 to + 60 (-13 to 140° F) | - 25 to + 60 (-13 to 140° F) |
| XUFZ920 (2) | XUFN12301 M4 x 0.7 | XUFN12311 M4 x 0.7 | XUFN05321 M6 x 0.75 | XUFN05323 M6 x 0.75 / M4 x 0.7 | XUFN05331 M6 x 0.75 | XUFN02323 M4 x 0.7 | XUFN01331 M4 x 0.7 |



| Thru-beam | | | Diffuse | | | |
|--------------------------------------|------------------------------|--|------------------------------|------------------------------|---|--|
| M3 / M2.6 (1) | M3 / L = 90 mm (0.29) | Long distance fibers with integral lens M8 / L = 20 mm (0.06) | M4 / M2.6 | M3 / L = 15 mm (0.04) | Long distance fibers M6 / L = 15 mm (0.04) | Flexible fibers for reciprocal movement M6 / L = 17 mm (0.05) |
| 50 or 1000 (0.16 or 3.28) (1) | 30 (0.09) | 2500 (8.2) | 18 (0.05) | 6 (0.01) | 95 (0.31) | 55 (0.18) |
| | | | | | | |
| Ø 0.5 Ø 1 | Ø 0.5 Ø 1 | Ø 1 Ø 2.2 | Ø 0.5 Ø 1 x 2 | Ø 0.265 Ø 1 x 2 | Ø 1.5 Ø 2.2 x 2 | Ø 1 Ø 2.2 x 2 |
| - 25 to + 60 (-13 to 140° F) | - 25 to + 60 (-13 to 140° F) | - 25 to + 60 (-13 to 140° F) | - 25 to + 60 (-13 to 140° F) | - 25 to + 60 (-13 to 140° F) | - 25 to + 60 (-13 to 140° F) | - 25 to + 60 (-13 to 140° F) |
| XUFN35301 M3 x 0.5 | XUFN35311 M3 x 0.5 | XUFN2L01L2 M8 x 1.25 | XUFN01321 M4 x 0.7 | XUFN04331 M3 x 0.5 | XUFN5P01L2 M6 x 0.75 | XUFN5S01L2 M6 x 0.75 |



| Thru-beam | | | Diffuse | | | |
|---------------------------------------|---------------------------------------|---|---|-------------------------------------|--------------------------------|--|
| Long distance fibers M4 / M2.6 (1) | Flexible fibers M4 / M2.6 (1) | Teflon fibers Ø 5 / L = 20 mm (0.06) | | | | |
| 300 or 2000 (0.98 or 6.56) (3) | 100 or 750 (0.032 or 2.46) (1) | 10000 (32.8) | 10 (0.03) | 20 (0.06) | 30 (0.09) | |
| | | | | | | |
| Ø 1.5 Ø 2.2 | Ø 1 Ø 2.2 | Ø 1 Ø 2.2 | Transmitter Ø 1 Receiver Ø 1.5 | Transmitter Ø 1.5 Receiver Ø 1.5 | Transmitter and Receiver Ø 1.5 | |
| - 25 to + 60 | - 25 to + 60 | - 25 to + 60 | Ø 2.2 x 2 - 10 to + 55 | Ø 2.2 x 2 - 10 to + 55 | Ø 2.2 x 2 - 10 to + 55 | |
| XUFN2P01L2 M2.6 x 0.45 / M4 x 0.7 | XUFN2S01L2 M2.6 x 0.45 / M4 x 0.7 | XUFN2T01L2 by clip (included) | XUFN5L01L2 | XUFN5L02L2 | XUFN5L03L2 | |
| | | | 2 elongated holes Ø 3.2 x 6.7 for M3 screws / fixing centers = 9.8 mm | | | |



Contrast sensors - color mark

Luminescence sensors

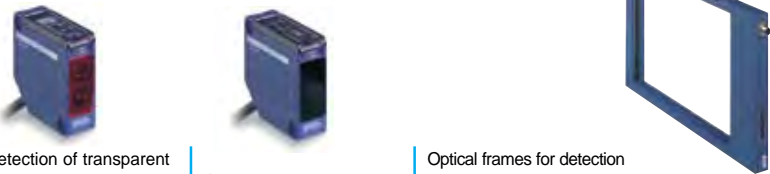
| | Diffuse (with teach mode) | Diffuse (manual) | Diffuse (with teach) |
|---|------------------------------------|------------------------------------|------------------------------------|
| Usable sensing distance | 0.009 m (0.03") (1) | 0.02 m (0.06") | 0.009 m (0.03") (1) |
| Mounting (mm) | direct: 21 x 28, M5 screws | M18 x 1 | direct: ctrs. 28, M5 screws |
| Sensitivity adjustment potentiometer | with teach mode button | | with teach mode button |
| Case M (metal) P (plastic) / Setting-up assistance LEDs | M / | M / | M / |
| Temperature range (°C) / Degree of protection (conforming to IEC 60529) | - 10 to + 55 (14 to 131° F) / IP67 | - 25 to + 55 (57 to 131° F) / IP67 | - 10 to + 55 (14 to 131° F) / IP67 |
| Dimensions (mm) Ø x L or H x W x D | 96 x 31 x 64 | Ø18 x 95 | 96 x 31 x 64 |

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

| Connection | | | M12 connector | M12 connector | M12 connector |
|--|-------------------------|-----------------------------|---------------|---------------|---------------|
| Transmitter / Receiver | 3-wire PNP | NO function | – | XU5M18U1D | – |
| | 3-wire NPN | NO function | – | – | – |
| | 3-wire PNP / NPN | programmable NO / NC | XURK1KSMM12 | – | XURU1KSMM12 |
| Supply voltage limits, min/max (V) including ripple | | | 10 - 30 | 10 - 30 | 10 - 30 |
| Switching capacity, max (mA) / Switching frequency (Hz) | | | 200 / 10000 | 100 / 1000 | 200 / 2000 |
| Overload and short-circuit protection (★) / LED output state indicator (⊗) | | | ★ / | ★ / | ★ / |

(1) 0.007 m with XURZ02; 0.018 m with XURZ01

Packaging series (continued)



| | Detection of transparent materials | Objects on conveyor | Optical frames for detection of passage of objects |
|---|--|--|--|
| | Reflex (with teach mode) (50 x 50 reflector included) | Diffuse with adjustable b/ ground suppression | Thru-beam 200 x 120 mm passageway (2) |
| Usable sensing distance | 1.5 m (4.9') | 1 m (3.28') | 0.12 m (0.39') |
| Mounting (mm) | direct: ctrs. 40 x 40 | direct: ctrs. 40 x 40 | direct: 222.5, M5 screws |
| Sensitivity adjustment potentiometer | with teach mode button | | |
| Case M (metal) P (plastic) / Setting-up assistance LEDs | P / | P / | M / |
| Temperature range (°C) / Degree of protection (conforming to IEC 60529) | - 25 to + 55 (-13 to 131° F) / IP65 | - 25 to + 55 (-13 to 131° F) / IP65 | 0 to + 60 (32 to 140° F) / IP65 |
| Dimensions (mm) Ø x L or H x W x L | 50 x 18 x 80 | 50 x 18 x 50 | 205 x 25 x 230 |

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

| Connection | | | Pre-cabled, PVC (2 m) | Pre-cabled, PVC (2 m) | – |
|--|-------------------------|-----------------------------|-----------------------|-----------------------|----------------------|
| Transmitter / Receiver | 3-wire PNP | NO function | – | – | XU5M18U1D |
| | 3-wire NPN | NO function | – | – | – |
| | 3-wire PNP | programmable NO / NC | – | – | – |
| | 3-wire NPN | programmable NO / NC | – | – | – |
| | 3-wire PNP / NPN | programmable NO / NC | XUKT1KSML2 | XUK8AKSNL2 | – |
| Connection | | | M12 connector | M12 connector | M12 connector |
| Transmitter / Receiver | 3-wire PNP | programmable NO / NC | – | – | – |
| | 3-wire NPN | programmable NO / NC | – | – | – |
| | 3-wire PNP / NPN | programmable NO / NC | XUKT1KSMM12 | XUKT1KSMM12 | XUKT1KSMM12 |
| Supply voltage limits, min/max (V) including ripple | | | 10 - 30 | 10 - 30 | 18 - 30 |
| Switching capacity, max (mA) / Switching frequency (Hz) | | | 100 / 1500 | 100 / 250 | 400 / 500 |
| Overload and short-circuit protection (★) / LED output state indicator (⊗) | | | ★ / | ★ / | ★ / |

(2) Different passageway sizes; 200 x 180: XUVF180M12, 200 x 250: XUVF250M12 and "U" form models available.

Accessories

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

length 2 m without LED
M8 (or S)
M12 (or D)
U20 (or K)

pre-wired, 90°
XSZCS101
XSZD111Y
XSZK101Y



pre-wired, straight
XSZCS111
XSZCD101Y
XSZCK111Y



Lenses for color mark or luminescence detection

Lens for doubling sensing distance



XURZ01

Ring for fixed focusing distance



XURZ02



Color sensors

Forked, for detection of opaque labels

Detection of aqueous liquids

| Diffuse | Diffuse (with integral amplifier) | Thru-beam Wwor diffuse (3) | Thru-beam infrared | Thru-beam water detector |
|---|--|---|--|---------------------------------|
| 0.02 m (0.06') | 0.040 - 0.060 m (0.13 - 0.19') | 0.005 - 0.25 m (0.016 - 0.082') (3) | 0.002 m (0.006') | 0.2 m (0.65') (4) |
| direct: centers 40 x 40 with teach mode button | direct: ctrs. 68x42, M5 screws with teach mode button | on rail, centers 16 with teach mode button | direct: centers 18 with teach mode button | direct: centers 20 |
| P / ☉ | M / ☉ | M / ☉ | M / ☉ | P / ☉ |
| - 10 to + 55 (14 to 131° F) / IP65 | - 10 to + 55 (14 to 131° F) / IP67 | - 10 to + 55 (14 to 131° F) / IP65 | 0 to + 55 (32 to 131° F) / IP65 | 0 to + 40 (32 to 104° F) / IP65 |
| 50 x 25 x 50 | 80 x 30 x 57 | 82 x 25 x 44 | 97 x 20 x 26 | 47 x 13 x 33 |

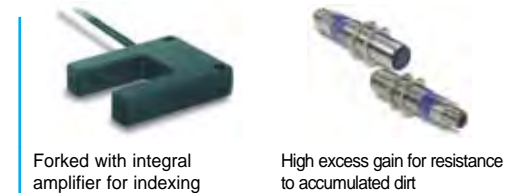
| M12 connector | Pre-cabled (2 m) | Pre-cabled (2 m) | M8 connector | Pre-cabled (2 m) |
|---------------|------------------|------------------|--------------|------------------|
| XUKC1PSMM12 | XURC3PPML2 | XURC4PPML2 | - | - |
| XUKC1NSMM12 | XURC3NPML2 | XURC4NPML2 | - | - |
| - | - | - | XUVK0252S | XUMW1KSNL2 |
| 10 - 30 | 10 - 30 | 10 - 30 | 10 - 30 | 10.8 - 26.4 |
| 100 / 1500 | 100 / 1200 | 100 / 1200 | 100 / 10000 | 100 / 1000 |
| ★ / ☉ | ★ / ☉ | ★ / ☉ | ★ / ☉ | ★ / ☉ |

(3) Depending on fibers selected, see table below

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

Packaging series (continued)

Materials handling series



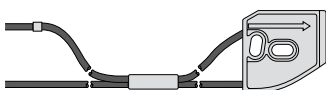
Forked with integral amplifier for indexing

High excess gain for resistance to accumulated dirt

| Line of sight along case axis | Line of sight 90° to case axis | Line of sight along case axis | Line of sight 90° to case axis | Thru-beam | Thru-beam |
|-------------------------------|--------------------------------|-------------------------------|--------------------------------|-----------------------------------|-------------------------------------|
| 0 - 1.4 (0 - 4.5') | 0 - 0.8 (0 - 2.62') | 0 - 1.4 (0 - 4.5') | 0 - 0.8 (0 - 2.62') | 0.03 m (0.098') | 50 m (164') |
| M18 x 1 | - | - | - | centers 47 | M18 x 1 |
| - | - | - | - | - | ☉ |
| P | - | M | - | P / - | M / ☉ |
| -40 to +70 (-40 to 158° F) | - | - | - | - 5 to + 55 (23 to 131° F) / IP54 | - 25 to + 55 (-13 to 131° F) / IP67 |
| M18 x 78 | M18 x 92 | M18 x 78 | M18 x 92 | - | M18 x 95 |

| Pre-cabled (2 m) | Pre-cabled (2 m) | Pre-cabled (2 m) | Pre-cabled (2 m) | Pre-cabled, PvR (2 m) | Pre-cabled (2 m) |
|----------------------|------------------|------------------|------------------|-----------------------|----------------------|
| - | - | - | - | XUVH0312 | - |
| - | - | - | - | XUVJ0312 | - |
| XUBTAPSNL2 | XUBTAPSWL2 | XUBTSPSNL2 | XUBTSPSWL2 | - | - |
| XUBTANSNL2 | XUBTANSWL2 | XUBTSNSNL2 | XUBTSNSWL2 | - | - |
| - | - | - | - | - | - |
| M12 connector | - | - | - | - | M12 connector |
| XUBTAPSNM12 | XUBTAPSWM12 | XUBTSPSNM12 | XUBTSPSWM12 | - | XU2M18AP20D |
| XUBTANSNM12 | XUBTANSWM12 | XUBTSNSNM12 | XUBTSNSWM12 | - | - |
| - | - | - | - | - | - |
| 10 - 30 | 10 - 30 | 10 - 30 | 10 - 30 | 19 - 38 | 10 - 30 |
| 100 / 500 | 100 / 500 | 100 / 500 | 100 / 500 | 150 / 1000 | 100 / 30 |
| ★ / ☉ | ★ / ☉ | ★ / ☉ | ★ / ☉ | ★ / ☉ | ★ / ☉ |

Fiber optic light guides for use with full color sensor XURC4 -



| Fiber type | System | Reference | Sensing dist. | Fiber type | System | Reference | Sensing dist. | |
|----------------|---------|------------|---------------|-----------------|---------|--|--------------------|----------------|
| Focused | Diffuse | XUFN5L01L2 | 10 mm (0.03') | Standard | Diffuse | XUFN05321 | 5 mm (0.01') | |
| | | XUFN5L02L2 | 20 mm (0.06') | | | Thru-beam (color detection by transparency) | XUFN12301 + XUFZ01 | 250 m (820.2') |
| | | XUFN5L03L2 | 30 mm (0.09') | | | | | |



| | Thru-Beam | Diffuse |
|---|-----------------------------------|-----------------------|
| Usable sensing distance (m) | 2m (6.56') | 0.05 m (0.16') |
| Dimensions (mm) Ø x L | M8 x 48 | M8 x 48 |
| Case M (metal) / Setting up assistance LEDs ☉ | M | |
| Temperature range (°C) / Degree of protection (conforming to IEC 60529) | -25 to +55 (-13 to 131° F) / IP67 | |

Sensors for DC applications


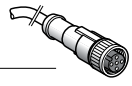


| Connection | Pre-cabled (2 m) | Pre-cabled (2 m) |
|--|-------------------------|-------------------------|
| Transmitter | XUAH0203 | - |
| Connection | M8 Connector | |
| Transmitter | XUAH203S | - |
| Connection | Pre-cabled (2 m) | |
| 3-wire PNP NO function | XUAH0214 | XUAH0515 |
| NC function | XUAH0224 | XUAH0525 |
| Connection | M8 Connector | Pre-cabled (2 m) |
| 3-wire PNP NO function | XUAH0214S | XUAH0515S |
| NC function | XUAH0224S | XUAH0525S |
| Supply voltage limits, min/max (V) including ripple | 10 - 36 | |
| Switching capacity, max (mA) / Switching frequency (Hz) | 100 / 2000 | |
| Overload and short-circuit protection (★) / LED output state indicator (☉) | ★ / ☉ | |



| | Line of sight along case axis | Line of sight 90° to case axis |
|---|------------------------------------|------------------------------------|
| Sensing Distance (m) Without (diffuse w/background suppression) | 0.12 / 0.12 (0.39' / 0.39') | 0.11 / 0.11 (0.36' / 0.36') |
| Nominal Sn / maximum Without (diffuse) | 0.3 / 0.4 (0.09' / 0.12') | 0.2 / 0.3 (0.65' / 0.98') |
| (excess gain = 2) excess gain = 1) With reflector (polarized reflex) | 2 / 3 (6.56' / 9.84') | 1.5 / 2 (4.92' / 6.56') |
| With thru-beam accessory (thru-beam) | 15 / 20 (49.21' / 65.61') | 10 / 14 (32.8' / 45.93') |
| Dimensions (mm) Ø x L | M18 x 78 | M18 x 92 |
| Sensitivity adjustment potentiometer | - | - |
| Case M (metal) / Setting up assistance LEDs ☉ | M | |
| Temperature range (°C) / Degree of protection (conforming to IEC 60529) | -25 to +55 (-13 to 131° F) / IP67 | |

