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Osiprox[®] Universal, Osiconcept[®]

Cylindrical

Flush mountable	page 2/22
Non flush mountable	page 2/26
 Flat, flush mountable and non flush mountable, 	
forms E, C and D	page 2/30

Osiprox[®] Optimum

Flat, flush mountable, forms J and F.	page 2/32
■ Flat, flush mountable, forms E, C and D	page 2/34
Cylindrical, flush mountable, increased range	page 2/36
Cylindrical, flush mountable	page 2/38

Osiprox[®] Technology

Plastic, cylindrical, non flush mountable	page 2/42
Basic	
 Metal, cylindrical, flush mountable, increased range Plastic, cylindrical, non flush mountable Metal, cylindrical, flush and non flush mountable 	page 2/48
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Multivoltage with short-circuit protection	page 2/56
With 2 complementary outputs	
 Solid-state outputs NO + NC Solid-state outputs PNP + NPN, NO/NC programmable 	

Osiprox® Application

 Osiconcept[®] application for detection of passage of objects for machine tools conveyor system page 2/62
For rotation monitoring and detection page 2/65
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With analogue output
Fixed sensing distance detection for ferrous and non ferrous materials page 2/76
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 For assembly, packaging and light handling
 Plastic case, 12 x 26 x 40 mm
For welding machine applications page 2/94

Osiprox® Application (continued)

Food and beverage processing series

Cylindrical, stainless steel, non flush mountable
- Three-wire, d.c. supply, solid-state output page 2/98
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Cylindrical, plastic, non flush mountable
- Three-wire, d.c. supply, solid-state output page 2/102
- Two-wire, a.c. or d.c. supply

Osiprox[®] Universal, Optimum and Application

Accessories	page 2/106
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Proximity sensors Inductive proximity sensors Osiprox[®] Universal



Case

Electric second

Flush mountability					
Dimensions (w x h x d) in m	m				
Case					
Sensing distance Sn (mm)					
Connection	Pre-cabled				
	Connector				
	Remote connector				
Supply	3-wire				
	≂ 2-wire				
Type reference					
Page(s)					

Flush mountable				Non flush mountable		
M8 x 50	M12 x 50	M18 x 60	M30 x 60	M12 x 55	M18 x 60	M30 x 62.5
Nickel plated brass				Nickel plated brass		
2.5	4	8	15	7	12	22
•	•	•	•	•		
•	•	•	•	•		
-	-	-	-	-		
•	• (1)	• (1)	• (1)	•		
-	• (1)	• (1)	• (1)	•		
XS6 08B1	XS6 12 B1/B1M	XS6 18 B1/B1M	XS6 30 B1/B1M	XS6 12B4	XS6 18B4	XS6 30B4
2/22	2 2/22 and 2/24			2/26 and 2/28		

Proximity sensors Inductive proximity sensors Osiprox[®] Universal

Flat		
Form E	Form C	Form D
Osi concept	Osi concept	Osi concept
Flush mountable and non flush mountable		
26 x 26 x 13	40 x 40 x 15	80 x 80 x 26
Plastic, PBT		
15	25	60
•		
•		
•		
•		
•		
XS8 E	XS8 C	XS8 D

2/30

Proximity sensors Inductive proximity sensors Osiprox[®] Optimum

Flat				
Form J	Form F	Form E	Form C	Form D
13				

Case

Flush mountability				
Dimensions (w x h	n x d) in mm			
Case				
Sensing distance	Sn (mm)			
Connection	Pre-cabled			
	Connector			
	Remote connector			
Supply	3-wire			
	2-wire			
Type reference				
Page				

Flush mountable							
8 x 22 x 8	15 x 32 x 8	26 x 26 x 13	40 x 40 x 15	80 x 80 x 26			
Plastic, PBT			Plastic, PBT				
2.5	5	10	15	40			
•	•	•	•	•			
-	-	•	•	•			
•	•	•	•	•			
•	•	•	•	•			
•	•	•	•	•			
XS7 J	XS7 F	XS7 E	XS7 C	XS7 D			
2/32	2/32	2/34	2/34				

Proximity sensors Inductive proximity sensors Osiprox[®] Optimum

Cylindrica Increased					Standard	range		
Ø 6	Ø 8	Ø 12	Ø 18	Ø 30	Ø8	Ø 12	Ø 18	Ø 30
Ļ			*	*			*	

Flush mountable					Flush mountable			
M8 x 33	M8 x 33	M12 x 33	M18 x 36,5	M30 x 40.6	M8 x 33	M12 x 33	M18 x 36.5	M30 x 40.6
Nickel plated bra	ISS				Nickel plated bra	ISS		
2.5	2.5	4	10	20	1.5	2	5	10
•	•	•	•	•	•	•	•	•
•	•	•	•	•	•	•	•	•
-	-	-	-	-	-	-	-	-
•	•	•	•	•	•	•	•	•
-	-	-	-	-	•	•	•	•
XS1 L06●●349●	XS1 N08●●349●	XS1 N12●●349●	XS1 N18●●349●	XS1 N30●●349●	XS5 08B1●	XS5 12B1●	XS5 18B1●	XS5 30B1●
2/36					2/38			

Proximity sensors Inductive proximity sensors Osiprox[®] Technology

Application series: sensors for specific tasks	Plastic case sensors	Basic sensors	Miniature sensors
Developed in accordance with the needs expressed by our customers, these sensors provide a complete solution for specific application functions: rotation monitoring, selective detection, analogue control, etc.	Food and beverage processing, chemical industry, marine sector	Standard machines, clean environment	Assembly machines for small parts

Form	Cylindrical
	Block, dimensions (w x h x d) in mm
Case	
Sensing distance Sn (mm)	Flush mountable in metal sensors
	Non flush mountable in metal sensors
Degree of protection	on
Connection	Pre-cabled
	Connector
	Remote connector
Supply	
	\sim
	\sim
Type reference	
Page(s)	

Threaded: M8, M12, M18, M30	Plain: Ø 6.5 Threaded: M8, M12, M18, M30	Plain: Ø 4, Ø 6.5 Threaded: M5
-	-	-
Plastic	Nickel plated brass or plastic (1)	Brass or stainless steel (1)
-	1.510 <i>(1)</i>	12.5 (1)
2.5 15 <i>(1)</i>	415 (1)	2.5
IP 67 or IP 68	IP 67	IP 67
•	•	•
-	•	-
•	-	
•	•	•
•	•	-
-	-	-
XS4 P	XS1 ●●B3	XS1 L
	XS1 ●●BL●	XS1 N
	XS2 ••BL•	XS2 L
2/42	2/44	2/54

Proximity sensors Inductive proximity sensors Osiprox[®] Technology

Multivoltage sensors with short-circuit protection	Sensors with 2 complementary outputs				
	Solid-state outputs NO + NC	Solid-state outputs PNP + NPN, NO/NC programmable			
Simple machines or installations not having a low voltage DC supply	Assembly machines, conveyor systems, materials ha	ndling, robotics			
Threaded: M12, M18, M30	Plain: Ø 6.5 Threaded: M8, M12, M18, M30	Threaded: M12, M18, M30			
-	-	-			
Nickel plated brass	Nickel plated brass or stainless steel or plastic (1)	Nickel plated brass or plastic (1)			
210	1.510	210			
415	2.515	415			
IP 67 or IP 68 (1)					
•	•	•			
•	•	•			
-	-	-			
•	•	•			
-	-	•			
•	-	-			
XS1 M	XS1●●●●C410	XS1 M●●KP340			
XS2 M	XS2••••C410	XS2 M●●KP340 XS4 P●●KP340			
2/56	2/58	2/60			

Proximity sensors Inductive proximity sensors

Osiprox[®] Application

Application series: sensors for specific tasks	Osiprox®Applic	ation	
	Osiconcept [®] Application	Sensors for rotation monitoring	Sensors with analogue output
Developed in accordance with the needs expressed by ur customers, these sensors provide a complete olution for specific application functions: otation monitoring, selective detection, analogue ontrol, etc.	Detection of passage of objects for machine tools, conveyor systems	Detection of underspeed, shaft overload and slowing down of conveyor belts	Position, displacement and deformation control/monitoring

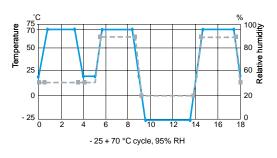
Block, dimensions (w x h x d) in mm
Flush mountable in metal sensors
Non flush mountable in metal sensors
1
~
$\overline{\mathbf{v}}$
Pre-cabled
Connector
Remote connector

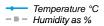
M12 (L = 54), M18 (L = 67), M30 (L = 71)	Threaded: M30	-	Threaded: M12, M18, M30	-
-	-	26 x 26 x 13 40 x 40 x 15	-	32 x 15 x 8 26 x 26 x 13 40 x 40 x 15 80 x 80 x 26
Nickel plated brass	Metal, cylindrical	PBT block	Metal or plastic, cylindrical	PBT block
518 <i>(1)</i>	10	1015 <i>(1)</i>	0.210 (1)	540 (1)
-	10	1015 <i>(1)</i>	0.460 (1)	540 (1)
-	IP 67	IP 67	IP 67	IP 67 or IP 68 <i>(1)</i>
•	•	•	•	•
-	-	-	-	•
-	•	•	-	-
-	•	-	•	•
-	-	•	-	•
•	-	-	-	-
XS6 12B2	XSA V	XS9 •11R	XS1 MeeeAB1	XS9
XS6 18 B2 XS6 30 B2			XS4 P●●AB1	••••A
2/62	2/65	2/67	2/69	2/73, 2/75

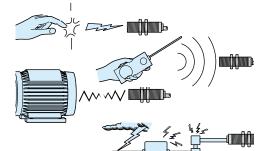
Proximity sensors Inductive proximity sensors Osiprox[®] Application

-actor 1 (Fe/	Nfe) sensors	Selective	Sensors for	assembly app	lications		Sensors for	Sensors for food and beverage processing applications	
		sensors	Form G	Form C	Form cubic 40	Forme D increased range	welding machine applications	Cylindrical, stainless steel	Cylindrical, plastic
errous mater	errous and non rials without ensing distance	Selective detection of ferrous materials only or non ferrous materials only		for assembly m I materials hand			Detection applications on welding machines	Detection of stainle materials in food/be and pharmaceutica	everage processing
))			
⁻ hreaded: /18, M30		Threaded: M18	-	-	-	-	Threaded: M12, M18, M30. Ø 12, Ø 18	Plain: Ø 18 Threaded: M12, M18, M30	Threaded: M12, M18, M30
10 x 117 x 41		-	12 x 40 x 26	40 x 117 x 41	40 x 40 x 40	80 x 80 x 40	-	-	-
/letal, cylindri r plastic, forr	ical n C, turret head	Metal, cylindrical, form A	Plastic				Metal, cylindrical, threaded, Teflon coated	Stainless steel, grade 316 L	Plastic, PPS
			2	15 to 20	15	50	2,3,5,10 (1)	_	-
, 10 or 15 <i>(1)</i>)	5, 6 or 10 <i>(1)</i>				50	2,3,3,10(1)		
5, 10 or 15 <i>(1,</i> -)	5, 6 or 10 (1)	4	20 to 40	20	42	410 <i>(1)</i>	722 (1)	722 (1)
- P 67 or IP 68		5, 6 or 10 (1) - IP 67 or IP 68 (1)		20 to 40				IP 67 (connector ve IP 68 (pre-cabled ve	ersion) ersion)
P 67 or IP 68		– IP 67 or	4	20 to 40			410 (1)	IP 67 (connector ve	ersion) ersion)
P 67 or IP 68		– IP 67 or	4	20 to 40	20		410 <i>(1)</i> IP 67	IP 67 (connector ve IP 68 (pre-cabled ve	ersion) ersion) to DIN 40050
- P 67 or IP 68		– IP 67 or	4	20 to 40	20		410 <i>(1)</i> IP 67	IP 67 (connector ve IP 68 (pre-cabled ve	ersion) ersion) to DIN 40050
- P 67 or IP 68		– IP 67 or	4	20 to 40	20 • - •	42 • - -	410 <i>(1)</i> IP 67 • - -	IP 67 (connector ve IP 68 (pre-cabled ve IP 69K conforming - -	rision) ersion) to DIN 40050 • (1) -
- P 67 or IP 68		– IP 67 or	4	20 to 40	20 • - • •	42 • - - - •	410 <i>(1)</i> IP 67 -	IP 67 (connector ve IP 68 (pre-cabled ve IP 69K conforming • -	ersion) ersion) to DIN 40050
5, 10 or 15 <i>(1)</i> - P 67 or IP 68 (1) - - - - XS1 M ••••KP		– IP 67 or	4	20 to 40 • • • • XS7 C XS8 C	20 • - •	42 • - -	410 <i>(1)</i> IP 67 • - -	IP 67 (connector ve IP 68 (pre-cabled ve IP 69K conforming - -	rision) ersion) to DIN 40050 • (1) -

Standards and certifications Parameters related to the environment







Recommendations

The sensors detailed in this catalogue are designed for use in standard industrial applications relating to presence detection.

