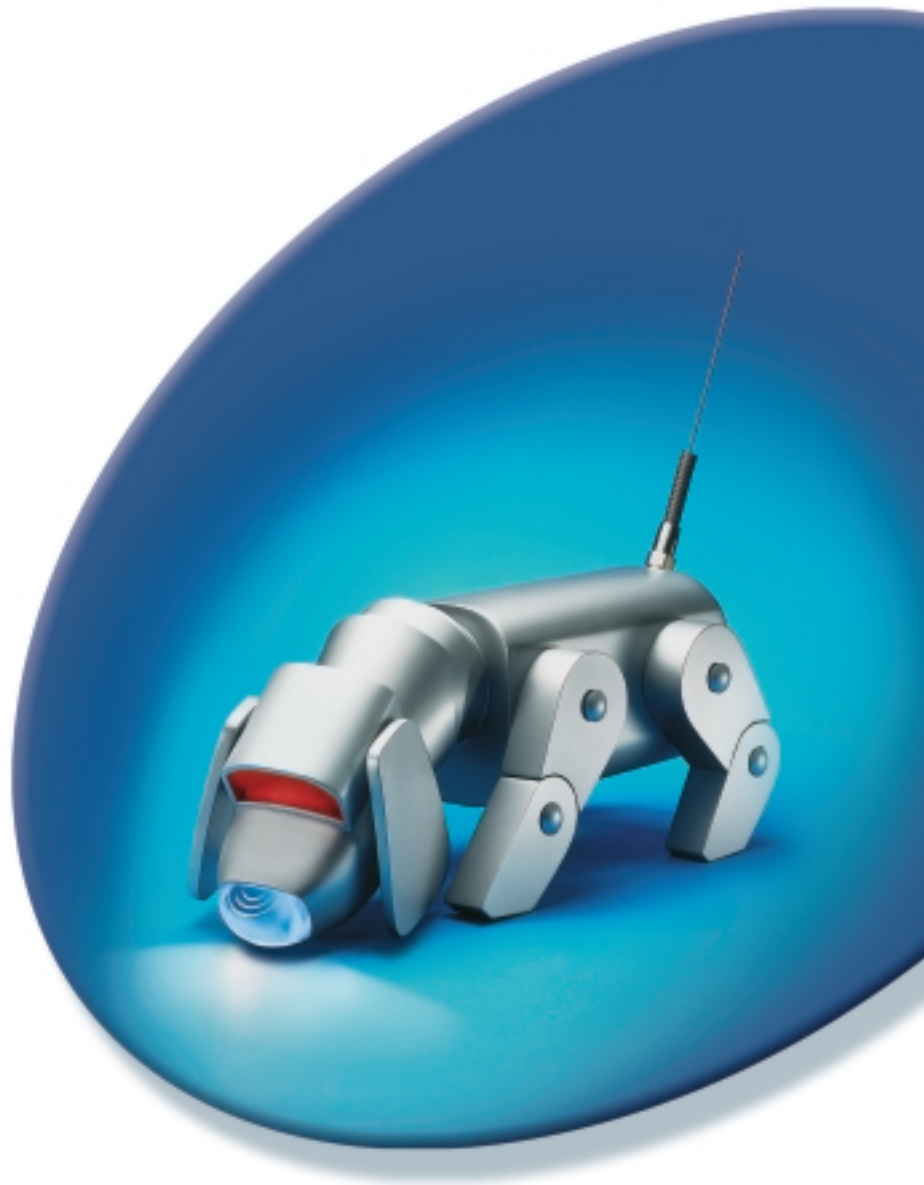


Global Detection  
**Osiris Osiprox Osiswitch Nautilus**  
The **essential** guide





## The essential guide to detection

A selection of 950 products, with the **top 400 selling products** referenced in **bold characters**.

Welcome to the **Simply Smart\*** world, compliments of Telemecanique

### Manufacturers

with **Osiconcept®**

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

### Distributors

with **Osiconcept®**

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

### Users

with **Osiconcept®**

Improve performance by reducing maintenance time with products that are **simpler** and unequalled in **flexibility**.

\***Simply Smart**: more ingenuity and intelligence for continually improving ease of use.

Benefit from Telemecanique's major innovation:

**Osiconcept®**  
Offering **s**implicity through **i**nnovation

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.**

Select the sensor according to your specific requirements

**"Universal" series:**  
Multi-purpose products providing multiple functions. This series also includes **Osiconcept®** products.

**"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.

# Osiconcept® A complete range of innovative and much more simple to use sensors

## Osiris Photo-electric sensors

Page 2



> 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.

### Detection without contact of any object, material or shape

- Detection from a few millimetres to several tens of metres
- 3D adjustable fixing accessories
- Specific products for particular applications

## Osiprox Inductive proximity sensors

Page 12



> 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).

### Detection without contact of metal objects

- Sensing distance/object . 60 mm
- Generic cylindrical and flat form products
- Specific products for particular applications

## Osiswitch Limit switches

Page 22



> Availability of more than 5,000 interchangeable configurations within 24 hours

Only one type of metal operating heads for 5 different bodies. Connection and contacts modularity.

### Detection by contact with rigid objects

- N/C contacts with positive opening operation
- Object speed . 1.5 m/s
- Specific products for particular applications

## Nautilus Sensors for pressure control

Page 29



> A user friendly product at last; easy to parameter prior to installation and to modify during operation

Ergonomic, tactile feedback keys plus scrolling menu on large 4 digit display.

### Detection by contact with fluid

- Electronic pressure and vacuum switches
- Analogue pressure sensors
- Electromechanical pressure and vacuum switches

## Other technologies

Page 20

> Capacitive proximity sensors

### Detection without contact of any object or material

- Sensing distance/object . 20 mm

> Ultrasonic proximity sensors

### Detection without contact of any object or material

- Sensing distance/object . 1 m

> Opto-electronic rotary encoders

### Detection via shaft coupling

**Osiconcept®**  
Offrir la simplicité par l'Innovation

**A single product that automatically adapts to all conditions.**

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



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	Design 18 plastic	Design 18 metal
<b>Max / usable sensing distance</b>		
without accessory	0.4 / 0.3 m	0.4 / 0.3 m
w/o accessory, with background supp.	0.12 / 0.12 m	0.12 / 0.12 m
with reflector (polarised)	3 / 2 m	3 / 2 m
with thru-beam accessory	20 / 15 m	20 / 15 m
Fixing (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: <b>using teach mode</b> / Setting-up assistance LEDs (°): yes /	

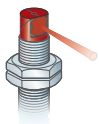
### Sensors for d.c. applications (solid-state output: transistor)

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 (M8 for XUM)		on M12 only	
T / R 3-wire	PNP programmable NO / NC	XUB0APSNM12	XUB0BPSNM12
	NPN programmable NO / NC	XUB0ANSNM12	XUB0BNSNM12
	PNP / NPN programmable NO / NC	-	-
Connection: screw clamp terminals			
T / R 3-wire	PNP / NPN programmable NO / NC	-	-
Switching capacity (mA) main output / alarm output		100 / -	100 / -
Common characteristics	Supply voltage limits, min/max (V) including ripple: 10...36 (except XUM 10...30) / Switching		
Thru-beam accessory	pre-cabled (2 m)	XUB0AKSNL2T	XUB0BKSNL2T
	connector	XUB0AKSNM12T	XUB0BKSNM12T
	screw terminals, ISO16 cable gland	-	-

### Multi-current/multi-voltage sensors for a.c. or d.c. applications / 10...36 V / 200...264 V including ripple on d.c.

Connection: pre-cabled, PvR (2 m)			
T / R	programmable. NO / NC with time delay	-	-
Connection: screw clamp terminals			
T / R	programmable. NO / NC with time delay	-	-
LED output state indicator (°) / power on LED (°)		-	-
Switching frequency (Hz)		-	-
Time delay(s)		-	-
Thru-beam accessory	pre-cabled, PvR (2 m)	-	-
	screw terminals, ISO16 cable gland	-	-

Also available in Design 18, 2-wire type multi-current/multi-voltage a.c./d.c. version. Please refer to the Detection Components catalogue.



#### 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: see Detection Components catalogue.

## Accessories

Reflectors			3D fixings with ball joint		
XUZC24	XUZC80	XUZC50		for XUB... XUZB2003 XUM... XUZM2003 XUK... XUZK2003 XUX... XUZX2003	for XUM... XUZM2004 XUK... XUZK2004 XUX... XUZX2004
					M12 rod for ball joint XUZ2001



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Miniature design	Compact design 50 x 50	Compact design
0.55 / 0.4 m	1.2 / 0.8 m	3 / 2 m
0.10 / 0.10 m	0.3 / 0.3 m	1.3 / 1.3 m
4 / 3 m	5.7 / 4 m	15 / 11 m
14 / 10 m	35 / 30 m	60 / 40 m
direct: fixing centres 25.5, M3 screws P / 12 x 34 x 20	direct: fixing centres 40 x 40, M4 screws P / 18 x 50 x 50	direct: fixing centres 30 / 38 to 40 / 50 / 74, M5 screws P / 30 x 92 x 71
Temperature range (°C): - 25...+ 55 / Degree of protection (conforming to IEC 60529): IP67 (XUK: IP65)		

XUM0APSAL2	-	-
XUM0ANSAL2	-	-
-	XUK0AKSAL2	-
XUM0APSAM8 (1)	-	-
XUM0ANSAM8 (1)	-	-
-	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 (1)	XUK0AKSAM12T	XUX0AKSAM12T
-	-	XUX0AKSAT16T

(relay output, 1 C/O, 3 A)

(1) M8 not Snap-C® compatible.

-	XUK0ARCTL2	-
-	-	XUX0ARCTT16
-	° / °	° / °
-	20	20
-	Adjustment from 0 to 15 s, on energisation, on de-energisation or monostable	-
-	XUK0ARCTL2T	-
-	-	XUX0ARCTT16T



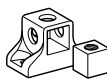
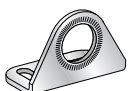
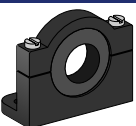
**Connector innovation**

New, innovative connector that is universal, simple and fast.

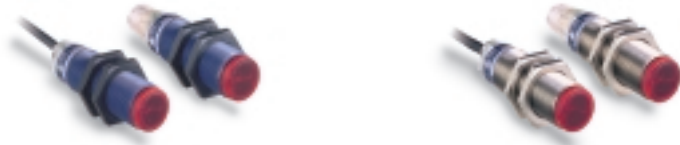
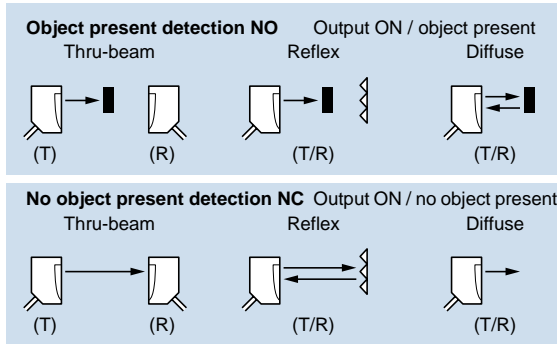
For all Telemecanique brand sensors with Snap-C compatible M12 connectors:

- cabling to the required length without using a screwdriver or a soldering iron,
- ready in just a few seconds, no wire stripping required.



Simple fixings			Suitable female plug-in connectors, including pre-wired versions						
Fixing support for M12 rod    <b>XUZ2003</b>	Single bracket								
									
	for	standard	with ball joint						
	XUB...	<b>XUZA118</b> (stnls. steel)	<b>XUZA218</b> (plastic)		length 5 m without LED	pre-wired, elbowed	pre-wired, straight	screw terminal	Snap-C
	XUM...	<b>XUZA50</b>	-		M8	<b>XZCP1041L5</b>	<b>XZCP0941L5</b>	<b>XZCC8FCM40S</b>	-
XUK...	<b>XUZA51</b>	-		M12	<b>XZCP1241L5</b>	<b>XZCP1141L5</b>	<b>XZCC12FCM40B</b>	<b>XZCC12FDM40V</b>	
XUX...	<b>XUXZ2000</b>	-							

The above products are only a selection of the most popular products, for other versions: please refer to the Detection Components catalogue.



	Design 18 plastic	Design 18 metal
<b>Max / usable sensing distance</b>		
Diffuse	0.8 / 0.6 m	0.8 / 0.6 m
Polarised reflex	3 / 2 m	3 / 2 m
Reflex	5.5 / 4 m	5.5 / 4 m
Thru-beam	20 / 15 m	20 / 15 m
Fixing (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...+ 55 / Degree of protection (conforming to IEC 60529): IP67 (XUK: IP65)	

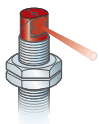
### Sensors for d.c. applications $\square$ (solid-state output: transistor)

Connection		pre-cabled, L = 2 m	M12 connector	pre-cabled, L = 2 m	M12 connector	
<b>Transmitter</b>		XUB2AKSNL2T	XUB2AKSNM12T	XUB2BKSNL2T	XUB2BKSNM12T	
<b>Receiver or T/R, 3-wire PNP (1)</b>	Diffuse, adjustable	NO	XUB5APANL2	XUB5APANM12	XUB5BPANL2	XUB5BPANM12
		NC	XUB5APBNL2	XUB5APBNM12	XUB5BPBNL2	XUB5BPBNM12
	Polarised reflex	NO	XUB9APANL2	XUB9APANM12	XUB9BPANL2	XUB9BPANM12
		NC	XUB9APBNL2	XUB9APBNM12	XUB9BPBNL2	XUB9BPBNM12
	Reflex	NO	XUB1APANL2	XUB1APANM12	XUB1BPANL2	XUB1BPANM12
		NC	XUB1APBNL2	XUB1APBNM12	XUB1BPBNL2	XUB1BPBNM12
	Thru-beam	NO	XUB2APANL2R	XUB2APANM12R	XUB2BPANL2R	XUB2BPANM12R
		NC	XUB2APBNL2R	XUB2APBNM12R	XUB2BPBNL2R	XUB2BPBNM12R
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 d.c. versions		Switching capacity, max (mA): 100 / Overload and short-circuit protection (★) /				

(1) For versions with NPN output, replace "P" by "N". Example: XUB1APANL2 becomes XUB1ANANL2.

### Multi-current/multi-voltage sensors for a.c. or d.c. applications $\sim$ / $\square$ 10...36 V $\square$ / 20...264 V $\sim$ including ripple on d.c.

Connection		–	–	–	–
<b>Transmitter</b>		–	–	–	–
<b>Receiver or T/R</b>	Diffuse	NO + NC	–	–	–
	Polarised reflex	NO + NC	–	–	–
	Reflex	NO + NC	–	–	–
	Thru-beam	NO + NC	–	–	–
Switching frequency (Hz)		–	–	–	–
LED output state indicator (°) / power on LED (°)		–	–	–	–

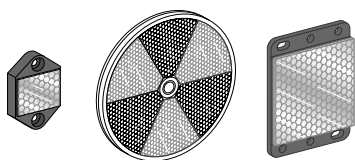


#### 90° head

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: see Detection Components catalogue.