Sensors for DC applications

| Connection | Pre-cabled (2 m) | Pre-cabled (2 m) |
|--|-------------------------|-------------------------|
| 3-wire PNP programmable NO / NC | XUB0SKNSNL2T | XUB0SKNSWL2T |
| Connection | M12 Connector | M12 Connector |
| 3-wire NPN programmable NO / NC | XUB0SKNSNM12T | XUB0SKNSWM12T |
| Connection | Pre-cabled (2 m) | Pre-cabled (2 m) |
| 3-wire PNP programmable NO / NC | XUB0SPSNL2 | XUB0SPSWL2 |
| 3-wire NPN programmable NO / NC | XUB0SNSNL2 | XUB0SNSWL2 |
| Connection | M12 Connector | M12 Connector |
| 3-wire PNP programmable NO / NC | XUB0SPSNM12 | XUB0SPSWM12 |
| 3-wire NPN programmable NO / NC | XUB0SNSNM12 | XUB0SNSWM12 |
| Supply voltage limits, min/max (V) including ripple | 10 - 36 | |
| Switching capacity, max (mA) / Switching frequency (Hz) | 100 / 250 | |
| Overload and short-circuit protection (★) / LED output state indicator (☉) | ★ / ☉ | |

| Suitable female plug-in connectors, including pre-wired versions | | | | | | |
|--|--------------------|---|---------------------|---|----------------------------------|---|
| length 5 m without LED | pre-wired, elbowed |  | pre-wired, straight |  | Stainless Steel Mounting Bracket |  |
| length 5 m without LED | XSZCS111 | | XSZCS101 | | M18 XSZA118 | Mounting bracket with indexing pin for cylindrical sensors |
| length 10 m without LED | XSZCS113 | | XSZCS103 | | | M8 XSZB108 |
| | | | | | | M18 XSZB118 |
| | | | | | | Reflector 50 x 50 mm |
| | | | | | |  |
| | | | | | | 50 x 50 mm XUZC50 |



Laser
class I



| | Transmitter & Receiver | Transmitter | Receiver | Transmitter & Receiver | Transmitter | Receiver |
|---|----------------------------|-------------|----------|------------------------|-------------|----------|
| Usable sensing distance (m) | 0 - 100 (0 - 328') | | | | | |
| Mounting (mm) | M18 x 1 | | | | | |
| Sensitivity adjustment potentiometer | - | - | - | - | - | - |
| Case M (metal) / Setting up assistance LEDs ☉ | P | | | M | | |
| Temperature range (°C) / Degree of protection (conforming to IEC 60529) | -40 to +70 (-40 to 158° F) | | | | | |
| Dimensions (mm) H x W x D | M18 x 66 | | M18 x 76 | M18 x 66 | | M18 x 76 |

Sensors for DC applications

| Connection | | Pre-Cabled, PVC (2 m) | | | | | |
|--|--------------------------|-----------------------|--------------|--------------|-------------|--------------|--------------|
| Connection | PNP programmable NO / NC | XUBLAPCNL2 | - | - | XUBLBPCNL2 | - | - |
| | NPN programmable NO / NC | XUBLANCNL2 | - | - | XUBLBNCNL2 | - | - |
| | | - | XUBLAKCNL2T | - | - | XUBLBKCNL2T | - |
| | PNP | - | - | XUBLAPCNL2R | - | - | XUBLBPCNL2R |
| | NPN | - | - | XUBLANCNL2R | - | - | XUBLBNCNL2R |
| Connection | | M12 Connector | | | | | |
| Connection | PNP programmable NO / NC | XUBLAPCNM12 | - | - | XUBLBPCNM12 | - | - |
| | NPN programmable NO / NC | XUBLANCNM12 | - | - | XUBLBNCNM12 | - | - |
| | | - | XUBLAKCNLM12 | - | - | XUBLBKCNLM12 | - |
| | PNP | - | - | XUBLAPCNM12R | - | - | XUBLBPCNM12R |
| | NPN | - | - | XUBLANCNM12R | - | - | XUBLBNCNM12R |
| Supply voltage limits, min/max (V) including ripple | 10 - 30 | | | | | | |
| Switching capacity, max (mA) / Switching frequency (Hz) | 100 / 1500 | | | | | | |
| Overload and short-circuit protection (★) / LED output state indicator (☉) | ★ / ☉ | | | | | | |

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

| | | | | | | | | |
|-------------------------|--------------------|--|---------------------|--|----------------------------------|--|--|--|
| length 5 m without LED | pre-wired, elbowed | | pre-wired, straight | | Stainless Steel Mounting Bracket | | Mounting bracket with indexing pin for cylindrical sensors | |
| length 5 m without LED | XSZCS111 | | XSZCS101 | | M18 XSZA118 | | M18 XSZB118 | |
| length 10 m without LED | XSZCS113 | | XSZCS103 | | | | | |

Osiconcept™
Offering simplicity through Innovation

A single product that automatically adapts to all installation environments.

Accurate position detection using teach mode.



| | Form E 26 x 26 | Form C 40 x 40 | Form D 80 x 80 | M12 |
|--|---|---|---|---|
| Nominal sensing distance Sn | 15 mm (0.59") | 25 mm (0.98") | 60 mm (2.36") | 5 mm (0.19") |
| Usable sensing distance S (mm) flush mountable / non flush mountable | 0 - 8 / 0 - 12 (0 - 0.31" / 0 - 0.47") | 0 - 12 / 0 - 20 (0 - 0.47" / 0 - 0.78") | 0 - 32 / 0 - 48 (0 - 1.25" / 0 - 1.88") | 0 - 2.7 / 0 - 4 (0 - 0.10" / 0 - 0.15") |
| Fine adjustment zone (mm) flush mountable / non flush mountable | 5 - 10 / 5 - 15 (0.19" - 0.39") | 8 - 15 / 8 - 25 (0.31" - 0.59") | 20 - 40 / 20 - 60 (7.8" - 1.57" / 7.8" - 2.36") | 1.7 - 3.4 / 1.7 - 5 (0.03" - 0.09" / 0.06" - 0.19") |
| Suitability for flush mounting (metal environment) | flush mountable or non flush mountable via Osiconcept teach mode | | | |
| Case M (metal) P (plastic) | P | P | P | P |
| Temperature range (°C) | - 25 to + 70 (-13 to 158° F) | - 25 to + 70 (-13 to 158° F) | - 25 to + 70 (-13 to 158° F) | - 25 to + 70 (-13 to 158° F) |
| Degree of protection (conforming to IEC 60529) | pre-cabled: IP68 (with connector: IP67) | | | IP67 |

Sensors for DC applications

| Connection | Pre-cabled, PvR (2 m) | | | | | |
|---|-------------------------|--------------------|----------------------|-------------|--------------|---------------------|
| Dimensions (mm) Ø x L or W x H x D | 26 x 26 x 13 | 40 x 40 x 15 | 80 x 80 x 26 | M12 x 54 | | |
| 3-wire | PNP | NO function | XS8E1A1PAL2 | XS8C1A1PAL2 | XS8D1A1PAL2 | - |
| | | NC function | XS8E1A1PBL2 | XS8C1A1PBL2 | XS8D1A1PBL2 | - |
| | NPN | NO function | XS8E1A1NAL2 | XS8C1A1NAL2 | XS8D1A1NAL2 | - |
| | | NC function | XS8E1A1NBL2 | XS8C1A1NBL2 | XS8D1A1NBL2 | - |
| Connection | M8 connector (1) | | M12 connector | | | |
| 3-wire | PNP | NO function | XS8E1A1PAM8 | XS8C1A1PAM8 | XS8D1A1PAM12 | XS612B2PAL01M12 (2) |
| | | NC function | XS8E1A1PBM8 | XS8C1A1PBM8 | XS8D1A1PBM12 | XS612B2PBL01M12 (2) |
| | NPN | NO function | XS8E1A1NAM8 | XS8C1A1NAM8 | XS8D1A1NAM12 | XS612B2NAL01M12 (2) |
| | | NC function | XS8E1A1NBM8 | XS8C1A1NBM8 | XS8D1A1NBM12 | XS612B2NBL01M12 (2) |
| Supply voltage limits, min/max (V) including ripple | 10 - 36 | 10 - 36 | 10 - 36 | 10 - 36 | | |
| Switching capacity, max (mA) | 100 | 200 | 200 | 100 | | |
| Overload and short-circuit protection (★) | ★ | ★ | ★ | ★ | | |
| LED output state indicator (⊗) and power on LED (⊗) | ⊗ / ⊗ | ⊗ / ⊗ | ⊗ / ⊗ | ⊗ / ⊗ | | |
| Voltage drop, closed state (V) at I nominal | 2 | 2 | 2 | 2 | | |
| Switching frequency (Hz) | 2000 | 1000 | 150 | 1000 | | |

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

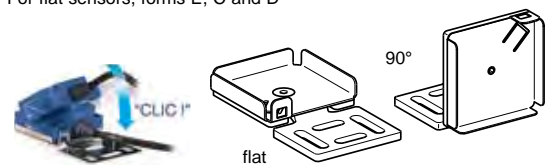
| Connection | Pre-cabled, PvR (2 m) | | | | |
|---|---------------------------------|--------------------|-----------------|-----------------|--------------|
| Dimensions (mm) Ø x L or W x H x D | 26 x 26 x 13 | 40 x 40 x 15 | 80 x 80 x 26 | - | |
| 2-wire AC/DC | NO function | XS8E1A1MAL2 | XS8C1A1MAL2 | XS8D1A1MAL2 | - |
| | not short-circuit protected (3) | NC function | XS8E1A1MBL2 | XS8C1A1MBL2 | XS8D1A1MBL2 |
| Connection | 1/2" 20 UNF connector | | | | |
| 2-wire AC/DC | NO function | XS8E1A1MAL01U20 | XS8C1A1MAL01U20 | XS8D1A1MAU20 | - |
| | not short-circuit protected (3) | NC function | XS8E1A1MBL01U20 | XS8C1A1MBL01U20 | XS8D1A1MBU20 |
| Supply voltage limits, min/max (V) including ripple | 20 - 264 | 20 - 264 | 20 - 264 | - | |
| Switching capacity, max (mA) | 200 AC or DC | 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 | 5.5 | - | |
| Switching frequency (Hz) | 2000 | 1000 | 150 | - | |

- (1) Also available with M12 connector on 152 mm (6") pigtail. Substitute M12 for M8 in part number
- (2) Flying lead (L = 0.15 m) (5.9") with end mounted remote control incorporating M12 connector
- (3) 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

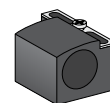
Mounting Brackets

For flat sensors, forms E, C and D



| | flat | 90° | substitution of block type sensors XSE / XSC / XSD |
|--------|---------|---------|--|
| Form E | XSZBE00 | XSZBE90 | XSZBE10 |
| Form C | XSZBC00 | XSZBC90 | XSZBC10 |
| Form D | - | - | XSZBD10 |

Mounting bracket with indexing pin for cylindrical sensors



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



Osiconcept



Osiconcept

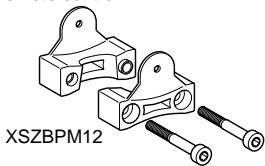


| M18 | M30 | M8 | M12 | M18 | M30 |
|--|---|------------------------------|---|------------------------------|------------------------------|
| 9 mm (0.35") | 18 mm (0.70") | 2.5 mm (0.09") | 4 mm (0.15") | 8 mm (0.31") | 15 mm (0.59") |
| 0 - 4.8 / 0 - 7.2 (0 - 1.88" / 0 - 0.28") | 0 - 8.8 / 0 - 14.4 (0 - 0.34" / 0 - 0.56") | 0 - 2 (0 - 0.07") | 0 - 3.2 (0 - 0.12") | 0 - 6.4 (0 - 0.25") | 0 - 12 (0 - 0.47") |
| 3 - 6 / 3 - 9 (0.11 - 0.23" / 0.11 - 0.35") | 6 - 11 / 6 - 18 (0.23 - 0.43" / 0.23 - 0.70") | - | - | - | - |
| flush or non flush mountable via Osiconcept teach mode | | flush mountable | flush mountable | flush mountable | flush mountable |
| M | M | M | M | M | M |
| - 25 to + 70 (-13 to 158° F) | - 25 to + 70 (-13 to 158° F) | - 25 to + 70 (-13 to 158° F) | - 25 to + 70 (-13 to 158° F) | - 25 to + 70 (-13 to 158° F) | - 25 to + 70 (-13 to 158° F) |
| IP67 | | IP67 | pre-cabled: IP68 (with connector: IP67) | | |

| M18 x 67 | M30 x 71 | M8 x 50 | M12 x 50 | M18 x 60 | M30 x 60 |
|---------------------|---------------------|--------------|--------------|--------------|--------------|
| - | - | XS608B1PAL2 | XS612B1PAL2 | XS618B1PAL2 | XS630B1PAL2 |
| - | - | XS608B1PBL2 | XS612B1PBL2 | XS618B1PBL2 | XS630B1PBL2 |
| - | - | XS608B1NAL2 | XS612B1NAL2 | XS618B1NAL2 | XS630B1NAL2 |
| - | - | XS608B1NBL2 | XS612B1NBL2 | XS618B1NBL2 | XS630B1NBL2 |
| XS618B2PAL01M12 (2) | XS630B2PAL01M12 (2) | XS608B1PAM12 | XS612B1PAM12 | XS618B1PAM12 | XS630B1PAM12 |
| XS618B2PBL01M12 (2) | XS630B2PBL01M12 (2) | XS608B1PBM12 | XS612B1PBM12 | XS618B1PBM12 | XS630B1PBM12 |
| XS618B2NAL01M12 (2) | XS630B2NAL01M12 (2) | XS608B1NAM12 | XS612B1NAM12 | XS618B1NAM12 | XS630B1NAM12 |
| XS618B2NBL01M12 (2) | XS630B2NBL01M12 (2) | XS608B1NBM12 | XS612B1NBM12 | XS618B1NBM12 | XS630B1NBM12 |
| 10 - 36 | 10 - 36 | 10 - 58 | 10 - 58 | 10 - 58 | 10 - 58 |
| 100 | 100 | 200 | 200 | 200 | 200 |
| ★ | ★ | ★ | ★ | ★ | ★ |
| ⊗ / ⊗ | ⊗ / ⊗ | ⊗ / - | ⊗ / - | ⊗ / - | ⊗ / - |
| 2 | 2 | 2 | 2 | 2 | 2 |
| 1000 | 1000 | 2500 | 2500 | 1000 | 500 |

| - | - | - | M12 x 50 | M18 x 60 | M30 x 60 |
|---|---|---|-----------------|-----------------|-----------------|
| - | - | - | XS612B1MAL2 | XS618B1MAL2 | XS630B1MAL2 |
| - | - | - | XS612B1MBL2 | XS618B1MBL2 | XS630B1MBL2 |
| - | - | - | XS612B1MAU20 | XS618B1MAU20 | XS630B1MAU20 |
| - | - | - | XS612B1MBU20 | XS618B1MBU20 | XS630B1MBU20 |
| - | - | - | 20 - 264 | 20 - 264 | 20 - 264 |
| - | - | - | 200 | 300 AC / 200 DC | 300 AC / 200 DC |
| - | - | - | ⊗ / - | ⊗ / - | ⊗ / - |
| - | - | - | 1.5 | 1.5 | 1.5 |
| - | - | - | 5.5 | 5.5 | 5.5 |
| - | - | - | 25 AC / 1000 DC | 25 AC / 1000 DC | 25 AC / 500 DC |

For Osiconcept XS6 remote control

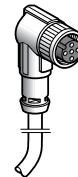


XSZBPM12

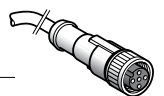
Suitable female plug-in connectors, including pre-wired versions

length 2 m without LED

pre-wired, 90°

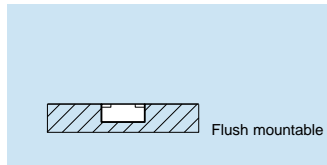


pre-wired, straight



| | |
|-----|-----------|
| M8 | XSZCS151 |
| M12 | XSZCD111Y |
| U20 | XSZCK101Y |

| |
|-----------|
| XSZCS141 |
| XSZCD101Y |
| XSZCK111Y |



| | Form J 8 x 22 | Form F 15 x 32 | Form E 26 x 26 | Form C 40 x 40 |
|--|---|------------------------------|------------------------------|------------------------------|
| Nominal sensing distance Sn | 2.5 mm (0.90") | 5 mm (0.19") | 10 mm (0.39") | 15 mm (0.66") |
| Operating zone (mm) | 0 - 2 (0 - 0.07") | 0 - 4 (0 - 0.15") | 0 - 8 (0 - 0.31") | 0 - 12 (0 - 0.47") |
| Suitability for flush mounting (metal environment) | flush mountable | flush mountable | flush mountable | flush mountable |
| Case M (metal) P (plastic) | P | P | P | P |
| Temperature range (°C) | - 25 to + 70 (-13 to 158° F) | - 25 to + 70 (-13 to 158° F) | - 25 to + 70 (-13 to 158° F) | - 25 to + 70 (-13 to 158° F) |
| Degree of protection (conforming to IEC 60529) | pre-cabled: IP68 (with connector: IP67) | | | |