These sensors do not incorporate the required redundant electrical circuit enabling their usage in safety applications.

For safety applications, please refer to our "Safety solutions using Preventa" catalogue. Quality control

Our inductive proximity sensors are subject to special precautions in order to guarantee their reliability in the most arduous industrial environments.

Qualification

- □ The product characteristics stated in this catalogue are subject to a **qualification procedure** carried out in our laboratories.
- In particular, the products are subjected to climatic cycle tests for 3000 hours whilst powered-up to verify their ability to maintain their characteristics over time.
- Production
- □ The electrical characteristics and sensing distances at both ambient temperature and extreme temperatures are 100% checked.
- Products are randomly selected during the course of production and subjected to monitoring tests relating to all their qualified characteristics.
- Customer returns

If, in spite of all these precautions, defective products are returned to us, they are subject to systematic analysis and corrective actions are implemented to eliminate the risks of the fault recurring.

Conformity to standards

All Schneider Electric brand inductive proximity sensors conform to and are tested in accordance with the recommendations of standard IEC 60947-5-2. Mechanical shock resistance

The sensors are tested in accordance with standard IEC 60068-2-27, 50 gn, duration 11 ms.

Vibration resistance

The sensors are tested in accordance with standard IEC 60068-2-6, amplitude $\pm\,2$ mm, f = 10...55 Hz, 25 gn at 55 Hz.

Resistance to the environment

- Please refer to the characteristics pages for the various sensors.
- IP 67: protection against the effects of immersion
- Test conforming to IEC 60529: sensor immersed for 30 minutes in 1 m of water. No deterioration in either operating or insulation characteristics is permitted.
- IP 68: protection against prolonged immersion.
 Sensor immersed for 336 hours in 40 metres of water at 50 °C.
 No deterioration in either operating or insulation characteristics is permitted.
 Schneider Electric sensors with an IP 68 degree of protection are ideal for use in the most arduous conditions, such as machine tools, automatic car washers.

Resistance to electromagnetic interference

 Electrostatic discharges 	\sim and \eqsim versions: level 4 immunity (15 kV). IEC 61000-4-2
 Radiated electromagnetic fields (electromagnetic waves) 	$\overline{\dots}, \sim$ and $\overline{\sim}$ versions: level 2 (3 V/m) or level 3 (10 V/m) immunity. IEC 61000-4-3
 Fast transients (motor start/stop interference) 	
Impulse voltage	$$, \sim and $-$ versions: level 3 immunity (2.5 kV) except Ø 8 mm and smaller models (level 1 kV). IEC 60947-5-2

Resistance to chemicals in the environment

- Owing to the very wide range of chemicals encountered in industry, it is very difficult to give general guidelines common to all sensors.
- To ensure lasting efficient operation, it is essential that any chemicals coming into contact with the sensors will not affect their casing and, in doing so, prevent their reliable operation.
- Cylindrical and flat plastic case sensors offer excellent overall resistance to: chamical products such as salts alighatic and aromatic oils, potroloum, acids and
- chemical products such as salts, aliphatic and aromatic oils, petroleum, acids and diluted bases. For alcohols, ketones and phenols, preliminary tests should be made relating to the nature and concentration of the liquid.
- food and beverage industry products such as animal or vegetable based products (vegetable oils, animal fat, fruit juice, dairy proteins, etc.).

In all cases, the materials selected (see product characteristics) provide satisfactory compatibility in most industrial environments (for further information, please consult your Regional Sales Office).

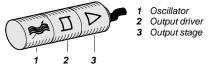
Class 2 devices 🗉

Electrical insulation conforming to standards IEC 61140 and NF C 20-030 relating to means of protection against electric shock.

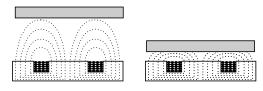
Insulation

Schneider Gelectric

Principle of inductive detection



Composition of an inductive proximity sensor



Detection of a metal object

Operating principle

An inductive proximity sensor is solely for the detection of metal objects. It basically comprises an oscillator whose windings constitute the sensing face. An alternating magnetic field is generated in front of these windings.

When a metal object is placed within the magnetic field generated by the sensor, the resulting currents induced form an additional load and the oscillations cease. This causes the output driver to operate and, depending on the sensor type, a normally open (NO) or normally closed (NC) output signal is produced.

Inductive proximity detection

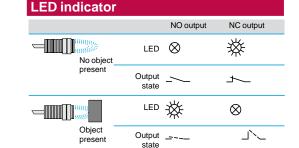
- Inductive proximity sensors enable the detection, without physical contact, of metal objects.
- Their range of applications is very extensive and includes:
- □ monitoring the position of machine parts (cams, end stops, etc.),
- counting the presence of metal objects, etc.

Advantages of inductive detection

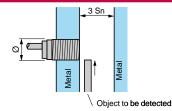
- No physical contact with the object to be detected, thus avoiding wear and enabling detection of fragile objects, freshly painted objects, etc.
- High operating rates. Fast response.
- Excellent resistance to industrial environments (robust products, fully encapsulated in resin).
- Solid-state technology: no moving parts, therefore service life of sensor not related to number of operating cycles.

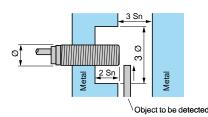
Osiconcept

Osiconcept sensors are suitable for all metal environments (flush mountable or non flush mountable) since they ensure a maximum sensing distance, even if there is a metal background. Precise detection of the position of the object can be obtained using the teach mode. For further information, see page 2/20.



Mounting sensors on a metal support





Output LED

All Schneider Electric brand inductive proximity sensors incorporate an output state LED indicator.

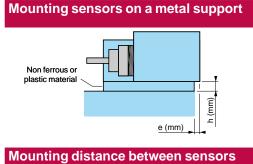
Osiconcept sensors are fitted with a green LED that indicates "Power on" and also assists the user during setting-up (teach mode).

Sensors suitable for flush mounting in metal

- No side clearance required.
- All models using the Osiconcept system are flush mountable in metal without reducing the sensing distance and also enable the detection of an object against a metal background. For further information, see pages 2/20 and 2/21.

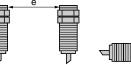
Sensors not suitable for flush mounting in metal

- Side clearance required.
- Sensing distance greater than that for a standard flush mountable model.
- The Osiconcept system eliminates the side clearance requirement. For further information, see pages 2/20 and 2/21.



Mounting using fixing clamp

- Standard flush mountable models: e = 0, h = 0
 Standard non flush mountable models:
- $\square \emptyset 6.5 / 8 / 12 \text{ mm: } e = 0, h = 0,$
- $\square \emptyset$ 18 mm: if h = 0, e \ge 5; e = 0, h \ge 3,
- Ø 30 mm: if $h = 0, e \ge 8; e = 0, h \ge 4$.
- Osiconcept models: e = 0, h = 0





2

Mounting face to face e≥10 Sn

Standard sensors

If 2 standard sensors are mounted too close to each other they are likely to lock in the "detection state" due to interference between their respective oscillating frequencies. To avoid this condition, minimum mounting distances stated for the sensors should be adhered to or, alternatively, sensors with staggered oscillating frequencies should be used.

Staggered frequency sensors

For applications where the minimum recommended mounting distances for standard sensors cannot be achieved, it is possible to overcome this restraint by using staggered frequency sensors. Please consult your Regional Sales Office.

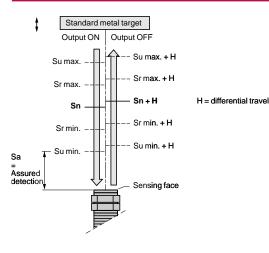
In this case, a staggered frequency sensor is mounted adjacent to or opposite each standard sensor.

Tightening torque for cylindrical type sensors



	Maximum tig materials	Maximum tightening torque for the various sensor case materials					
	Brass	Brass	Stainless stee	el Plastic			
Diameter	Short case me	odel Form A model	Form A model	All models			
of sensor (mm)	XS5 ●●B1	XS6 ●●B1 XS6 ●●B2 XSA V●	XS1 ●● XS2 ●●	XS4 Pee			
ð 5	1.6 N.m	1.6 N.m	2 N.m	-			
7 8	5 N.m	5 N.m	9 N.m	1 N.m			
Ø 12	6 N.m	15 N.m	30 N.m	2 N.m			
Ø 18	15 N.m	35 N.m	50 N.m	5 N.m			
Ø 30	40 N.m	50 N.m	100 N.m	20 N.m			

Sensing distance

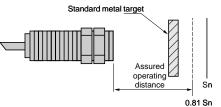


Definitions

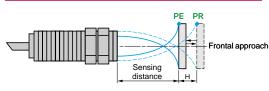
In order to ensure that customers can make reliable product comparisons and selection, the standard IEC 60947-5-2 defines various sensing distances, such as:

Nominal sensing distance (Sn) The rated operating distance for which the sensor is designed. It does not take into account

- any variations (manufacturing tolerances, temperature, voltage). **Real sensing distance (Sr)** The real sensing distance is measured at the rated voltage (Un) and the rated ambient temperature (Tn). It must be between 90% and 110% of the nominal sensing distance (Sn):
- 0.9 Sn ≤ Sr ≤ 1.1 Sn.
 Usable sensing distance (Su)
 The usable sensing distance is measured at the limits of the permissible variations in the ambient temperature (Ta) and the supply voltage (Ub). It must be between 90% and 110% of
 - ambient temperature (1a) and the supply voltage (Ub). It must be between 90% and 110% the real sensing distance: 0.9 Sr \leq Su \leq 1.1 Sr. Assured sensing distance (Sa).
 - This is the operating zone of the sensor. The assured operating distance is between 0 and 81% of the nominal sensing distance (Sn): $0 \le Sa \le 0.9 \times 0.9 \times Sn$



Terminology



PE = pick-up point, the target is detected PR = drop-out point, the target is no longer detected

Standard metal target The standard IEC 60947-5-2 defines the standard metal target as a square mild steel (Fe 360)

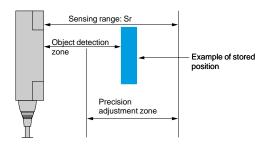
plate, 1 mm thick. The side dimension of the plate is either equal to the diameter of the circle engraved on the sensing face of the sensor or 3 times the nominal sensing distance (Sn).

Differential travel

The differential travel (H), or hysteresis, is the distance between the pick-up point, as the standard metal target moves towards the sensor, and the drop-out point, as it moves away. This hysteresis is essential for the stable operation of the sensor.

Repeat accuracy

The repeat accuracy (R) is the repeatability of the sensing distance between successive operations. Readings are taken over a period of time whilst the sensor is subjected to voltage and temperature variations: 8 hours, 10 to 30 °C, Un \pm 5%. It is expressed as a percentage of Sr.





1 Detection threshold curves 2 "Object detected" LED

Detection zone and precision adjustment zone

By using sensitivity adjustment in teach mode, Osiconcept proximity sensors enable the position of an object to be detected as it approaches from the front or side. The teach mode can be used when the object is located in the zone known as the "precision adjustment zone". When the object approaches from the front, the detection zone of the object ranges from the stored position down to zero.

Operating zone

- The operating zone relates to the area in front of the sensing face in which the detection of a metal object is certain.
- The values stated in the characteristics relating to the various types of sensor are for steel objects of a size equal to the sensing face of the sensor.
- For objects of a different nature (smaller than the sensing face of the sensor, other metals, etc.), it is necessary to apply a correction coefficient.

2

Kθ

1,1

0,9

Km

magn.

1

0,5

-25

type type A37

316 304

Stainless steel

Inductive proximity sensors

Correction coefficients to apply to the assured operating distance

Assured operating distance of a sensor

In practice, most objects to be detected are generally made of steel and are of a size equal to, or greater, than the sensing face of the sensor.

For the calculation of the assured operating distance for different operating conditions, one must take into account the correction coefficients that influence it.

The curves indicated are purely representative of typical curves. They are only given as a guide to the approximate usable sensing distance of a proximity sensor for a given application.

Influence of ambient temperature

Apply a correction coefficient K θ , determined from the curve shown opposite.

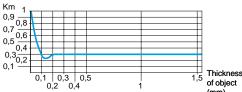
Material of object to be detected

Temperature °C

Apply a correction coefficient Km, determined from the diagram shown opposite.

The fixed sensing distance models for ferrous/non ferrous (Fe/NFe) materials enable the detection of different objects at a fixed distance, irrespective of the type of material.

Special case of a very thin object made of a non ferrous material.



Steel Brass

20

0

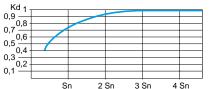
50

UZ33 AU4G Cu

70

Alu. Copper Iron Lead Bronze

(mm) Typical curve for a **copper** object used with a Ø 18 mm cylindrical sensor



Typical curve for a **steel** object used with a \emptyset 18 mm cylindrical sensor

Calculation examples

Size of object to be detected

Apply a correction coefficient Kd, determined from the curve shown opposite. When calculating the sensing distance for the selection of a sensor, make the assumption that Kd = 1.