## Accessories

### Reflectors



XUZC24 XUZC80 XUZC50

#### Reflectors (mm)

Ø 16	XUZC16
Ø 21	XUZC21
24 x 21	XUZC24
Ø 31	XUZC31
Ø 39	XUZC39
Ø 80	XUZC80
50 x 50	XUZC50

### 3D fixings with ball joint

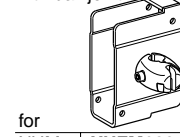


Bracket with ball joint for sensors and reflector XUZC50

for

XUB...	XUZB2003
XUM...	XUZM2003
XUK...	XUZK2003
XUX...	XUZX2003

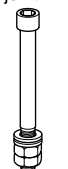
Protective housing with ball joint



for

XUM...	XUZM2004
XUK...	XUZK2004
XUX...	XUZX2004

M12 rod for ball joint



XUZ2001



Miniature design	Compact design 50 x 50	Compact design
0.6 / 0.4 m	1.5 / 1 m $\equiv$ or $\sim$	3 / 2.1 m
3 / 2 m	7.5 / 5 m $\equiv$ or 6 / 4 m $\sim$	15 / 11 m
6 / 4 m	15 / 9 m $\equiv$ or 10 / 7 m $\sim$	20 / 14 m
12 / 8 m	45 / 30 m $\equiv$ or 30 / 20 m $\sim$	60 / 40 m
direct: fixing centres 25.5, M3 screws	direct: fixing centres 40 x 40, M4 screws	direct: fixing centres 30 / 38 to 40 / 50 / 74, M5 screws
P / 12 x 34 x 27	P / 18 x 50 x 50	P / 30 x 92 x 71
°	°	°
/ LED output state indicator and power on LED (°): yes		

pre-cabled, L = 2 m	M8 connector	pre-cabled, L = 2 m	M12 connector	screw terms, ISO16 cbl. gland	M12 connector
XUM2AKSNL2T	XUM2AKSNM8T	XUK2AKSNL2T	XUK2AKSNM12T	XUX0AKSAT16T	XUX0AKSAM12T
<b>XUM5APANL2</b>	XUM5APANM8	<b>XUK5APANL2</b>	XUK5APANM12	<b>XUX5APANT16</b>	XUX5APANM12
XUM5APBNL2	XUM5APBNM8	XUK5APBNL2	XUK5APBNM12	XUX5APBNT16	XUX5APBNM12
XUM9APANL2	XUM9APANM8	XUK9APANL2	XUK9APANM12	XUX9APANT16	XUX9APANM12
XUM9APBNL2	XUM9APBNM8	XUK9APBNL2	XUK9APBNM12	XUX9APBNT16	XUX9APBNM12
<b>XUM1APANL2</b>	XUM1APANM8	<b>XUK1APANL2</b>	XUK1APANM12	<b>XUX1APANT16</b>	XUX1APANM12
XUM1APBNL2	XUM1APBNM8	XUK1APBNL2	XUK1APBNM12	XUX1APBNT16	XUX1APBNM12
XUM2APANL2R	XUM2APANM8R	XUK2APANL2R	XUK2APANM12R	XUX2APANT16R	XUX2APANM12R
XUM2APBNL2R	XUM2APBNM8R	XUK2APBNL2R	XUK2APBNM12R	XUX2APBNT16R	XUX2APBNM12R
10...30	10...30	10...30	10...30	10...36	10...36
500	500	500	500	500	500
LED output state indicator (°): yes / power on LED (°): yes					

(relay output, 1 C/O, 3A)

-	-	pre-cabled, L = 2 m	-	screw terms, ISO16 cbl. gland	-
-	-	XUK2ARCNL2T	-	XUX0ARCTT16T	-
-	-	XUK5ARCNL2	-	XUX5ARCNT16	-
-	-	XUK9ARCNL2	-	XUX9ARCNT16	-
-	-	XUK1ARCNL2	-	XUX1ARCNT16	-
-	-	XUK2ARCNL2R	-	XUX2ARCNT16R	-
-	-	20	-	20	-
-	-	° / °	-	° / °	-



#### Connector innovation

New, innovative connector that is universal, simple and fast.

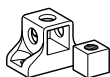
For all Telemecanique brand sensors with Snap-C compatible M12 connectors:

- cabling to the required length without using a screwdriver or a soldering iron,
- ready in just a few seconds, no wire stripping required.



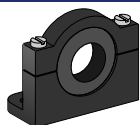
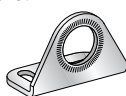
#### Simple fixings

Fixing support for M12 rod



XUZ2003

Single bracket

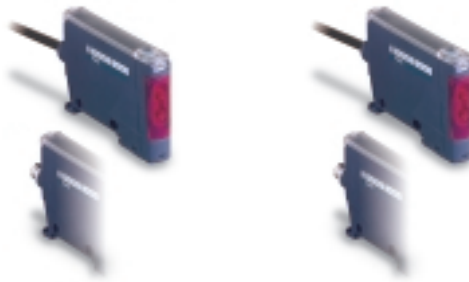
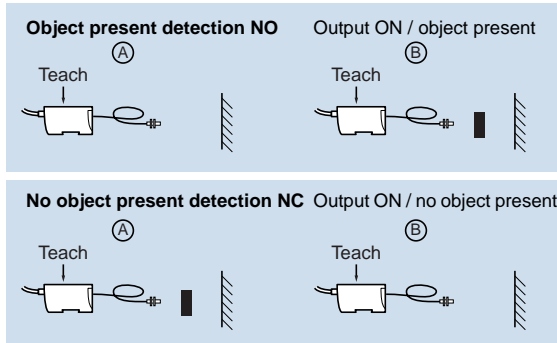


for	standard	with ball joint
XUB...	<b>XUZA118</b> (stnls. steel)	<b>XUZA218</b> (plastic)
XUM...	<b>XUZA50</b>	-
XUK...	<b>XUZA51</b>	-
XUX...	<b>XUXZ2000</b>	-

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

length 5 m without LED	pre-wired, elbowed	pre-wired, straight	screw terminal	Snap-C
M8	<b>XZCP1041L5</b>	<b>XZCP0941L5</b>	<b>XZCC8FCM40S</b>	-
M12	<b>XZCP1241L5</b>	<b>XZCP1141L5</b>	<b>XZCC12FCM40B</b>	<b>XZCC12FDM40V</b>

The above products are only a selection of the most popular products, for other versions: please refer to the Detection Components catalogue.



(1) Models suitable for use with XUFZ01 and XUFZ02

	Optimum	Universal
System	For plastic fibres	
Max / usable sensing distance (mm)	Depending on fibre used	
Fixing (mm)	DIN rail or direct: fixing centres 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...+ 55	- 10...+ 40
Degree of protection (conforming to IEC 60529)	IP65 with Ø 1 fibre / IP64 with Ø 0.5 fibre	

System
Sensing distance (mm)
Fibre cross-section
Fibre Ø (mm)
Sheath Ø
Temperature range (°C)
References
Fixing

(2) With XUF-Z04 fixing clamp with lens.  
(3) Depending on length and lens fixing clamps.

## Sensors for d.c. applications (solid-state output: transistor)

Connection: pre-cabled, PVC (2 m)		
Amplifier	3-wire PNP programmable NO / NC	XUDA1PSML2
references	3-wire NPN programmable NO / NC	XUDA1NSML2
XUDA2PSML2		
XUDA2NSML2		
Connection: M8 connector		
Amplifier	3-wire PNP programmable NO / NC	XUDA1PSMM8
references	3-wire NPN programmable NO / NC	XUDA1NSMM8
XUDA2PSMM8		
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) Models suitable for use with XUFZ01 and XUFZ02

System
Sensing distance (mm)
Fibre cross-section
Fibre Ø (mm)
Sheath Ø
Temperature range (°C)
References
Fixing

## Accessories

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



Fig. 1



Fig. 2

length 5 m	
Elbowed, without LED, fig. 1	XZCP1041L5
Straight, without LED, fig. 2	XZCP0941L5

### For thru-beam system plastic fibre optics

Lenses	For increasing sensing distance (pair)	XUFZ01
	With 90° mirror (pair)	XUFZ02
Fixing clamp with lens (set of 2)	Front screw fixing for fibre optics XUF-Z920	XUFZ04

### For all system fibre optics

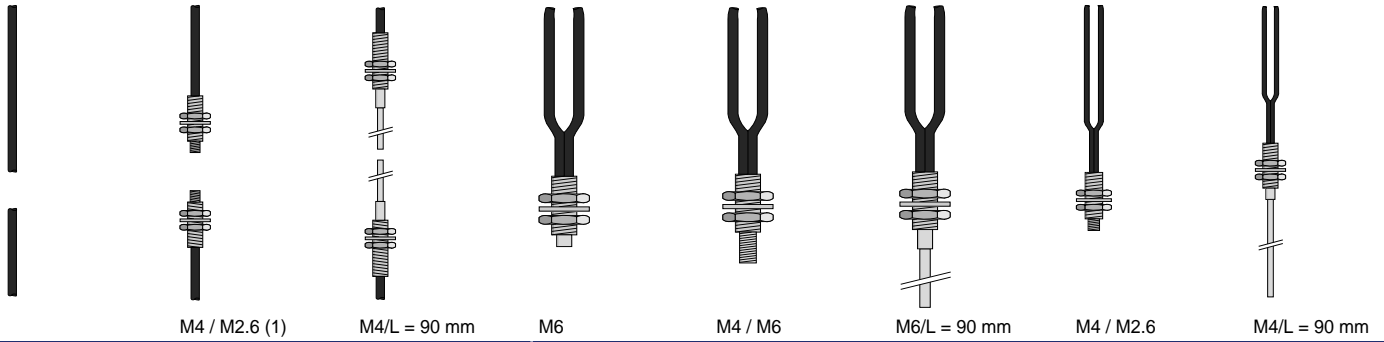
Fibre trimmer	For trimming fibres to length (included with all plastic fibre optics)	XUFZ11
Protective metallic tubing	Length 1 m, for plastic fibres with threaded end fittings	XUFZ210
	For M4 thread	XUFZ310
	For M6 thread	XUFZ310

(1) Models suitable for use with XUFZ01 and XUFZ02

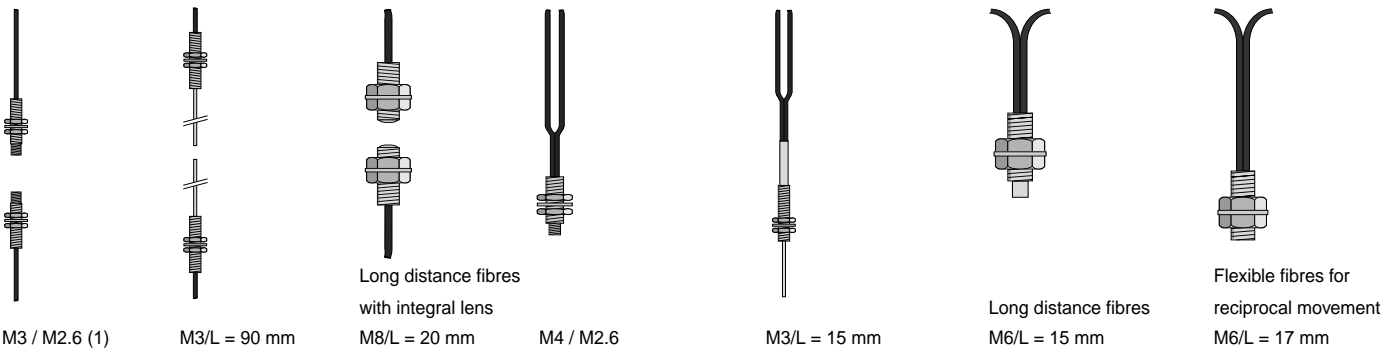
System
Sensing distance (mm)
Fibre cross-section
Fibre Ø (mm)
Sheath Ø
Temperature range (°C)
References
Fixing



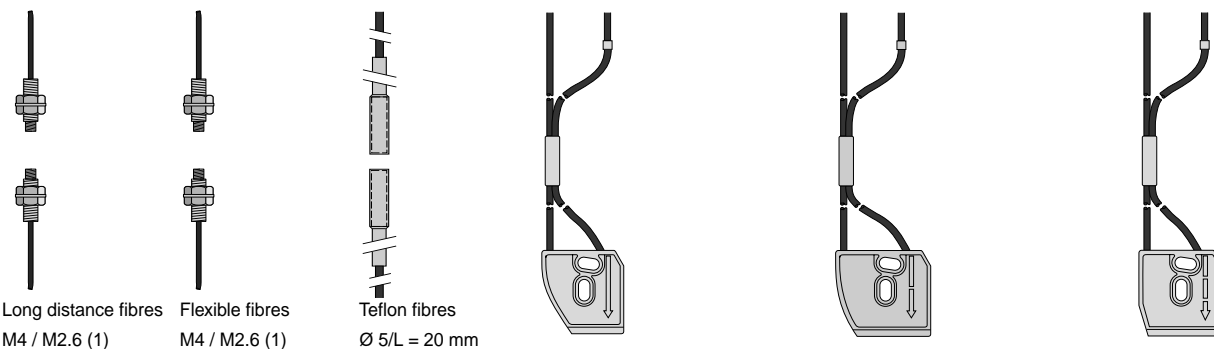
# Plastic fibre optic light guides (length 2 m)



Thru-beam			Diffuse				
250 to 900 (3)	200 or 1500 (1)	180	70	60	60	15	18
Ø 1	Ø 1	Ø 1	Ø 1	Ø 1 + 16 Ø 0.265	Ø 1	Ø 0.5 + 4 Ø 0.23	Ø 0.5
Ø 2.2	Ø 2.2	Ø 2.2	Ø 2.2 x 2	Ø 2.2 x 2	Ø 2.2 x 2	Ø 1 x 2	Ø 1 x 2
- 25...+ 60	- 25...+ 60	- 25...+ 60	- 25...+ 60	- 25...+ 60	- 25...+ 60	- 25...+ 60	- 25...+ 60
XUFZ920	XUFN12301	XUFN12311	XUFN05321	XUFN05323	XUFN05331	XUFN02323	XUFN01331
(2)	M4 x 0.7	M4 x 0.7	M6 x 0.75	M6 x 0.75 / M4 x 0.7	M6 x 0.75	M4 x 0.7	M4 x 0.7



Thru-beam			Diffuse			
50 or 1000 (1)	30	2500	18	6	95	55
Ø 0.5	Ø 0.5	Ø 1	Ø 0.5	Ø 0.265	Ø 1.5	Ø 1
Ø 1	Ø 1	Ø 2.2	Ø 1 x 2	Ø 1 x 2	Ø 2.2 x 2	Ø 2.2 x 2
- 25...+ 60	- 25...+ 60	- 25...+ 60	- 25...+ 60	- 25...+ 60	- 25...+ 60	- 25...+ 60
XUFN35301	XUFN35311	XUFN2L01L2	XUFN01321	XUFN04331	XUFN5P01L2	XUFN5S01L2
M3 x 0.5	M3 x 0.5	M8 x 1.25	M4 x 0.7	M3 x 0.5	M6 x 0.75	M6 x 0.75