Sensors for DC applications

| Connection | | | Pre-cabled, PvR (2 m) | | | |
|--|-----|-------------|-----------------------|--------------------|--------------|--------------|
| Dimensions (mm) Ø x L or W x H x D | | | 8 x 22 x 8 | 15 x 32 x 8 | 26 x 26 x 13 | 40 x 40 x 15 |
| 3-wire | PNP | NO function | XS7J1A1PAL2 | XS7F1A1PAL2 | XS7E1A1PAL2 | XS7C1A1PAL2 |
| | | NC function | XS7J1A1PBL2 | XS7F1A1PBL2 | XS7E1A1PBL2 | XS7C1A1PBL2 |
| | NPN | NO function | XS7J1A1NAL2 | XS7F1A1NAL2 | XS7E1A1NAL2 | XS7C1A1NAL2 |
| | | NC function | XS7J1A1NBL2 | XS7F1A1NBL2 | XS7E1A1NBL2 | XS7C1A1NBL2 |
| Connection | | | M8 connector | | | |
| 3-wire | PNP | NO function | XS7J1A1PAL01M8 (1) | XS7F1A1PAL01M8 (1) | XS7E1A1PAM8 | XS7C1A1PAM8 |
| | | NC function | XS7J1A1PBL01M8 (1) | XS7F1A1PBL01M8 (1) | XS7E1A1PBM8 | XS7C1A1PBM8 |
| | NPN | NO function | XS7J1A1NAL01M8 (1) | XS7F1A1NAL01M8 (1) | XS7E1A1NAM8 | XS7C1A1NAM8 |
| | | NC function | XS7J1A1NBL01M8 (1) | XS7F1A1NBL01M8 (1) | XS7E1A1NBM8 | XS7C1A1NBM8 |
| Supply voltage limits, min/max (V) including ripple | | | 10 - 36 | 10 - 36 | 10 - 36 | 10 - 38 |
| Switching capacity, max (mA) | | | 100 | 100 | 100 | 100 |
| Short-circuit protect. (★) / LED output state indicator (⊗) / Power on LED (⊙) | | | ★ / ⊗ / - | ★ / ⊗ | ★ / ⊗ | ★ / ⊗ |
| Voltage drop, closed state (V) at I nominal | | | 2 | 2 | 2 | 2 |
| Switching frequency (Hz) | | | 2000 | 2000 | 1000 | 1000 |

Sensors for DC applications

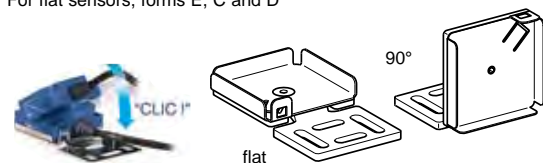
| Connection | | | Pre-cabled, PvR (2 m) | | | |
|--|---------------|-------------|-----------------------|--------------------|--------------|--------------|
| Dimensions (mm) Ø x L or W x H x D | | | 8 x 22 x 8 | 15 x 32 x 8 | 26 x 26 x 13 | 40 x 40 x 15 |
| 2-wire | non polarized | NO function | XS7J1A1DAL2 | XS7F1A1DAL2 | XS7E1A1DAL2 | XS7C1A1DAL2 |
| | | NC function | XS7J1A1DBL2 | XS7F1A1DBL2 | XS7E1A1DBL2 | XS7C1A1DBL2 |
| Connection | | | M8 connector | | | |
| 2-wire | non polarized | NO function | XS7J1A1DAL01M8 (1) | XS7F1A1DAL01M8 (1) | XS7E1A1DAM8 | XS7C1A1DAM8 |
| | | NC function | XS7J1A1DBL01M8 (1) | XS7F1A1DBL01M8 (1) | XS7E1A1DBM8 | XS7C1A1DBM8 |
| Supply voltage limits, min/max (V) including ripple | | | 10 - 36 | 10 - 36 | 10 - 36 | 10 - 36 |
| Switching capacity, max (mA) | | | 100 | 100 | 100 | 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 | | | 4 | 4 | 4 | 4 |
| Switching frequency (Hz) | | | 4000 | 5000 | 1000 | 1000 |

(1) Flying lead (L = 0.15 m) (5.9") with M8 end connector

Accessories

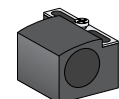
Mounting Brackets

For flat sensors, forms E, C and D



| | flat | 90° | substitution of block type sensors XSE / XSC / XSD |
|--------|---------|---------|--|
| Form E | XSZBE00 | XSZBE90 | XSZBE10 |
| Form C | XSZBC00 | XSZBC90 | XSZBC10 |
| Form D | - | - | XSZBD10 |

Mounting bracket with indexing pin for cylindrical sensors



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




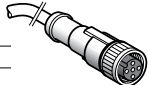
| Form D 80 x 80 | M8 | M12 | M18 | M30 |
|---|------------------------------|---|------------------------------|------------------------------|
| 40 mm (1.57") | 1.5 mm (0.05") | 2 mm (0.07") | 5 mm (0.19") | 10 mm (0.39") |
| 0 - 32 (0 - 1.25") | 0 - 1.2 (0 - 0.04") | 0 - 1.6 (0 - 0.06") | 0 - 4 (0 - 0.15") | 0 - 8 (0 - 0.31") |
| flush mountable | flush mountable (2) | flush mountable (2) | flush mountable (2) | flush mountable (2) |
| P | M | M | M | M |
| - 25 to + 70 (-13 to 158° F) | - 25 to + 70 (-13 to 158° F) | - 25 to + 70 (-13 to 158° F) | - 25 to + 70 (-13 to 158° F) | - 25 to + 70 (-13 to 158° F) |
| pre-cabled: IP68 (with connector: IP67) | IP67 | pre-cabled: IP68 (with connector: IP67) | | |

| | | | | |
|----------------------|---------------------|----------------------|--------------|--------------|
| 80 x 80 x 26 | M8 x 33 | M12 x 33 | M18 x 36.5 | M30 x 40.6 |
| XS7D1A1PAL2 | XS508B1PAL2 | XS512B1PAL2 | XS518B1PAL2 | XS530B1PAL2 |
| XS7D1A1PBL2 | XS508B1PBL2 | XS512B1PBL2 | XS518B1PBL2 | XS530B1PBL2 |
| XS7D1A1NAL2 | XS508B1NAL2 | XS512B1NAL2 | XS518B1NAL2 | XS530B1NAL2 |
| XS7D1A1NBL2 | XS508B1NBL2 | XS512B1NBL2 | XS518B1NBL2 | XS530B1NBL2 |
| M12 connector | M8 connector | M12 connector | | |
| XS7D1A1PAM12 | XS508B1PAM8 | XS512B1PAM12 | XS518B1PAM12 | XS530B1PAM12 |
| XS7D1A1PBM12 | XS508B1PBM8 | XS512B1PBM12 | XS518B1PBM12 | XS530B1PBM12 |
| XS7D1A1NAM12 | XS508B1NAM8 | XS512B1NAM12 | XS518B1NAM12 | XS530B1NAM12 |
| XS7D1A1NBM12 | XS508B1NBM8 | XS512B1NBM12 | XS518B1NBM12 | XS530B1NBM12 |
| 10 - 36 | 10 - 36 | 10 - 36 | 10 - 36 | 10 - 36 |
| 100 | 200 | 200 | 200 | 200 |
| ★ / ⊗ | ★ / ⊗ | ★ / ⊗ | ★ / ⊗ | ★ / ⊗ |
| 2 | 2 | 2 | 2 | 2 |
| 100 | 5000 | 5000 | 2000 | 1000 |

| | | | | |
|----------------------|--------------|--------------|--------------|--------------|
| 80 x 80 x 26 | M8 x 50 | M12 x 50 | M18 x 52.5 | M30 x 50 |
| XS7D1A1DAL2 | XS508B1DAL2 | XS512B1DAL2 | XS518B1DAL2 | XS530B1DAL2 |
| XS7D1A1DBL2 | XS508B1DBL2 | XS512B1DBL2 | XS518B1DBL2 | XS530B1DBL2 |
| M12 connector | | | | |
| XS7D1A1DAM12 | XS508B1DAM12 | XS512B1DAM12 | XS518B1DAM12 | XS530B1DAM12 |
| XS7D1A1DBM12 | XS508B1DBM12 | XS512B1DBM12 | XS518B1DBM12 | XS530B1DBM12 |
| 10 - 36 | 10 - 58 | 10 - 58 | 10 - 58 | 10 - 58 |
| 100 | 100 | 100 | 100 | 100 |
| ★ / ⊗ | ★ / ⊗ | ★ / ⊗ | ★ / ⊗ | ★ / ⊗ |
| 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 4 | 4 | 4 | 4 | 4 |
| 100 | 4000 | 4000 | 3000 | 2000 |

(2) Non-flush mountable available, consult factory

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

| | | | | |
|---------------------------|-------------------|---|------------------------|---|
| length 2 m without LED | pre-wired, 90° |  | pre-wired, straight |  |
| M8 (or S) | XSZCS151 | | XSZCS141 | |
| M12 (or D) | XSZCD111Y | XSZCD101Y | | |
| U20 (or K) | XSZCK101Y | XSZCK111Y | | |



| | | Ø M12 threaded | Ø M18 threaded | Ø M30 threaded |
|--|---------------------|----------------------------|---------------------|----------------------|
| Nominal sensing distance Sn | non flush mountable | 7 mm (0.25") | 12 mm (0.47") | 22 mm (0.86") |
| Operating zone (mm) | non flush mountable | 0 - 5.6 (0 - 1.22") | 0 - 9.6 (0 - 0.37") | 0 - 17.6 (0 - 6.69") |
| Suitability for flush mounting (metal environment) | | non flush mountable | | |
| Case M (metal) P (plastic) | | P | | |
| Temperature range (°C) | | -25 to +85 (-13 to 185° F) | | |
| Degree of protection (conforming to IEC 60529) | | IP67, IP69 K | | |
| Dimensions (mm) Ø x L | non flush mountable | M12 x 61 | M18 x 70 | M30 x 70 |

Sensors for DC applications

| Connection | | | | Pre-cabled, PUR (2 m) | | |
|------------|-----|-------------|---------------------|-----------------------|--------------|--------------|
| 3-wire | PNP | NO function | non flush mountable | XS212AAPAL2 | XS218AAPAL2 | XS230AAPAL2 |
| | | NC function | non flush mountable | XS212AAPBL2 | XS218AAPBL2 | XS230AAPBL2 |
| | NPN | NO function | non flush mountable | XS212AANAL2 | XS218AANAL2 | XS230AANAL2 |
| | | NC function | non flush mountable | XS212AANBL2 | XS218AANBL2 | XS230AANBL2 |
| Connection | | | | M12 Connector | | |
| 3-wire | PNP | NO function | non flush mountable | XS212AAPAM12 | XS218AAPAM12 | XS230AAPAM12 |
| | | NC function | non flush mountable | XS212AAPBM12 | XS218AAPBM12 | XS230AAPBM12 |
| | NPN | NO function | non flush mountable | XS212AANAM12 | XS218AANAM12 | XS230AANAM12 |
| | | NC function | non flush mountable | XS212AANBM12 | XS218AANBM12 | XS230AANBM12 |

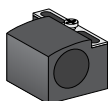
Sensors for AC and DC applications

| Connection | | | Pre-cabled, PUR (2 m) | | |
|------------|-------------|---------------------|-----------------------|--------------|--------------|
| 2-wire | NO function | non flush mountable | - | XS218AAMAL2 | XS230AAMAL2 |
| Connection | | | M12 Connector | | |
| 2-wire | NO function | non flush mountable | - | XS218AAMAU20 | XS230AAMAU20 |

Accessories

Mounting Brackets

Mounting bracket with indexing pin for cylindrical sensors



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

Stainless Steel Mounting Bracket



| | |
|-----|-----------|
| M12 | 9006PA112 |
| M18 | XSZA118 |

Food and Beverage market, metal


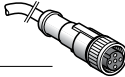


| Ø M12 threaded | Ø M18 plain | Ø M18 threaded | Ø M30 threaded |
|----------------------------|---------------------|----------------|----------------------|
| 7 mm (0.25") | 12 mm (0.47") | | 22 mm (0.86") |
| 0 - 5.6 (0 - 1.22") | 0 - 9.6 (0 - 0.37") | | 0 - 17.6 (0 - 6.69") |
| M | | | |
| -40 to +85 (-40 to 185° F) | | | |
| M12 x 61 | M18 x 70 | M18 x 70 | M30 x 70 |

| | | | |
|----------------------|---------------------|----------------------|--------------|
| XS212SAPAL2 | XS218SAPAL2 | XS2L2SAPAL2 | XS230SAPAL2 |
| XS212SAPBL2 | XS218SAPBL2 | XS2L2SAPBL2 | XS230SAPBL2 |
| XS212SANAL2 | XS218SANAL2 | XS2L2SANAL2 | XS230SANAL2 |
| XS212SANBL2 | XS218SANBL2 | XS2L2SANBL2 | XS230SANBL2 |
| M12 connector | M8 connector | M12 connector | |
| XS212SAPAM12 | XS218SAPAM12 | XS2L2SAPAM12 | XS230SAPAM12 |
| XS212SAPBM12 | XS218SAPBM12 | XS2L2SAPBM12 | XS230SAPBM12 |
| XS212SANAM12 | XS218SANAM12 | XS2L2SANAM12 | XS230SANAM12 |
| XS212SANBM12 | XS218SANBM12 | XS2L2SANBM12 | XS230SANBM12 |

| | | | |
|----------------------|---------------------|----------------------|--------------|
| - | - | XS218SAMAL2 | XS230SAMAL2 |
| M12 connector | M8 connector | M12 connector | |
| - | - | XS218SAMAU20 | XS230SAMAU20 |

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

| | | | | |
|-------------------------|--------------------|---|---------------------|---|
| length 5 m without LED | pre-wired, elbowed |  | pre-wired, straight |  |
| length 5 m without LED | XSZCS111 | | XSZCS101 | |
| length 10 m without LED | XSZCS113 | | XSZCS103 | |



| | | M8 | M12 | M18 | M30 |
|--|---------------------|-------------------------------|---------------------|---------------------|--------------------|
| Nominal sensing distance Sn | flush mountable | – | – | – | – |
| | non flush mountable | 2.5 mm (0.09") | 4 mm (0.15") | 8 mm (0.31") | 15 mm (0.59") |
| Operating zone (mm) | flush mountable | – | – | – | – |
| | non flush mountable | 0 - 2 (0 - 0.07") | 0 - 3.2 (0 - 0.12") | 0 - 6.4 (0 - 0.25") | 0 - 12 (0 - 0.47") |
| Suitability for flush mounting (metal environment) | | non flush mountable | | | |
| Case M (metal) P (plastic) | | P | | | |
| Temperature range (°C) | | - 20 to + 70 (-4 to + 158° F) | | | |
| Degree of protection (conforming to IEC 60529) | | IP 67 | | | |
| Dimensions (mm) Ø x L | flush mountable | – | – | – | – |
| | non flush mountable | M8 x 42 | M12 x 41.3 | M18 x 50.6 | M30 x 50.6 |

Sensors for DC applications

| Connection | | | | Pre-cabled, PUR (2 m) | | | |
|------------|-----|-------------|---------------------|-----------------------|--------------|--------------|--------------|
| 3-wire | PNP | NO function | non flush mountable | XS208ALPAL2 | XS212ALPAL2 | XS218ALPAL2 | XS230ALPAL2 |
| | | NC function | non flush mountable | XS208ALPBL2 | XS212ALPBL2 | XS218ALPBL2 | XS230ALPBL2 |
| | NPN | NO function | non flush mountable | XS208ALNAL2 | XS212ALNAL2 | XS218ALNAL2 | XS230ALNAL2 |
| | | NC function | non flush mountable | XS208ALNBL2 | XS212ALNBL2 | XS218ALNBL2 | XS230ALNBL2 |
| 3-wire | PNP | NO function | flush mountable | – | – | – | – |
| | | NC function | flush mountable | – | – | – | – |
| | NPN | NO function | flush mountable | – | – | – | – |
| | | NC function | flush mountable | – | – | – | – |
| Connection | | | | M12 Connector | | | |
| 3-wire | PNP | NO function | non flush mountable | – | XS212ALPAM12 | XS218ALPAM12 | XS230ALPAM12 |
| | | NC function | non flush mountable | – | XS212ALPBM12 | XS218ALPBM12 | XS230ALPBM12 |
| | NPN | NO function | non flush mountable | – | XS212ALNAM12 | XS218ALNAM12 | XS230ALNAM12 |
| | | NC function | non flush mountable | – | XS212ALNBM12 | XS218ALNBM12 | XS230ALNBM12 |
| 3-wire | PNP | NO function | flush mountable | – | – | – | – |
| | | NC function | flush mountable | – | – | – | – |
| | NPN | NO function | flush mountable | – | – | – | – |
| | | NC function | flush mountable | – | – | – | – |