Variation of supply voltage

In all cases, apply the correction coefficient Kt = 0.9.

Correction of the sensing distance of a sensor

Sensor with nominal sensing distance Sn = 15 mm.

Ambient temperature variation 0 to + 20 °C.

Object material and size: steel, 30 x 30 x 1 mm thick.

The assured operating distance Sa is determined using the formula:

Sa = Sn x Kq x Km x Kd x Kt = 15 x 0.98 x 1 x 0.95 x 0.9

i.e. Sa = 12.5 mm.

Selecting a sensor for a given application

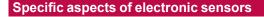
Application characteristics:

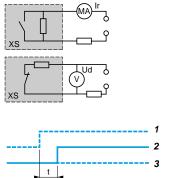
- object material and size: iron (Km = 0.9), 30 x 30 mm,
- temperature: 0 to 20 °C (K θ = 0.98),
- object detection distance: $3 \text{ mm} \pm 1.5 \text{ mm}$, i.e. Sa max. = 4.5 mm,
- assume Kd = 1.
- A sensor must be selected for which $Sn \ge \frac{Sa}{Kq \times Km \times Kd \times Kt} = \frac{4.5}{0.98 \times 0.9 \times 1 \times 0.9}$

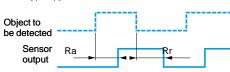
i.e. **Sn≥5.7 mm**

Schneider GElectric

2







Power supply

Terminology

- Residual current (Ir)
- The residual current (Ir) corresponds to the current flowing through the sensor when in the "open" state
- □ Characteristic of 2-wire type proximity sensors.

Voltage drop (Ud)

The voltage drop (Ud) corresponds to the voltage drop at the sensor's terminals when in the "closed" state (value measured at nominal current rating of sensor).

First-up delay

- The first-up delay corresponds to the time (t) between the connection of the power supply to the sensor and its fully operational state.
 - Supply voltage U on Sensor operational at state 1
- 3
 - Sensor at state 0

Delays

- Response time (Ra): the time delay between the object to be detected entering the sensor's operating zone and the subsequent change of output state. This parameter limits the speed and size of the object.
- □ Recovery time (Rr): the time delay between an object to be detected leaving the sensor's operating zone and the subsequent change of output state. This parameter limits the interval between successive objects.

Sensors for a.c. circuits (\sim and $\overline{\sim}$ models)

Check that the voltage limits of the sensor are compatible with the nominal voltage of the a.c. supply used.

Sensors for d.c. circuits

- d.c. source: check that the voltage limits of the sensor and the acceptable level of ripple are compatible with the supply used.
- a.c. source (comprising transformer, rectifier, smoothing capacitor): the supply voltage must be within the operating limits specified for the sensor.

Where the voltage is derived from a single-phase a.c. supply, the voltage must be rectified and smoothed to ensure that:

- the peak voltage of the d.c. supply is lower than the maximum voltage rating of the sensor. Peak voltage = nominal voltage x $\sqrt{2}$

- the minimum voltage of the supply is greater than the minimum voltage rating of the sensor, given that:

- $\Delta V = (I \times t) / C$
- $\Delta V = max.$ ripple: 10% (V).
- I = anticipated load current (mA), t = period of 1 cycle (10 ms full-wave rectified for a 50 Hz supply frequency), C = capacitance (µF)

As a general rule, use a transformer with a lower secondary voltage (Ue) than the required d.c. voltage (U).

Example:

 \sim 18 V to obtain = 24 V, \sim 36 V to obtain = 48 V.

Output signal (contact logic)

Normally open (NO)

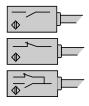
Corresponds to a sensor whose output changes to the closed state when an object is present in the operating zone.

Normally closed (NC)

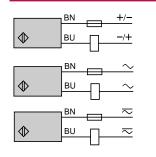
Corresponds to a sensor whose output changes to the open state when an object is present in the operating zone.

Complementary outputs (NO + NC)

Corresponds to a sensor with a normally closed output and a normally open output.



Outputs (continued)



2-wire type ..., non polarised NO or NC output

Specific aspects

These sensors are wired in series with the load to be switched.

As a consequence, they are subject to:

a residual current in the open state (current flowing through the sensor in the "open" state), a voltage drop in the closed state (voltage drop across the sensor's terminals in the "closed" state).

Advantages

- Only 2 leads to be wired: these sensors can be wired in series in the same way as mechanical limit switches
- □ They can be connected to either positive (PNP) or negative (NPN) logic PLC inputs,
- No risk of incorrect connections.

Operating precautions

- Check the possible effects of residual current and voltage drop on the actuator or input connected,
- □ For sensors that do not have overload and short-circuit protection (a.c. or a.c./d.c. symbol), it is essential to connect a 0.4 A "quick-blow" fuse in series with the load.

3-wire type, NO or NC output, PNP or NPN

Specific aspects

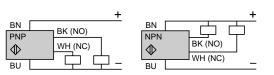
+

Твк

- □ These sensors comprise 2 wires for the d.c. supply and a 3rd wire for the output signal,
- □ PNP type: switching the positive side to the load
- □ NPN type: switching the negative side to the load.

Advantages

- Protection against supply reverse polarity,
 Protection against overload and short-circuit,
- □ No residual current, low voltage drop.



+

ВК

BN

NPN

 \Diamond

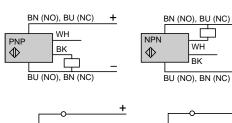
ΒU

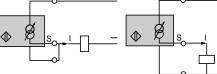
4-wire type, complementary outputs, NO and NC outputs, PNP or NPN

Advantages

Advantages

- □ Protection against supply reverse polarity (+/-).
- D Protection against overload and short-circuit.





3-wire connection

2-wire connection



+

+



4-wire type, multifunction, programmable ..., NO or NC output, PNP or NPN

Specific output signals, analogue type

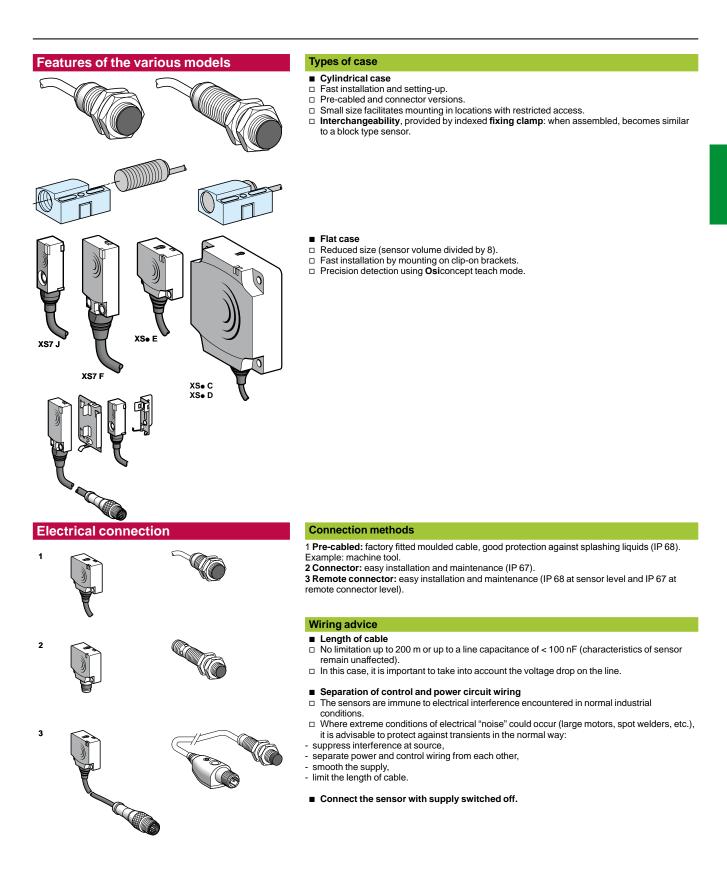
- These sensors convert the approach of a metal object towards the sensing face into an output current variation which is proportional to the distance between the object and the sensing face.
- Two models available:
- 0...10 V (0...10 mA) output for 3-wire connection,
 4-20 mA output for 2-wire connection.

ΒN

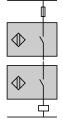
PNP

 \diamondsuit

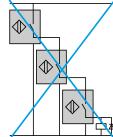
BU



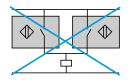
Setting-up precautions

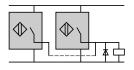


2

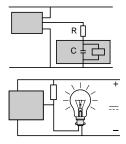












Connection in series

2-wire type sensors

- The following points should be taken into account:
- □ Series wiring is only possible using sensors with wide voltage limits. Based on the assumption that each sensor has the same residual current value, each sensor, in the open state, will share the supply voltage, i.e.

U supply U sensor =

n sensors

- U sensor and U supply must remain within the sensor's voltage limits.
- □ If only one sensor in the circuit is in the open state, it will be supplied at a voltage almost equal to the supply voltage.
- U When in the closed state, a small voltage drop is present across each sensor. The resultant loss of voltage at the load will be the sum of the individual voltage drops and therefore, the load voltage should be selected accordingly.

3-wire type sensors

This connection method is not recommended.

- Correct operation of the sensors cannot be assured and, if this method is used, tests should be made before installation
- The following points should be taken into account:
- □ Sensor 1 carries the load current in addition to the no-load current consumption values of the other sensors connected in series. For certain models, this connection method is not possible unless a current limiting resistor is used.
- D When in the closed state, a small voltage drop is present across each sensor. The load should therefore be selected accordingly.
- □ As sensor 1 closes, sensor 2 does not operate until a certain time (t) has elapsed (corresponding to the first-up delay) and likewise for the following sensors in the sequence.
- □ The use of "flywheel" diodes is recommended when an inductive load is being switched.

Sensors and devices in series with an external mechanical contact

2 and 3-wire type sensors

- The following points should be taken into account:
- When the mechanical contact is open, the sensor is not supplied.
- When the contact closes, the sensor does not operate until a certain time (t) has elapsed (corresponding to the first-up delay).

Connection in parallel

2-wire type sensors

- This connection method is not recommended.
- Should one of the sensors be in the closed state, the sensor in parallel will be "shorted-out" and no longer supplied.
 - As the first sensor passes into the open state, the second sensor will become energised and will be subject to its first-up delay.
- This configuration is only permissible where the sensors will be working alternately.
- This method of connection can lead to irreversible damage of the units.

3-wire type sensors

■ No specific restrictions. The use of "flywheel" diodes is recommended when an inductive load (relay) is being switched.

a.c. supply

- 2-wire type sensors cannot be connected directly to an a.c. supply.
- □ This would result in immediate destruction of the sensor and considerable danger to the user.
- An appropriate load (refer to the instruction sheet supplied with the sensor) must always be connected in series with the sensor.

Capacitive load (C > 0.1 μ F)

- On power-up, it is necessary to limit (by resistor) the charging current of the capacitive load C.
- The voltage drop in the sensor can also be taken into account by subtracting it from the supply voltage for the calculation of R.
 - U (supply)

R = (sensor)

Load comprising an incandescent lamp

If the load comprises an incandescent lamp, the cold state resistance can be 10 times lower than the hot state resistance. This can cause very high current levels on switching. Fit a preheat resistor in parallel with the sensor.

 $R = \frac{U^2}{P} \times 10$, U = supply voltage and P = lamp power

Schneider

Fast troubleshooting guide	Descible severa	Demadu
Problem	Possible causes	Remedy
The sensor's output will not change state when a metal object enters the detection zone	On an Osi concept sensor: setting-up or programming error.	 After a RESET, follow the environment teach mode procedure. Refer to instruction sheet supplied with sensor.
	Output stage faulty or complete failure of the sensor or the short-circuit protection has tripped.	 Check that the sensor is compatible with the supply being used. Check the load current characteristics: if load current I ≥ maximum switching capacity, an auxiliary relay, of the CAD N type for example, should be interposed between the sensor and the load, if I ≤ maximum switching capacity, check for wiring faults (short-circuit). In all cases, a 0.4 A "quick-blow" fuse should be fitted in series with the sensor.
	Wiring error	 Check that the wiring conforms to the wiring shown on the sensor label or instruction sheet.
	Supply fault	 Check that the sensor is compatible with the supply (~ or ==). Check that the supply voltage is within the voltage limits of the sensor. Remember that with a rectified, smoothed supply, U peak = U nominal x √2 with a ripple voltage ≤ 10%.
False or erratic operation, with or without the presence of a metal object in the detection zone	On an Osi concept sensor: setting-up or programming error.	 After a RESET, follow the environment teach mode procedure. Refer to instruction sheet supplied with sensor.
	Influence of background or metal environment	 Refer to the instruction sheet supplied with the sensor. For sensors with adjustable sensitivity, reduce the sensing distance.
	Operating distance poorly defined for the object to be detected	 Apply the correction coefficients. Realign the system or run the teach mode again.
	Influence of transient interference on the supply lines	 Ensure that any d.c. supplies, when derived from rectified a.c., are correctly smoothed (C > 400 µF). Separate a.c. power cables from low-level d.c. cables (24 V low level). Where very long distances are involved, use suitable cable: screened and twisted pairs of the correct cross-sectional area.
	Equipment prone to emitting electromagnetic interference	Position the sensors as far away as possible from any sources of interference.
	Response time of the sensor too slow for the particular object being detected	 Check the suitability of the sensor for the position or size of the object to be detected. If necessary, select a sensor with a higher switching frequency.
	Influence of high temperature	 Eliminate sources of radiated heat or protect the sensor casing with a heat shield. Realign, having adjusted the temperature around the fixing support.
No detection following a period of service	Vibration, shock	 Realign the system. Replace the support or protect the sensor.