Thru-beam			Diffuse focused for full colour sensor XURC4			
300 or 2000 (1)	100 or 750 (1)	1000	10		20	30
Ø 1.5	Ø 1	Ø 1	Transmitter Ø 1	Receiver Ø 1.5	Transmitter Ø 1.5	Receiver Ø 1.5
Ø 2.2	Ø 2.2	Ø 2.2	Ø 2.2 x 2		Ø 2.2 x 2	Ø 2.2 x 2
- 25...+ 60	- 25...+ 60	- 25...+ 60	- 10...+ 55		- 10...+ 55	- 10...+ 55
XUFN2P01L2	XUFN2S01L2	XUFN2T01L2	XUFN5L01L2		XUFN5L02L2	XUFN5L03L2
M2.6 x 0.45 / M4 x 0.7	M2.6 x 0.45 / M4 x 0.7	by clip (included)	2 elongated holes Ø 3.2 x 6.7 for M3 screws / fixing centres = 9.8 mm			



Detection of transparent materials



Colour mark reader

	Reflex (reflector not included)	Reflex (with teach mode) (50 x 50 reflector included)	Diffuse (manual)	Diffuse (with teach mode)
<b>Max / usable sensing distance</b>	<b>1.1 / 0.8 m (1)</b>	<b>1.5 m</b>	<b>0.009 m (2)</b>	<b>0.009 m (2)</b>
Fixing (mm)	M18 x 1	direct: fixing ctrs. 40 x 40	direct: 21 x 28, M5 screws	direct: 21 x 28, M5 screws
Case M (metal) P (plastic)	P	P	M	M
Sensitivity adjustment potentiometer		with teach mode button		with teach mode button
Setting-up assistance LEDs (°)	—	°	°	°
Temperature range (°C)	+ 10...+ 55	- 25...+ 55	- 10...+ 55	- 10...+ 55
Degree of protection (conforming to IEC 60529)	IP67	IP65	IP67	IP67

## Sensors for d.c. applications (solid-state output: transistor)

Connection: pre-cabled, PVC (2 m)					
Dimensions (mm) Ø x L or H x W x D		Ø18 x 55	50 x 18 x 50	—	—
Transmitter/Receiver	3-wire PNP	light switching	—	—	—
		dark switching	—	—	—
	3-wire NPN	light switching	—	—	—
		dark switching	—	—	—
Transmitter/Receiver	3-wire PNP	light/dark prog. switching	XUBH01353	—	—
	3-wire NPN	light/dark prog. switching	XUBJ01353	—	—
Transmitter/Receiver	3-wire PNP/NPN	light/dark prog. switching	—	XUKT1KSML2	—
Connection: M12 connector					
Dimensions (mm) Ø x L or H x W x D		Ø18 x 68	50 x 18 x 80	100 x 30 x 62.5	96 x 31 x 64
Transmitter/Receiver	3-wire PNP	light switching	—	—	—
		dark switching	—	—	—
	3-wire NPN	light switching	—	—	—
		dark switching	—	—	—
Transmitter/Receiver	3-wire PNP	light/dark prog. switching	XUBH01353D	—	—
	3-wire NPN	light/dark prog. switching	XUBJ01353D	—	—
Transmitter/Receiver	3-wire PNP/NPN	light/dark prog. switching	—	XURK0955D	XURK1KSMM12
Supply voltage limits, min/max (V) including ripple		10...30	10...30	10...30	10...30
Switching capacity, max (mA)		100	100	200	200
Overload and short-circuit protection (★) / LED output state indicator (°)		★ / °	★ / °	★ / °	★ / °
Switching frequency (Hz)		500	1500	10000	10000

(1) With 50 x 50 mm reflector;  
0.6 m with 24 x 21 reflector.

(2) 0.007 m with XURZ02  
0.018 m with XURZ01.

## Accessories

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

length 5 m, w/o LED	pre-wired, elbowed	pre-wired, straight	screw terminal
M8	XZCP1041L5	XZCP0941L5	XZCC8FCM40S
M12	XZCP1241L5	XZCP1141L5	XZCC12FCM40B

Lenses for colour mark or luminescence detection

Lens for doubling sensing distance



XURZ01



Luminescence sensor

"Full colour" sensor

Detection of objects on conveyor systems

Forked sensor for detection of opaque labels

Detection of aqueous liquids

Diffuse (manual)	Diffuse (with teach mode)	Diffuse (with integral amplifier)	Thru-beam or Diffuse (3) (with integral amplifier)	Diffuse with adjustable b/ground suppression	Thru-beam infra-red	Thru-beam infra-red
<b>0.02 m</b>	<b>0.009 m (2)</b>	<b>0.040...0.060 m</b>	<b>0.005...0.25 m (3)</b>	<b>1 m</b>	<b>0.002 m</b>	<b>0.2 m (4)</b>
M18 x 1	direct: ctrs. 28, M5 screws	direct: ctrs. 68x42, M5 screws	on rail, centres 16	direct: fixing ctrs. 40 x 40	direct: fixing centres 18	direct: fixing ctrs. 20
M	M	M	M	P	M	P
	with teach mode button	with teach mode button	with teach mode button		with teach mode button	
- 25...+ 55	- 10...+ 55	- 10...+ 55	- 10...+ 55	- 25...+ 55	0...+ 55	0...+ 40
IP67	IP67	IP67	IP65	IP65	IP65	IP65

-	-	80 x 30 x 57	82 x 25 x 44	50 x 18 x 50	-	47 x 13 x 33
-	-	<b>XURC3PPML2</b>	XURC4PPML2	-	-	-
-	-	-	-	-	-	-
-	-	XURC3NPML2	XURC4NPML2	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	XUK8AKSNL2	-	XUMW1KSNL2
Ø 18 x 95	96 x 31 x 64	-	-	50 x 18 x 80	97 x 20 x 26	-
XU5M18U1D	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	XURU1KSMM12	-	-	<b>XUK8AKSNM12</b>	XUVK0252S (M8)	-
10...30	10...30	10...30	10...30	10...30	10...30	10.8...26.4
100	200	100	100	100	100	100
★ / °	★ / °	★ / °	★ / °	★ / °	★ / °	★ / °
1000	2000	1200	1200	250	10000	1000

(3) Depending on fibres selected, see table below.

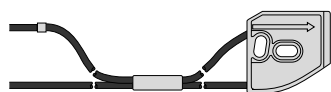
(4) Nominal sensing distance 50 m. Use between 10 and 20 cm, depending on the application.

Ring for fixed focusing

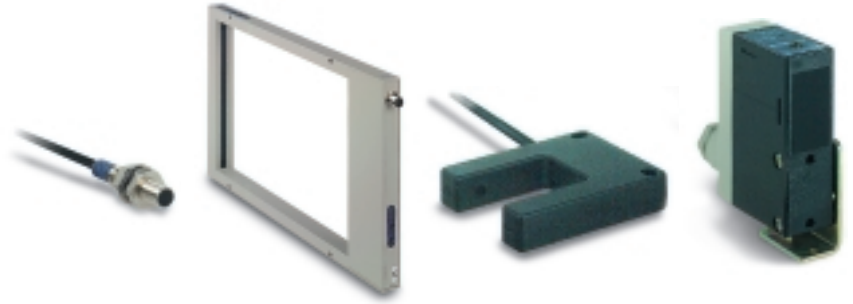


XURZ02

Fibre optic light guides for use with full colour sensor XURC4...



Fibre type	System	Reference	Sensing dist.
Focused	Diffuse	XUFN5L01L2	10 mm
		XUFN5L02L2	20 mm
		XUFN5L03L2	30 mm
Standard	Diffuse	XUFN05321	5 mm
	Thru-beam (colour detection by transparency)	XUFN12301 + XUFZ01	250 mm



Robust and compact

Optical frames for detection of passage of objects

Fork design with integral amplifier for indexing

Analogue output for position control

	Diffuse (1)	Thru-beam (2)	Thru-beam	Diffuse
<b>Max / usable sensing distance</b>	<b>0.07 / 0.05 m</b>	<b>0.12 / 0.18 / 0.25 m</b>	<b>0.03 m</b>	<b>0.20...0.80 m</b>
Fixing (mm)	M8 x 1	direct: 222.5, M5 screws	Fixing centres 47	Fixing ctrs. 30 - 11P cable gland
Case M (metal) P (plastic)	M	M	P	P
Sensitivity adjustment potentiometer	—		—	—
Setting-up assistance LEDs (°)	—	°	—	°
Temperature range (°C)	- 25...+ 55	0...+ 60	- 5...+ 55	- 25...+ 60
Degree of protection (conforming to IEC 60529)	IP67	IP65	IP54	IP67

### Sensors for d.c. applications (solid-state output: transistor)

Connection: pre-cabled (2 m)						
Dimensions (mm) Ø x L or H x W x D		Ø8 x 40	—	58 x 14 x 68	—	
<b>Transmitter/Receiver 3-wire PNP</b>	NO	XUAH0515	—	XUVH0312	—	
	NC	XUAH0525	—	—	—	
	<b>3-wire NPN</b>	NO	XUAJ0515	—	XUVJ0312	—
		NC	XUAJ0525	—	—	—
<b>Transmitter/Receiver 3-wire PNP</b>	NO / NC programmable	—	—	—	—	
	<b>3-wire NPN</b>	NO / NC programmable	—	—	—	
Connection: connector						
Dimensions (mm) Ø x L or H x W x L		Ø8 x 46	205 / 265 / 335 x 25 x 230	—	—	
<b>Transmitter/Receiver 3-wire PNP</b>	NO	XUAH0515S	—	—	—	
	NC	XUAH0525S	—	—	—	
	<b>3-wire NPN</b>	NO	XUAJ0515S	—	—	—
		NC	XUAJ0525S	—	—	—
<b>Transmitter/Receiver 3-wire PNP</b>	NO / NC programmable	—	—	—	—	
	<b>3-wire NPN</b>	NO / NC programmable	—	—	—	
<b>Transmitter/Receiver 3-wire PNP/NPN programmable output ON or OFF</b>	internal size 200 x 120 mm	—	XUVF120M12	—	—	
	internal size 200 x 180 mm	—	XUVF180M12	—	—	
	internal size 200 x 250 mm	—	XUVF250M12	—	—	
Connection: screw clamp terminals						
Dimensions (mm) H x W x D		—	—	—	86 x 27 x 83	
<b>Receiver or T/R 3-wire PNP</b>		—	—	—	XUJK803538	
Supply voltage limits, min/max (V) including ripple		10...30	18...30	19...38	20...30	
Switching capacity, max (mA)		100	400	150	max: 20, min: 4	
Overload and short-circuit protection (★) / LED output state indicator (°)		★ / °	★ / °	★ / °	★ / °	
Switching frequency (Hz)		700	500	1000	10000	

### Multi-current/multi-voltage sensors for a.c. or d.c. applications / (relay output, 1 C/O)

Connection: pre-cabled (2 m)					
<b>Relay output: Transmitter/Receiver 5-wire type light switching</b>		—	—	—	—
Connection: screw clamp terminals					
Dimensions (mm) H x W x D		—	—	—	—
<b>T/R dark switching (buzzer)</b>		—	—	—	—
Supply voltage limits, min/max (V) 50-60 Hz		—	—	—	—
Switching capacity		—	—	—	—
LED output state indicator (°)		—	—	—	—
Time delay (time delay models only) (seconds)		—	—	—	—
Switching frequency (Hz)		—	—	—	—

(1) Thru-beam system also available.

(2) "U" models available.

(3) With 4...20 mA analogue output.

# Food and beverage processing series <sup>(1)</sup>

# Buildings series



Laser class II



Very long sensing distance or accurate sensing

High excess gain for resistance to accumulated dirt

Stainless steel version for resistance to harsh agents

Access control

With integral buzzer for access monitoring

Thru-beam laser	Thru-beam	Polarised reflex	Diffuse	Reflex	Reflex
<b>500 / 100 m</b>	<b>70 / 50 m</b>	<b>3 / 2 m</b>	<b>0.15 / 0.10 m</b>	<b>9 / 6 m</b>	<b>9 / 6 m</b>
M18 x 1	M18 x 1	M18 x 1	M18 x 1	direct or bracket (fixing centres 30), M4 screws	P
P	M	M (stainless steel)	M (stainless steel)	P	P
		-	-	-	-
- 10...+ 45	- 25...+ 55	- 25...+ 55	- 25...+ 55	- 25...+ 55	- 25...+ 55
IP67	IP67	IP67	IP67	IP67	IP67

-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	XU9N18PP341	XU5N18PP341
-	-	XU9N18NP341	XU5N18NP341
Ø18 x 76	M18 x 95	-	-
-	XU2M18AP20D (3)	-	-
-	-	-	-
-	-	-	-
-	-	-	-
<b>XU2P18PP340DL</b>	-	XU9N18PP341D	XU5N18PP341D
XU2P18NP340DL	-	XU9N18NP341D	XU5N18NP341D
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
10...30	10...30	10...30	10...30
100	100	100	100
★ / °	★ / °	★ / °	★ / °
500	30	500	500

Sold in kit form in blister pack, comprising:

- reflex photo-electric sensor
- 50 x 50 mm reflector
- fixings
- installation instructions

Sold in kit form in blister pack, comprising:

- reflex photo-electric sensor
- Ø 80 mm reflector
- fixings
- installation instructions

-	-	-	-	XULM06031H60	-
-	-	-	-	70 x 18 x 45	85 x 27 x 61
-	-	-	-	-	XUJB06031H60
-	-	-	-	20...264 a.c./d.c.	20...264 a.c./20...60 d.c.
-	-	-	-	Relay output: 2A, cos φ = 1 / 0.5A cos φ = 0.4	
-	-	-	-	°	°
-	-	-	-	-	0.3...3
-	-	-	-	20	20

Non flush mountable in metal  
Flush mountable in metal

**Osiconcept®**  
Offrir la simplicité par l'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
<b>Nominal sensing distance Sn</b>	<b>15 mm</b>	<b>25 mm</b>	<b>60 mm</b>	<b>5 mm</b>
Usable sensing distance S (mm) flush mountable / non flush mountable	0...8 / 0...12	0...12 / 0...20	0...32 / 0...48	0...2.7 / 0...4
Fine adjustment zone (mm) flush mountable / non flush mountable	5...10 / 5...15	8...15 / 8...25	20...40 / 20...60	1.7...3.4 / 1.7...5
Suitability for flush mounting in metal	flush mountable or non flush mountable via Osiconcept teach mode			
Case M (metal) P (plastic)	P	P	P	P
Temperature range (°C)	- 25...+ 70	- 25...+ 70	- 25...+ 70	- 25...+ 70
Degree of protection (conforming to IEC 60529)	pre-cabled: IP68 (with connector: IP67)			IP67