Sensors for AC applications

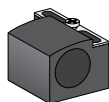
| Connection | | | Pre-cabled, PUR (2 m) | | | |
|---|------------|-----------------|-----------------------|------|-----|----|
| 2-wire, not short-circuit protected (1) | NO | flush mountable | – | – | – | – |
| Supply voltage limits, min/max (V) including ripple | | | 10 - 36 | | | |
| Switching capacity, max (mA) | | | 50 | | 100 | |
| Short-circuit protection (★) / LED output state indicator (⊗) | | | ★ / ⊗ | | | |
| Voltage drop, closed state (V) at I nominal | | | < 2 | | | |
| Switching frequency (Hz) | DC version | | 3000 | 1000 | 250 | 60 |
| | AC version | | – | – | – | – |

(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

Mounting Brackets

Mounting bracket with indexing pin for cylindrical sensors



| | |
|------|---------|
| M6.5 | XSZB165 |
| M8 | XSZB108 |
| M12 | XSZB112 |
| M18 | XSZB118 |
| M30 | XSZB130 |

Basic, metal



| Ø 6.5 | M8 | M12 | M18 | M30 |
|---|---------------------|---------------------|---------------------|--------------------|
| 1.5 (0.05") | 1.5 (0.05") | 2 (0.07") | 5 (0.19") | 10 (0.39") |
| – | 2.5 mm (0.09") | 4 mm (0.15") | 8 mm (0.31") | 15 mm (0.59") |
| 0 - 1.2 (0 - 0.04") | 0 - 1.2 (0 - 0.04") | 0 - 1.6 (0 - 0.15") | 0 - 4 (0 - 0.15") | 0 - 8 (0 - 0.31") |
| – | 0 - 2 (0 - 0.07") | 0 - 3.2 (0 - 0.12") | 0 - 6.4 (0 - 0.25") | 0 - 12 (0 - 0.47") |
| flush mountable or non flush mountable depending on model | | | | |
| M | | | | |
| - 25 to + 70 (-13 to + 158° F) | | | | |
| IP 67 | | | | |
| Ø 6.5 x 42 | M8 x 42 | M12 x 41.3 | M18 x 51.3 | M18 x 51.3 |
| – | M8 x 42 | M12 x 41.3 | M18 x 50.6 | M30 x 50.6 |

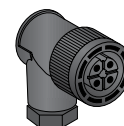
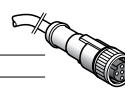
| | | | | |
|--------------------|---------------------|---------------------|---------------------|---------------------|
| – | XS208BLPAL2 | XS212BLPAL2 | XS218BLPAL2 | XS230BLPAL2 |
| – | XS208BLPBL2 | XS212BLPBL2 | XS218BLPBL2 | XS230BLPBL2 |
| – | XS208BLNAL2 | XS212BLNAL2 | XS218BLNAL2 | XS230BLNAL2 |
| – | XS208BLNBL2 | XS212BLNBL2 | XS218BLNBL2 | XS230BLNBL2 |
| XS106BLPAL2 | XS108BLPAL2 | XS112BLPAL2 | XS118BLPAL2 | XS130BLPAL2 |
| XS106BLPBL2 | XS108BLPBL2 | XS112BLPBL2 | XS118BLPBL2 | XS130BLPBL2 |
| XS106BLNAL2 | XS108BLNAL2 | XS112BLNAL2 | XS118BLNAL2 | XS130BLNAL2 |
| XS106BLNBL2 | XS108BLNBL2 | XS112BLNBL2 | XS118BLNBL2 | XS130BLNBL2 |
| – | M12 (1) | | M12 | |
| – | XS208BLPAM12 | XS212BLPAM12 | XS218BLPAM12 | XS230BLPAM12 |
| – | XS208BLPBM12 | XS212BLPBM12 | XS218BLPBM12 | XS230BLPBM12 |
| – | XS208BLNAM12 | XS212BLNAM12 | XS218BLNAM12 | XS230BLNAM12 |
| – | XS208BLNBM12 | XS212BLNBM12 | XS218BLNBM12 | XS230BLNBM12 |
| – | XS108BLPAM12 | XS112BLPAM12 | XS118BLPAM12 | XS130BLPAM12 |
| – | XS108BLPBM12 | XS112BLPBM12 | XS118BLPBM12 | XS130BLPBM12 |
| – | XS108BLNAM12 | XS112BLNAM12 | XS118BLNAM12 | XS130BLNAM12 |
| – | XS108BLNBM12 | XS112BLNBM12 | XS118BLNBM12 | XS130BLNBM12 |

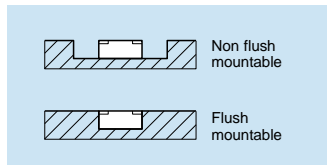
(1) M8 version available. To order, replace the reference suffix M12 by **M8**. Example XS108BLPAM12 becomes XS108BLPAM8.

| | | | | |
|---|------|------------------------|-----------------------|---------------------|
| – | – | XS112BLFAL2 | XS118BLFAL2 | XS130BLFAL2 |
| 10 - 36 | | | | 10 - 58 |
| 50 | | 100 | | |
| ★ / ☉ | | | | |
| < 2 (XS112BLFAL2 = < 7, XS118 and XS130 BLFAL2 = 4.5) | | | | |
| 3000 | 3000 | XS1 = 2000, XS2 = 1000 | XS1 = 2000, XS2 = 250 | XS1 = 200, XS2 = 60 |
| – | – | 25 | 25 | 25 |

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 | XZCP0566L5 |
| M12 (or D) | XZCP1241L5 | XZCP1141L5 | XZCP1141L5 |





| | M8 | M12 | M18 | M30 |
|--|------------------------------|---|---------------------|--------------------|
| Nominal sensing distance Sn | 2.5 mm (0.09") | 4 mm (0.15") | 8 mm (0.31") | 15 mm (0.59") |
| Operating zone (mm) | 0 - 2 (0 - 0.07") | 0 - 3.2 (0 - 0.12") | 0 - 6.4 (0 - 0.25") | 0 - 12 (0 - 0.47") |
| Suitability for flush mounting (metal environment) | non flush mountable | | | |
| Case M (metal) P (plastic) | P | | | |
| Temperature range (°C) | - 25 to + 70 (-13 to 158° F) | | | |
| Degree of protection (conforming to IEC 60529) | IP67 | pre-cabled: IP68 (with connector: IP67) | | |

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 polarized) | 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 |
| | | NO function | XS4P08PB340 | XS4P12PB340 | XS4P18PB340 | XS4P30PB340 |
| | NPN | NO function | XS4P08NA340 | XS4P12NA340 | XS4P18NA340 | XS4P30NA340 |
| | | NO function | XS4P08NB340 | XS4P12NB340 | XS4P18NB340 | XS4P30NB340 |
| Connection | | | M8 connector | M12 connector | | |
| 3-wire | PNP | NO function | XS4P08PA340S | XS4P12PA340D | XS4P18PA340D | XS4P30PA340D |
| | | NO function | XS4P08PB340S | XS4P12PB340D | XS4P18PB340D | XS4P30PB340D |
| | NPN | NO function | XS4P08NA340S | XS4P12NA340D | XS4P18NA340D | XS4P30NA340D |
| | | NO 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 (⊗) / Power on LED (⊙) | | | ★ / ⊗ / - | ★ / ⊗ / - | ★ / ⊗ / - | ★ / ⊗ / - |
| 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

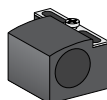
| Connection | | | Pre-cabled, PvR (2 m) | | | |
|---|--------------|------------------------------|-----------------------|-----------------|-----------------|-------------------|
| Dimensions (mm) Ø x L or W x D x H | | | | M8 x 50 | M12 x 50 | M18 x 60 M30 x 60 |
| 2-wire | AC/DC | NO function | XS4P08MA230 | XS4P12MA230 | XS4P18MA230 | XS4P30MA230 |
| | | NC function | XS4P08MB230 | XS4P12MB230 | XS4P18MB230 | XS4P30MB230 |
| AC | AC | NO or NC programmable | - | - | - | - |
| AC/DC | AC/DC | NO or NC programmable | - | - | - | - |
| Connection | | | U20 connector | | | |
| 2-wire | AC/DC | NO function | XS4P08MA230K | XS4P12MA230K | XS4P18MA230K | XS4P30MA230K |
| | | 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

Mounting Brackets

Mounting bracket with indexing pin for cylindrical sensors



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

Miniature cylindrical (assembly)

Rectangular Form C



| Ø 4 | M5 | Ø 6.5 | Form C | | | |
|------------------------------|---------------------|---------------------|------------------------------|---------------------------------------|---------------------|---------------------------------------|
| 1 mm (0.03") | 1 mm (0.03") | 1.5 mm (0.05") | 15 mm (0.59") | 20 mm (0.78") increased sensing dist. | 20 mm (0.78") | 40 mm (1.56") increased sensing dist. |
| 0 - 0.8 (0 - 0.03") | 0 - 0.8 (0 - 0.03") | 0 - 1.2 (0 - 0.04") | 0 - 12 (0 - 0.47") | 0 - 16 (0 - 0.62") | 0 - 16 (0 - 0.62") | 0 - 32 (0 - 1.25") |
| flush mountable | | | flush mountable | | non flush mountable | |
| M | | | P | | | |
| - 25 to + 70 (-13 to 158° F) | | | - 25 to + 70 (-13 to 158° F) | | | |
| IP67 | | | IP67 | | | |

| Pre-cabled, PvR (2 m) | | | Screw terminals (3) | | | |
|-----------------------|------------------|--------------|---|-------------|--|-------------|
| Ø 4 x 29 | M5 x 29 | M6.5 x 33 | 40 x 40 x 117 | | | |
| - | - | - | XS7C40DP210 | - | XS8C40DP210 | - |
| - | - | - | XS7C40PC440 | XS7C40PC449 | XS8C40PC440 | XS8C40PC449 |
| - | - | - | XS7C40NC440 | XS7C40NC449 | XS8C40NC440 | XS8C40NC449 |
| XS1L04PA310 | XS1N05PA310 | XS1L06PA340 | - | - | - | - |
| - | - | - | - | - | - | - |
| XS1L04NA310 | XS1N05NA310 | XS1L06NA340 | - | - | - | - |
| - | - | - | - | - | - | - |
| M8 connector | | | | | | |
| XS1L04PA310S | XS1N05PA311S (2) | XS1L06PA340S | - | - | - | - |
| - | - | - | - | - | - | - |
| XS1L04NA310S | XS1N05NA311S (2) | XS1L06NA340S | - | - | - | - |
| - | - | - | - | - | - | - |
| 5 - 30 | 5 - 30 | 10 - 38 | 12 - 48 | | | |
| 100 | 100 | 200 | 4-wire version = 200 - 2-wire version = 1.5 - 100 | | | |
| ★ / ⊗ / - | ★ / ⊗ / - | ★ / ⊗ / - | 4-wire version = ★ / ⊗ / ⊗ - 2-wire version = ★ / ⊗ / - | | | |
| 2 | 2 | 2 | 4-wire version = 2 - 2-wire version = 4 | | | |
| 5000 | 5000 | 2500 | 2-wire = 1500 / 4-wire = 1000 | | 2-wire = 800 / 4-wire = 1000 (20 mm) 500 (40 mm) | |

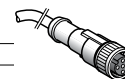
| Pre-cabled, PvR (2 m) | | | Screw terminals (3) | | | |
|-----------------------|---|---|--|---|-------------|---|
| - | - | - | 40 x 40 x 117 | | | |
| - | - | - | - | - | - | - |
| - | - | - | - | - | - | - |
| - | - | - | XS7C40FP260 | - | XS8C40FP260 | - |
| - | - | - | XS7C40MP230 | - | XS8C40MP230 | - |
| - | - | - | - | - | - | - |
| - | - | - | - | - | - | - |
| - | - | - | 20 - 264 | | | |
| - | - | - | AC version = 500 - AC/DC version = 300 / 200 | | | |
| - | - | - | ⊗ | | | |
| - | - | - | AC version = 1.5 - AC/DC version = 0.8 / 1.5 | | | |
| - | - | - | 5.5 | | | |
| - | - | - | 25 AC / 50 DC | | | |

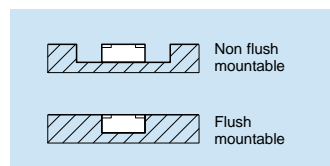
(2) Stainless steel sensors, Sn = 0.8 mm

(3) Sensors supplied without cable gland. Suitable cable gland: 13P

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

| length 2 m without LED | pre-wired, 90° | pre-wired, straight |
|------------------------|----------------|---------------------|
| M8 (or S) | XSZCS114 | XSZCD104 |
| M12 (or D) | XSZCD114Y | XSZCD104Y |
| U20 (or K) | XSZCK111Y | XSZCK101Y |





| | Form E 26 x 26 | Form C 40 x 40 | M30 | M18 | M30 |
|---|------------------------------|---------------------|--------------------------|---|-------------------|
| Nominal sensing distance S_n | 10 mm (0.09") | 15 mm (0.09") | 10 mm (0.09") | 5 mm (0.09") | 10 mm (0.09") |
| Operating zone (mm) | 0 - 8 (0 - 0.31") | 0 - 12 (0 - 0.472") | 0 - 8 (0 - 0.31") | 0 - 4 (0 - 0.15") | 0 - 8 (0 - 0.31") |
| Suitability for flush mounting (metal environment) | flush mountable | | | flush mountable | |
| Case M (metal) P (plastic) | P | P | M | M | M |
| Temperature range (°C) | - 25 to + 70 (-13 to 158° F) | | | 0 to + 50 (32 to 122° F) | |
| Degree of protection (conforming to IEC 60529) | IP67 | | | pre-cabled: IP68 (with connector: IP67) | |
| Dimensions (mm) Ø x L or W x H x D | 26 x 26 x 13 | 40 x 40 x 15 | M30 x 81 | M18 x 70 | M30 x 60 |
| Maximum speed of passing object (impulses/min) | 48000 | 48000 | 6000 - 48000 (1) | - | - |
| Adjustable frequency range (impulses/min) | 60 - 6000 | 60 - 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 | | | | |
| 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) | | | 200 | 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) | | | - | - | - | - | |

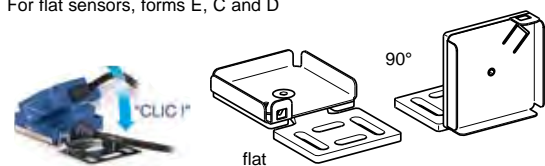
Multi-current/multi-voltage sensors for AC/DC applications

| 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) | | | 200 | 300 AC / 200 DC | 350 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

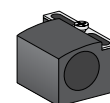
Mounting Brackets

For flat sensors, forms E, C and D



| | flat | 90° | substitution of block type sensors XSE / XSC / XSD |
|--------|---------|---------|---|
| Form E | XSZBE00 | XSZBE90 | XSZBE10 |
| Form C | XSZBC00 | XSZBC90 | XSZBC10 |
| Form D | - | - | XSZBD10 |

Mounting bracket with indexing pin for cylindrical sensors



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

Analog (Position control)



| Form F 8 x 32 | Form E 26 x 26 | Form C 40 x 40 | Form D 80 x 80 | M12 | M18 | M30 |
|---|------------------------------|------------------------------|------------------------------|--|--|---|
| 5 mm (0.09") | 10 mm (0.09") | 15 mm (0.09") | 40 mm (0.09") | M: 2 mm (0.09") / P: 4 mm (0.09") | M: 5 mm (0.09") / P: 8 mm (0.09") | M: 10 mm (0.09") / P: 15 mm (0.09") |
| 1 - 4 (0.03 - 0.15") | 1 - 10 (0.03 - 0.39") | 2 - 15 (0.07 - 0.59") | 5 - 40 (0.19 - 1.57") | M: 0.2-2 / P: 0.4-4 (0.007-0.09"/0.01-0.15") | M: 0.5-5/P: 0.8-8 (0.02-0.2"/0.03-0.31") | M: 1-10/P: 1.5-15 (0.03-0.39"/0.05-0.59") |
| 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 to + 70 (-13 to 158° F) | - 25 to + 70 (-13 to 158° F) | - 25 to + 70 (-13 to 158° F) | - 25 to + 70 (-13 to 158° F) | - 25 to + 70 (-13 to 158° F) | - 25 to + 70 (-13 to 158° F) | - 25 to + 70 (-13 to 158° F) |
| pre-cabled: IP68 (with connector: IP67) | | | | IP67 | | |
| 15 x 8 x 32 | 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) (5.90") with end mounted remote control incorporating M12 connector