Osiprox[®] Osiconcept[®]: Offering Simplicity through Innovation





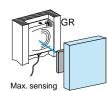
2



Max. sensing distance



Max. sensing distance



distance

Operating principle

In proposing the Osiconcept technology, Schneider Electric brand offers simplicity through innovation.

■ With Osiconcept, a single product meets all metal object detection needs. By simply pressing the "Teach mode" pushbutton, the product automatically takes up an optimum configuration for all detection, flush mountability and environment requirements.

- Other advantages of Osiconcept:
- □ □Increased performance:

sensing distance guaranteed and optimized irrespective of the mounting configuration, the object, the environment or the background, - suitable for all metal environments.

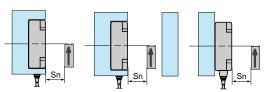
□ □Simplified use provided by:

- the Osiconcept technology associated with the availability of the flattest, most compact sensors on the market ensuring that the sensor is fully built into the machine, thereby limiting risks of mechanical damage,

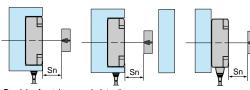
- mechanical adjustments being eliminated through the use of the teach mode.

- □ Lower costs due to:
 - adjustment times and complex supports being eliminated,
- the elimination of flush mountable and non flush mountable versions which halves the number of references,
- much easier and much quicker product selection.

Precision position detection



Precision side approach detection



Precision frontal approach detection





All Osiconcept inductive proximity sensors benefit from ultra precise adjustment which is very quick irrespective of the metal environment.

Precision side approach detection makes it possible to accurately define the position at which the object will be detected as it passes the sensor. Due to the Osiconcept technology, the desired detection position can be stored in memory by simply pressing the teach button.

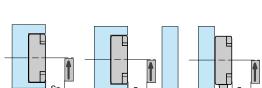
Precision frontal approach detection makes it possible to accurately define the position at which the object will be detected as it approaches the sensor. Due to the Osiconcept technology, the desired detection position can be stored in memory by simply pressing the teach button.

Mounting accessories

Schneider Electric brand proposes a complete, inexpensive range of mounting accessories (clamps, plates, brackets, etc.) providing solutions to all setting-up problems.

Fixing kits enable guick installation or replacement of **Osi**concept sensors.

No adjustment is required. Simple clipping-in enables the sensor to be fixed in position and ready for operation.



Presentation

Inductive proximity sensors Osiprox[®] Osiconcept[®]: Offering Simplicity through Innovation



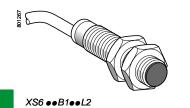
Block type Dimensions (mm)		26 x 26 x 13	40 x 40 x 15	80 x 80 x 26
Sensing distance	Flush mounted use	010	015	040
(mm)	Non flush mounted use	015	025	060
Sensor type		XS8 E1A1	XS8 C1A1	XS8 D1A1
Page		2/30		



Cylindrical ty	ре			
Dimensions (mm)		12	18	30
Sensing distance	Flush mounted use	03.4	06	011
(mm)	Non flush mounted use	05	09	018
Sensor type		XS6 12B2	XS6 18B2	XS6 30B2
Page		2/62		

2

Inductive proximity sensors Osiprox[®] Universal Cylindrical, flush mountable Three-wire, d.c. supply, solid-state output





Ø 8, thread	ed M8 x	1			
Sensing distance (Sn)	Function	Output	Connection	Reference	Weight
mm					kg
2.5	NO	PNP	Pre-cabled $(L = 2 m) (1)$	XS6 08B1PAL2	0.035
			M12 connector	XS6 08B1PAM12	0.015
	NP	NPN	Pre-cabled $(L = 2 m) (1)$	XS6 08B1NAL2	0.035
			M12 connector	XS6 08B1NAM12	0.015
	NC	PNP	Pre-cabled $(L = 2 m) (1)$	XS6 08B1PBL2	0.035
			M12 connector	XS6 08B1PBM12	0.015
		NPN	Pre-cabled $(L = 2 m) (1)$	XS6 08B1NBL2	0.035
			M12 connector	XS6 08B1NBM12	0.015

Ø 12, threaded M12 x 1						
Sensing distance (Sn)	Function	Output	Connection	Reference	Weight	
mm					kg	
4	NO	PNP	Pre-cabled (L = 2 m) (1)XS6 12B1PAL2	0.075	
			M12 connector	XS6 12B1PAM12	0.020	
		NPN	Pre-cabled (L = 2 m) (1)XS6 12B1NAL2	0.075	
			M12 connector	XS6 12B1NAM12	0.020	
	NC	PNP	Pre-cabled $(L = 2 m)$ (1)XS6 12B1PBL2	0.075	
			M12 connector	XS6 12B1PBM12	0.020	
		NPN	Pre-cabled (L = 2 m) (1)XS6 12B1NBL2	0.075	
			M12 connector	XS6 12B1NBM12	0.020	

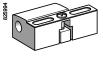
Ø 18. threaded M18 x 1

~,					
Sensing distance (Sn) mm	Function	Output	Connection	Reference	Weight kg
8	NO	PNP	Pre-cabled (L = 2 m)) (1) XS6 18B1PAL2	0.100
			M12 connector	XS6 18B1PAM12	0.040
	NP	NPN	Pre-cabled (L = 2 m)) (1) XS6 18B1NAL2	0.100
			M12 connector	XS6 18B1NAM12	0.040
	NC	PNP	Pre-cabled (L = 2 m)) (1) XS6 18B1PBL2	0.100
			M12 connector	XS6 18B1PBM12	0.040
		NPN	Pre-cabled (L = 2 m)) (1) XS6 18B1NBL2	0.100
			M12 connector	XS6 18B1NBM12	0.040

Ø 30, threa	aea M30	X 1.5			
Sensing distance (Sn)	Function	Output	Connection	Reference	Weight
mm					kg
15	NO	PNP	Pre-cabled (L = 2 m) (1	1) XS6 30B1PAL2	0.205
			M12 connector	XS6 30B1PAM12	0.145
		NPN	Pre-cabled (L = 2 m) (1	1) XS6 30B1NAL2	0.205
			M12 connector	XS6 30B1NAM12	0.145
	NC	PNP	Pre-cabled (L = 2 m) (2)XS6 30B1PBL2	0.205
			M12 connector	XS6 30B1PBM12	0.145
		NPN	Pre-cabled (L = 2 m) (1	1) XS6 30B1NBL2	0.205
			M12 connector	XS6 30B1NBM12	0.145

Accessories (2)		
Description		Reference	Weight kg
Fixing clamps	Ø 8	XSZ B108	0.006
	Ø 12	XSZ B112	0.006
	Ø 18	XSZ B118	0.010
	Ø 30	XSZ B130	0.020

(1) For a 5 m long cable, replace L2 with L5, and for a 10 m long cable, replace L2 with L10. Example: XS6 08B1PAL2 becomes XS6 08B1PAL5 with a 5 m long cable.
(2) For further information, see page 2/106.



XSZ Beee

Inductive proximity sensors Osiprox[®] Universal

Osiprox[®] Universal Cylindrical, flush mountable Three-wire, d.c. supply, solid-state output

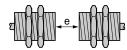
Sensor type			XS6 eeB1eeM12	XS6 ••B1•eL2	
Product certifications			UL, CSA, CE		
Connection	Connector		M12	-	
	Pre-cabled		-	Length: 2 m	
Operating zone	Ø8	mm	02		
	Ø 12	mm	03.2		
	Ø 18	mm	06.4		
	Ø 30	mm	012		
Differential travel		%	115 of real sensing distance (Sr)		
Degree of protection	Conforming to IEC 60529		IP 67	IP 68 double insulation (except Ø 8: IP 67)	
	Conforming to DIN 40050		IP 69K for Ø12 to Ø30		
Storage temperature range		°C	- 40+ 85		
Operating temperature range		°C	- 25+ 70		
Materials	Case		Nickel plated brass except XS6 08: stair	nless steel grade 303	
	Pre-cabled		-	PvR 3 x 0.34 mm ² (except XS6 08: 3 x 0.11 mm ²)	
Vibration resistance	Conforming to IEC 60068-2-6		25 gn, amplitude ± 2 mm (f = 10 to 55 Hz	z)	
Shock resistance	Conforming to IEC 60068-2-27		50 gn, duration 11 ms		
Output state indication			LED (yellow), 4 viewing ports at 90° LED (yellow), annular		
Rated supply voltage		٧	== 1248 with protection against reverse polarity		
Voltage limits (including ripple	e)	٧	1058		
Switching capacity		mA	≤ 200 with overload and short-circuit protection		
Voltage drop, closed state		٧	≤2		
Current consumption, no-load	I	mA	≤ 10		
Maximum switching frequency	/ XS6 08B1000, XS6 12B1000	Hz	2500		
	XS6 18B1	Hz	1000		
	XS6 30B1	Hz	500		
Delays	First-up	ms	≤ 10		
	Response	ms	\leq 0.2 for Ø8 and Ø12, \leq 0.3 for Ø18, \leq 0	0.6 for Ø30	
	Recovery	ms	\leq 0.2 for Ø8 and Ø12, \leq 0.7 for Ø18, \leq 1	1.4 for Ø30	
Wiring scheme					
Connector	Pre-cabled	PNP	NPN		
M12		BN/1			
4 3	BU : Blue	PNP	+ BN/1 BK/4 (NO) NPN	└ +	
$((\bullet \bullet))$	BN : Brown BK : Black	\Diamond		BK/4 (NO) BK/2 (NC)	
		3U/3			

See connection on page 9/45.

Setting-up

Minimum mounting distances (mm)

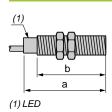
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	Side by side	Face to face	Facing a metal object
Ø8	e≥5	e ≥ 30	e≥8
Ø 12	e≥8	e ≥ 50	e≥12
Ø 18	e≥16	e ≥ 100	e ≥ 25
Ø 30	e ≥ 30	e ≥ 180	e≥45
Ø 30	e≥30	e ≥ 180	e≥45

Dimensions



	Pre-cabled (mm)		Connecto	or (mm)	
XS6	a	b	a	b	
Ø8	50	42	61	40	
Ø 12	50	42	61	42	
Ø 18	61.4	51	71.5	51	
Ø 30	61.8	51	71.8	51	

Inductive proximity sensors Osiprox[®] Universal Cylindrical, flush mountable Two-wire, a.c. or d.c. supply (1)





XS6 ●●B1M●U20

Ø 12, threade	d M12 x 1			
Sensing distance (Sn) mm	Function	Connection	Reference	Weight kg
4	NO	Pre-cabled (L = 2 m) <i>(</i> 2)	XS6 12B1MAL2	0.075
		Connector 1/2" - 20UNF	XS6 12B1MAU20	0.025
	NC	Pre-cabled $(L = 2 m)$ (2)	XS6 12B1MBL2	0.075
		Connector 1/2" - 20UNF	XS6 12B1MBU20	0.025

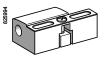
Ø 18, threade	d M18 x 1			
Sensing distance (Sn) mm	Function	Connection	Reference	Weight kg
8	NO	Pre-cabled (L = 2 m) (2)	XS6 18B1MAL2	0.120
		Connector 1/2" - 20UNF	XS6 18B1MAU20	0.060
	NC	Pre-cabled (L = 2 m) (2)	XS6 18B1MBL2	0.120
		Connector 1/2" - 20UNF	XS6 18B1MBU20	0.060

Ø 30. threaded M30 x 1.5

~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~				
Sensing distance (Sn) mm	Function	Connection	Reference	Weight kg
15	NO	Pre-cabled $(L = 2 m)$ (2)	XS6 30B1MAL2	0.205
		Connector 1/2" - 20UNF	XS6 30B1MAU20	0.145
	NC	Pre-cabled $(L = 2 m)$ (2)	XS6 30B1MBL2	0.205
		Connector 1/2" - 20UNF	XS6 30B1MBU20	0.145

Accessorie	S (3)		
Description		Reference	Weight kg
Fixing clamps	Ø 12	XSZ B112	0.006
	Ø 18	XSZ B118	0.010
	Ø 30	XSZ B130	0.020

(1) Available in Ø8 plastic with double insulation, see page 2/42.
(2) For a 5 m long cable, replace L2 with L5, and for a 10 m long cable, replace L2 with L10. Example: XS6 12B1MAL2 becomes XS6 12B1MAL5 with a 5 m long cable.
(3) For further information, see page 2/106.