## Sensors for d.c. applications ≡ (3-wire)

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
<b>3-wire</b>	<b>PNP</b>	NO	<b>XS8E1A1PAL2</b>	<b>XS8C1A1PAL2</b>	<b>XS8D1A1PAL2</b>	–
		NC	XS8E1A1PBL2	XS8C1A1PBL2	XS8D1A1PBL2	–
	<b>NPN</b>	NO	<b>XS8E1A1NAL2</b>	<b>XS8C1A1NAL2</b>	<b>XS8D1A1NAL2</b>	–
		NC	XS8E1A1NBL2	XS8C1A1NBL2	XS8D1A1NBL2	–
Connection: M8 or M12 connector			<b>Snap-C® compatible</b> on M12 only			
<b>3-wire</b>	<b>PNP</b>	NO	<b>XS8E1A1PAM8</b>	<b>XS8C1A1PAM8</b>	<b>XS8D1A1PAM12</b>	<b>XS612B2PAL01M12 (2)</b>
		NC	XS8E1A1PBM8	XS8C1A1PBM8	XS8D1A1PBM12	XS612B2PBL01M12 (2)
	<b>NPN</b>	NO	<b>XS8E1A1NAM8</b>	<b>XS8C1A1NAM8</b>	<b>XS8D1A1NAM12</b>	<b>XS612B2NAL01M12 (2)</b>
		NC	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 a.c. or d.c. applications ≈ (2-wire)

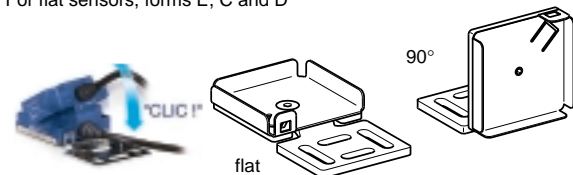
Connection: pre-cabled, PvR (2 m)						
Dimensions (mm) Ø x L or W x H x D				26 x 26 x 13	40 x 40 x 15	80 x 80 x 26 –
<b>2-wire</b>	<b>a.c./d.c. without short-circuit protection (1)</b>	NO	<b>XS8E1A1MAL2</b>	<b>XS8C1A1MAL2</b>	<b>XS8D1A1MAL2</b>	–
		NC	XS8E1A1MBL2	XS8C1A1MBL2	XS8D1A1MBL2	–
Connection: 1/2" 20 UNF connector						
<b>2-wire</b>	<b>a.c./d.c. without short-circuit protection (1)</b>	NO	<b>XS8E1A1MAL01U20</b>	<b>XS8C1A1MAL01U20</b>	<b>XS8D1A1MAU20</b>	–
		NC	XS8E1A1MBL01U20	XS8C1A1MBL01U20	XS8D1A1MBU20	–
Supply voltage limits, min/max (V) including ripple on d.c.			20...264	20...264	20...264	–
Switching capacity, max (mA)			200 ~ or ≡	300 ~ / 200 ≡	300 ~ / 200 ≡	–
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) It is essential to connect a 0.4 A quick-blow fuse in series with the load.

## Accessories

### Fixing

For flat sensors, forms E, C and D

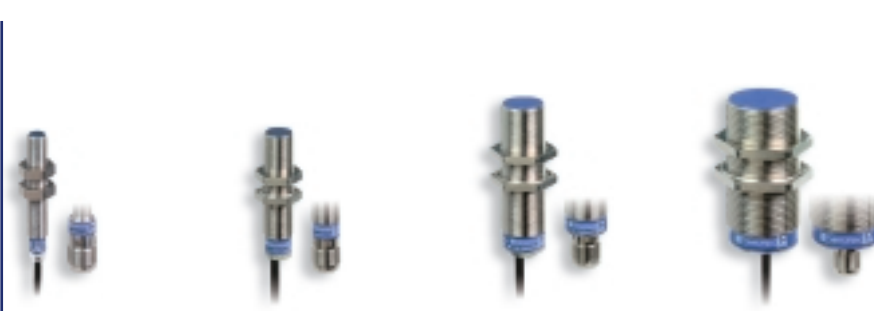


	flat	90°	substitution of block type sensors XSE / XSC / XSD
Form E	<b>XSZBE00</b>	<b>XSZBE90</b>	<b>XSZBE10</b>
Form C	<b>XSZBC00</b>	<b>XSZBC90</b>	<b>XSZBC10</b>
Form D	–	–	<b>XSZBD10</b>

Fixing clamp with indexing pin for cylindrical sensors



M8	<b>XSZB108</b>
M12	<b>XSZB112</b>
M18	<b>XSZB118</b>
M30	<b>XSZB130</b>



Osiconcept®

Osiconcept®

M18	M30	M8	M12	M18	M30
9 mm	18 mm	2.5 mm	4 mm	8 mm	15 mm
0...4.8 / 0...7.2	0...8.8 / 0...14.4	0...2	0...3.2	0...6.4	0...12
3...6 / 3...9	6...11 / 6...18	-	-	-	-
flush or non flush mountable via Osiconcept teach mode		flush mountable	flush mountable	flush mountable	flush mountable
M	M	M	M	M	M
- 25...+ 70	- 25...+ 70	- 25...+ 70	- 25...+ 70	- 25...+ 70	- 25...+ 70
IP67		IP67	pre-cabled: IP68 (with connector: IP67)		

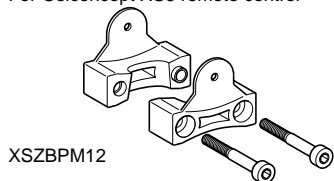
M18 x 67	M30 x 71	M8 x 50	M12 x 50	M18 x 60	M30 x 60
-	-	<b>XS608B1PAL2</b>	<b>XS612B1PAL2</b>	<b>XS618B1PAL2</b>	<b>XS630B1PAL2</b>
-	-	XS608B1PBL2	XS612B1PBL2	XS618B1PBL2	XS630B1PBL2
-	-	<b>XS608B1NAL2</b>	<b>XS612B1NAL2</b>	<b>XS618B1NAL2</b>	<b>XS630B1NAL2</b>
-	-	XS608B1NBL2	XS612B1NBL2	XS618B1NBL2	XS630B1NBL2
<b>XS618B2PAL01M12 (2)</b>	<b>XS630B2PAL01M12 (2)</b>	<b>XS608B1PAM12</b>	<b>XS612B1PAM12</b>	<b>XS618B1PAM12</b>	<b>XS630B1PAM12</b>
XS618B2PBL01M12 (2)	XS630B2PBL01M12 (2)	XS608B1PBM12	XS612B1PBM12	XS618B1PBM12	XS630B1PBM12
<b>XS618B2NAL01M12 (2)</b>	<b>XS630B2NAL01M12 (2)</b>	<b>XS608B1NAM12</b>	<b>XS612B1NAM12</b>	<b>XS618B1NAM12</b>	<b>XS630B1NAM12</b>
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
-	-	-	<b>XS612B1MAL2</b>	<b>XS618B1MAL2</b>	<b>XS630B1MAL2</b>
-	-	-	<b>XS612B1MBL2</b>	<b>XS618B1MBL2</b>	<b>XS630B1MBL2</b>
-	-	-	<b>XS612B1MAU20</b>	<b>XS618B1MAU20</b>	<b>XS630B1MAU20</b>
-	-	-	<b>XS612B1MBU20</b>	<b>XS618B1MBU20</b>	<b>XS630B1MBU20</b>
-	-	-	20...264	20...264	20...264
-	-	-	200	300 ~ / 200 ---	300 ~ / 200 ---
-	-	-	° / -	° / -	° / -
-	-	-	. 1.5	. 1.5	. 1.5
-	-	-	. 5.5	. 5.5	. 5.5
-	-	-	25 ~ / 1000 ---	25 ~ / 1000 ---	25 ~ / 500 ---

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

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

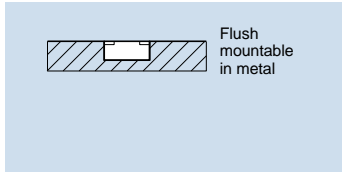
For Osiconcept XS6 remote control



XSZBPM12

length 5 m w/o LED	pre-wired elbowed	pre-wired straight	screw terminal	Snap-C
M8	XZCP0666L5	<b>XZCP0566L5</b>	XZCC8FCM30S	-
M12	XZCP1241L5	<b>XZCP1141L5</b>	XZCC12FCM40B	<b>XZCC12FDM40V</b>
U20	XZCP1965L5	XZCP1865L5	XZCC20FCM30B	-

The above products are only a selection of the most popular products, for other versions: please refer to the Detection Components catalogue.



	Form J 8 x 22	Form F 15 x 32	Form E 26 x 26	Form C 40 x 40
<b>Nominal sensing distance S<sub>n</sub></b>	<b>2.5 mm</b>	<b>5 mm</b>	<b>10 mm</b>	<b>15 mm</b>
Operating zone (mm)	0...2	0...4	0...8	0...12
Suitability for flush mounting in metal	flush mountable	flush mountable	flush mountable	flush mountable
Case M (metal) P (plastic)	P	P	P	P
Temperature range (°C)	- 25...+ 70	- 25...+ 70	- 25...+ 70	- 25...+ 70
Degree of protection (conforming to IEC 60529)	pre-cabled: IP68 (with connector: IP67)			

## Sensors for d.c. applications $\equiv$ (3-wire)

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	<b>XS7J1A1PAL2</b>	<b>XS7F1A1PAL2</b>	XS7E1A1PAL2	XS7C1A1PAL2
		NC	XS7J1A1PBL2	XS7F1A1PBL2	XS7E1A1PBL2	XS7C1A1PBL2
	NPN	NO	<b>XS7J1A1NAL2</b>	<b>XS7F1A1NAL2</b>	XS7E1A1NAL2	XS7C1A1NAL2
		NC	XS7J1A1NBL2	XS7F1A1NBL2	XS7E1A1NBL2	XS7C1A1NBL2
Connection: M8 or M12 connector			Snap-C <sup>®</sup> compatible on M12 only			
3-wire	PNP	NO	<b>XS7J1A1PAL01M8 (1)</b>	<b>XS7F1A1PAL01M8 (1)</b>	XS7E1A1PAM8	XS7C1A1PAM8
		NC	XS7J1A1PBL01M8 (1)	XS7F1A1PBL01M8 (1)	XS7E1A1PBM8	XS7C1A1PBM8
	NPN	NO	<b>XS7J1A1NAL01M8 (1)</b>	<b>XS7F1A1NAL01M8 (1)</b>	XS7E1A1NAM8	XS7C1A1NAM8
		NC	XS7J1A1NBL01M8 (1)	XS7F1A1NBL01M8 (1)	XS7E1A1NBM8	XS7C1A1NBM8
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 (°)			★ / °	★ / °	★ / °	★ / °
Voltage drop, closed state (V) at I nominal			. 2	. 2	. 2	. 2
Switching frequency (Hz)			2000	2000	1000	1000

## Sensors for d.c. applications $\equiv$ (2-wire)

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 polarised	NO	XS7J1A1DAL2	XS7F1A1DAL2	XS7E1A1DAL2	XS7C1A1DAL2
		NC	XS7J1A1DBL2	XS7F1A1DBL2	XS7E1A1DBL2	XS7C1A1DBL2
Connection: M8 or M12 connector			Snap-C <sup>®</sup> compatible on M12 only			
2-wire	non polarised	NO	XS7J1A1DAL01M8 (1)	XS7F1A1DAL01M8 (1)	XS7E1A1DAM8	XS7C1A1DAM8
		NC	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) with M8 end connector.

## Accessories

Fixing			substitution of block type sensors XSE / XSC / XSD			Fixing clamp with indexing pin for cylindrical sensors	
<p>For flat sensors, forms E, C and D</p>	flat	90°	Form E	Form C	Form D	M8	<b>XSZB108</b>
	flat	90°	Form E	Form C	Form D	M12	<b>XSZB112</b>
	flat	90°	Form E	Form C	Form D	M18	<b>XSZB118</b>
	flat	90°	Form E	Form C	Form D	M30	<b>XSZB130</b>









Form D 80 x 80	M8	M12	M18	M30
<b>40 mm</b>	<b>1.5 mm</b>	<b>2 mm</b>	<b>5 mm</b>	<b>10 mm</b>
0...32	0...1.2	0...1.6	0...4	0...8
flush mountable	flush mountable	flush mountable	flush mountable	flush mountable
P	M	M	M	M
- 25...+ 70	- 25...+ 70	- 25...+ 70	- 25...+ 70	- 25...+ 70
pre-cabled: IP68 (with connector: IP67)	IP67	pre-cabled: IP68 (with connector: IP67)		

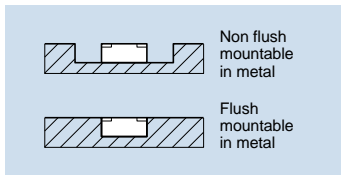
80 x 80 x 26	M8 x 33	M12 x 33	M18 x 36.5	M30 x 40.6
XS7D1A1PAL2	<b>XS508B1PAL2</b>	<b>XS512B1PAL2</b>	<b>XS518B1PAL2</b>	<b>XS530B1PAL2</b>
XS7D1A1PBL2	XS508B1PBL2	XS512B1PBL2	XS518B1PBL2	XS530B1PBL2
XS7D1A1NAL2	<b>XS508B1NAL2</b>	<b>XS512B1NAL2</b>	<b>XS518B1NAL2</b>	<b>XS530B1NAL2</b>
XS7D1A1NBL2	XS508B1NBL2	XS512B1NBL2	XS518B1NBL2	XS530B1NBL2
XS7D1A1PAM12	<b>XS508B1PAM8</b>	<b>XS512B1PAM12</b>	<b>XS518B1PAM12</b>	<b>XS530B1PAM12</b>
XS7D1A1PBM12	XS508B1PBM8	XS512B1PBM12	XS518B1PBM12	XS530B1PBM12
XS7D1A1NAM12	<b>XS508B1NAM8</b>	<b>XS512B1NAM12</b>	<b>XS518B1NAM12</b>	<b>XS530B1NAM12</b>
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
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

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

				
length 5 m without LED	pre-wired elbowed	pre-wired straight	screw terminal	Snap-C
M8 (or S)	XZCP0666L5	<b>XZCP0566L5</b>	XZCC8FCM30S	–
M12 (or D)	XZCP1241L5	<b>XZCP1141L5</b>	XZCC12FCM40B	<b>XZCC12FDM40V</b>
U20 (or K)	XZCP1965L5	XZCP1865L5	XZCC20FCM30B	–

The above products are only a selection of the most popular products, for other versions: **please refer to the Detection Components catalogue.**



	M8	M12	M18	M30
<b>Nominal sensing distance Sn</b>	<b>2.5 mm</b>	<b>4 mm</b>	<b>8 mm</b>	<b>15 mm</b>
Operating zone (mm)	0...2	0...3.2	0...6.4	0...12
Suitability for flush mounting in metal	non flush mountable	non flush mountable	non flush mountable	non flush mountable
Case M (metal) P (plastic)	P	P	P	P
Temperature range (°C)	- 25...+ 80	- 25...+ 80	- 25...+ 80	- 25...+ 80
Degree of protection (conforming to IEC 60529)	pre-cabled: IP68 (with connector: IP67)			