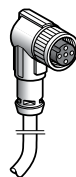
(4) Flying lead (L = 0.15 m) (5.90") with end connector

(5) Flying lead (L = 0.15 m) (5.90") with end mounted remote control incorporating 1/2-20 UNF connector

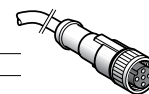
Suitable female plug-in connectors, including pre-wired versions

length 2 m
without LED

pre-wired,
90°



pre-wired,
straight



| | |
|------------|-----------|
| M8 | XSZCS114 |
| M12 (or D) | XSZCD114Y |
| U20 | XSZCK111Y |

| |
|-----------|
| XSZCD104 |
| XSZCD104Y |
| XSZCK101Y |



| | | M8 | M12 | M18 | M30 |
|--|---------------------|-------------------------------------|---------------------|-------------------|--------------------|
| Nominal sensing distance Sn | flush mountable | 2.5 mm (0.98") | 4 mm (1.57") | 10 mm (3.94") | 20 mm (7.87") |
| | non flush mountable | - | - | - | - |
| Operating zone (mm) | flush mountable | 0 - 2 (0 - 0.07") | 0 - 3.2 (0 - 0.12") | 0 - 8 (0 - 0.31") | 0 - 16 (0 - 0.62") |
| | non flush mountable | - | - | - | - |
| Suitability for flush mounting (metal environment) | | Flush mountable | | | |
| Case M (metal) P (plastic) | | M | | | |
| Temperature range (°C) | | - 25 to + 50 (-13 to 122° F) | | | |
| Degree of protection (conforming to IEC 60529) | | IP67 IP68 (with connector: IP67) | | | |
| Dimensions (mm) Ø x L | | M8 x 33 | M12 x 33 | M18 x 33.5 | M30 x 40.6 |

Sensors for DC applications

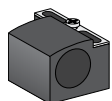
| Connection | | | | Pre-cabled, PvR (2 m) | | | |
|---|----------------------|-------------|-------------------------------|-----------------------|--------------|--------------|--------------|
| 3-wire | PNP+NPN | NO function | | XS1N08PA349 | XS1N12PA349 | XS1N18PA349 | XS1N30PA349 |
| | | NC function | | XS1N08PB349 | XS1N12PB349 | XS1N18PB349 | XS1N30PB349 |
| | NPN | NO function | | XS1N08NA349 | XS1N12NA349 | XS1N18NA349 | XS1N30NA349 |
| | | NC function | | XS1N08NB349 | XS1N12NB349 | XS1N18NB349 | XS1N30NB349 |
| 4-wire | PNP | NO + NC | flush mountable | - | - | - | - |
| | | | non flush mountable | - | - | - | - |
| | NPN | NO + NC | flush mountable | - | - | - | - |
| | | | non flush mountable | - | - | - | - |
| | PNP+NPN programmable | NO/NC | flush mountable (metal) | - | - | - | - |
| | | | non flush mountable (metal) | - | - | - | - |
| | | | non flush mountable (plastic) | - | - | - | - |
| | | | | - | - | - | - |
| Connection | | | | Pre-cabled, PvR (2 m) | | | |
| 3-wire | PNP | NO function | | XS1N08PA349S (1) | XS1N12PA349D | XS1N18PA349D | XS1N30PA349D |
| | | NC function | | XS1N08PB349S (1) | XS1N12PB349D | XS1N18PB349D | XS1N30PB349D |
| | NPN | NO function | | XS1N08NA349S (1) | XS1N12NA349D | XS1N18NA349D | XS1N30NA349D |
| | | NC function | | XS1N08NB349S (1) | XS1N12NB349D | XS1N18NB349D | XS1N30NB349D |
| 4-wire | PNP | NO + NC | flush mountable | - | - | - | - |
| | | | non flush mountable | - | - | - | - |
| | NPN | NO + NC | flush mountable | - | - | - | - |
| | | | non flush mountable | - | - | - | - |
| | PNP+NPN programmable | NO/NC | flush mountable (metal) | - | - | - | - |
| | | | non flush mountable (metal) | - | - | - | - |
| | | | non flush mountable (plastic) | - | - | - | - |
| | | | | - | - | - | - |
| Supply voltage limits, min/max (V) including ripple | | | | 10 - 38 | | | |
| Switching capacity, max (mA) | | | | 200 | | | |
| Short-circuit protection (★) / LED output state indicator (⊗) | | | | ★ / - | | | |
| Voltage drop, closed state (V) at I nominal | | | | 2.6 | | | |
| Switching frequency (Hz) | | | | 2500 | 2500 | 1000 | 500 |

(1) For versions with M12 connector, replace "S" with "D". Example: XS1N08PA349S becomes XS1N08PA349D

Accessories

Mounting Brackets

Mounting bracket with indexing pin for cylindrical sensors



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

Complementary outputs - Short case NO + NC

PNP + NPN outputs, NO/NC programmable



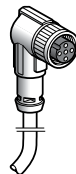
| M8 | M12 | M18 | M30 | M12 | M18 | M30 |
|---|---------------------|------------------------------|--------------------|---|---------------------|--------------------|
| 1.5 mm (0.05") | 2 mm (0.07") | 5 mm (0.19") | 10 mm (0.39") | 2 mm (0.07") | 5 mm (0.19") | 10 mm (0.39") |
| 2.5 mm (0.10") | 4 mm (0.16") | 8 mm (0.31") | 15 mm (0.59") | 4 mm (0.16") | 8 mm (0.31") | 15 mm (0.59") |
| 0 - 1.2 (0 - 0.04") | 0 - 1.6 (0 - 0.06") | 0 - 4 (0 - 0.15") | 0 - 8 (0 - 0.31") | 0 - 1.6 (0 - 0.06") | 0 - 4 (0 - 0.15") | 0 - 8 (0 - 0.31") |
| 0 - 2 (0 - 0.07") | 0 - 3.2 (0 - 0.12") | 0 - 6.4 (0 - 0.25") | 0 - 12 (0 - 0.47") | 0 - 3.2 (0 - 0.12") | 0 - 6.4 (0 - 0.25") | 0 - 12 (0 - 0.47") |
| 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 to + 80 (-13 to 176° F) | | - 25 to + 70 (-13 to 158° F) | | - 25 to + 70 (-13 to 158° F) | | |
| IP67 | | IP68 (with connector: IP67) | | IP68 (with connector: IP67) | | |
| M8 x 50 | M12 x 33 | M18 x 36.5 | M30 x 40.5 | M12 x 50 | M18 x 60 | M30 x 60 |

| 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 - 38 | | | | 10 - 38 | | |
| 200 | | | | 200 | | |
| ★ / ⊗ | | | | ★ / - | | |
| 2 | | | | 2.6 | | |
| 5000 | 5000 | 2000 | 1000 | 5000 | 2000 | 1000 |

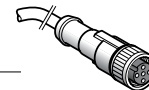
Suitable female plug-in connectors, including pre-wired versions

length 2 m
without LED

pre-wired,
90°



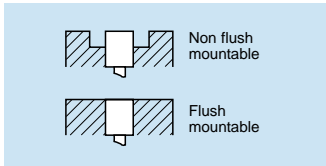
pre-wired,
straight



M8 (or S)
M12 (or D)

XSZCS151
XSZCD114

XSZCS141
XSZCD104Y





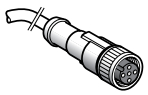
| | | M12 | M18 | M30 |
|--|---------------------|---|---------------------|--------------------|
| Nominal sensing distance Sn | flush mountable | 2 mm (0.07") | 5 mm (0.19") | 10 mm (0.39") |
| | non flush mountable | 4 mm (0.15") | 8 mm (0.31") | 15 mm (0.59") |
| Operating zone (mm) | flush mountable | 0 - 1.6 (0 - 0.06") | 0 - 4 (0 - 0.15") | 0 - 8 (0 - 0.31") |
| | non flush mountable | 0 - 3.2 (0 - 0.12") | 0 - 6.4 (0 - 0.25") | 0 - 12 (0 - 0.47") |
| 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 to + 70 (-13 to 158° F) | | |
| Degree of protection (conforming to IEC 60529) | | IP68 (with connector: IP67) | | |
| Dimensions (mm) Ø x L | | M12 x 50 | M18 x 60 | M30 x 60 |

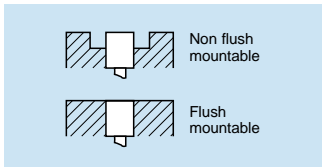
Sensors for DC applications

| Connection | | | Pre-cabled, PvR (2 m) | | |
|--|--------------------|---------------------|------------------------|--------------------|--------------------|
| 2-wire AC/DC | NO function | flush mountable | XS1M12MA250 | XS1M18MA250 | - |
| | | non flush mountable | XS2M12MA250 | XS2M18MA250 | XS2M30MA250 |
| | NC function | flush mountable | XS1M12MB250 | XS1M18MB250 | - |
| | | non flush mountable | XS2M12MB250 | XS2M18MB250 | - |
| Connection | | | 1/2" 20 Micro style AC | | |
| 2-wire AC/DC | NO function | flush mountable | XS1M12MA250K | XS1M18MA250K | - |
| | | non flush mountable | XS2M12MA250K | XS2M18MA250K | - |
| | NC function | flush mountable | XS1M12MB250K | XS1M18MB250K | XS1M30MB250K |
| | | non flush mountable | XS2M12MB250K | XS2M18MB250K | XS2M30MB250K |
| Supply voltage limits, min/max (VAC) 50-60 Hz including ripple | | | 20 - 264 | | |
| Switching capacity, max (mA) | | | 200 | 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

Accessories

| Mounting Brackets | | Suitable female plug-in connectors, including pre-wired versions | |
|---|-----|--|---|
| Mounting bracket with indexing pin for cylindrical sensors  | M12 | XSZB112 | length 2 m without LED pre-wired, 90°  U20 (or K) XSZCK101Y |
| | M18 | XSZB118 | |
| | M30 | XSZB130 | |
| | | | |
| | | | pre-wired, straight  XSZCK111Y |



| | Suitability for flush mtg. (metal environment) | M12 | M18 | M30 | 40 x 40 |
|--|--|--------------------------|-----------------------|---------------------|----------------------|
| Nominal sensing distance S_n | flush mountable | 2 mm (0.078") | 5 mm (0.196") | 10 mm (0.393") | 15 mm (0.591") |
| | non flush mountable | 2 mm (0.078") | 5 mm (0.196") | 10 mm (0.393") | – |
| Operating zone (mm) | flush mountable | 0 - 1.44 (0 - 0.56") | 0 - 3.60 (0 - 0.141") | 0 - 7.2 (0 - 0.28") | 0 - 10.8 (0 - 0.43") |
| | non flush mountable | 0 - 1.44 (0 - 0.56") | 0 - 3.60 (0 - 0.141") | 0 - 7.2 (0 - 0.28") | – |
| Case M (metal) P (plastic) | flush mountable | M, P | M, P | M, P | P |
| | non flush mountable | M, P | M, P | M, P | – |
| Temperature range (°C) | | -25 - +70 (-13 - 158° F) | | | |
| Degree of protection (conforming to IEC 60529) | | IP67 | | | IP67 |
| Dimensions (mm) Ø x L | | M12 x 50 | M18 x 70 | M30 x 70 | 40 x 40 x 117 |

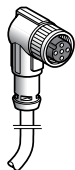

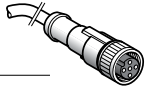
Sensors for DC applications

| Connection | | | | Pre-cabled, PvC (2 m) | | | |
|---|-----|----------------|-----------------|-----------------------|------------------------|------------------------|-----------------|
| 3-wire | PNP | NO function | flush mountable | XT112S1PAL2 | XT118B1PAL2 | XT130B1PAL2 | – |
| | | NPN | flush mountable | XT112S1NAL2 | XT118B1NAL2 | XT130B1NAL2 | – |
| Connection | | | | Pre-cabled, PvC (2 m) | | | |
| 3-wire | PNP | NO/NC function | flush mountable | – | – | – | – |
| | | NPN | flush mountable | – | – | – | – |
| Connection | | | | Pre-cabled, PvR (2 m) | | | Screw terminals |
| 4-wire | PNP | NO/NC function | flush mountable | XT112S1PCL2 | XT118B1PCL2 | XT130B1PCL2 | XT7C40PC440 |
| Connection | | | | M12 | | | Screw terminals |
| 4-wire | PNP | NO/NC function | flush mountable | XT112S1PCM12 | XT118B1PCM12 | XT130B1PCM12 | XT7C40PC440 |
| Supply voltage limits, min/max (V) including ripple | | | | 12 - 30 | 12 - 31 | 12 - 32 | 10 - 38 |
| Switching capacity, max (mA) | | | | 200 | 3-wire 200, 2-wire 330 | 3-wire 200, 2-wire 330 | 300 |
| Short circuit-protection (★) / LED output state indicator (⊗) | | | | ★ / ⊗ | | | ★ / ⊗ |
| Voltage drop, closed state (V) at I nominal | | | | > or = 2 | > or = 2 | > or = 2 | > or = 2 |
| Switching frequency (Hz) | | | | 300 | 200 | 150 | 100 |

Multi-current / multi-voltage for AC applications

| Connection | | | | Pre-cabled, PvR (2 m) | | | |
|---|--|-----------------------|-----------------|-----------------------|-------------|-------------|-----------------|
| 2-wire AC | | NO function | flush mountable | – | XT118B1FAL2 | XT130B1FAL2 | – |
| | | NC function | flush mountable | – | XT118B1FBL2 | XT130B1FBL2 | – |
| | | NO / NC function | flush mountable | – | – | – | XT7C40FP262 |
| Connection | | | | | | | Screw terminals |
| 2-wire AC | | NO or NC programmable | flush mountable | – | – | – | XT7C40FP262 |
| Supply voltage limits, min/max (V) 50-60 Hz | | | | – | 24 - 240 | 24 - 240 | 20 - 264 |
| Switching capacity, max (mA) | | | | – | 330 | 330 | 350 |
| LED output state indicator (⊗) / Power on LED (⊗) | | | | – | ★ / ⊗ | – | ★ / ⊗ |
| Residual current, open state (mA) | | | | – | <5 | <5 | 1.5 @ 120 V |
| Voltage drop, closed state (V) at I nominal | | | | – | > or = 6 | > or = 6 | > or = 5.5 |
| Switching frequency (Hz) | | | | – | 25 | 25 | 25 |

Accessories

| Mounting Brackets | | Suitable female plug-in connectors, including pre-wired versions | | | |
|---|---------------|--|----------------|---|---|
| Mounting bracket with indexing pin for cylindrical sensors | | length 2 m without LED | pre-wired, 90° |  | pre-wired, straight |
|  | M8 XSZB108 | M8 | XSZCS151 | |  |
| | M12 XSZB112 | M12 | XSZCD114Y | | |
| | M18 XSZB118 | | | | |
| | Ø 32 XSZB32 | | | | |



| Electronic Tags | C format | | ISO Badge | Disc |
|--------------------------------------|-----------------------|----------------|-------------------------|------------------|
| Nominal sensing distance (mm) | | | | |
| with station XGC S49 | 48 (1.88") | 40 (1.57") | 100 (3.93") | 65 (2.55") |
| with station XGC S89 | 48 (1.88") | 40 (1.57") | 100 (3.93") | 65 (2.55") |
| Dimensions (W x H x D) | 40 mm x 40 mm x 15 mm | | 54 mm x 85.5 mm x .8 mm | Ø x 30 mm x 3 mm |
| Memory Capacity | 3 405 | | 13 632 | 112 |
| Type of Memory | EEPROM | | | |
| Time (ms) | | | | |
| read | 9.25 + 375 x n | 16.25+ 375 x n | 12 + 0.825 x n | 12 + 0.825 x n |
| write | 13 + 0.8 x n | 20 + 0.8 x n | 20 + 11.8 x n | 12 + 5.6 x n |
| Part Number | XGH B 444345 | XGH B445345 | XGH B90E340 | XGH B320345 |



| Electronic Tags | E format | Cylindrical |
|--------------------------------------|-----------------------|--------------------|
| Nominal sensing distance (mm) | | |
| with station XGC S49 | 40 (1.57") | 18 (0.70") |
| with station XGC S89 | 55 (2.16") | 20 (0.75") |
| Dimensions (W x H x D) | 26 mm x 26 mm x 13 mm | M18 x 1 mm x 12 mm |
| Memory Capacity | 256 | 256 |
| Type of Memory | EEPROM | |
| Time (ms) | | |
| read | 12 + 0.825 x n | 12 + 0.825 x n |
| write | 20 + 11.8 x n | 19 + 4.1 x n |
| Part Number | XGH B221346 | XGH B211345 |



| Accessories | | | | | |
|---|------------|---|------------|---|------------|
| Part number | Length (m) | Part number | Length (m) | Part number | Length (m) |
| TCS MCN1FQM2 | 2 (6.6') | TCS MCN1F9M2P | 2 (6.6') | XGS Z08L2 | 2 (6.6') |
| - | - | - | - | XGS Z08L5 | 5 (16.4') |
| - | - | - | - | XGS Z08L10 | 10 (32.8') |
| Description | | | | | |
| Modus® shielded connection cable, M12/SUB-D15, A Coding | | Modbus® shielded connection cable, M12/Mini-DIN 8-way, A Coding | | Pre-wired M12, 4-pin female connector, A Coding | |