XSZ B100

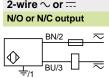
Inductive proximity sensors Osiprox[®] Universal

Osiprox[®] Universal Cylindrical, flush mountable Two-wire, a.c. or d.c. supply

Sensor type			XS6 ••B1MeU20	XS6 ••B1MeL2	
Product certifications			UL, CSA, C€	•	
Connection	Connector		1/2" - 20 UNF	_	
	Pre-cabled		-	Length: 2 m	
Operating zone	Ø 12	mm	03.2		
	Ø 18	mm	06.4		
	Ø 30	mm	012		
Differential travel		%	115 of real sensing distance (Sr)		
Degree of protection	Conforming to IEC 60529		IP 67	IP 68 double insulation 🗉	
Storage temperature ra	nge	°C	- 40+ 85		
Operating temperature range		°C	- 25+ 70		
Materials	Case		Nickel plated brass		
	Pre-cabled		-	PvR 2 x 0.34 mm ²	
Vibration resistance	Conforming to IEC 60068-2-6		25 gn, amplitude ± 2 mm (f = 10 to 55 Hz)		
Shock resistance	Conforming to IEC 60068-2-27		50 gn, duration 11 ms		
Output state indication			LED (yellow): 4 viewing ports at 90°	LED (yellow): annular	
Rated supply voltage		V	\sim or == 24240 (\sim 50/60 Hz)		
Voltage limits (including	g ripple)	v	\sim or == 20264		
Switching capacity	XS6 12B1M●●●	mA	5200 (1)		
	XS6 18B1Meee, XS6 30B1Meee	mA	~ 5300 or == 5200 (1)		
Voltage drop, closed sta	ate	V	≤ 5.5		
Residual current, open	state	mA	≤0.8		
Maximum switching	XS6 12B2eee,XS6 18B1Meee	Hz	\sim 25 or $=$ 1000		
frequency	XS6 30B1Meee	Hz	\sim 25 or $=$ 500		
Delays	First-up	ms	≤ 20 for XS6 12B1M●●● , ≤ 25 for XS6	18B1Meee and XS6 30B1Meee	
	Response	ms	≤0.5		
	Recovery	ms	\leq 0.2 for XS6 12B1Meee, \leq 0.5 for XS6	6 18B1M●●●, ≤ 2 for XS6 30B1M●●	
		(1) It is	s essential to connect a 0.4 A quick-blow	fuse in series with the load	
Wiring scheme					
Connector	Pre-cabled	2-wi	re \sim or		
1/2" - 20 UNF	BU: Blue	N/O d	or N/C output		
1	BN: Brown				

1/2" - 20 UNF 1/2" - 20 UNF +/- : 2 ± : 1

Pre-cabled BU: Blue BN: Brown



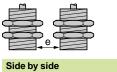
≟: on connector models only

See connection on page 9/45.

+/- : 3

Setting-up

Minimum mounting distances (mm)



Face to face

e≥50

e ≥ 90

e ≥ 180

₽

Facing a metal object
e ≥ 12
e ≥ 25
e ≥ 45

Dimensions

e≥30 **XS6**

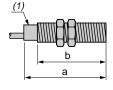
e≥8

e ≥ 16

Ø 12

Ø 18

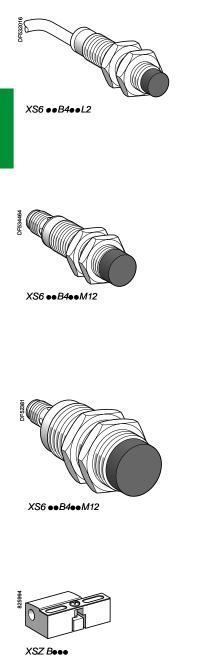
Ø 30



(1) LED

	Pre-cabled (mm)		Connecto	or (mm)	
XS6	а	b	а	b	
Ø 12	50	42	61	42	
Ø 18	60	51	72.2	51	
Ø 30	60	51	72.2	51	

Inductive proximity sensors Osiprox[®] Universal Cylindrical, non flush mountable Three-wire, d.c. supply, solid-state output



Sensing dist. (Sn) mm	Function	Output	Connection	Reference	Weight kg
7	NO	PNP	Pre-cabled (L = 2 m) (1)	XS6 12B4PAL2	0.075
			M12 connector	XS6 12B4PAM12	0.020
		NPN	Pre-cabled (L = 2 m) (1)	XS6 12B4NAL2	0.075
			M12 connector	XS6 12B4NAM12	0.020
	NC	PNP	Pre-cabled (L = 2 m) (1)	XS6 12B4PBL2	0.075
			M12 connector	XS6 12B4PBM12	0.020
		NPN	Pre-cabled (L = 2 m) (1)	XS6 12B4NBL2	0.075
			M12 connector	XS6 12B4NBM12	0.020

Ø 18, threa	ded M18	x 1			
Sensing dist. (Sn) mm	Function	Output	Connection	Reference	Weight kg
12	NO	PNP	Pre-cabled (L = 2 m) (1)	XS6 18B4PAL2	0.100
			M12 connector	XS6 18B4PAM12	0.040
		NPN	Pre-cabled (L = 2 m) (1)	XS6 18B4NAL2	0.100
			M12 connector	XS6 18B4NAM12	0.040
	NC	PNP	Pre-cabled (L = 2 m) (1)	XS6 18B4PBL2	0.100
			M12 connector	XS6 18B4PBM12	0.040
		NPN	Pre-cabled (L = 2 m) (1)	XS6 18B4NBL2	0.100
			M12 connector	XS6 18B4NBM12	0.040

Ø 30, threa	ded M30	x 1.5			
Sensing dist. (Sn) mm	Function	Output	Connection	Reference	Weight kg
22	NO	PNP	Pre-cabled (L = 2 m) (1)	XS6 30B4PAL2	0.205
			M12 connector	XS6 30B4PAM12	0.145
		NPN	Pre-cabled (L = 2 m) (1)	XS6 30B4NAL2	0.205
	_		M12 connector	XS6 30B4NAM12	0.145
	NC	PNP	Pre-cabled (L = 2 m) (1)	XS6 30B4PBL2	0.205
			M12 connector	XS6 30B4PBM12	0.145
		NPN	Pre-cabled (L = 2 m) (1)	XS6 30B4NBL2	0.205
			M12 connector	XS6 30B4NBM12	0.145

Accessories (2)			
Description		Reference	Weight kg
Fixing clamps	Ø 12	XSZ B112	0.006
	Ø 18	XSZ B118	0.010
	Ø 30	XSZ B130	0.020
(1) For a 5 m long cable	roplace 12 by 15 for a 10 m	long cable replace 1.2 by 1.10	

(1) For a 5 m long cable replace L2 by L5; for a 10 m long cable replace L2 by L10. Example: XS6 12B4PAL2 becomes XS6 12B4PAL5 with a 5 m long cable. (2) For further information, see page 2/106.

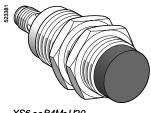
2

Inductive proximity sensors Osiprox[®] Universal Cylindrical, non flush mountable Three-wire, d.c. supply, solid-state output

Characteristics								
Sensor type				XS6 ••B4••M	112		XS6 ••B4	●●L2
Product certifications/approv	als			UL, CSA, C€				
Connection	Connector			M12			-	
	Pre-cabled			-			Length: 2 r	n
Operating zone	Ø 12		mm	05.6				
	Ø 18		mm	09.6				
	Ø 30		mm	017.6				
Differential travel	200		%	115 of real se	ensina di	stance (Sr)		
Degree of protection	Conforming to IEC 605	29	70	IP 67	shoring an		IP 68 dout	ble insulation
Storage temperature		.20	°C	- 40+ 85			11 00, 000	
Operating temperature			°C	- 25+ 70				
Materials	Case		- U	Nickel plated b	race			
materials	Cable			Nickel plated b	1033		PvR, 3 x 0.	24 mm ²
Vibratian register og		0000		– OF an omplitud		m /f 10 to EE		.54 mm
Vibration resistance	Conforming to IEC 600		-			n (f = 10 to 55 H	۷)	
Shock resistance	Conforming to IEC 600	168-2-27		50 gn, duration	111 ms			
Output state indication				Yellow LED: 4	viewing	orts at 00°	Yellow LE): annular
			v			on against rever		J. amilulai
Rated supply voltage	o)		V	1248 with 1058	protectio	ayamstrever	se polarity	
Voltage limits (including rippl	e)		_		1000	l ab art aircuit	ataatian	
Switching capacity			mA		noad and	I short-circuit pr	Diection	
Voltage drop, closed state			V	≤2				
Current consumption, no-load	a		mA	≤10				
	W VCC 40D4		- LI-	2500				
Maximum switching frequenc	XS6 18B4		Hz	2500				
			Hz	1000				
	XS6 30B4 ••••		Hz	500				
Delays	First-up		ms	≤10				
	Response		ms	≤ 0.2 Ø12, ≤ 0.				
	Recovery		ms	≤ 0.2 Ø12, ≤ 0.	7Ø18, ≤	1.4 Ø30		
Wiring schemes								
Connector	Pre-cabled		PNP			NPN		
M12			BN/1		Ŧ	BN/1	<u> </u>	
4 3	BU: Blue		PNP	BK/4 (N		NPN		
	BN: Brown		\Diamond				BK/4 (NO) BK/2 (NC)	
	BK: Black		BU/3		_	BU/3	BN/2 (NC)	
$1 \rightarrow 2$			D0/3		_	80/3		
See connection on page 9/45.								
Setting-up						, ``		
			Minir	num mountin	g dista	nces (mm)		
3 Sr								
	"→					0	0	
	† I		Æ			FUID PUID	€ -	e
				5 255		JmAnAm	шНиНт	JIIIATAM
				e		00	00	00
	w w							
Weeta	Metal H		Side	oy side		Face to face		Facing a metal object
		Ø 12	e ≥ 48	.,		e ≥ 84		e≥21
Ot	ject to be detected	Ø 12 Ø 18	e≥72			<u>e≥04</u> e≥144		e≥36
		Ø 30	e≥120)		e≥ 264		e≥50 e≥66
Dimonsions		w 30	5 2 I Z	, 		5 > 204		G > 00
Dimensions			¥ • •					
(1)			XS6					
			Dro	ablad (mm)	Conre	ector (mm)		
		VCC		abled (mm)		• •		
		XS6	а	b	a	b	c	
b +		Ø 12	55	41.5	65.5	41.5	5	
a		Ø 18	60	43.5	71.5	43.5	8	
→		Ø 30	62.5	41	74	41	13	
(1) LED								

Inductive proximity sensors Osiprox[®] Universal Cylindrical, non flush mountable Two-wire, a.c. or d.c. supply





XS6 ●●B4M●U20



Ø 18, threade	d M18 x 1			
Sensing distance (Sn) mm	Function	Connection	Reference	Weight kg
12	NO	Pre-cabled (L = 2 m) (1)	XS6 18B4MAL2	0.120
		1/2" - 20UNF connector	XS6 18B4MAU20	0.060
	NC	Pre-cabled (L = 2 m) (1)	XS6 18B4MBL2	0.120
		1/2" - 20UNF connector	XS6 18B4MBU20	0.060

Ø 30, threade	ed M30 x 1.5			
Sensing distance (Sn) mm	Function	Connection	Reference	Weight kg
22	NO	Pre-cabled (L = 2 m) (1)	XS6 30B4MAL2	0.205
		1/2" - 20UNF connector	XS6 30B4MAU20	0.145
	NC	Pre-cabled (L = 2 m) (1)	XS6 30B4MBL2	0.205
		1/2" - 20UNF connector	XS6 30B4MBU20	0.145

Accessorie	S (2)		
Description		Reference	Weight kg
Fixing clamps	Ø 18	XSZ B118	0.010
	Ø 30	XSZ B130	0.020

(1) For a 5 m long cable replace L2 by L5; for a 10 m long cable replace L2 by L10. Example: XS6 18B4MAL2 becomes XS6 18B4MAL5 with a 5 m long cable.

(2) For further information, see page 2/106.