### Sensors for d.c. applications $\equiv$ (3-wire)

Connection: pre-cabled, PvR (2 m)			M8 x 33	M12 x 33	M18 x 33.5	M30 x 40.5
3-wire	PNP	NO	XS4P08PA340	XS4P12PA340	XS4P18PA340	XS4P30PA340
		NC	XS4P08PB340	XS4P12PB340	XS4P18PB340	XS4P30PB340
	NPN	NO	XS4P08NA340	XS4P12NA340	XS4P18NA340	XS4P30NA340
		NC	XS4P08NB340	XS4P12NB340	XS4P18NB340	XS4P30NB340
	0...10 V output	plastic	–	–	–	–
	4...20 mA output	metal flush mountable	–	–	–	–
		plastic flush mountable	–	–	–	–
plastic non flush mntble		–	–	–	–	
Connection: M8 or M12 connector			M8 x 33	M12 x 33	M18 x 33.5	M30 x 40.5
3-wire	PNP	NO	XS4P08PA340S	XS4P12PA340D	XS4P18PA340D	XS4P30PA340D
		NC	XS4P08PB340S	XS4P12PB340D	XS4P18PB340D	XS4P30PB340D
	NPN	NO	XS4P08NA340S	XS4P12NA340D	XS4P18NA340D	XS4P30NA340D
		NC	XS4P08NB340S	XS4P12NB340D	XS4P18NB340D	XS4P30NB340D
	0...10 V output		–	–	–	–
	4...20 mA output		–	–	–	–
	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 protection (★) / LED output state indicator (°)		★ / °	★ / °	★ / °	★ / °	
Linearity error		–	–	–	–	
Voltage drop, closed state (V) at I nominal		. 2	. 2	. 2	. 2	
Switching frequency (Hz)		5000	5000	2000	1000	
Operating frequency (Hz)		–	–	–	–	

### Multi-current/multi-voltage sensors for a.c. or d.c. applications $\simeq$ (2-wire)

Connection: pre-cabled, PvR (2 m)			M8 x 50	M12 x 50	M18 x 60	M30 x 60
2-wire	without short-circuit protection (1)	NO	XS4P08MA230	XS4P12MA230	XS4P18MA230	XS4P30MA230
		NC	XS4P08MB230	XS4P12MB230	XS4P18MB230	XS4P30MB230
Connection: U20 connector			M8 x 50	M12 x 50	M18 x 60	M30 x 60
2-wire	without short-circuit protection (1)	NO	XS4P08MA230K	XS4P12MA230K	XS4P18MA230K	XS4P30MA230K
		NC	XS4P08MB230K	XS4P12MB230K	XS4P18MB230K	XS4P30MB230K
Supply voltage limits, min/max (V) including ripple on d.c.		20...264	20...264	20...264	20...264	
Switching capacity, max (mA)		100	200	300 $\simeq$ / 200 $\equiv$	300 $\simeq$ / 200 $\equiv$	
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 $\simeq$ / 3000 $\equiv$	25 $\simeq$ / 3000 $\equiv$	25 $\simeq$ / 2000 $\equiv$	25 $\simeq$ / 1000 $\equiv$	

(1) It is essential to connect a 0.4 A quick-blow fuse in series with the load.

## Accessories

### Fixing

For fixing accessories see page 14.

# Analogue (Position control)

Forms F, E, C and D:  
available 1<sup>st</sup> half 2004

Preliminary information



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	10 mm	15 mm	40 mm	M: 2 mm / P: 4 mm	M: 5 mm / P: 8 mm	M: 10 mm / P: 15 mm
1...4	1...10	2...15	5...40	M: 0.2...2 / P: 0.4...4	M: 0.5...5 / P: 0.8...8	M: 1...10 / P: 1.5...15
flush mountable	flush mountable	flush mountable	flush mountable	flush/non flush mountable	flush/non flush mountable	flush/non flush mountable
P	P	P	P	M or P	M or P	M or P
- 25...+ 70	- 25...+ 70	- 25...+ 70	- 25...+ 70	- 25...+ 70	- 25...+ 70	- 25...+ 70
pre-cabled: IP68 (with connector: IP67)						

15 x 32 x 8	26 x 26 x 13	40 x 40 x 15	80 x 80 x 26	Ø 12 x 50	Ø 18 x 50	Ø 30 x 52.5
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
XS9F111A1L2	XS9E111A1L2	XS9C111A1L2	XS9D111A1L2	XS4P12AB110	XS4P18AB110	XS4P30AB110
-	-	-	-	XS1M12AB120	XS1M18AB120	XS1M30AB120
XS9F111A2L2	XS9E111A2L2	XS9C111A2L2	XS9D111A2L2	-	-	-
-	-	-	-	<b>XS4P12AB120</b>	<b>XS4P18AB120</b>	<b>XS4P30AB120</b>
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
XS9F111A1L01M8 (2)	XS9E111A1L01M12 (2)	XS9C111A1L01M12 (2)	XS9D111A1M12	-	-	-
<b>XS9F111A2L01M8 (2)</b>	<b>XS9E111A2L01M12 (2)</b>	<b>XS9C111A2L01M12 (2)</b>	<b>XS9D111A2M12</b>	-	-	-
10...36	10...36	10...36	10...36	10...38	10...38	10...38
-	-	-	-	-	-	-
-	-	-	-	-	-	-
10 %	10 %	10 %	10 %	10 %	10 %	10 %
-	-	-	-	-	-	-
-	-	-	-	-	-	-
2000	1000	1000	100	1500	500	300

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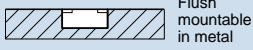
(2) Flying lead (L = 0.15 m) with end connector.

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

For connection accessories see page 15.

The above products are only a selection of the most popular products, for other versions: **please refer to the Detection Components catalogue.**

## Application Miniature cylindrical (Assembly)



	Ø 4	M5	Ø 6.5
<b>Nominal sensing distance Sn</b>	<b>1 mm</b>	<b>1 mm</b>	<b>1.5 mm</b>
Operating zone (mm)	0...0.8	0...0.8	0...1.2
Suitability for flush mounting in metal	flush mountable		
Case M (metal) P (plastic)	M		
Speed adjustment of passing object	-		
Temperature range (°C)	- 25...+ 70		
Degree of protection (conforming to IEC 60529)	IP67		
Dimensions (mm) Ø x L or W x H x D	Ø 4 x 29	M5 x 29	M6.5 x 33
Maximum speed of passing object (impulses/min)	-		
Adjustable frequency range (impulses/min)	-		

### Sensors for d.c. applications ≡ (3-wire)

Connection: pre-cabled, PvR (2 m)						
<b>4-wire</b>	<b>PNP / NPN NO / NC</b>	programmable	-	-	-	-
<b>3-wire</b>	<b>PNP</b>	NO	<b>XS1L04PA310</b>	<b>XS1N05PA310</b>	<b>XS1L06PA340</b>	
		NC	slow version	-	-	-
		NC	fast version	-	-	-
		NO	XS1L04NA310	XS1N05NA310	XS1L06NA340	
Connection: M8 or M12 connector						
<b>3-wire</b>	<b>PNP</b>	NO	<b>XS1L04PA310S</b>	<b>XS1N05PA311S (2)</b>	<b>XS1L06PA340S</b>	
		NC	-	-	-	-
	<b>NPN</b>	NO	XS1L04NA310S	XS1N05NA311S (2)	XS1L06NA340S	
		NC	-	-	-	-
Connection: M12 connector						
<b>4-wire</b>	<b>PNP / NPN NO / NC</b>	programmable	-	-	-	-
Supply voltage limits, min/max (V) including ripple			5...30	5...30	10...38	
Switching capacity, max (mA)			100	100	200	
Short-circuit protection (★) / LED output state indicator (°) / Power on LED (°)			★ / ° / -	★ / ° / -	★ / ° / -	
Voltage drop, closed state (V) at I nominal			. 2	. 2	. 2	
Switching frequency (Hz)			5000	5000	2500	

(2) Stainless steel sensors, Sn = 0.8 mm.

### Multi-current/multi-voltage sensors for a.c. or d.c. applications ≈ (2-wire)

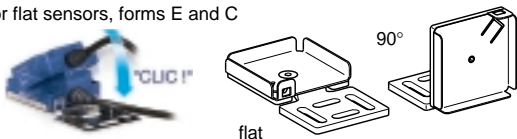
Connection: pre-cabled, PvR (2 m)						
<b>2-wire</b>	<b>a.c./d.c. without short-circuit protection (4)</b>	NO	-	-	-	
		NC	-	-	-	
		NC	slow version	-	-	-
		NC	fast version	-	-	-
Supply voltage limits, min/max (V), 50-60 Hz			-	-	-	
Switching capacity, max (mA)			-	-	-	
LED output state indicator (°) / Power on LED (°)			-	-	-	
Residual current, open state (mA)			-	-	-	
Voltage drop, closed state (V) at I nominal			-	-	-	
Switching frequency (Hz)			-	-	-	

(4) It is essential to connect a 0.4 A quick-blow fuse in series with the load.

### Accessories

#### Fixing clamps

For flat sensors, forms E and C



	flat	90°
Form E	<b>XSZBE00</b>	<b>XSZBE90</b>
Form C	<b>XSZBC00</b>	<b>XSZBC90</b>

Fixing clamp with indexing pin for cylindrical sensors



M4	<b>XSZB104</b>	M12	<b>XSZB112</b>
M5	<b>XSZB105</b>	M18	<b>XSZB118</b>
M6.5	<b>XSZB165</b>	M30	<b>XSZB130</b>
M8	<b>XSZB108</b>		

## Rotation control

## Fixed sensing distance

(for ferrous or non ferrous materials)



Form E 26 x 26	Form C 40 x 40	M30	M18	M30
<b>10 mm</b>	<b>15 mm</b>	<b>10 mm</b>	<b>5 mm</b>	<b>10 mm</b>
0...8	0...12	0...8	0...4	0...8
flush mountable			flush mountable	
P	P	M	M	M
teach mode	teach mode		-	-
- 25...+ 70			0...+ 50	
IP67			pre-cabled: IP68 (with connector: IP67)	
26 x 26 x 13	40 x 40 x 15	M30 x 81	M18 x 70	M30 x 60
48000	48000	6000...48000 (1)	-	-
6...6000	6...6000	6...150 / 120...3000 (1)	-	-

(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).

-	-	-	XS1M18KPM40	XS1M30KPM40
-	-	-	-	-
-	-	<b>XSAV11373</b>	-	-
-	-	<b>XSAV12373</b>	-	-
-	-	-	-	-
-	-	-	-	-
<b>XS9E11RPBL01M12 (3)</b>	<b>XS9C11RPBL01M12 (3)</b>	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	XS1M18KPM40D	Flying lead with M12 con., L = 0.8 m XS1M30KPM40LD
10...36	10...36	10...58	10...38	
100	200	200	200	
★ / ° / °	★ / ° / °	★ / ° / -	★ / ° / -	
. 2	. 2	. 2	. 2.6	
-	-	-	1000	

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

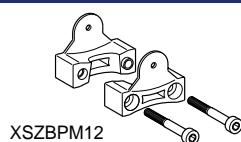
-	-	-	-	-
<b>XS9E11RMBL01U20 (5)</b>	<b>XS9C11RMBL01U20 (5)</b>	-	-	-
-	-	<b>XSAV11801</b>	-	-
-	-	<b>XSAV12801</b>	-	-
20...264	20...264	20...264	-	-
100	300 ~ / 200 ≡	300 ~ / 200 ≡	-	-
° / °	° / °	° / -	-	-
. 1.5	. 1.5	. 1.5	-	-
. 5.5	. 5.5	. 5.7	-	-
-	-	-	-	-

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

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

For remote control XS9...R

For connection accessories see page 15.



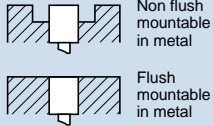
XSZBPM12

# Other technologies

## Capacitive

### Detection of insulating materials

(flush mountable in metal)



	M12	M18	M30	Ø 32
<b>Nominal sensing distance S<sub>n</sub></b>	<b>2 mm</b>	<b>5 mm</b>	<b>10 mm</b>	<b>15 mm</b>
Operating zone (mm)	0...1.44	0...3.6	0...7.2	0...10.8
Suitability for flush mounting in metal	flush mountable			
Case M (metal) P (plastic)	M	M	M	M
Temperature range (°C)	0...+50	-25...+70	-25...+70	-25...+70
Degree of protection (conforming to IEC 60529)	IP67	IP67	IP67	IP63

### Sensors for d.c. applications $\text{---}$

<b>Connection: pre-cabled, PVC (2 m)</b>						
Dimensions (mm) Ø x L or W x D x H			M12 x 50	M18 x 60	M30 x 60	–
<b>3-wire</b>	<b>PNP</b>	NO	XT1M12PA372	XT1M18PA372	XT1M30PA372	–
		NC	XT1M12PB372	XT1M18PB372	XT1M30PB372	–
	<b>NPN</b>	NO	XT1M12NA372	XT1M18NA372	XT1M30NA372	–
<b>Connection: screw clamp terminals</b>						
<b>3-wire</b>	<b>PNP</b>	NO + NC complementary functions	–	–	–	–
	<b>NPN</b>	NO + NC complementary functions	–	–	–	–
<b>Connection: M12 connector (M8 for XX512...)</b>						
<b>4-wire</b>	<b>PNP / NPN</b>	NO	–	–	–	–
Supply voltage limits, min/max (V) including ripple			10...38	–	–	–
Switching capacity, max (mA)			300	–	–	–
Short-circuit protection (★) / LED output state indicator (°)			★ / °	–	–	–
Voltage drop, closed state (V) at I nominal			. 2	–	–	–
Switching frequency (Hz)			100	–	–	–
Ultrasound frequency (kHz)			–	–	–	–

### Multi-current/multi-voltage sensors for a.c. or d.c. applications $\text{~}$ (2-wire)

<b>Connection: pre-cabled, PVC (2 m)</b>						
Dimensions (mm) Ø x L or W x D x H			–	M18 x 60	M30 x 60	Ø 32 x 80
<b>2-wire a.c.</b>		NO	–	XT1M18FA262	XT1M30FA262	XT1L32FA262
		NC	–	XT1M18FB262	XT1M30FB262	XT1L32FB262
<b>Connection: screw clamp terminals</b>						
<b>2-wire a.c.</b>		programmable NO or NC	–	–	–	–
Supply voltage limits, min/max (V) including ripple on d.c.			–	20...264	20...264	90...250
Switching capacity, max (mA)			–	300	300	250
LED output state indicator (°)			–	°	°	°
Residual current, open state (mA)			–	. 1.5 / 120 V	. 1.5 / 120 V	. 7
Voltage drop, closed state (V) at I nominal			–	. 5.5	. 5.5	. 9
Switching frequency (Hz)			–	25	25	10

### Accessories

<b>Fixing</b>		<b>Suitable female plug-in connectors, including pre-wired versions</b>			
Fixing clamp with indexing pin for cylindrical sensors					
M12	<b>XSZB112</b>				
M18	<b>XSZB118</b>	length 5 m without LED	pre-wired, elbowed	pre-wired, straight	screw terminal
M30	<b>XSZB130</b>	M8	<b>XZCP1041L5</b>	<b>XZCP0941L5</b>	XZCC8FCM40S
Ø 32	XUZB32	M12	<b>XZCP1241L5</b>	<b>XZCP1141L5</b>	<b>XZCC12FCM40B</b>