Ositrack _____ RFID



| Compact Stations, 13.56 MHz | E format | Cylindrical |
|--|------------------------------------|-------------------------|
| Dimensions (W x H x D) | 40 x 40 x 15 | 80 x 80 x 26 |
| Protocols | Modbus TRU, Uni-Telway and CANopen | |
| Normal Sensing Distance depending on associated tag (mm) | 18 - 70 (0.70 - 2.75") | 20 - 100 (0.75 - 3.93") |
| Part Number | XGC S4901201 | XGC S8901201 |



| Connection boxes | Ethernet box | Tap-off box |
|-----------------------------|---------------------|--------------------------------|
| Protocols | Modbus TCP/IP | Modbus, Uni-Telway and CANopen |
| Associated compact stations | XGC S49 and XGC S89 | |
| Supply Voltage | 24 VDC | |
| Part number | XGS Z33ETH | TGS AMT31FP |



| Portable Terminal | For 13.56 MHz RFID diagnostics |
|-------------------|--|
| Description | Read/Write operations on electronic tags and diagnostics on compact stations |
| Protocols | Microsoft Windows® CE.NET Professional version 4.2 |
| Part Number | XGS TP401 |



| Part number | Part number | Use with | Part number | Use with | Part number | Use with |
|---|-------------------------------------|------------|---------------------|-------------|-------------------------------|-------------|
| TCS CTN011M11F | XGSZ3P | TCSAMT31FP | XSZBC00 | XGCS4901201 | XSZBC90 | XGCS4901201 |
| - | - | XGSZ33ETH | XSZBE00 | XGHB445345 | XSZBE90 | XGHB445345 |
| - | - | - | - | XGHB221346 | - | XGHB221346 |
| Network "T" connector, M12, 1 male/2 female 5-pin, A coding | Mounting plate for connection boxes | | Flat mounting plate | | 90° angle flat mounting plate | |



| Model Number | | | | | | | |
|-----------------------|-----------|---------------------|-----------|---------------------------|------------------|---------------------------|------------------|
| Characteristic | | | | 18 mm Barrel Style | | Dual Mount Style | |
| Housing Style | | | | PBT | | VALOX® | |
| Housing Material | | | | PBT | | VALOX® | |
| Temperature Range C° | | | | -30 to 70 (-22 to 158° F) | | -30 to 70 (-22 to 158° F) | |
| Supply Voltage | | | | 12-24 VDC | | 12-24 VDC | |
| Range | Window | | | Cable | Quick Disconnect | Cable | Quick Disconnect |
| 508 mm (20") | Teachable | | | | | | |
| | | NPN Sinking | NO | VM18-NNO | VM18-NNO-Q | VM1-NNO | VM1-NNO-Q |
| | | | NC | VM18-NNC | VM18-NNC-Q | VM1-NNC | VM1-NNC-Q |
| | | PNP Sourcing | NO | VM18-PNO | VM18-PNO-Q | VM1-PNO | VM1-PNO-Q |
| | | | NC | VM18-PNC | VM18-PNC-Q | VM1-PNC | VM1-PNC-Q |

Dual Mount & 18 mm Dual-Level Sensing



| Model Number | | | | | | | |
|-----------------------|-----------|------------|--|---------------------------|------------------|---------------------------|------------------|
| Characteristic | | | | 18 mm Barrel Style | | Dual Mount Style | |
| Housing Style | | | | PBT | | VALOX® | |
| Housing Material | | | | PBT | | VALOX® | |
| Temperature Range C° | | | | -30 to 70 (-22 to 158° F) | | -30 to 70 (-22 to 158° F) | |
| Supply Voltage | | | | 12-24 VDC | | 12-24 VDC | |
| Range | Window | | | Cable | Quick Disconnect | Cable | Quick Disconnect |
| 508 mm (20") | Teachable | | | | | | |
| | | NPN | | | | | |
| | | Pump-in | | VM18-NPI0000 | VM18-NPI0000-Q | VM1-NPI0000 | VM1-NPI0000-Q |
| | | Pump-out | | VM18-NP00000 | VM18-NP00000-Q | VM1-NP00000 | VM1-NP00000-Q |
| | | PNP | | | | | |
| | | Pump-in | | VM18-PPI0000 | VM18-PPI0000-Q | VM1-PPI0000 | VM1-PPI0000-Q |
| | | Pump-out | | VM18-PPO0000 | VM18-PPO0000-Q | VM1-PPO0000 | VM1-PPO0000-Q |

ALL Virtu series sensors use the same cables

Accessories

Mounting Brackets

Mounting bracket with indexing pin for cylindrical sensors



M18 XSZA118

Stainless Steel Mounting Bracket



M18 XSZB118

PB100 In-line accessory pushbutton for teaching window limits (for Virtu™ series sensors)

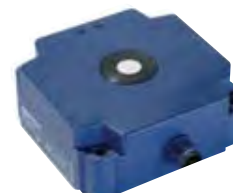


Virtu Analog



| Model Number | | | | | |
|-----------------------------|---------------|----------------------------------|-------------------------|----------------------------------|-------------------------|
| Characteristic | | | | | |
| Housing Style | | 18 mm Barrel Style | | Dual Mount Style | |
| Housing Material | | PBT | | VALOX® | |
| Temperature Range C° | | -30 to 70 (-22 to 158° F) | | -30 to 70 (-22 to 158° F) | |
| Supply Voltage | | 15-24 VDC | | 15-24 VDC | |
| Range | Window | Cable | Quick Disconnect | Cable | Quick Disconnect |
| 508 mm (20") | Teachable | | | | |
| Voltage | | | | | |
| | Auto Slope | VM18-VA | VM18-VA-Q | VM1-VA | VM1-VA-Q |
| | Inverse Slope | VM18-VI | VM18-VI-Q | VM1-VI | VM1-VI-Q |
| | Direct Slope | VM18-VD | VM18-VD-Q | VM1-VD | VM1-VD-Q |
| Current | | | | | |
| | Auto Slope | VM18-CA | VM18-CA-Q | VM1-CA | VM1-CA-Q |
| | Inverse Slope | VM18-CI | VM18-CI-Q | VM1-CI | VM1-CI-Q |
| | Direct Slope | VM18-CD | VM18-CD-Q | VM1-CD | VM1-CD-Q |

Virtu 30 and Virtu 80



| Model Number | | | | | |
|-----------------------------|---------------------|----------------------------------|--------------|-------------------------|--------------|
| Characteristic | | | | | |
| Housing Style | | 18 mm Barrel Style | | Dual Mount Style | |
| Housing Material | | PBT Valox 553 | | | |
| Temperature Range C° | | -30 to 70 (-22 to 158° F) | | | |
| Supply Voltage | | 12-24 VDC | | | |
| Range | Window | Quick Disconnect | | | |
| 1000 mm (39.4") | Teachable | | | | |
| | PNP Sinking | NO | XX6V3A1PAM12 | | XX8D1A1PAM12 |
| | | NC | XX6V3A1PBM12 | | XX8D1A1PBM12 |
| | NPN Sourcing | NO | XX6V3A1NAM12 | | XX8D1A1NAM12 |
| | | NC | XX6V3A1NBM12 | | XX8D1A1NBM12 |

ALL Virtu series sensors use the same cables

| Accessories | | | | | |
|---|-----------------|------------|-----------|-----------------|------------|
| Straight | Connection type | Length | 90° | Connection type | Length |
| XSZCD101Y | M12 connector | 2 m (6.6') | XSZCD111Y | M12 connector | 2 m (6.6') |
| PB100 In-line accessory push-button for teaching window limits (for Virtu series sensors) | | | | | |

Virtu 30 and Virtu 80 Analog



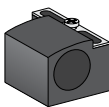
| Model Number | | | |
|-----------------------------|---------------|---------------------------|--------------|
| Characteristic | | | |
| Housing Style | | 30mm Barrel Style | 80 x 80 |
| Housing Material | | PBT Valox 553 | |
| Temperature Range C° | | -30 to 70 (-22 to 158° F) | |
| Supply Voltage | | 15-24 VDC | |
| Range | Window | Quick Disconnect | |
| 1000 mm (39.4") | Teachable | | |
| | | 0-10 VDC | XX9V3A1F1M12 |
| | | 4-20 mA | XX9V3A1C2M12 |
| | | | XX9D1A1F1M12 |
| | | | XX9D1A1C2M12 |

ALL Virtu series sensors use the same cables

Accessories

Mounting Brackets

Mounting bracket with indexing pin for cylindrical sensors



M18 XSZA118

Stainless Steel Mounting Bracket



M18 XSZB118

SM300 Series

Ultrasonic Sensors 12 mm & Flat-profile Proximity



12 mm ULTEM



Flat-profile ULTEM

| Model Number* | | | | | |
|-------------------------------|-----------------|----------------------------|----------------------------|----------------------------|----------------------------|
| Characteristics | | | | | |
| Housing Style/Material | | 12 mm ULTEM® | Flat-profile ULTEM® | 12 mm ULTEM® | Flat-profile ULTEM® |
| Temperature Range C° | | -30 to 70 (-22° to 158° F) | -30 to 70 (-22° to 158° F) | -30 to 70 (-22° to 158° F) | -30 to 70 (-22° to 158° F) |
| Supply Voltage | | 12-24 VDC | 12-24 VDC | 12-24 VDC | 12-24 VDC |
| Connection Type | | 3 m (10') Cable | | M12 Connector | |
| Range | Window | | | | |
| 50.8 mm (2.0") | 44.5 (1.75") | | | | |
| | NO | SM300A-228-00 | SM300A-228-00FP | SM350A-228-00 | SM350A-228-00FP M8 |
| | NC | SM300A-228-10 | SM300A-228-10FP | SM350A-228-10 | SM380A-228-00FP M12 |
| 101.6 mm (4.0") | 25.4 mm (1.0") | | | | |
| | NO | SM300A-416-00 | | | SM350A-416-00FP M8 |
| 101.6 mm (4.0") | 95.3 mm (3.75") | | | | |
| | NO | SM300A-460-00 | SM300A-460-00FP | | SM330A-460-00FP M8 (1) |
| | | | | | SM340A-460-00FP M8 (2) |
| | | | | | SM350A-460-00FP M8 |
| | | | | | SM380A-228-00FP M12 |
| | NC | SM300A-460-10 | | | SM350A-460-10FP M8 |

(1) PNP output only – 3 pin

(2) NPN output only – 3 pin

(*) All possible sensor configurations are not listed here

SM302 Dual-level Sensing



12 mm ULTEM



Flat-profile ULTEM

| Model Number* | | | | | |
|-------------------------------|------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| Characteristics | | | | | |
| Housing Style/Material | | 12 mm ULTEM® | Flat-profile ULTEM® | 12 mm ULTEM® | Flat-profile ULTEM® |
| Temperature Range C° | | -30 to 70 (-22° to 158° F) | -30 to 70 (-22° to 158° F) | -30 to 70 (-22° to 158° F) | -30 to 70 (-22° to 158° F) |
| Supply Voltage | | 12-24 VDC | 12-24 VDC | 12-24 VDC | 12-24 VDC |
| Connection Type | | 3 m (10') Cable | | M12 Connector | |
| Range | Window | | | | |
| 50.8 mm (2.0") | 19.05 mm (0.75") | | | | |
| | Pump-in | SM302A-212-10 | | SM382A-212-10 | M12 |
| | Pump-out | SM302A-212-00 | SM302A-212-00FP | SM382A-212-00 | SM382A-212-00FP M12 |
| 72.6 mm (3.0") | 25.4 mm (1.0") | | | | |
| | Pump-in | SM302A-316-10 | | SM352A-316-10 | Ma |
| | Pump-out | SM302A-316-00 | SM302A-316-00FP | SM352A-316-00 | SM352A-316-00FP M8 |
| 101.6 mm (4.0") | 25.4 mm (1.0") | | | | |
| | Pump-in | SM302A-416-10 | | SM382A-416-10 | M12 |
| | Pump-out | SM302A-416-00 | SM302A-416-00FP | SM382A-416-00 | SM382A-416-00FP M12 |
| 101.6 mm (4.0") | 50.8 mm (2.0") | | | | |
| | Pump-in | SM302A-432-10 | | SM352A-432-10 | Ma |
| | Pump-out | SM302A-432-00 | SM302A-432-00FP | SM352A-32-00 | SM352A-432-00FP M8 |

(*) All possible sensor configurations are not listed here

| Accessories for SM300 and SM302 series | | | | | |
|--|-----------------|------------|-----------|-----------------|------------|
| Straight | Connection type | Length | 90° | Connection type | Length |
| XSZCD101Y | M12 connector | 2 m (6.6') | XSZCD111Y | M12 connector | 2 m (6.6') |
| XSZCS101 | M8 connector | 2 m (6.6') | XSZCS111 | M8 connector | 2 m (6.6') |