Inductive proximity sensors Osiprox[®] Universal

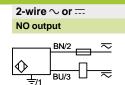
Cylindrical, non flush mountable Two-wire, a.c. or d.c. supply

Sensor type			XS6 eeB4MeU20	XS6 eeB4MeL2	
Product certifications/a	pprovals		UL, CSA, CE		
Connection	Connector		1/2" - 20UNF	-	
	Pre-cabled		-	Length: 2 m	
Operating zone	Ø 18	mm	09.6		
	Ø 30	mm	017.6		
Differential travel		%	115 of real sensing distance (Sr)		
Degree of protection	Conforming to IEC 60529		IP 67	IP 68, double insulation 🗉	
Storage temperature		°C	- 40+ 85		
Operating temperature		°C	- 25+ 70		
Materials	Case		Nickel plated brass		
	Cable		-	PvR, 2 x 0.34 mm ²	
Vibration resistance	Conforming to IEC 60068-2-6		25 gn, amplitude ± 2 mm (f = 10 to 55 H	z)	
Shock resistance	Conforming to IEC 60068-2-27		50 gn, duration 11 ms		
Output state indication			Yellow LED: 4 viewing ports at 90°	Yellow LED: annular	
Rated supply voltage		v	∼ or == 24240 (~ 50/60 Hz)		
Voltage limits (including	g ripple)	v	∼ or == 20264		
Switching capacity		mA	∼ 5300 or 5200 (1)		
Voltage drop, closed sta	ate	V	≤ 5.5		
Residual current, open	state	mA	≤ 0.8		
Maximum switching	XS6 18B4Meee	Hz	\sim 25 or $=$ 1000		
frequency	XS6 30B4Meee	Hz	\sim 25 or $=$ 300		
Delays	First-up	ms	≤ 30 XS6 18B4M●●● and XS6 30B4M●	•••	
	Response	ms	≤0.5		
	Recovery	ms	≤ 0.5 XS6 18B4M●●●, ≤ 2 XS6 30B4M	•••	

Wiring schemes

Connector 1/2" - 20UNF

Pre-cabled BU: Blue BN: Brown



See connection on page 9/45.

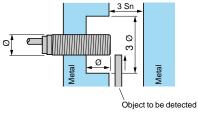
≂:2

÷:1 ≂:3

Setting-up

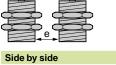
Dimensions

ัว





±: on connector models only

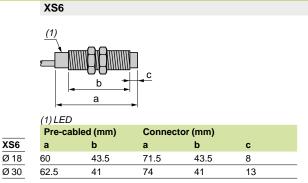


Ø 18 e≥72 Ø 30 e≥120

Face to face
e≥144

e≥264

Facing a metal object e≥36 e≥66



References

Inductive proximity sensors Osiprox[®] Universal, Osiconcept[®] (1) Flat, flush mountable and non flush mountable, forms E, C and D Two-wire, a.c. or d.c. supply Three-wire, d.c. supply, solid-state output

	Flat. form	E, 26 x 26 x	x 13 mm (2)		
4226			out Connection	Reference	Weight
	(Sn) mm				kg
			ad and short-circuit prote		
	15	NO PNP		XS8 E1A1PAL2	0.075
ä ä			M8 connector	XS8 E1A1PAM8	0.040
		NPN	Remote M12 connector	XS8 E1A1PAL01M12	
XS8 E1A1••L2		NPN	Pre-cabled (L = 2 m) (3) M8 connector	XS8 E1A1NAL2 XS8 E1A1NAM8	0.075
	~		Remote M12 connector	XS8 E1A1NAL01M12	
		NC PNP		XS8 E1A1PBL2	0.040
LEDG4			M8 connector	XS8 E1A1PBM8	0.040
XS8 • 1A 1 • • L01M12	2		Remote M12 connector	XS8 E1A1PBL01M12	
XS8 • 1A 1 • • L01 U20)	NPN	Pre-cabled (L = 2 m) (3)	XS8 E1A1NBL2	0.075
			M8 connector	XS8 E1A1NBM8	0.040
XS8 E1A1●●M8			Remote M12 connector	XS8 E1A1NBL01M12	0.040
		or == unprote	cted (4)		
· ^ · ^	15	NO –	Pre-cabled $(L = 2 m) (3)$	XS8 E1A1MAL2	0.070
			Remote 1/2" - 20 UNF conne		
		NC –	$\frac{\text{Pre-cabled (L = 2 m) (3)}}{\text{Pre-cabled (L = 2 m) (3)}}$	XS8 E1A1MBL2	0.070
		C 40 × 40 ·	Remote 1/2" - 20 UNF conne	C. X58 ETATMBL01020	0.040
			x 15 mm (2)		
	Sensing dist. (Sn) mm	Function Outp	out Connection	Reference	Weight kg
		- with overloa	ad and short-circuit prote	ction	Ng
	25	NO PNP		XS8 C1A1PAL2	0.095
			M8 connector	XS8 C1A1PAM8	0.060
			Remote M12 connector	XS8 C1A1PAL01M12	
XS8 C1A1	1aaM8	NPN	Pre-cabled (L = 2 m) (3)	XS8 C1A1NAL2	0.095
XS8 C1A1eeL2			M8 connector	XS8 C1A1NAM8	0.060
			Remote M12 connector	XS8 C1A1NAL01M12	0.060
• ~		NC PNP		XS8 C1A1PBL2	0.095
02269210			M8 connector	XS8 C1A1PBM8	0.060
			Remote M12 connector	XS8 C1A1PBL01M12	
	\sim	NPN	Pre-cabled (L = 2 m) (3) M8 connector	XS8 C1A1NBL2 XS8 C1A1NBM8	0.095
			Remote M12 connector	XS8 C1A1NBL01M12	
		or unprote		XOU UTA INDEUTIMITZ	0.000
	25	NO –	Pre-cabled (L = 2 m) (3)	XS8 C1A1MAL2	0.090
			Remote 1/2" - 20 UNF conne		
		NC –	Pre-cabled (L = 2 m) (3)	XS8 C1A1MBL2	0.090
			Remote 1/2" - 20 UNF conne	c. XS8 C1A1MBL01U20	0.060
	Flat, form	D, 80 x 80 x	x 26 mm (2)		
	Sensing dist.	Function Outp	out Connection	Reference	Weight
	(Sn) mm			_	kg
XS8 D1A1	1440		ad and short-circuit prote		
V ASS DIAN	●● <i>M12</i> 60	NO PNP		XS8 D1A1PAL2 (5)	0.390
XS8 D1A1eeL2			M12 connector	XS8 D1A1PAM12 (5)	
		NPN	Pre-cabled (L = 2 m) (3) M12 connector	XS8 D1A1NAL2 (5) XS8 D1A1NAM12 (5)	0.390
		NC PNP		XS8 D1A1NAM12 (5) XS8 D1A1PBL2 (5)	0.340
			M12 connector	XS8 D1A1PBL2 (5)	
	~	NPN		XS8 D1A1NBL2 (5)	0.390
	\sim \wedge)		M12 connector	XS8 D1A1NBM12 (5)	0.340
	(0) Two-wire \sim	or 🞞 unprote	cted (4)		
	60 لم	NO –	Pre-cabled (L = 2 m) (3)	XS8 D1A1MAL2 (5)	0.390
			1/2" - 20 UNF connector	XS8 D1A1MAU20 (5)	
		NC –	Pre-cabled (L = 2 m) (3)	XS8 D1A1MBL2 (5)	0.390
		formation C	1/2" - 20 UNF connector	XS8 D1A1MBU20 (5)	0.340
	(1) For further in (2) For accesso		siconcept®, see page 2/20 /106.		
	(3) For a 5 m long	g cable, replace L	2 with L5 , and for a 10 m long cab		
			4 A quick-blow fuse in series wi		f the
		onto 35 mm ome xample: XS8 D1	ega rail or 80 x 80 x 40 mm form I A1PAL2 DIN .	aı, auu אויע וויע נוופ פחל 01	uie
XS8 D1A1	●●M12DIN	,			
V					

XS8 D1A1eeL2DIN

Inductive proximity sensors Osiprox[®] Universal, **Osi**concept[®] (1) Flat, flush mountable and non flush mountable, forms E, C and D Two-wire, a.c. or d.c. supply Three-wire, d.c. supply, solid-state output

Characteristics										
Sensor types					XS8 E		XS8 E • • • • • • • • • • • • • • • • • •	●L01U20, ●L01M12,		XS8 EeeeeL XS8 CeeeeL XS8 DeeeeL
Product certifications					UL, CSA, CE					
Connection	Conne	ector			M8 except XS8 •••••M12: XS8 •••••U20:		XS8 ••••	lead with remote ●L01M12: M1 ●L01U20: 1/2	2,	-
• • • • • •	Pre-ca				-		-			Length: 2 m
Sensing distance and adjustment zone	XS8 E		nsing dist. Sn		015 non flush m					
aujustment zone	×00.0	Fine adjustr		mm	515 non flush m				•	
	XS8 C		nsing dist. Sn	_	025 non flush m	v				
	XS8 D	Fine adjustr	nent zone nsing dist. Sn	mm mm	825 non flush m 060 non flush m					
	720 D	Fine adjustr	0	mm	2060 non flush r	0			0	
Differential travel		i ine aujusti		%	115 of real sens					guiation
Degree of protection	Confo	rming to IEC 60	1529	70	IP 67 double insula		-	ector: IP 67)		IP 68 🗆
Storage temperature range			020	°C	- 40+ 85					
Operating temperature ran				°C	- 25+ 70					
Materials	Case				PBT					
	Pre-ca	bled			-		PvR 3 x 0.3	34 mm ² and	PvR 2 x	0.34 mm ² \sim
Vibration resistance		rming to IEC 60	0068-2-6		25 gn, amplitude ±	2 mm (f = 10 to	-			-
Shock resistance		rming to IEC 60			50 gn, duration 11					
Indicator	Output	state			Yellow LED					
	Supply	on and teach m	node		Green LED					
Rated	3-wire			۷	1224 with protect	ction against rev	erse polarity	1		
supply voltage	2-wire			v	\sim or $=$ 24240 ('	\sim 50/60 Hz)				
Voltage limits	3-wire			v	1036					
(including ripple)	2-wire			v	\sim or $= 20264$					
Current consumption, no-loa				mA	≤10					
Residual current, open stat				mA	≤ 1.5					
Switching capacity	3-wire			mA	≤ 100 XS8 E , ≤ 20					
	2-wire			mA	5200 ≂ XS8 E ,	$5300 \sim XS8$	C and XS8 C) , 5200 X	S8 C and	XS8 D.
Voltage drop, closed state	3-wire			V	≤2					
Maulau au 14 a b la a faa aw	2-wire			V	≤ 5.5	X00.0 450.X0	NA D			
Maximum switching freque	-	-		Hz	2000 XS8 E, 1000				0 < 15	
Delays	First-u Respo			ms ms	≤ 10 XS8 E, XS8 C ≤ 0.3	and x36 D (3	-wire), ≤ 10 A	.50 E and 750	C , ≤ 157	(36 D (2-wire)
	Recov			ms	≤ 0.3 ≤ 0.8 XS8 E and X	S8C ≤6¥S8	D			
Wiring scheme	10000									
-		na aablad		DND	M40 M0		140 140			
Connector		re-cabled		PNP/	M12 or M8	NPN/M	112 or M8	2	2-wire 1/	2"-20 UNF
M8 M12 1/2"-20 L 4 1 - 3 1		J: Blue I: Brown		BN/1	+	BN/1		+		_BN/2 ~
4		C Black		PNP	BK/4 (NO) BK/2 (NC)	NPN	ВК/4			
)						BK/2	(NC)	\Diamond	
		e connection page 9/45.		BU/3	Connector NO and		orminal 4			
Cotting	UI	pago 3/ 4 0.			connector, NO and	NO OULPUT ON T	ərrininai 4.			
Setting-up					ensions	N			×0	
Minimum mounting dis		. ,			C/D/E	XS8 C/D			XS8 E	
Side by side	e≥	XS8 E XS8 C				= B	►			
	Flush mounted	40 60	200	► D					(1)	
	Non flush		600		Î	0 (1)			<u>م</u> "	
	mounted									Ł
¥ ¥					۵		ш		₩ [_	F <u>(3)</u>
Face to face	e≥	XS8 E XS8 C	XS8 D							
P	Flush	80 120	400		↓	10	10		B	
e e	mounted		N 1 /	∇	F	(3)			∢ [∪] ⊳	
	Non flush mounted		Not recom- mended	T	<u>- (</u>	<u> </u>	<u> </u>			
Y Y	mounted			-111				/4) LED	
Facing a metal object	e≥	XS8 E XS8 C	XS8 D				o ای		·	node button
r doing a metal object	67	10 15	40			(2)	<u> </u>		·	C type screws
				Senso	or A (cable)	A (connector) В С	DE		G H
e				XS8 E	14	11	26 13			6.8 6.6
F				XS8 C	14	11	40 15	,		8.3 13.6
∀	_			XS8 D	23	18	80 26	16 6	5 5,5	8.5 37.8
-				XS8 D	••DIN 23	18	80 40	30 6	5 5.1	22.5 37.8

References

Inductive proximity sensors Osiprox[®] Optimum Flat, flush mountable, forms J and F Two-wire, d.c. supply Three-wire, d.c. supply, solid-state output