# Ultrasonic

## Detection of conductive materials (non flush mountable in metal)      Detection of any material



40 x 40	M18	M30	Ø 32	M12	M18	M30
15 mm	8 mm	15 mm	20 mm	50 mm	150 mm	1 m
0...10.8	0...5.8	0...10.8	0...14.4	6.4...51	25.4...152	51...991
non flush mountable	non flush mountable			-	-	-
P	P	P	P	P	P	P
- 25...+ 70	- 25...+ 70	- 25...+ 70	- 25...+ 70	- 20...+ 65	0...+ 60	0...+ 60
IP67	IP67	IP67	IP63	IP67	IP67	IP67

40 x 40 x 117	M18 x 60	M30 x 60	-	M12 x 50	M18 x 65	M30 x 85
-	XT4P18PA372	XT4P30PA372	-	-	-	-
-	-	-	-	-	-	-
-	XT4P18NA372	XT4P30NA372	-	-	-	-
XT7C40PC440	-	-	-	-	-	-
XT7C40NC440	-	-	-	-	-	-
-	-	-	-	XX512A1KAM8	XX518A1KAM12	XX630A1KAM12
10...58	10...38	-	-	10...28	10...28	10...28
200	300	-	-	100	100	100
★ / °	★ / °	-	-	★ / °	★ / -	★ / °
. 2	. 2	-	-	. 1	. 1	. 1
100	100	-	-	125	80	10
-	-	-	-	500	500	200

40 x 40 x 117	M18 x 60	M30 x 60	Ø 32 x 80
-	XT4P18FA262	XT4P30FA262	XT4L32FA262
-	-	XT4P30FB262	XT4L32FB262
XT7C40FP262	-	-	-
20...264	20...264	-	90...250
350	300	-	250
°	°	-	°
. 1.5	. 1.5 / 120V	-	. 7
. 5.5	. 5.5	-	. 9
25	25	-	10

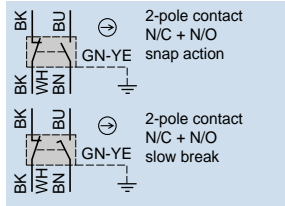
## Rotary encoders

### Opto-electronic, incremental (counting indication)

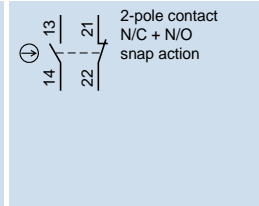


Solid shaft Ø 6		Ø 40	Ø 58
<b>Connection</b>		pre-cabled, PVC (2m)	M23 connector
<b>Resolution</b>	<b>Output stage</b>		
100 points	5 V RS422; 4.5...5.5 V Push Pull 11...30 V	XCC-1406PR01R XCC-1406PR01K	- -
360 points	Push Pull 11...30 V	XCC-1406PR03K	XCC-1506PS03K
500 points	5 V RS422; 4.5...5.5 V Push Pull 11...30 V	XCC-1406PR05R XCC-1406PR05K	XCC-1506PS05R XCC-1506PS05K
1000 points	5 V RS422; 4.5...5.5 V Push Pull 11...30 V	XCC-1406PR10R XCC-1406PR10K	XCC-1506PS10R XCC-1506PS10K
1024 points	5 V RS422; 4.5...5.5 V Push Pull 11...30 V	XCC-1406PR11R XCC-1406PR11K	XCC-1506PS11R XCC-1506PS11K

### XCMD



### XCKT



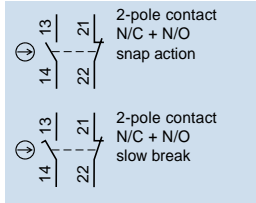
### Miniature design XCMD metal, pre-cabled; fixing by the body or by the head

Type of operator	Metal end plunger	Steel roller plunger	Thermoplastic roller lever	Variable length thermoplastic roller lever	M12 head metal end plunger
Mechanical durability (millions of operating cycles)	10	10	10	10	10
Actuation speed (in m/s)	0.5	0.5	1.5	1.5	0.5
Switches conforming to standard IEC 947-5-1 section 3 ⊕	⊕	⊕	⊕	⊖	⊖
Degree of protection conforming to IEC 60529	IP66 and IP67				
Rated operational characteristics	~ AC 15; B 300 (Ue = 240 V, Ie = 1.5 A) / ∞ DC 13; R 300 (Ue = 250 V, Ie = 0.1 A)				
Cable entry	Pre-cabled, adjustable direction, length = 1 m (other lengths available on request)				
Fixing centres (mm)	20				
Body dimensions (mm) W x D x H	30 x 16 x 50				
Complete switch (2-pole N/C + N/O snap action)	<b>XCMD2110L1</b>	<b>XCMD2102L1</b>	<b>XCMD2115L1</b>	XCMD2145L1	<b>XCMD21F0L1</b>
(2-pole N/C + N/O break before make, slow break)	XCMD2510L1	XCMD2502L1	XCMD2515L1	XCMD2545L1	XCMD25F0L1

⊕ Positive opening operation



### XCKP



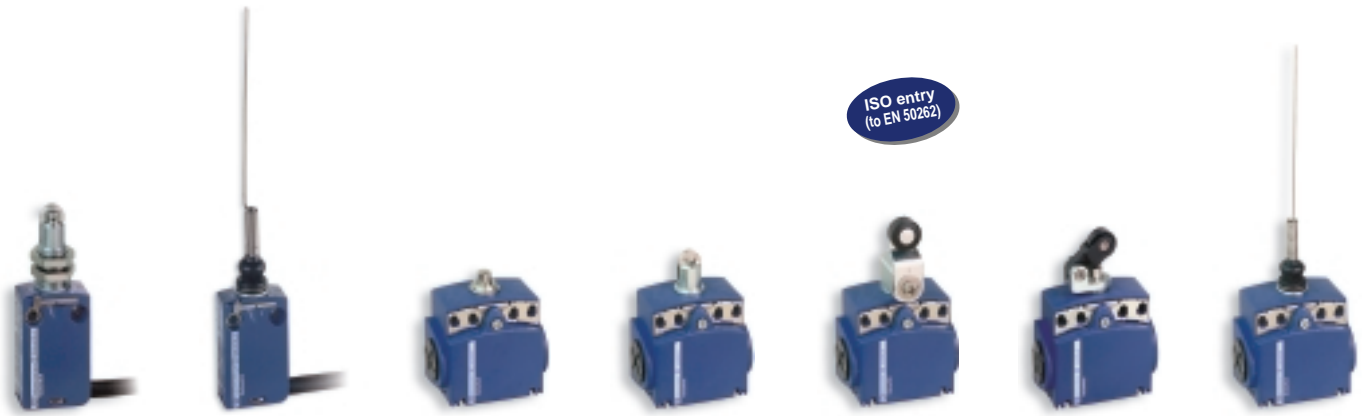
### Compact design XCKD metal and XCKP plastic conforming to standard EN 50047

Type of operator	Metal end plunger	Steel roller plunger	Thermoplastic roller lever plunger, horizontal actuation in 1 direction	M18 head metal end plunger	M18 head steel roller plunger
Mechanical durability (millions of operating cycles)	15	10	15	10	10
Actuation speed (in m/s)	0.5	0.5	1	0.5	0.5
Switches conforming to standard IEC 947-5-1 section 3 ⊕	⊕	⊕	⊕	⊖	⊖
Degree of protection conforming to IEC 60529	IP66 and IP67				
Rated operational characteristics	~ AC 15; A 300 (Ue = 240 V, Ie = 3 A) / ∞ DC 13; Q 300 (Ue = 250 V, Ie = 0.27 A)				
Cable entry	1 tapped entry for ISO M16 x 1.5 cable gland (2)				
Fixing centres (mm)	20	20	20	M18 x 1	M18 x 1
Body dimensions (mm) W x D x H	31 x 30 x 65				
<b>Metal switches</b>					
Complete switch (2-pole N/C + N/O snap action)	<b>XCKD2110P16</b>	<b>XCKD2102P16</b>	<b>XCKD2121P16</b>	<b>XCKD21H0P16</b>	<b>XCKD21H2P16</b>
(2-pole N/C + N/O break before make, slow break)	XCKD2510P16	XCKD2502P16	XCKD2521P16	XCKD25H0P16	XCKD25H2P16
<b>Plastic, double insulated switches</b>					
Complete switch (2-pole N/C + N/O snap action)	<b>XCKP2110P16</b>	<b>XCKP2102P16</b>	<b>XCKP2121P16</b>	<b>XCKP21H0P16</b>	<b>XCKP21H2P16</b>
(2-pole N/C + N/O break before make, slow break)	XCKP2510P16	XCKP2502P16	XCKP2521P16	XCKP25H0P16	XCKP25H2P16

⊕ Positive opening operation

(2) With entry for Pg 11 cable gland, replace P16 by G11.  
Example: XCKD2110P16 becomes XCKD2110G11.  
For other cable entries, see adaptable sub-assemblies on page 25.





ISO entry  
(to EN 50262)

Compact design XCKT, plastic, 2 cable entries						
M12 head steel roller plunger	"Cat's whisker"	Metal end plunger	Steel roller plunger	Thermoplastic roller lever	Thermoplastic roller lever plunger, horizontal actuation	"Cat's whisker"
10	5	15	10	10	15	5
0.1	1	0.5	0.5	1.5	1	1
⊖	–	⊖	⊖	⊕	⊕	–
IP66 and IP67						
~ AC 15; A 300 (Ue = 240 V, Ie = 3 A) / --- DC 13; Q 300 (Ue = 250 V, Ie = 0.27 A)						
2 tapped entries for ISO M16 x 1.5 cable gland (1)						
20 or 40						
58 x 30 x 51						
<b>XCMD21F2L1</b>	XCMD2106L1	<b>XCKT2110P16</b>	<b>XCKT2102P16</b>	<b>XCKT2118P16</b>	<b>XCKT2121P16</b>	XCKT2106P16
XCMD25F2L1	XCMD2506L1	–	–	–	–	–

(1) With entries for Pg 11 cable gland, replace P16 by G11. Example: XCKT2110P16 becomes XCKT2110G11








ISO entry  
(to EN 50262)

With reset facility X CPR and X CDR								
Thermoplastic roller lever	Variable length thermoplastic roller lever	Rubber roller lever Ø 50 mm	"Cat's whisker"	Metal end plunger	Steel roller lever plunger	Thermoplastic roller lever plunger, horizontal actuation in 1 direction	Thermoplastic roller lever plunger, vertical actuation in 1 direction	Thermoplastic roller lever
10	10	10	5	1	1	1	1	1
1.5	1.5	1.5	1	0.5	0.5	1	1	1.5
⊖	⊖	⊖	–	⊖	⊖	⊕	⊕	⊕
IP66 and IP67								
~ AC 15; A 300 (Ue = 240 V, Ie = 3 A) / --- DC 13; Q 300 (Ue = 250 V, Ie = 0.27 A)								
1 tapped entry for ISO M20 x 1.5 cable gland (3)								
20	20	20	20	20	20	20	20	20
31 x 30 x 95								
<b>XCKD2118P16</b>	XCKD2145P16	XCKD2139P16	XCKD2106P16	XCDR2110P20	XCDR2102P20	XCDR2121P20	XCDR2127P20	XCDR2118P20
XCKD2518P16	XCKD2545P16	XCKD2539P16	XCKD2506P16	XCDR2510P20	XCDR2502P20	XCDR2521P20	XCDR2527P20	XCDR2518P20
<b>XCKP2118P16</b>	XCKP2145P16	XCKP2139P16	XCKP2106P16	XCPR2110P20	XCPR2102P20	XCPR2121P20	XCPR2127P20	XCPR2118P20
XCKP2518P16	XCKP2545P16	XCKP2539P16	XCKP2506P16	XCPR2510P20	XCPR2502P20	XCPR2521P20	XCPR2527P20	XCPR2518P20






(3) With entries for Pg 13.5 cable gland, replace P20 by G13.  
Example: XCDR2110P20 becomes XCDR2110G13  
For other cable entries, see adaptable sub-assemblies on page 25

### Heads - common to miniature and compact bodies

#### Metal plunger and multi-directional heads

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



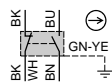
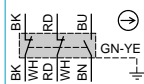
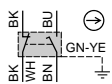
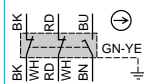
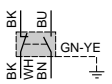
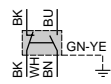
#### Metal rotary heads and levers

Description	Rotary head without lever, spring return, for actuation from LH or RH side	Thermoplastic roller lever, track: 24/31 mm (ZCMD) 29/36 mm (ZCD/P/T)	Steel roller lever, track: 24/31 mm (ZCMD) 29/36 mm (ZCD/P/T)	Thermoplastic roller lever, track: 16/39 mm (ZCMD) 21/44 mm (ZCD/P/T)	Steel roller lever, track: 16/39 mm (ZCMD) 21/44 mm (ZCD/P/T)
					
Reference	↻ ZCE01	↻ ZCY15 (2)	↻ ZCY16 (2)	↻ ZCY25 (2)	↻ ZCY26 (2)

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

### Bodies

#### Miniature

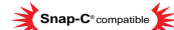
						
Type of contact						
	2-pole N/C + N/O Snap action	3-pole N/C+N/C+N/O Snap action	2-pole N/C + N/O Slow break	3-pole N/C+N/C+N/O Slow break	2-pole N/C + N/O Snap action M12 5-pin connector	1 C/O single-pole Snap action M12 4-pin connector
Reference of metal body	ZCMD21	ZCMD39	ZCMD25	ZCMD37	ZCMD21C12	ZCMD21M12
Reference of plastic body	-	-	-	-	-	-

### Connection of miniature bodies

Specific pre-cabled connection components					Option: pre-wired M12 connector, L = 2 m
	for ZCMD21	for ZCMD39	for ZCMD25	for ZCMD37	5-pin
L = 1 m	ZCMC21L1	ZCMC39L1	ZCMC25L1	ZCMC37L1	
L = 2 m	ZCMC21L2	ZCMC39L2	ZCMC25L2	ZCMC37L2	
L = 5 m	ZCMC21L5	ZCMC39L5	ZCMC25L5	ZCMC37L5	XZCP1164L2
					XZCP1169L2

↻ Positive opening operation

(3) compatible

 Snap-C compatible

# and compact switches

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

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

## Compact



Type of contact							
Ref. metal body	ZCD21	ZCD39	ZCD25	ZCD37	ZCD21M12	-	-
Ref. plastic body	ZCP21	ZCP39	ZCP25	ZCP37	-	ZCP21M12	ZCT21P16 ZCT25P16