Additional cable lengths are available

SM600 Series

Ultrasonic Sensors 18 mm & Flat-profile Proximity



18 mm ULTEM



18 mm Stainless



Flat-profile ULTEM

| Model Number* | | | | | | | | |
|------------------------|------------------------|---------------|------------------------|-----------------|------------------------|----------------|------------------------|--|
| Characteristics | | | | | | | | |
| Housing Style/Material | 18 mm ULTEM® | | Stainless Steel | | Flat-profile ULTEM® | | 18 mm ULTEM® | |
| Temperature Range C° | 0 to 60 (32 to 140° F) | | 0 to 60 (32 to 140° F) | | 0 to 60 (32 to 140° F) | | 0 to 60 (32 to 140° F) | |
| Connection Type | 3 m (10') Cable | | | | M12 Connector | | | |
| Supply Voltage | 12-24 VDC | | | | 12-24 VDC | | | |
| Range | Window | | | | | | | |
| 51 mm (2") | 1.6 mm (1/16") | | | | | | | |
| | NO | SM600A-201-00 | SM600A-201-00S | SM600A-201-00FP | SM650A-201-00 | SM650A-201-00S | SM650A-201-00FP | |
| | NC | SM600A-201-10 | SM600A-201-10S | SM600A-201-10FP | SM650A-201-10 | SM650A-201-10S | SM650A-201-10FP | |
| | 13 mm (1/2") | | | | | | | |
| | NO | SM600A-208-00 | SM600A-208-00S | SM600A-208-00FP | SM650A-208-00 | SM650A-208-00S | SM650A-208-00FP | |
| | NC | SM600A-208-10 | SM600A-208-10S | SM600A-208-10FP | SM650A-208-10 | SM650A-208-10S | SM650A-208-10FP | |
| | 19 mm (3/4") | | | | | | | |
| | NO | SM600A-212-00 | SM600A-212-00S | SM600A-212-00FP | SM650A-212-00 | SM650A-212-00S | SM650A-212-00FP | |
| | NC | SM600A-212-10 | SM600A-212-10S | SM600A-212-10FP | SM650A-212-10 | SM650A-212-10S | SM650A-212-10FP | |
| | 25 mm (1") | | | | | | | |
| | NO | SM600A-216-00 | SM600A-216-00S | SM600A-216-00FP | SM650A-216-00 | SM650A-216-00S | SM650A-216-00FP | |
| | NC | SM600A-216-10 | SM600A-216-10S | SM600A-216-10FP | SM650A-216-10 | SM650A-216-10S | SM650A-216-10FP | |
| 77 mm (3") | 1.6 mm (1/16") | | | | | | | |
| | NO | SM600A-301-00 | SM600A-301-00S | SM600A-301-00FP | SM650A-301-00 | SM650A-301-00S | SM650A-301-00FP | |
| | NC | SM600A-301-10 | SM600A-301-10S | SM600A-301-10FP | SM650A-301-10 | SM650A-301-10S | SM650A-301-10FP | |
| | 13 mm (1/2") | | | | | | | |
| | NO | SM600A-308-00 | SM600A-308-00S | SM600A-308-00FP | SM650A-308-00 | SM650A-308-00S | SM650A-308-00FP | |
| | NC | SM600A-308-10 | SM600A-308-10S | SM600A-308-10FP | SM650A-308-10 | SM650A-308-10S | SM650A-308-10FP | |
| | 19 mm (3/4") | | | | | | | |
| | NO | SM600A-312-00 | SM600A-312-00S | SM600A-312-00FP | SM650A-312-00 | SM650A-312-00S | SM650A-312-00FP | |
| | NC | SM600A-312-10 | SM600A-312-10S | SM600A-312-10FP | SM650A-312-10 | SM650A-312-10S | SM650A-312-10FP | |
| | 25 mm (1") | | | | | | | |
| | NO | SM600A-316-00 | SM600A-316-00S | SM600A-316-00FP | SM650A-316-00 | SM650A-316-00S | SM650A-316-00FP | |
| | NC | SM600A-316-10 | SM600A-316-10S | SM600A-316-10FP | SM650A-316-10 | SM650A-316-10S | SM650A-316-10FP | |
| | 51 mm (2") | | | | | | | |
| | NO | SM600A-332-00 | SM600A-332-00S | SM600A-332-00FP | SM650A-332-00 | SM650A-332-00S | SM650A-332-00FP | |
| | NC | SM600A-332-10 | SM600A-332-10S | SM600A-332-10FP | SM650A-332-10 | SM650A-332-10S | SM650A-332-10FP | |
| 102 mm (4") | 1.6 mm (1/16") | | | | | | | |
| | NO | SM600A-401-00 | SM600A-401-00S | SM600A-401-00FP | SM650A-401-00 | SM650A-401-00S | SM650A-401-00FP | |
| | NC | SM600A-401-10 | SM600A-401-10S | SM600A-401-10FP | SM650A-401-10 | SM650A-401-10S | SM650A-401-10FP | |
| | 13 mm (1/2") | | | | | | | |
| | NO | SM600A-408-00 | SM600A-408-00S | SM600A-408-00FP | SM650A-408-00 | SM650A-408-00S | SM650A-408-00FP | |
| | NC | SM600A-408-10 | SM600A-408-10S | SM600A-408-10FP | SM650A-408-10 | SM650A-408-10S | SM650A-408-10FP | |
| | 19 mm (3/4") | | | | | | | |
| | NO | SM600A-412-00 | SM600A-412-00S | SM600A-412-00FP | SM650A-412-00 | SM650A-412-00S | SM650A-412-00FP | |
| | NC | SM600A-412-10 | SM600A-412-10S | SM600A-412-10FP | SM650A-412-10 | SM650A-412-10S | SM650A-412-10FP | |
| | 25 mm (1") | | | | | | | |
| | NO | SM600A-416-00 | SM600A-416-00S | SM600A-416-00FP | SM650A-416-00 | SM650A-416-00S | SM650A-416-00FP | |
| | NC | SM600A-416-10 | SM600A-416-10S | SM600A-416-10FP | SM650A-416-10 | SM650A-416-10S | SM650A-416-10FP | |
| | 51 mm (2") | | | | | | | |
| | NO | SM600A-432-00 | SM600A-432-00S | SM600A-432-00FP | SM650A-432-00 | SM650A-432-00S | SM650A-432-00FP | |
| | NC | SM600A-432-10 | SM600A-432-10S | SM600A-432-10FP | SM650A-432-10 | SM650A-432-10S | SM650A-432-10FP | |
| | 77 mm (3") | | | | | | | |
| | NO | SM600A-448-00 | SM600A-448-00S | SM600A-448-00FP | SM650A-448-00 | SM650A-448-00S | SM650A-448-00FP | |
| | NC | SM600A-448-10 | SM600A-448-10S | SM600A-448-10FP | SM650A-448-10 | SM650A-448-10S | SM650A-448-10FP | |

(* All possible sensor configurations are not listed here

| Accessories for SM600 Series | | | | | |
|--|-----------------|------------|-----------|-----------------|------------|
| Straight | Connection type | Length | 90° | Connection type | Length |
| XSZCD101Y | M12 connector | 2 m (6.6') | XSZCD111Y | M12 connector | 2 m (6.6') |
| Additional cable lengths are available | | | | | |

SM600 Series

Ultrasonic Sensors 18 mm & Flat-profile Proximity (continued)



18 mm ULTEM



18 mm Stainless



Flat-profile ULTEM

| Model Number* | | | | | | | |
|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-----------------|
| Characteristics | | | | | | | |
| Housing Style/Material | 18 mm ULTEM® | Stainless Steel | Flat-profile ULTEM® | 18 mm ULTEM® | Stainless Steel | Flat-profile ULTEM® | |
| Temperature Range C° | 0 to 60 (32 to 140° F) | 0 to 60 (32 to 140° F) | 0 to 60 (32 to 140° F) | 0 to 60 (32 to 140° F) | 0 to 60 (32 to 140° F) | 0 to 60 (32 to 140° F) | |
| Connection Type | 3 m (10') Cable | | | M12 Connector | | | |
| Supply Voltage | 12-24 VDC | | | 12-24 VDC | | | |
| Range | Window | | | | | | |
| 127 mm (5") | 1.6 mm (1/16") | | | | | | |
| | NO | SM600A-501-00 | SM600A-501-00S | SM600A-501-00FP | SM650A-501-00 | SM650A-501-00S | SM650A-501-00FP |
| | NC | SM600A-501-10 | SM600A-501-10S | SM600A-501-10FP | SM650A-501-10 | SM650A-501-10S | SM650A-501-10FP |
| | 13 mm (1/2") | | | | | | |
| | NO | SM600A-508-00 | SM600A-508-00S | SM600A-508-00FP | SM650A-508-00 | SM650A-508-00S | SM650A-508-00FP |
| | NC | SM600A-508-10 | SM600A-508-10S | SM600A-508-10FP | SM650A-508-10 | SM650A-508-10S | SM650A-508-10FP |
| | 19 mm (3/4") | | | | | | |
| | NO | SM600A-512-00 | SM600A-512-00S | SM600A-512-00FP | SM650A-512-00 | SM650A-512-00S | SM650A-512-00FP |
| | NC | SM600A-512-10 | SM600A-512-10S | SM600A-512-10FP | SM650A-512-10 | SM650A-512-10S | SM650A-512-10FP |
| | 25 mm (1") | | | | | | |
| | NO | SM600A-516-00 | SM600A-516-00S | SM600A-516-00FP | SM650A-516-00 | SM650A-516-00S | SM650A-516-00FP |
| | NC | SM600A-516-10 | SM600A-516-10S | SM600A-516-10FP | SM650A-516-10 | SM650A-516-10S | SM650A-516-10FP |
| | 51 mm (2") | | | | | | |
| | NO | SM600A-532-00 | SM600A-532-00S | SM600A-532-00FP | SM650A-532-00 | SM650A-532-00S | SM650A-532-00FP |
| | NC | SM600A-532-10 | SM600A-532-10S | SM600A-532-10FP | SM650A-532-10 | SM650A-532-10S | SM650A-532-10FP |
| | 77 mm (3") | | | | | | |
| | NO | SM600A-548-00 | SM600A-548-00S | SM600A-548-00FP | SM650A-548-00 | SM650A-548-00S | SM650A-548-00FP |
| | NC | SM600A-548-10 | SM600A-548-10S | SM600A-548-10FP | SM650A-548-10 | SM650A-548-10S | SM650A-548-10FP |
| 152 mm (6") | 1.6 mm (1/16") | | | | | | |
| | NO | SM600A-601-00 | SM600A-601-00S | SM600A-601-00FP | SM650A-601-00 | SM650A-601-00S | SM650A-601-00FP |
| | NC | SM600A-601-10 | SM600A-601-10S | SM600A-601-10FP | SM650A-601-10 | SM650A-601-10S | SM650A-601-10FP |
| | 13 mm (1/2") | | | | | | |
| | NO | SM600A-608-00 | SM600A-608-00S | SM600A-608-00FP | SM650A-608-00 | SM650A-608-00S | SM650A-608-00FP |
| | NC | SM600A-608-10 | SM600A-608-10S | SM600A-608-10FP | SM650A-608-10 | SM650A-608-10S | SM650A-608-10FP |
| | 19 mm (3/4") | | | | | | |
| | NO | SM600A-612-00 | SM600A-612-00S | SM600A-612-00FP | SM650A-612-00 | SM650A-612-00S | SM650A-612-00FP |
| | NC | SM600A-612-10 | SM600A-612-10S | SM600A-612-10FP | SM650A-612-10 | SM650A-612-10S | SM650A-612-10FP |
| | 25 mm (1") | | | | | | |
| | NO | SM600A-616-00 | SM600A-616-00S | SM600A-616-00FP | SM650A-616-00 | SM650A-616-00S | SM650A-616-00FP |
| | NC | SM600A-616-10 | SM600A-616-10S | SM600A-616-10FP | SM650A-616-10 | SM650A-616-10S | SM650A-616-10FP |
| | 51 mm (2") | | | | | | |
| | NO | SM600A-632-00 | SM600A-632-00S | SM650A-632-00 | SM650A-632-00S | SM650A-632-00FP | SM650A-732-00FP |
| | NC | SM600A-632-10 | SM600A-632-10S | SM650A-632-10 | SM650A-632-10S | SM650A-632-10FP | SM650A-732-10FP |
| | 77 mm (3") | | | | | | |
| | NO | SM600A-648-00 | SM600A-648-00S | SM600A-648-00FP | SM650A-648-00 | SM650A-648-00S | SM650A-648-00FP |
| | NC | SM600A-648-10 | SM600A-648-10S | SM600A-648-10FP | SM650A-648-10 | SM650A-648-10S | SM650A-648-00FP |
| | 127 mm (5") | | | | | | |
| | NO | SM600A-680-00 | SM600A-680-00S | SM600A-680-00FP | SM650A-680-00 | SM650A-680-00S | SM650A-680-00FP |
| | NC | SM600A-680-10 | SM600A-680-10S | SM600A-680-10FP | SM650A-680-10 | SM650A-680-10S | SM650A-680-10FP |

(* All possible sensor configurations are not listed here)

Accessories for SM600 Series

| Straight | Connection type | Length | 90° | Connection type | Length |
|--|-----------------|------------|-----------|-----------------|------------|
| XSZCD101Y | M12 connector | 2 m (6.6') | XSZCD111Y | M12 connector | 2 m (6.6') |
| Additional cable lengths are available | | | | | |

(continued)

| Model Number* | | | | | | | | | | | | |
|------------------------|------------------------|---------------|------------------------|-----------------|------------------------|----------------|------------------------|--|------------------------|--|------------------------|--|
| Characteristics | | | | | | | | | | | | |
| Housing Style/Material | 18 mm ULTEM® | | Stainless Steel | | Flat-profile ULTEM® | | 18 mm ULTEM® | | Stainless Steel | | Flat-profile ULTEM® | |
| Temperature Range C° | 0 to 60 (32 to 140° F) | | 0 to 60 (32 to 140° F) | | 0 to 60 (32 to 140° F) | | 0 to 60 (32 to 140° F) | | 0 to 60 (32 to 140° F) | | 0 to 60 (32 to 140° F) | |
| Connection Type | 3 m (10') Cable | | | | | | M12 Connector | | | | | |
| Supply Voltage | 12-24 VDC | | | | | | 12-24 VDC | | | | | |
| Range | Window | | | | | | | | | | | |
| 178 mm (7") | 1.6 mm (1/16") | | | | | | | | | | | |
| | NO | SM600A-701-00 | SM600A-701-00S | SM600A-701-00FP | SM650A-701-00 | SM650A-701-00S | SM650A-701-00FP | | | | | |
| | NC | SM600A-701-10 | SM600A-701-10S | SM600A-701-10FP | SM650A-701-10 | SM650A-701-10S | SM650A-701-10FP | | | | | |
| | 13 mm (1/2") | | | | | | | | | | | |
| | NO | SM600A-708-00 | SM600A-708-00S | SM600A-708-00FP | SM650A-708-00 | SM650A-708-00S | SM650A-708-00FP | | | | | |
| | NC | SM600A-708-10 | SM600A-708-10S | SM600A-708-10FP | SM650A-708-10 | SM650A-708-10S | SM650A-708-10FP | | | | | |
| | 9 mm (3/4") | | | | | | | | | | | |
| | NO | SM600A-712-00 | SM600A-712-00S | SM600A-712-00FP | SM650A-712-00 | SM650A-712-00S | SM650A-712-00FP | | | | | |
| | NC | SM600A-712-10 | SM600A-712-10S | SM600A-712-10FP | SM650A-712-10 | SM650A-712-10S | SM650A-712-10FP | | | | | |
| | 25 mm (1") | | | | | | | | | | | |
| | NO | SM600A-716-00 | SM600A-716-00S | SM600A-716-00FP | SM650A-716-00 | SM650A-716-00S | SM650A-716-00FP | | | | | |
| | NC | SM600A-716-10 | SM600A-716-10S | SM600A-716-10FP | SM650A-716-10 | SM650A-716-10S | SM650A-716-10FP | | | | | |
| | 51 mm (2") | | | | | | | | | | | |
| | NO | SM600A-732-00 | SM600A-732-00S | SM600A-732-00FP | SM650A-732-00 | SM650A-732-00S | SM650A-732-00FP | | | | | |
| | NC | SM600A-732-10 | SM600A-732-10S | SM600A-732-10FP | SM650A-732-10 | SM650A-732-10S | SM650A-732-10FP | | | | | |
| | 77 mm (3") | | | | | | | | | | | |
| | NO | SM600A-748-00 | SM600A-748-00S | SM600A-748-00FP | SM650A-748-00 | SM650A-748-00S | SM650A-748-00FP | | | | | |
| | NC | SM600A-748-10 | SM600A-748-10S | SM600A-748-10FP | SM650A-748-10 | SM650A-748-10S | SM650A-748-10FP | | | | | |
| | 127 mm (5") | | | | | | | | | | | |
| | NO | SM600A-780-00 | SM600A-780-00S | SM600A-780-00FP | SM650A-780-00 | SM650A-780-00S | SM650A-780-00FP | | | | | |
| | NC | SM600A-780-10 | SM600A-780-10S | SM600A-780-10FP | SM650A-780-10 | SM650A-780-10S | SM650A-780-10FP | | | | | |

(*) All possible sensor configurations are not listed here

SM602 Dual-level

| Model Number* | | | | | | | | | | | | |
|------------------------|--------------------------|---------------|------------------------|-----------------|------------------------|----------------|------------------------|--|------------------------|--|------------------------|--|
| Characteristics | | | | | | | | | | | | |
| Housing Style/Material | 18 mm ULTEM® | | Stainless Steel | | Flat-profile ULTEM® | | 18 mm ULTEM® | | Stainless Steel | | Flat-profile ULTEM® | |
| Temperature Range C° | 0 to 60 (32 to 140° F) | | 0 to 60 (32 to 140° F) | | 0 to 60 (32 to 140° F) | | 0 to 60 (32 to 140° F) | | 0 to 60 (32 to 140° F) | | 0 to 60 (32 to 140° F) | |
| Connection Type | 3 m (10') Cable | | | | | | M12 Connector | | | | | |
| Supply Voltage | 12-24 VDC | | | | | | 12-24 VDC | | | | | |
| Near Limit/Alarm | Far Limit/Alarm | | | | | | | | | | | |
| 95.3 mm (3.75") | 102 mm (4") | | | | | | | | | | | |
| | Pump-out | SM602A-404-00 | SM602A-404-00S | SM602A-404-00FP | SM652A-404-00 | SM652A-404-00S | SM652A-404-00FP | | | | | |
| | Pump-in | | SM602A-404-10 | | | SM652A-404-10 | | | | | | |
| | 127 mm (5") | | | | | | | | | | | |
| | Pump-out | SM602A-520-00 | | | SM652A-520-00 | | | | | | | |
| | Pump-in | SM602A-520-10 | | | SM652A-520-10 | | | | | | | |
| | 76.2 mm (3") | | | | | | | | | | | |
| | Pump-out | SM602A-416-00 | SM602A-416-00S | SM602A-416-00FP | SM652A-416-00 | SM652A-416-00S | SM652A-416-00FP | | | | | |
| | Pump-in | SM602A-416-10 | | | SM652A-416-10 | | | | | | | |
| | 127 mm (5") | | | | | | | | | | | |
| | Pump-out | SM602A-532-00 | | | SM652A-532-00 | | | | | | | |
| | Pump-in | SM602A-532-10 | | | SM652A-532-10 | | | | | | | |
| | 51 mm (2") | | | | | | | | | | | |
| | Pump-out | SM602A-432-00 | SM602A-432-00S | SM602A-432-00FP | SM652A-432-00 | SM652A-432-00S | SM652A-432-00FP | | | | | |
| | Pump-in | SM602A-432-10 | SM652A-432-10 | | | | | | | | | |
| | 76.2 mm (3") | | | | | | | | | | | |
| | Pump-out | | SM602A-532-00 | | | SM652A-532-00 | | | | | | |
| | Pump-in | | SM602A-532-10 | | | SM652A-532-10 | | | | | | |
| | 102 mm (4") | | | | | | | | | | | |
| | 152 mm (6") | | | | | | | | | | | |
| | Dual Alarm Normally Open | | | | | | | | | | | |
| | | SM602A-632-20 | | | SM652A-632-20 | | | | | | | |