XST J1A1••L2	
XS7 J1A1eeL01M8	
error file for the second seco	
XS7 F1A1eeL01M8	

Flat, form J	l, 8 x 22	x 8 mm	(1) (2)		
Three-wire					
Sensing distance (Sn) mm	Function	Output	Connection	Reference	Weight kg
2.5	NO	PNP	Pre-cabled (L = 2 m) (3)	XS7.11A1PAL2	0.060
210			0.15 m flying lead with M8 connector		0.040
		NPN	Pre-cabled (L = 2 m) (3)	XS7 J1A1NAL2	0.060
			0.15 m flying lead with M8 connector	XS7 J1A1NAL01M 8	0.040
	NC	PNP	Pre-cabled (L = 2 m) (3)		0.060
			0.15 m flying lead with M8 connector		0.040
		NPN	$\frac{\text{Pre-cabled (L = 2 m) (3)}}{2.45}$		0.060
T			0.15 m flying lead with M8 connector	XS7 J1A1NBL01M8	0.040
	E	Output	C ommontion	Defenses	Mainha
Sensing distance (Sn) mm	Function	Output	Connection	Reference	Weight kg
2.5	NO		Pre-cabled (L = 2 m) (3)	XS7 J1A1DAL2	0.050
			0.15 m flying lead with M8 connector	XS7 J1A1DAL01M8	0.035
	NC		Pre-cabled (L = 2 m) (3)		0.050
			0.15 m flying lead with M8 connector	XS7 J1A1DBL01M8	0.035
Flat, form F	-, 15 x 32	2 x 8 mr	n (1)		
Three-wire					
Sensing distance (Sn) mm	Function	Output	Connection	Reference	Weight kg
5	NO	PNP	Pre-cabled (L = 2 m) (3)	XS7 F1A1PAL2	0.065
-			0.15 m flying lead with M8 connector		0.045
		NPN	Pre-cabled (L = 2 m) (3)	XS7 F1A1NAL2	0.065
			0.15 m flying lead with M8 connector	XS7 F1A1NAL01M8	0.045
	NC	PNP	Pre-cabled (L = 2 m) (3)		0.065
			0.15 m flying lead with M8 connector		0.045
		NPN	$\frac{\text{Pre-cabled (L = 2 m) (3)}}{2}$		0.065
- .			0.15 m flying lead with M8 connector	XS7 F1A1NBL01M8	0.045
Two-wire	Function	Outrout	Connection	Reference	Woinht
Sensing distance (Sn) mm	Function	Output	Connection	Reference	Weight kg
5	NO		Pre-cabled (L = 2 m) (3)	XS7 F1A1DAL2	0.055
			0.15 m flying lead with M8 connector	XS7 F1A1DAL01M8	0.045
	NC		Pre-cabled (L = 2 m) (3)		0.055
			0.15 m flying lead with M8 connector	XS7 F1A1DBL01M8	0.045
(1) For accessorie (2) Sensors XS7			clamp with screw.		

(2) Sensors XS7 J include a basic fixing clamp with screw.
 (3) For a 5 m long cable, replace L2 with L5, and for a 10 m long cable, replace L2 with L10. For example XS7 J1A1PAL2 becomes XS7 J1A1PAL5 with a 5 m long cable.

Inductive proximity sensors Osiprox[®] Optimum Flat, flush mountable, forms J and F Two-wire, d.c. supply Three-wire, d.c. supply, solid-state output

Characteristics					
Characteristics					
Sensor type			XS7 JeeeeL01M8		XS7 JeeeeeL2, XS7 FeeeeeL2
Product certifications			CE	UL, CSA, CE	
Connection	Connector		0.15 m flying lead with	n M8 connector	-
	Pre-cabled		-		Length: 2 m
Operating zone	XS7 J	mm	02		•
	XS7 F	mm	04		
Differential travel		%	115 of real sensing	distance (Sr)	
Degree of protection	Conforming to IEC 60529		IP 67 (XS7 J), IP 68 ()		
Storage temperature range		°C	- 40+ 85	- /	
Operating temperature range		°C	- 25+ 70		
Aaterials	Case		PBT		
	Pre-cabled		PvR 3 x 0.11 mm ² or 2	x 0 11 mm ² (XS7 E · 2	$2 \text{ or } 3 \times 0.34 \text{ mm}^2$
/ibration resistance	Conforming to IEC 60068-2-6		25 gn , amplitude $\pm 2 \text{ m}$,	
Shock resistance					
	Conforming to IEC 60068-2-27		50 gn, duration 11 ms		
Output state indication			Yellow LED		
ated supply voltage		V	== 1224 with protec	tion against reverse po	olarity
oltage limits (including ripple)		v	1036		
Current consumption, no-load	3-wire	mA	≤10		
esidual current, open state	2-wire	mA	≤ 0.5		
witching capacity	3-wire	mA	100 with overload and	short-circuit protectio	n
-	2-wire	mA	1.5100 with overloa		
/oltage drop, closed state	3-wire	V	≤2		
J	2-wire	v	≤4		
Aximum switching frequency		• kHz	2		
Maximum switching nequency	2-wire	kHz	4 for XS7 J, 5 for XS7	c	
N=1				<u>r</u>	
Delays	First-up	ms	Three-wire: 5		
		ms	Two-wire: 10 XS7 J, 5	X57 F	
	Response	ms	Three-wire: 0.1		
		ms	Two-wire: 0.5 XS7 J,	5 XS7 F	
	Recovery	ms	Three-wire: 0.1		
		ms	Two-wire: 1 XS7 J, 52	XS7 F	
Wiring scheme					
Connector	Pre-cabled	PNP	NO or NC	NPN, NO or NO	2-wire, NO
M8	The-cabled	,			2-wite, NO
	BU: Blue	BN/1	_ +	BN/1	+ BN/3 +/·
7	BN: Brown	PNP	BK/4		
	BK: Black	\Diamond		ВК/4	
0		BU/3	<u> </u>	BU/3	BU/4 L -/+
See connection					2-wire, N/C
on page 9/45.					
					BN/1 +/-
Setting-up					
Setting-up		Minir	mum mounting dist	ances (mm)	
Setting-up		Minir	mum mounting dist	ances (mm)	
Setting-up		F		ances (mm)	
Setting-up		Minir		ances (mm)	
Setting-up		F		ances (mm)	
Setting-up		F		ances (mm)	
Setting-up		e T		, e, l	BU/4 L -/4
Setting-up		e T		ances (mm)	BU/4 L -/4
Setting-up	XS7 J	$\mathbf{Side I}$ $\mathbf{e} \ge 1$		Face to face e ≥ 6	EXAMPLE BU/4 \Box -/4 BU/4 \Box -/4 Facing a metal object e ≥ 7.5
		Side t		Face to face	BU/4 L -/4
		$\mathbf{Side I}$ $\mathbf{e} \ge 1$		Face to face e ≥ 6	$e \ge 7.5$ BU/4 □ -/4
		$ \begin{array}{c} \hline \\ \\ \\ $	by side	Face to face e ≥ 6	$E \ge 7.5$ $e \ge 15$ $E \ge 15$
		$\mathbf{Side I}$ $\mathbf{e} \ge 1$	by side	Face to face e ≥ 6	EXAMPLE BU/4 \Box -/4 BU/4 \Box -/4 Facing a metal object e ≥ 7.5
		$ \begin{array}{c} \hline \\ \\ \\ $	by side	Face to face e ≥ 6	$E \ge 7.5$ $e \ge 15$ $E \ge 15$
		$ \begin{array}{c} \hline \\ \\ \\ $	by side	Face to face e ≥ 6	$E \ge 7.5$ $e \ge 15$ $E \ge 15$
		$ \begin{array}{c} \hline \\ \\ \\ $	by side	Face to face e ≥ 6	$ \begin{array}{c} BU/4 \Box ./4 \\ BU/4 \Box ./4 \\ $
Setting-up Dimensions		$ \begin{array}{c} \hline \\ \\ \\ $	by side	Face to face e ≥ 6	$ \begin{array}{c} $
		$ \begin{array}{c} \hline \\ \\ \\ $	F 15 (1) (1)	Face to face e ≥ 6	$ \begin{array}{c} BU/4 \Box -/4 \\ BU/4 \Box -/4 \\ BU/4 \Box -/4 \\ \hline BU/4 \Box -/4 \\ BU/4 \Box -/4 \\$
		$ \begin{array}{c} \hline \\ \\ \\ $	by side	Face to face e ≥ 6	$ \begin{array}{c} $
		$ \begin{array}{c} \hline \\ \\ \\ $	F 15 (1) (1)	Face to face e ≥ 6	$Facing a metal object$ $e \ge 7.5$ $e \ge 15$ XS7 J $Facing a metal object$ $e \ge 7.5$ $e \ge 15$
		$ \begin{array}{c} \hline \\ \\ \\ $	by side	Face to face e ≥ 6	$Facing a metal object$ $e \ge 7.5$ $e \ge 15$ XS7 J $Facing a metal object$ $e \ge 7.5$ $e \ge 15$
		$ \begin{array}{c} \hline \\ \\ \\ $	F 15 (1) (1)	Face to face e ≥ 6	$Facing a metal object$ $e \ge 7.5$ $e \ge 15$ XS7 J $Facing a metal object$ $e \ge 7.5$ $e \ge 15$
		$ \begin{array}{c} \hline \\ \\ \\ $	by side	Face to face e ≥ 6	$E \ge 7.5$ $E \ge 7.5$ $E \ge 15$ $E \ge 15$ $E \ge 15$ $E \ge 15$
		$ \begin{array}{c} \hline \\ \\ \\ $	by side	Face to face e ≥ 6	$\frac{e}{BU/4} - \frac{1}{4}$ Facing a metal object $\frac{e \ge 7.5}{e \ge 15}$ XS7 J XS7 J

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References

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Inductive proximity sensors Osiprox[®] Optimum Flat, flush mountable, forms E, C and D Two-wire, d.c. supply Three-wire, d.c. supply, solid-state output