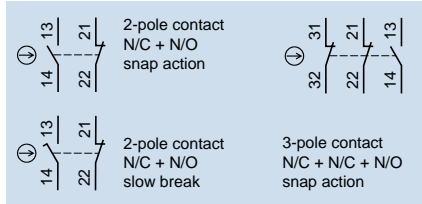
## Connection of compact bodies

Interchangeable outlet for cable gland							Option: pre-wired M12 connector, L = 2 m	ZCT Pg 11 cable gland versions: replace the suffix P16 by G11. Example: ZCT21P16 becomes ZCT21G11
Description	For ISO M16 cable gland	For ISO M20 cable gland	For Pg 11 cable gland	For Pg 13.5 cable gland	For 1/2" NPT cable gland	For PF 1/2 (G12) cable gland	5-pin	ZCT 1/2 NPT versions: replace the suffix P16 by N12 (adaptor). Example: ZCT21P16 becomes ZCT21N12
Metal	ZCDEP16	ZCDEP20	ZCDEG11	ZCDEG13	ZCDEN12	ZCDEF12	4-pin	
Plastic	ZCPEP16	ZCPEP20	ZCPEG11	ZCPEG13	ZCPEN12	ZCPEF12	XZCP1164L2 XZCP1169L2	

# Osiswitch Classic

Limit switches

## XCKJ, XCKS, XCKM



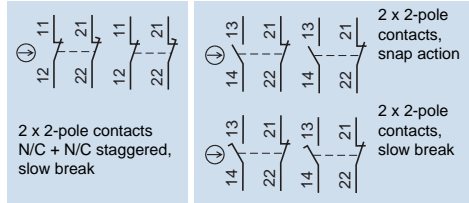
ISO entry  
(to EN 50262)

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

Type of operator	Metal end plunger	Steel roller plunger	Thermoplastic roller lever	Variable length thermoplastic roller lever	
Mechanical durability (millions of operating cycles)	30	25	30	30	
Actuation speed (in m/s)	0.5	1	1.5	1.5	
Degree of protection conforming to IEC 60529	IP667				
Rated operational characteristics	~ AC 15; A 300 (Ue = 240 V, Ie = 3 A) / ≡ DC 13; Q 300 (Ue = 250 V, Ie = 0.27 A)				
Cable entry (1)	1 tapped entry for ISO M20 x 1.5 cable gland				
Fixing centres (mm)	30 x 60				
Body dimensions (mm) W x D x H	40 x 44 x 77				
Complete switch	(2-pole N/C + N/O snap action)	⊕ XCKJ161H29	⊕ XCKJ167H29	⊕ XCKJ10511H29	XCKJ10541H29
	(2-pole N/C + N/O break before make, slow break)	⊕ XCKJ561H29	⊕ XCKJ567H29	⊕ XCKJ50511H29	XCKJ50541H29
Body	(2-pole N/C + N/O snap action)	⊕ ZCKJ1H29	⊕ ZCKJ1H29	⊕ ZCKJ1H29	⊕ ZCKJ1H29
	(2-pole N/C + N/O break before make, slow break)	⊕ ZCKJ5H29	⊕ ZCKJ5H29	⊕ ZCKJ5H29	⊕ ZCKJ5H29
	(3-pole N/C + N/C + N/O snap action)	⊕ ZCKJD39H29	⊕ ZCKJD39H29	⊕ ZCKJD39H29	⊕ ZCKJD39H29
Associated head (including operator)	⊕ ZCKE61	⊕ ZCKE67	⊕ ZCKE05	⊕ ZCKE05	
Operating lever for rotary head	-	-	⊕ ZCKY11	ZCKY41	

⊕ Positive opening operation

## XCKMR XCR



ISO entry  
(to EN 50262)

### Type XCKM metal, 3 cable entries

Type of operator	Metal end plunger	Steel roller plunger	Roller lever plunger, horizontal actuation in 1 direction	Thermoplastic roller lever	
Mechanical durability (millions of operating cycles)	20	20	20	15	
Actuation speed (in m/s)	0.5	0.5	1.5	1.5	
Degree of protection conforming to IEC 60529	IP665				
Rated operational characteristics	~ AC 15; A 300 (Ue = 240 V, Ie = 3 A) / ≡ DC 13; Q 300 (Ue = 250 V, Ie = 0.27 A)				
Cable entry (1)	3 tapped entries for ISO M20 x 1.5 cable gland (2 entries fitted with blanking plugs)				
Fixing centres (mm)	41				
Body dimensions (mm) W x D x H	63 x 30 x 64				
Complete switch	(2-pole N/C + N/O snap action)	⊕ XCKM110H29	⊕ XCKM102H29	⊕ XCKM121H29	⊕ XCKM115H29
	(2-pole N/C + N/O, break before make, slow break)	⊕ XCKM510H29	⊕ XCKM502H29	⊕ XCKM521H29	⊕ XCKM515H29
Body	(2-pole N/C + N/O snap action)	⊕ ZCKM1H29	⊕ ZCKM1H29	⊕ ZCKM1H29	⊕ ZCKM1H29
	(2-pole N/C + N/O, break before make, slow break)	⊕ ZCKM5H29	⊕ ZCKM5H29	⊕ ZCKM5H29	⊕ ZCKM5H29
	(2-pole N/C + N/C + N/O snap action)	⊕ ZCKMD39H29	⊕ ZCKMD39H29	⊕ ZCKMD39H29	⊕ ZCKMD39H29
Complete operating head	⊕ ZCKD10	⊕ ZCKD02	⊕ ZCKD21	⊕ ZCKD15	
Complete switches with 2-pole snap action contacts	(2 x N/C + N/O contacts actuated in each direction)	-	-	-	-
	(1 x N/C + N/O contact actuated in each direction)	-	-	-	-
Complete switch	(2 x single-pole C/O snap action contacts)	-	-	-	-
	(2 x 2-pole N/C+N/C staggered, slow break contacts)	-	-	-	-

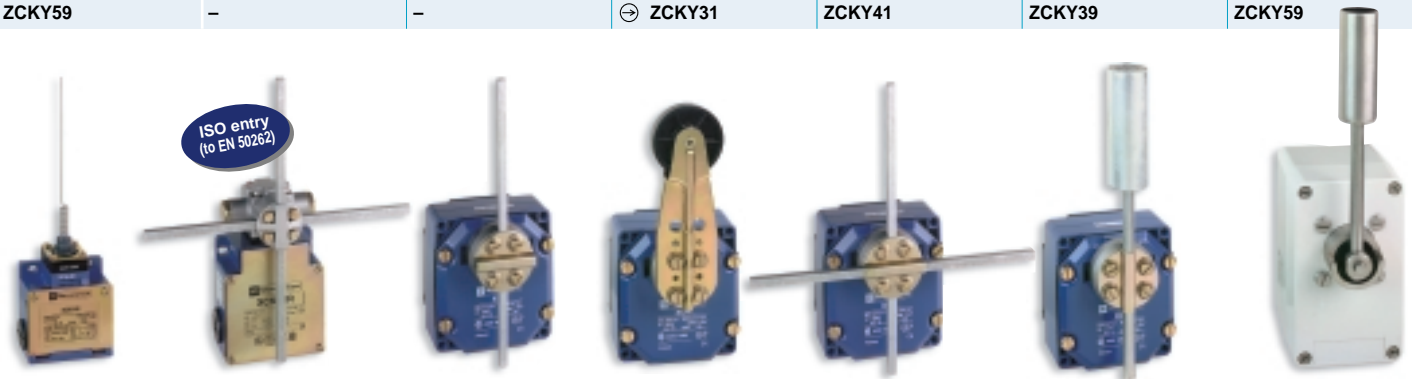
⊕ Positive opening operation

(1) For Pg 13.5 cable entry delete the reference suffix H29. Example: XCKJ161H29 becomes XCKJ161



ISO entry  
(to EN 50262)

Type XCKS plastic, double insulated, conforming to standard EN 50041						
Polyamide, Ø 6 mm rod lever L = 200 mm	Metal end plunger	Steel roller plunger	Thermoplastic roller lever	Variable length thermoplastic roller lever	Rubber roller lever Ø 50 mm	Polyamide, Ø 6 mm rod lever L = 200 mm
30	25	15	20	20	20	20
1.5	0.5	0.5	1.5	1.5	1	1
IP653						
~ AC 15; A 300 (Ue = 240 V, Ie = 3 A) / --- DC 13; Q 300 (Ue = 250 V, Ie = 0.27 A)						
1 tapped entry for ISO M20 x 1.5 cable gland						
30 x 60						
40 x 36 x 72.5						
XCKJ10559H29	⊖ XCKS101H29	⊖ XCKS102H29	⊖ XCKS131H29	XCKS141H29	XCKS139H29	XCKS159H29
XCKJ50559H29	⊖ XCKS501H29	⊖ XCKS502H29	⊖ XCKS531H29	XCKS541H29	XCKS539H29	XCKS559H29
⊖ ZCKJ1H29	⊖ ZCKS1H29	⊖ ZCKS1H29	⊖ ZCKS1H29	⊖ ZCKS1H29	⊖ ZCKS1H29	⊖ ZCKS1H29
⊖ ZCKJ5H29	⊖ ZCKS5H29	⊖ ZCKS5H29	⊖ ZCKS5H29	⊖ ZCKS5H29	⊖ ZCKS5H29	⊖ ZCKS5H29
⊖ ZCKJD39H29	⊖ ZCKSD39H29	⊖ ZCKSD39H29	⊖ ZCKSD39H29	⊖ ZCKSD39H29	⊖ ZCKSD39H29	⊖ ZCKSD39H29
⊖ ZCKE05	⊖ ZCKD01	⊖ ZCKD02	⊖ ZCKD31	ZCKD41	ZCKD39	ZCKD59
ZCKY59	-	-	⊖ ZCKY31	ZCKY41	ZCKY39	ZCKY59



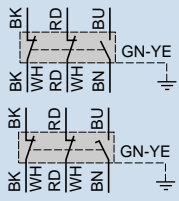
ISO entry  
(to EN 50262)

Types XCKMR and XCR "Application - hoisting, handling, conveying"						
"Cat's whisker"	Square rod levers ⊘ 6 mm, "crossed"	Square rod lever ⊘ 6 mm	Large roller rod lever Ø 50 mm	Square rod levers ⊘ 6 mm, "crossed" or "T"	Conveyor belt shift monitoring switches Galvanised steel operating lever	Stainless steel operating lever
10	2	10	10	10	10	-
0.5	1.5	1.5	1.5	1.5	1.5	1.5
IP545					IP 665	
~ AC 15; A 300 (Ue = 240 V, Ie = 3 A) / --- DC 13; Q 300 (Ue = 250 V, Ie = 0.27 A)						
3 ISO M20 x 1.5 entries		1 tapped entry for n° 13 cable gland (for ISO M20 x 1.5, adaptor DE9RA1620 must be ordered separately)				
61.5		85 x 75			105 x 70	
118 x 59 x 77		85 x 75 x 95			85 x 87 x 146	
XCKM106H29	-	-	-	-	-	-
-	-	-	-	-	-	-
⊖ ZCKM1H29	-	-	-	-	-	-
⊖ ZCKM5H29	-	-	-	-	-	-
⊖ ZCKMD39H29	-	-	-	-	-	-
ZCKD06	-	-	-	-	-	-
-	-	⊖ XCRA11 (2)	⊖ XCRA15	⊖ XCRE18 (2)	-	-
-	-	⊖ XCRB11 (2)	-	⊖ XCRF17 (3)	-	-
-	-	-	-	-	XCRT115	XCRT315 (4)
-	XCKMR54D1H29 (2)	-	-	-	-	-
(2) Steel rods, L = 200 mm		(3) Steel "T" rods, L = 200 mm, W = 300 mm			(4) Polyester enclosure	

The above products are only a selection of the most popular products, for other versions: please refer to the Detection Components catalogue.

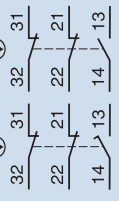
Limit switches

## XCSCM



3-pole contact  
N/C + N/C + N/O  
snap action

## XCSP/D



3-pole contact  
N/C + N/C + N/O  
break before make,  
slow break



## Safety limit switches

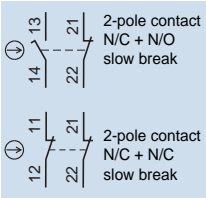
### Miniature

### Compact

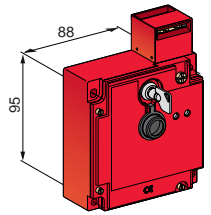
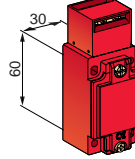
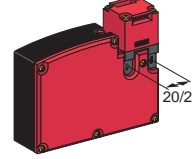
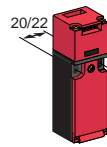
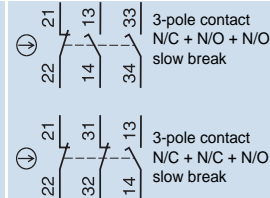
Minimum force or torque (actuation / positive opening)	8.5 N / 42.5 N	7 N / 35 N	0.5 N.m / 0.1 N.m	15 N / 45 N	12 N / 36 N	10 N.m / 0.1 N.m	
Degree of protection	IP66 + IP67 + IP68						
<b>Complete switch, metal</b>	N/C + N/C + N/O snap action	⊖ XCSCM3910L1	⊖ XCSCM3902L1	⊖ XCSCM3915L1	XCSD3910P20	XCSD3902P20	XCSD3918P20
	N/C + N/C + N/O slow break	⊖ XCSCM3710L1	⊖ XCSCM3702L1	⊖ XCSCM3715L1	XCSD3710P20	XCSD3702P20	XCSD3718P20
<b>Complete switch, plastic</b>	N/C + N/C + N/O snap action	–	–	–	XCSP3910P20	XCSP3902P20	XCSP3918P20
	N/C + N/C + N/O slow break	–	–	–	XCSP3710P20	XCSP3702P20	XCSP3718P20

Positive opening operation

## XCSPA/PR/TE



## XCSA/E



## Safety switches

Actuation speed (min → max)	0.01 → 0.5 m/s	–	0.01 → 0.5 m/s	0.01 → 0.5 m/s	0.01 → 0.5 m/s		
Degree of protection conforming to IEC 60529	IP67						
Body + head dimensions (mm) W x D x H	30 x 30 x 93.5	30 x 30 x 96	110 x 33 x 93.5	40 x 44 x 113.5	98 x 44 x 146		
Solenoid and pilot light supply voltage	–	–	~ or = 24 V	~ 230 V	–		
<b>Complete sw.</b> (N/C+N/O staggered: XCSPA/PR/TE) (N/C+N/O+N/O: XCSA/E)	⊖ XCSA591	⊖ XCSPR551	⊖ XCSTE5311	⊖ XCSTE5341	⊖ XCSA501	⊖ XCSE5311	⊖ XCSE5341
<b>Complete switch</b> (N/C+N/C: XCSPA/PR/TE) (N/C+N/C+N/O: XCSA/E)	⊖ XCSA791	⊖ XCSPR751	⊖ XCSTE7311	⊖ XCSTE7341	⊖ XCSA701	⊖ XCSE7311	⊖ XCSE7341

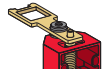
Positive opening operation

## Accessories for safety switches

for XCSPA / PR / TE



for XCSA / E



Actuators

XCSZ11

XCSZ12

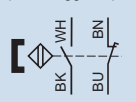
XCSZ13

XCSZ01

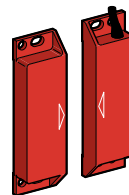
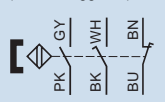
XCSZ02

XCSZ03

N/C + N/O contact  
(N/O staggered)