(*) All possible sensor configurations are not listed here

| Accessories for SM602 Series | | | | | |
|--|-----------------|------------|-----------|-----------------|------------|
| Straight | Connection type | Length | 90° | Connection type | Length |
| XSZCD101Y | M12 connector | 2 m (6.6') | XSZCD111Y | M12 connector | 2 m (6.6') |
| Additional cable lengths are available | | | | | |

| Model Number* | | | | | | | | |
|------------------------|------------------------|---------------|------------------------|-----------------|------------------------|----------------|------------------------|--|
| Characteristics | | | | | | | | |
| Housing Style/Material | 30 mm ULTEM® | | 30 mm Stainless | | 30 mm ULTEM® | | 30 mm ULTEM® | |
| Temperature Range C° | 0 to 60 (32 to 140° F) | | 0 to 60 (32 to 140° F) | | 0 to 60 (32 to 140° F) | | 0 to 60 (32 to 140° F) | |
| Connection Type | 3 m (10') Cable | | | | M12 Connector | | | |
| Supply Voltage | 15-24 VDC | | | | 15-24 VDC | | | |
| Range | Window | | | | | | | |
| 102 mm (4") | 70 mm (2.75") | | | | | | | |
| | Inv. 0-10V 2.5ms | SM606A-444-00 | SM606A-444-00S | SM606A-444-00FP | SM656A-444-00 | SM656A-444-00S | SM656A-444-00FP | |
| | Dir. 0-10 V 2.5 ms | SM606A-444-01 | SM606A-444-01S | SM606A-444-01FP | SM656A-444-01 | SM656A-444-01S | SM656A-444-01FP | |
| | Inv. 0-10V 1.5 ms | SM606A-444-02 | SM606A-444-02S | SM606A-444-02FP | SM656A-444-02 | SM656A-444-02S | SM656A-444-02FP | |
| | Inv. 0-10V 2.5 ms | SM606A-444-03 | SM606A-444-03S | SM606A-444-03FP | SM656A-444-03 | SM656A-444-03S | SM656A-444-03FP | |
| | Dir. 0-10V 1.5 ms | SM606A-444-04 | SM606A-444-04S | SM606A-444-04FP | SM656A-444-04 | SM656A-444-04S | SM656A-444-04FP | |
| 152 mm (6") | 117 mm (4.62") | | | | | | | |
| | Inv. 0-10V 2.5ms | SM606A-674-00 | SM606A-674-00S | SM606A-674-00FP | SM656A-674-00 | SM656A-674-00S | SM656A-674-00FP | |
| | Dir. 0-10 V 2.5 ms | SM606A-674-01 | SM606A-674-01S | SM606A-674-01FP | SM656A-674-01 | SM656A-674-01S | SM656A-674-01FP | |
| | Inv. 0-10V 1.5 ms | SM606A-674-02 | SM606A-674-02S | SM606A-674-02FP | SM656A-674-02 | SM656A-674-02S | SM656A-674-02FP | |
| | Inv. 0-10V 2.5 ms | SM606A-674-03 | SM606A-674-03S | SM606A-674-03FP | SM656A-674-03 | SM656A-674-03S | SM656A-674-03FP | |
| | Dir. 0-10V 1.5 ms | SM606A-674-04 | SM606A-674-04S | SM606A-674-04FP | SM656A-674-04 | SM656A-674-04S | SM656A-674-04FP | |

(*) All possible sensor configurations are not listed here

SM606S

All the above 0-10 V version sensors are available with a 4-20 mA output in the flat profile housing only.

To order, replace the number "0" in the reference by "1".

Example: For pre-cabled versions: SM606A-444-00FP becomes SM606A-444-10FP.

For connector versions: SM656A-444-00FP becomes SM656A-444-10FP.

Sensing distances: refer to www.SESensors.com

Accessories for SM606 Series

| Straight | Connection type | Length | 90° | Connection type | Length |
|----------|-----------------|------------|-----------|-----------------|------------|
| XSCD101Y | M12 connector | 2 m (6.6') | XSZCD111Y | M12 connector | 2 m (6.6') |

Other cable lengths are available

SM607 Small Target Sensing

| Model Number* | | | | | | | | |
|------------------------|------------------------|---------------|------------------------|-----------------|------------------------|----------------|------------------------|--|
| Characteristics | | | | | | | | |
| Housing Style/Material | 18 mm ULTEM® | | Stainless Steel | | Flat-profile ULTEM® | | 18 mm ULTEM® | |
| Temperature Range C° | 0 to 60 (32 to 140° F) | | 0 to 60 (32 to 140° F) | | 0 to 60 (32 to 140° F) | | 0 to 60 (32 to 140° F) | |
| Connection Type | 3 m (10') Cable | | | | M12 Connector | | | |
| Supply Voltage | 12-24 VDC | | | | 12-24 VDC | | | |
| Range | Window | | | | | | | |
| 38.1 mm (1.5") | 12.7 mm (0.5") | | | | | | | |
| | Straight label edge NO | SM607A-A08-01 | SM607A-A08-01S | SM607A-A08-01FP | SM657A-A08-01 | SM657A-A08-01S | SM657A-A08-01FP | |
| | Circular label edge NO | SM607A-A08-02 | SM607A-A08-02S | SM607A-A08-02FP | SM657A-A08-02 | SM657A-A08-02S | SM657A-A08-02FP | |
| 51 mm (2") | 3 mm (0.125") | | | | | | | |
| | | SM607A-202-00 | SM607A-202-00S | SM607A-202-00FP | SM657A-202-00 | SM657A-202-00S | SM657A-202-00FP | |
| | 6 mm (0.25") | | | | | | | |
| | | SM607A-204-00 | SM607A-204-00S | SM607A-204-00FP | SM657A-204-00 | SM657A-204-00S | SM657A-204-00FP | |
| | 13 mm (0.5") | | | | | | | |
| | | SM607A-208-00 | SM607A-208-00S | SM607A-208-00FP | SM657A-208-00 | SM657A-208-00S | SM657A-208-00FP | |

(*) All possible sensor configurations are not listed here

Accessories for SM607 Series

| Straight | Connection type | Length | 90° | Connection type | Length |
|-----------|-----------------|------------|-----------|-----------------|------------|
| XSZCD101Y | M12 connector | 2 m (6.6') | XSZCD111Y | M12 connector | 2 m (6.6') |

Additional cable lengths are available



30 mm ULTEM®(1 & 2 m)



30 mm Stainless (1 & 2 m)



30 mm ULTEM®(8 m)

Model Number*

| Model Number* | | | | |
|--|---|-------------------|-----------------|-------------------|
| Characteristics | | | | |
| Housing Style/Material | 30 mm ULTEM® | 30 mm Stainless | 30 mm ULTEM® | 30 mm Stainless |
| Temperature Range C° | 0 to 50 (32 to 122° F) (Ultem) -20 to 50 (-4 to 122° F) (Stainless) | | | |
| Connection Type | 3 m (10') Cable | | M12 Connector | |
| Supply Voltage | 12-24 VDC | | 12-24 VDC | |
| Sensing Range | | | | |
| 51 mm (2") - 1 m (39") | | | | |
| NO NPN & PNP | SM900A-100000 | SM900A-100000S | SM950A-100000 | SM950A-100000S |
| NC NPN & PNP | SM900A-110000 | SM900A-110000S | SM950A-110000 | SM950A-110000S |
| Complementary NPN | SM900A-120000 | SM900A-120000S | SM950A-120000 | SM950A-120000S |
| Complementary PNP | SM900A-130000 | SM900A-130000S | SM950A-130000 | SM950A-130000S |
| Object Proximity | SM900A-100000OB | SM900A-100000OBS | SM950A-100000OB | SM950A-100000OBS |
| 120 mm (4.7") - 2 m (79") | | | | |
| NO NPN & PNP | SM900A-400000 | SM900A-400000S | SM950A-400000 | SM950A-400000S |
| NC NPN & PNP | SM900A-410000 | SM900A-410000S | SM950A-410000 | SM950A-410000S |
| Complementary NPN | SM900A-420000 | SM900A-420000S | SM950A-420000 | SM950A-420000S |
| Object Proximity | SM900A-400000OB | SM900A-400000OBS | SM950A-400000OB | SM950A-400000OBS |
| 120 mm (4.7") - 1 m (39") | | | | |
| NO NPN & PNP Stainless Steel Transducer | | SM9000A-700000STS | | SM9500A-700000STS |
| 203 mm (8") - 8 m (315") | | | | |
| Object Proximity | SM9000A-800000 | | SM9500A-800000 | |

(*) All possible sensor configurations are not listed here

Accessories for SM900 Series

| Straight | Connection type | Length | 90° | Connection type | Length |
|-----------|-----------------|------------|-----------|-----------------|------------|
| XSZCD101Y | M12 connector | 2 m (6.6') | XSZCD111Y | M12 connector | 2 m (6.6') |

Additional cable lengths are available

SM902 Series

Ultrasonic Sensors Dual-level Sensors



30 mm ULTEM®(1 & 2 m)



30 mm Stainless (1 & 2 m)



30 mm ULTEM®(8 m)

| Model Number* | | | | |
|---|--|------------------|-----------------|------------------|
| Characteristics | | | | |
| Housing Style/Material | 30 mm ULTEM® | 30 mm Stainless | 30 mm ULTEM® | 30 mm Stainless |
| Temperature Range C° | 0 to 50 (32 to 122° F) (Utem) -20 to 50 (-4 to 122° F) (Stainless) | | | |
| Connection Type | 3 m (10') Cable | | M12 Connector | |
| Supply Voltage | 12-24 VDC | | 12-24 VDC | |
| Sensing Range | | | | |
| 51 mm (2") - 1 m (39") | | | | |
| Pump-out latch | SM902A-100000 | SM902A-100000S | SM952A-100000 | SM952A-100000S |
| w/ Loss of Echo Hold | SM902A-100000LE | SM902A-100000LES | SM952A-100000LE | SM952A-100000LES |
| Pump-in latch | SM902A-110000 | SM902A-110000S | SM952A-110000 | SM952A-110000S |
| w/ Loss of Echo Hold | SM902A-110000LE | SM902A-110000LES | SM952A-110000LE | SM952A-110000LES |
| Dual Setpoint (NPN) | SM902A-124000 | SM902A-124000S | SM952A-124000 | SM952A-124000S |
| Pump-in latch, w/alarm (NPN) | SM902A-144100 | SM902A-144100S | SM952A-144100 | SM952A-144100S |
| Pump-in latch w/setpoint (NPN) | SM902A-164000 | SM902A-164000S | SM952A-164000 | SM952A-164000S |
| 120 mm (4.7") - 2 m (79") | | | | |
| Pump-out latch | SM902A-400000 | SM902A-400000S | SM952A-400000 | SM952A-400000S |
| w/ Loss of Echo Hold | SM902A-400000LE | SM902A-400000LES | SM952A-400000LE | SM952A-400000LES |
| Pump-in latch | SM902A-410000 | SM902A-410000S | SM952A-410000 | SM952A-410000S |
| w/ Loss of Echo Hold | SM902A-410000LE | SM902A-410000LES | SM952A-410000LE | SM952A-410000LES |
| Dual Setpoint (NPN) | SM902A-424000 | SM902A-424000S | SM952A-424000 | SM952A-424000S |
| Pump-in latch, w/alarm (NPN) | SM902A-444000 | SM902A-444000S | SM952A-444000 | SM952A-444000S |
| Pump-out latch, w/alarm (PNP) | SM902A-4560000 | SM902A-4560000S | SM952A-4560000 | SM956A-4560000 |
| Pump-in latch w/setpoint (NPN) | SM902A-464000 | SM902A-464000S | SM952A-464000 | SM952A-464000S |
| 120 mm (4.7") - 1 m (39") | | | | |
| Pump-out latch Stainless Steel Transducer | | SM902A-700000STS | | SM952A-700000STS |
| Pump-in latch Stainless Steel Transducer | | SM902A-710000STS | | SM952A-710000STS |
| Dual Setpoint (NPN) Stainless Steel Transducer | | SM902A-724000STS | | SM952A-724000STS |
| 203 mm (8") - 8 m (315") | | | | |
| Pump-in latch | SM902A-810000 | | SM952A-810000 | |
| Dual Setpoint (NPN) | SM902A-824000 | | SM952A-824000 | |

(*) All possible sensor configurations are not listed here

| Accessories for SM902 Series | | | | | |
|--|-----------------|------------|-----------|-----------------|------------|
| Straight | Connection type | Length | 90° | Connection type | Length |
| XSZCD101Y | M12 connector | 2 m (6.6') | XSZCD111Y | M12 connector | 2 m (6.6') |
| Additional cable lengths are available | | | | | |



30 mm ULTEM®(1 & 2 m)



30 mm Stainless (1 & 2 m)



30 mm ULTEM®(8 m)

| Model Number* | | | | |
|---|--|------------------|---------------|------------------|
| Characteristics | | | | |
| Housing Style/Material | 30 mm ULTEM® | 30 mm Stainless | 30 mm ULTEM® | 30 mm Stainless |
| Temperature Range C° | 0 to 50 (32 to 122° F) (Utem) -20 to 50 (-4 to 122° F) (Stainless) | | | |
| Connection Type | 3 m (10') Cable | | M12 Connector | |
| Supply Voltage | 15-24 VDC | | 15-24 VDC | |
| Sensing Range | 51 mm (2") - 1 m (39") | | | |
| Inverse 0-10V | | | | |
| Min output state on loss of echo | SM906A-100000 | SM906A-100000S | SM956A-100000 | SM956A-100000S |
| Hold on loss of echo min. power up | SM906A-102000 | SM906A-102000S | SM956A-102000 | SM956A-102000S |
| Hold on loss of echo max. power up | SM906A-103000 | SM906A-103000S | SM956A-103000 | SM956A-103000S |
| Direct 0-10V | | | | |
| Max output state on loss of echo | SM906A-111000 | SM906A-111000S | SM956A-111000 | SM956A-111000S |
| Inverse 4-20 mA | | | | |
| Min output state on loss of echo | SM906A-120000 | SM906A-120000S | SM956A-120000 | SM956A-120000S |
| Hold on loss of echo min. power up | SM906A-122000 | SM906A-122000S | SM956A-122000 | SM956A-122000S |
| Direct 4-20 mA | | | | |
| Hold on loss of echo min. power up | SM906A-132000 | SM906A-132000S | SM956A-132000 | SM956A-132000S |
| 120 mm (4.7") - 2 m (79") | | | | |
| Inverse 0-10V | | | | |
| Min output state on loss of echo | SM906A-400000 | SM906A-400000S | SM956A-400000 | SM956A-400000S |
| Hold on loss of echo min. power up | SM906A-402000 | SM906A-402000S | SM956A-402000 | SM956A-402000S |
| Hold on loss of echo max. power up | SM906A-403000 | SM906A-403000S | SM956A-403000 | SM956A-403000S |
| Direct 0-10V | | | | |
| Max output state on loss of echo | SM906A-411000 | SM906A-411000S | SM956A-411000 | SM956A-411000S |
| Inverse 4-20 mA | | | | |
| Min output state on loss of echo | SM906A-420000 | SM906A-420000S | SM956A-420000 | SM956A-420000S |
| Hold on loss of echo min. power up | SM906A-422000 | SM906A-422000S | SM956A-422000 | SM956A-422000S |
| Direct 4-20 mA | | | | |
| Hold on loss of echo min. power up | SM906A-432000 | SM906A-432000S | SM956A-432000 | SM956A-432000S |
| 120 mm (4.7") - 1 m (39") | | | | |
| Inverse 4-20 mA | | | | |
| Max output state on loss of echo Stainless Steel Transducer | | SM906A-72100STS | | SM956A-72100STS |
| Hold on loss of echo max power up Stainless Steel Transducer | | SM906A-723000STS | | SM956A-723000STS |
| 203 mm (8") - 8 m (315") | | | | |
| Inverse 0-10V | | | | |
| Min output state on loss of echo | SM906A-800000 | | SM956A-800000 | |
| Inverse 4-20 mA | | | | |
| Min output state on loss of echo | SM906A-820000 | | SM956A-820000 | |
| Direct 4-20 mA | | | | |
| Hold on loss of echo min. power up | SM906A-832000 | | SM956A-832000 | |

(*) All possible sensor configurations are not listed here

| Accessories for SM900 Series | | | | | |
|------------------------------|-----------------|------------|----------|-----------------|------------|
| Straight | Connection type | Length | 90° | Connection type | Length |
| XXZAC130 | M12 connector | 2 m (6.6') | XXZAC132 | M12 connector | 2 m (6.6') |

Additional cable lengths are available

For application assistance or to find your distributor
please call 1-800-435-2121
or visit www.SESensors.com

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