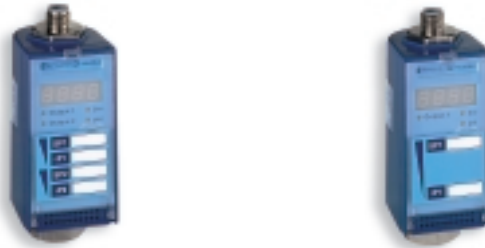



N/C+N/O+N/O contact  
(1 N/O staggered)




## Coded magnetic switches

Switches for actuation	Face to face, face to side, side to side	Face to face
Degree of protection conforming to IEC 60529 / Type of contact	IP67 / REED	
Dimensions (mm) W x D x H or Ø x L	16 x 7 x 51	25 x 13 x 88
Switch with coded magnet (N/C + N/O, N/O staggered)	XCSDMC5902	XCSDMR5902
Switch with coded magnet (N/C + N/O + N/O, 1 N/O staggered)	–	XCSDMP5002



Setting range (bar) (1)	lower limit (PB) : vacuum switches upper limit (PH): pressure switches	-0.08...-1	0.08...1	0.2...2.5	0.8...10	3.2...40
Ambient air temperature (°C)		- 25...+ 80				
Degree of protection (conforming to IEC 60529)		IP67				
Voltage limits (V)		24 --- (--- 17...33)				
Dimensions (mm) H x W x D		113 x 46 x 58				
Fluid connection		1/4" BSP female (2)				
Electrical connection		M12 connector (4) 				
<b>Configurable with digital display, connection by M12 connector (3)</b>						
Universal sensors,	4...20 mA	<b>XMLFM01D2025</b>	<b>XMLF001D2025</b>	XMLF002D2025	<b>XMLF010D2025</b>	XMLF040D2025
solid-state output 200 mA	0...10 V	XMLFM01D2125	XMLF001D2125	XMLF002D2125	XMLF010D2125	XMLF040D2125
Dual stage pressure switches, solid-state output 200 mA		<b>XMLFM01D2035</b>	<b>XMLF001D2035</b>	XMLF002D2035	<b>XMLF010D2035</b>	XMLF040D2035
Analogue sensors	4...20 mA	<b>XMLFM01D2015</b>	<b>XMLF001D2015</b>	XMLF002D2015	<b>XMLF010D2015</b>	XMLF040D2015
	0...10 V	XMLFM01D2115	XMLF001D2115	XMLF002D2115	XMLF010D2115	XMLF040D2115
Permissible differential (bar) (pressure switches)	Min at low setting	0.03	0.03	0.08	0.3	1.2
	Min at high setting	0.03	0.03	0.08	0.3	1.2
	Max at high setting	0.95	0.95	2.38	9.5	38



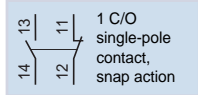
Setting range (bar) (1)	upper limit (PH): pressure switches	8...100	12.8...160	20...250	32...400	48...600
Ambient air temperature (°C)		- 25...+ 80				
Degree of protection (conforming to IEC 60529)		IP67				
Voltage limits (V)		24 --- (--- 17...33)				
Dimensions (mm) H x W x D		113 x 46 x 58				
Fluid connection		1/4" BSP female (2)				
Electrical connection		M12 connector (4) 				
<b>Configurable with digital display, connection by M12 connector (3)</b>						
Universal sensors,	4...20 mA	<b>XMLF100D2025</b>	XMLF160D2025	<b>XMLF250D2025</b>	<b>XMLF400D2025</b>	XMLF600D2025
solid-state output 200 mA	0...10 V	XMLF100D2125	XMLF160D2125	XMLF250D2125	XMLF400D2125	XMLF600D2125
Dual stage pressure switches, solid-state output 200 mA		<b>XMLF100D2035</b>	XMLF160D2035	<b>XMLF250D2035</b>	<b>XMLF400D2035</b>	XMLF600D2035
Analogue sensors	4...20 mA	<b>XMLF100D2015</b>	XMLF160D2015	<b>XMLF250D2015</b>	<b>XMLF400D2015</b>	XMLF600D2015
	0...10 V	XMLF100D2115	XMLF160D2115	XMLF250D2115	XMLF400D2115	XMLF600D2115
Permissible differential (bar) (pressure switches)	Min at low setting	3	4.8	7.5	12	18
	Min at high setting	3	4.8	7.5	12	18
	Max at high setting	95	152	237.5	380	570

(1) Fluids controlled: hydraulic oils, air, fresh water, sea water, corrosive fluids from - 15...+ 80°C.

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

(3) Also available in a.c. 120 V version with 2.5 A relay output and SAE 7/8-16 UN connector.

(4) For M12 connection accessories, see page 3.



Size (bar)	-1	5	1	2.5
Environmental characteristics	Ambient air temperature (°C): - 25...+ 70 Degree of protection (conforming to IEC 60529): IP66			
Rated operational characteristics	~ AC-15; B300 (Ue = 240 V, Ie = 1.5 A - Ue = 120 V, Ie = 3 A) / ≡ DC-13; R300 (Ue = 250 V, Ie = 0.1 A)			
Fluid connection	1/4" BSP female (other connections possible, please contact us)			
Electrical connection	Screw terminals, tapped entry for n° 13 (DIN Pg 13.5) cable gland - For ISO M20 x 1.5 tapped entry,			

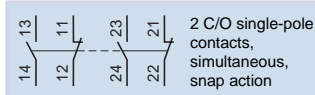
### Type XMLA fixed differential (1), single threshold detection

Setting range (bar) of upper limit (PH): pressure switches	- 0.28...- 1 (5)	-	0.03...1	0.15...2.5
Dimensions (mm) H x W x D	113 x 35 x 75	113 x 35 x 75	162 x 110 x 110	158 x 55 x 77.5
<b>With setting scale, screw terminal connections (2)</b>				
1 C/O single-pole, snap action contact	XMLAM01V2S11	-	XMLA001R2S11	XMLA002A2S11
<b>Without setting scale, screw terminal connections (2)</b>				
1 C/O single-pole, snap action contact	XMLAM01V1S11	-	XMLA001R1S11	XMLA002A1S11
Natural differential (bar)	at low setting	0.24 (3)	-	0.02
subtract from PH to give PB	at high setting	0.24 (3)	-	0.04

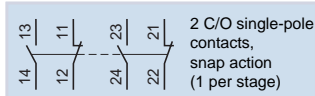
### Type XMLB adjustable differential (1), regulation between 2 thresholds

Setting range (bar) of upper limit (PH): pressure switches	- 0.14...- 1 (5)	- 0.5...5	0.05...1	0.3...2.5
<b>With setting scale, screw terminal connections (2)</b>				
1 C/O single-pole, snap action contact	XMLBM02V2S11	XMLBM05A2S11	XMLB001R2S11	XMLB002A2S11
Possible differential (bar)	Min at low setting	0.13 (4)	0.5	0.04
subtract from PH to give PB	Min at high setting	0.13 (4)	0.5	0.06
	Max at high setting	0.8 (4)	6	0.75

### XMLC



### XMLD



## XMLC and D



### Type XMLC adjustable differential (1), regulation between 2 thresholds

Setting range (bar) of upper limit (PH): pressure switches	- 0.14...- 1 (5)	- 0.55...5	0.05...1	0.3...2.5
Dimensions (mm) H x W x D	113 x 46 x 85	113 x 46 x 85	175 x 110 x 110	158 x 55 x 90
<b>With setting scale, screw terminal connections</b>				
2 C/O single-pole simultaneous snap action contacts	XMLCM02V2S11	XMLCM05A2S11	XMLC001R2S11	XMLC002B2S11
Possible differential (bar)	Min at low setting	0.13 (4)	0.45	0.03
subtract from PH to give PB	Min at high setting	0.14 (4)	0.45	0.04
	Max at high setting	0.8 (4)	6	0.8

### Type XMLD fixed differential (1), dual stage, for detection at each threshold

Setting range (bar)	2 <sup>nd</sup> stage switching point (PB2)	- 0.12...- 1 (5)	-	0.12...1	0.34...2.5
	1 <sup>st</sup> stage switching point (PB1)	- 0.10...- 0.98	-	0.04...0.92	0.2...2.36
	Spread between 2 stages (PB2 - PB1)	- 0.02...- 0.88	-	0.08...0.73	0.14...1.5
<b>Without setting scale, screw terminal connections</b>					
2 C/O single-pole snap action contacts (1 per stage)		XMLDM02V1S11	-	XMLD001R1S11	XMLD002B1S11
Natural differential (bar)	at low setting	0.1 (3)	-	0.03	0.14
subtract from PH 1/2 to give PB 1/2	at high setting	0.1 (3)	-	0.07	0.19



# vacuum switches



4                      10                      20                      35                      70                      160                      300                      500

conforming to IEC 947-5-1 Appendix A, EN 60947-5-1

replace the last digit of the reference by 2 (example: XMLA010A2S11 becomes XMLA010A2S12)

0.4...4	0.6...10	0.7...20	1.5...35	5...70	10...160	20...300	30...500
113 x 35 x 75	113 x 35 x 75	113 x 35 x 75	113 x 35 x 75	113 x 35 x 75	113 x 35 x 75	113 x 35 x 75	113 x 35 x 75
XMLA004A2S11	<b>XMLA010A2S11</b>	<b>XMLA020A2S11</b>	XMLA035A2S11	<b>XMLA070D2S11</b>	XMLA160D2S11	<b>XMLA300D2S11</b>	XMLA500D2S11
XMLA004A1S11	XMLA010A1S11	XMLA020A1S11	XMLA035A1S11	XML-A070D1S11	XMLA160D1S11	XMLA300D1S11	XMLA500D1S11
0.35	0.5	0.4	1.25	3	5.5	16.5	20
0.35	0.5	1	1.25	7.5	18	35	45

0.25...4	0.7...10	1.3...20	3.5...35	7...70	10...160	22...300	30...500
XMLB004A2S11	<b>XMLB010A2S11</b>	<b>XMLB020A2S11</b>	XMLB035A2S11	<b>XMLB070D2S11</b>	XMLB160D2S11	<b>XMLB300D2S11</b>	XMLB500D2S11
0.02	0.57	1	1.7	4.7	9.3	19.4	23
0.25	0.85	1.6	2.55	8.8	20.8	37	52.6
2.4	7.5	11	20	50	100	200	300

(1) Fluids controlled: hydraulic oils, air, fresh water, sea water, corrosive fluids, . 35 bar: up to 70°C, from 70 to 500 bar: up to 160°C.

(2) For connection by DIN 43650A connector (IP65), replace the letter "S" in the reference by "C". Example: XMLB010A2S11 becomes XMLB010A2C11.

(3) For vacuum switch: natural differential to be added to PB to give PH.

(4) For vacuum switch: possible differential to be added to PB to give PH.

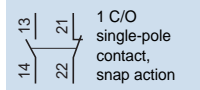
(5) Setting range (bar) of lower limit (PB): vacuum switch.



0.3...4	0.7...10	1.3...20	3.5...35	7...70	12...160	22...300	30...500
113 x 46 x 85	113 x 46 x 85	113 x 46 x 85	113 x 46 x 85	113 x 46 x 85	113 x 46 x 85	113 x 46 x 85	113 x 46 x 85
XMLC004B2S11	<b>XMLC010B2S11</b>	<b>XMLC020B2S11</b>	XMLC035B2S11	XMLC070D2S11	XMLC160D2S11	XMLC300D2S11	XMLC500D2S11
0.15	0.45	0.7	1	4.5	9	16	19
0.17	0.7	1	1.5	8.9	21	35	52
2.5	8	11	22	60	110	240	340

0.40...4	1.2...10	2.14...20	4.4...35	9.4...70	16.5...160	36...300	41...500
0.19...3.79	0.52...9.32	0.9...18.76	1.9...32.5	6.6...67.2	10.5...154	25...289	25...484
0.21...2.18	0.68...5.8	1.24...9.55	2.5...20.4	2.8...46	6...83	11...189	16...244
XMLD004B1S11	<b>XMLD010B1S11</b>	<b>XMLD020B1S11</b>	XMLD035B1S11	XMLD070D1S11	XMLD160D1S11	XMLD300D1S11	XMLD500D1S11
0.15	0.45	0.7	1.5	5	8.8	17	21
0.19	0.6	1.3	2.6	9.5	20	42	65

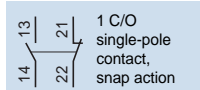
The above products are only a selection of the most popular products, for other versions: **please refer to the Detection Components catalogue.**



Setting range of upper limit (PH) (bar)	1...6	1.3...12	3.5...25
Ambient air temperature (°C)	- 25 to + 70		
Degree of protection (conforming to IEC 60529)	IP54		
Rated operational characteristics	~ AC-15; B300 (Ue = 240 V, Ie = 1.5 A - Ue = 120 V, Ie = 3 A) / --- DC-13; R300 (Ue = 250 V, Ie = 0.1 A)		
Dimensions (mm) H x W x D	106 x 57 x 98		126 x 57 x 98
Fluid connection	1/4" BSP female		
Electrical connection	Screw terminals, 2 tapped entries for n° 13 (DIN Pg 13.5) cable gland		

## Type XMXA with internal setting screw (1)

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



Setting range of upper limit (PH) (bar)	1...6	1.3...12	3.5...25
Ambient air temperature (°C)	- 25 to + 70		
Degree of protection (conforming to IEC 60529)	IP54		
Rated operational characteristics	~ AC-15; B300 (Ue = 240V, Ie = 1.5A - Ue = 120V, Ie = 3A) / --- DC-13; R300 (Ue = 250V, Ie = 0.1A)		
Dimensions (mm) H x W x D	113 x 57 x 98		133 x 57 x 98
Fluid connection	1/4" BSP female		
Electrical connection	Screw terminals, tapped entry for n° 13 (DIN Pg 13.5) cable gland		

## Type XMA with external setting screw (transparent cover) (1)

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

(1) Fluids controlled: fresh water, sea water, air from 0 to + 70°C.

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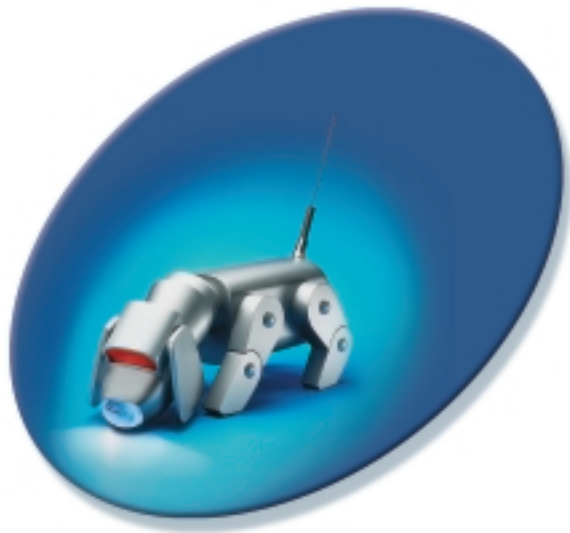
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Owing to changes in standards and equipment, the characteristics given in the text and images in this document are not binding until they have been confirmed with us.

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