Fish, form E, 26 × 26 × 13 mm () No PAP Pre-abled (1-2m) (4) XST E1ATAPAL2 OUT NO PAP Pre-abled (1-2m) (4) XST E1ATAPAL2 OUT NO PAP Pre-abled (1-2m) (4) XST E1ATAPAL2 OUT NO PAP Pre-abled (1-2m) (4) XST E1ATAPAL4 OUT NO PAP Pre-abled (1-2m) (4) XST E1ATAPAL2 OUT NO PAP Pre-abled (1-2m) (4) XST E1ATAPAL4 OUT NO PAP Pre-abled (1-2m) (4) XST E1ATAPAL4 <th< th=""><th>_</th><th></th><th>Sensing dis- tance (Sn) mm</th><th></th><th>Output</th><th>Connection</th><th>Reference</th><th>Weight kg</th></th<>	_		Sensing dis- tance (Sn) mm		Output	Connection	Reference	Weight kg
10 NO PNP Pre-called (1-2 m) (4) SY FE 147 PLA2 0.07 10 NO PNP Pre-called (1-2 m) (4) SY FE 147 PLA2 0.07 10 NO PNP Pre-called (1-2 m) (4) SY FE 147 PLA2 0.07 10 NO PNP Pre-called (1-2 m) (4) SY FE 147 PLA2 0.07 10 NO PNP Pre-called (1-2 m) (4) SY FE 147 PLA2 0.07 10 NO PNP Pre-called (1-2 m) (4) SY FE 147 PLA2 0.07 10 NO PNP Pre-called (1-2 m) (4) SY FE 147 PLA2 0.07 10 NO PNP Pre-called (1-2 m) (4) SY FE 147 PLA2 0.07 10 NO PNP Pre-called (1-2 m) (4) SY FE 147 PLA2 0.07 10 NO PNP Pre-called (1-2 m) (4) SY FE 147 PLA2 0.07 10 NO PR-called (1-2 m) (4) SY FE 147 PLA2 0.07 10 NO Pre-called (1-2 m) (4) SY FE 147 PLA2 0.07	DFE64230		Flat, form	E, 26	5 x 26 x 13	mm (1)		Ū
MST ETATest MST ETATEST Attraction Attra					DND	$\operatorname{Pro} \operatorname{coblod} (I = 2 \operatorname{m}) (A)$	YS7 E1 A1 DAL 2	0.075
SXFEA1ee12 NPR Pre-cabled (L = 2m (4) SXFEAA1ee12 0.040 NP Pre-cabled (L = 2m (4) SXFEAA1ee12 0.040 SXFEAA1ee12 SXFEAA1ee12 0.040 SXFEAA1EE12 0.040 SXFEAA1EE12 SXFEAA1EE12 0.			10	NO	FINE	. ,,,,		
NST EIA1es2 NST EIA1es2 OTT NST EIA1es2 NST EIA1es0 NST EIA1AUNE OTT NST EIA1es0 NST EIA1AUNE OTT NST EIA1AUNE OTT NST EIA1 NST EIA1AUNE OTT NST EIA1AUNE OTT NST EIA1 NST EIA1 OTT NST EIA1AUNE OTT NST EIA1 NST EIA1 OTT NST EIA1 OTT NST EIA1 NST EIA1 OTT NST EIA1 NST EIA1 OTT NST EIA1 NST EIA1 OTT NST EIA1 OTT NST EIA1 NST EIA1 NST EIA1 NST EIA1 OTT NST EIA1 NST EIA1 NST EIA1 NST EIA1 NST EIA1								
SXT E IA1ee12 NC Pre-child(1=2m)(4) SXT E IA1AUADITUE 0.075 NC PNP Pre-child(1=2m)(4) SXT E IA1AUADITUE 0.040 NST E IA1ee08 NC PNP Pre-child(1=2m)(4) SXT E IA1EE08 0.040 NST E IA1ee08 NC PNP Pre-child(1=2m)(4) SXT E IA1EE08 0.040 NST E IA1ee08 NC PNP Pre-child(1=2m)(4) SXT E IA1EE02 0.075 NST E IA1ee08 NC Pre-child(1=2m)(4) SXT E IA1EE02 0.070 NST E IA1ee08 NC Pre-child(1=2m)(4) SXT E IA1E02 0.070 NST E IA1ee08 NC Pre-child(1=2m)(4) SXT E IA1E02 0.070 NST E IA1ee08 NC Pre-child(1=2m)(4) SXT E IA1E02 0.070 NST E IA1ee08 NC Pre-child(1=2m)(4) SXT E IA1E02 0.070 NST E IA1ee08 NC Pre-child(1=2m)(4) SXT E IA1E02 0.070 NST E IA1ee08 NST E IA1E02 0.070 NST E IA1E02 0.070 NST E IA1E02 NST E IA1E02					NPN			
No. No. PR Pre-cabled (1 = 2m / 4) SZF EXTANUETINI 2 0.400 NC PRP Pre-cabled (1 = 2m / 4) SZF EXTANUETINI 2 0.400 NST EXTANUET NC PRP Pre-cabled (1 = 2m / 4) SZF EXTANUETINI 2 0.400 NST EXTANUET NC PRP Pre-cabled (1 = 2m / 4) SZF EXTANUETINI 2 0.400 NST EXTANUET NC PRP Pre-cabled (1 = 2m / 4) SZF EXTANUETINI 2 0.400 NST EXTANUET NC PRP Pre-cabled (1 = 2m / 4) SZF EXTANUETINI 2 0.400 NST EXTANUET NC PRP Pre-cabled (1 = 2m / 4) SZF EXTANUETINI 2 0.400 NST EXTANUET NC PRP Pre-cabled (1 = 2m / 4) SZF EXTANUETINI 2 0.400 NST EXTANUET NST EXTANUETINI 2 0.400 Pre-cabled (1 = 2m / 4) SZF EXTANUETINI 2 0.400 NST EXTANUET NST EXTANUETINI 2 0.400 Pre-cabled (1 = 2m / 4) SZF EXTANUETINI 2 0.400 NST EXTANUET NST EXTANUETINI 2 0.400 Pre-cabled (1 = 2m / 4) SZT EXTAN	XS7 E1A1eel 2							
NC PNP Pre-cabled (L-2m) (X ST ELATEBL2 D057 (X						and the second		
NS7 = IA1eL0eM12 Remate Mt2 connector XS7 E1A1BBL01112 0.000 NS7 = IA1eL0eM12 NPN Pre-cabled (L=2n) (d) XS7 E1A1NBBL 0.040 NS7 = IA1eL0eM12 NPN Pre-cabled (L=2n) (d) XS7 E1A1NBBL 0.040 NS7 = IA1eL0eM12 NPN Pre-cabled (L=2n) (d) XS7 E1A1NBL 0.040 NS7 = IA1eL0eM12 NPN Pre-cabled (L=2n) (d) XS7 E1A1NBL 0.040 NS7 = IA1eL0eM12 NPN Pre-cabled (L=2n) (d) XS7 E1A1NBL 0.040 NS7 = IA1eL0eM12 NPN Pre-cabled (L=2n) (d) XS7 E1A1DBL01M12 0.040 NS7 = IA1eL0eM12 NS7 E1A1DBL01M12 0.040 Remote M12 connector XS7 E1A1DBL01M12 0.040 NS7 = IA1eL0EM12 NS7 E1A1DBL01M12 0.040 Remote M12 connector XS7 C1A1PAL2 0.040 NS7 = IA1eL0EM12 NS7 = IA1eL0EM12 0.040 Remote M12 connector XS7 C1A1PAL2 0.040 NS7 = IA1eL0EM12 NS7 = IA1eL0EM12 0.040 Remote M12 connector XS7 C1A1PAL2 0.040 NS7 = IA1eL0EM11 NS7 = IA1eL0EM11 NS				NC	PNP	Pre-cabled $(L = 2 m) (4)$		
NS7 = IA1eL0eM12 Remate Mt2 connector XS7 E1A1BBL01112 0.000 NS7 = IA1eL0eM12 NPN Pre-cabled (L=2n) (d) XS7 E1A1NBBL 0.040 NS7 = IA1eL0eM12 NPN Pre-cabled (L=2n) (d) XS7 E1A1NBBL 0.040 NS7 = IA1eL0eM12 NPN Pre-cabled (L=2n) (d) XS7 E1A1NBL 0.040 NS7 = IA1eL0eM12 NPN Pre-cabled (L=2n) (d) XS7 E1A1NBL 0.040 NS7 = IA1eL0eM12 NPN Pre-cabled (L=2n) (d) XS7 E1A1NBL 0.040 NS7 = IA1eL0eM12 NPN Pre-cabled (L=2n) (d) XS7 E1A1DBL01M12 0.040 NS7 = IA1eL0eM12 NS7 E1A1DBL01M12 0.040 Remote M12 connector XS7 E1A1DBL01M12 0.040 NS7 = IA1eL0EM12 NS7 E1A1DBL01M12 0.040 Remote M12 connector XS7 C1A1PAL2 0.040 NS7 = IA1eL0EM12 NS7 = IA1eL0EM12 0.040 Remote M12 connector XS7 C1A1PAL2 0.040 NS7 = IA1eL0EM12 NS7 = IA1eL0EM12 0.040 Remote M12 connector XS7 C1A1PAL2 0.040 NS7 = IA1eL0EM11 NS7 = IA1eL0EM11 NS						M8 connector	XS7 E1A1PBM8	0.040
MB connector XS7 E1A1BB/ID 0.449 NO Pre-cabled (L-2 m) (4) XS7 E1A1BB/ID 0.449 NO Pre-cabled (L-2 m) (4) XS7 E1A1BB/ID 0.449 NO Pre-cabled (L-2 m) (4) XS7 E1A1BB/ID 0.449 NO Remote M12 connector XS7 E1A1BB/ID 0.449 NO Remote M12 connector XS7 E1A1BB/ID 0.449 NO Remote M12 connector XS7 E1A1BB/ID 0.400 NO Remote M12 connector XS7 C1A1BB/ID 0.400 NO NO Pre-cabled (L-2 m) (4) XS7 C1A1BB/ID 0.400 NO		XS7 •1A1•L0•M12				Remote M12 connector	XS7 E1A1PBL01M12	0.040
XSTEIAIteAMB Remote M12 connector XST EIAINBLDIMI2 0.490 M NO PPe-cabled (L=2 n) (4) XST EIAINBLDIMI2 0.490 NO NO PPe-cabled (L=2 n) (4) XST EIAINBLDIMI2 0.490 NO NO PPe-cabled (L=2 n) (4) XST EIAINBLDIMI2 0.490 NO NO PPe-cabled (L=2 n) (4) XST EIAINBLDIMI2 0.490 NO NO PPe-cabled (L=2 n) (4) XST EIAINBLDIMI2 0.490 NO NO PPe-cabled (L=2 n) (4) XST EIAINBLDIMI2 0.490 NO PPe-cabled (L=2 n) (4) XST EIAINBLDIMI2 0.490 NO PN PPe-cabled (L=2 n) (4) XST EIAINBLDIMI2 0.490 NO PN PPe-cabled (L=2 n) (4) XST CIAINBLDIMI2 0.490 NO PN PPe-cabled (L=2 n) (4) XST CIAINBLDIMI2 0.490 NO PN PPe-cabled (L=2 n) (4) XST CIAINBLDIMI2 0.490 NO PN PPe-cabled (L=2 n) (4) XST CIAINBLDIMI2 0.490 NO PPe-cabl					NPN	Pre-cabled (L = 2 m) (4)	XS7 E1A1NBL2	0.075
KSY E IAN extended Two-wire ::: Pro-cabled (1 = 2 m) (4) XSY E IAN IDAL2 (2) 0.00 NO M8 connector XSY E IAN IDAL2 (2) 0.070 NO M8 connector XSY E IAN IDAL2 (2) 0.070 NO M8 connector XSY E IAN IDAL2 (2) 0.070 NO M8 connector XSY E IAN IDAL2 (2) 0.070 NO M8 connector XSY E IAN IDAL2 (2) 0.070 NO M8 connector XSY E IAN IDAL2 (2) 0.070 M8 connector XSY E IAN IDAL2 (2) 0.070 M8 connector XSY E IAN IDAL2 (2) NO XSY C IAN # AL 0.070 M8 connector XSY E IAN IDAL2 (2) 0.070 M8 connector XSY C IAN # AL 0.070 M8 connector XSY C IAN # AL 0.070 M8 connector XSY C IAN # AL 0.070 M8 connector XSY C IAN # AL 0.070 M8 connector XSY C IAN # AL 0.070 M8 connector XSY C IAN # AL 0.070 M8 connector XSY C IAN # AL 0.070 KSY C IAN # AL 0.070						M8 connector	XS7 E1A1NBM8	0.040
Two-wire ::: Two-wire ::: 10 NO Pre-cabled (L=2 m) (d) XST FLATDAME 0.070 MB connector XST FLATDAME 0.040 Pre-cabled (L=2 m) (d) XST FLATDAME 0.040 NO Pre-cabled (L=2 m) (d) XST FLATDAME 0.040 Pre-cabled (L=2 m) (d) XST FLATDAME 0.040 NO Pre-cabled (L=2 m) (d) XST FLATDAME 0.040 Pre-cabled (L=2 m) (d) XST FLATDAME 0.040 NO Remote M12 connector XST FLATDAME 0.040 Pre-cabled (L=2 m) (d) XST FLATDAME 0.040 NO Remote M12 connector XST FLATDAME 0.040 Pre-cabled (L=2 m) (d) XST FLATDAME 0.040 NO Remote M12 connector XST CLATPALID 0.040 Pre-cabled (L=2 m) (d) XST CLATPALID 0.040 NO Pre-cabled (L=2 m) (d) XST CLATPALID 0.040 Pre-cabled (L=2 m) (d) XST CLATPALID 0.040 NO Pre-cabled (L=2 m) (d) XST CLATPALID 0.040 Pre-cabled (L=2 m) (d) XST CLATPALID 0.040 NO Pr	XS7 E1A1					Remote M12 connector	XS7 E1A1NBL01M12	0.040
ME Omenandar ME Omenandar ME Omenandar ME Omenandar ME Omenandar Omenan			Two-wire					
Remote M12 connector SF2 F4 AIDALDMIN2 0.404 NO Remote M12 connector SF2 F4 AICALDMIN2 0.404 NO NC Pre-cabled (L = 2m) (4) SF2 F4 AICALDMIN2 0.406 NO Remote M12 connector SF2 F4 AICALDMIN2 0.406 NO Remote M12 connector SF2 F4 AICALDMIN2 0.406 NO Remote M12 connector SF2 F4 AICALDMIN2 0.406 Remote M12 connector SF2 F4 AICALDMIN2 0.406 Remote M12 connector SF2 F4 AICALDMIN2 0.406 NO NO	4233	4234	10	NO		Pre-cabled (L = 2 m) (4)	XS7 E1A1DAL2	0.070
NO Remote M12 connector XST E1A1CALDIM12 0.640 NC Pre-cabled (L = 2 m) (4) XST E1A1CBLDPM12 0.640 NC Pre-cabled (L = 2 m) (4) XST E1A1CBLDPM12 0.640 NC Pre-cabled (L = 2 m) (4) XST E1A1CBLDPM2 0.640 NC Pre-cabled (L = 2 m) (4) XST E1A1CBLDPM2 0.640 NC Pre-cabled (L = 2 m) (4) XST E1A1CBLDPM2 0.650 NC Pre-cabled (L = 2 m) (4) XST E1A1CBLDPM2 0.650 NC PNP Pre-cabled (L = 2 m) (4) XST E1A1CBLDPM2 0.650 NC PNP Pre-cabled (L = 2 m) (4) XST E1A1CBLDPM2 0.650 NC PNP Pre-cabled (L = 2 m) (4) XST E1A1CBLDPM2 0.650 NC PNP Pre-cabled (L = 2 m) (4) XST E1A1CBLDPM2 0.650 NC PNP Pre-cabled (L = 2 m) (4) XST E1A1CBLDPM2 0.650 NC PNP Pre-cabled (L = 2 m) (4) XST E1A1CBLDPM2 0.650 NC PNP Pre-cabled (L = 2 m) (4) XST E1A1CBLDPM2 0					M8 connector	XS7 E1A1DAM8	0.040	
iterminals 1 and 4 (2) Remote M12 connector (3) SYF EATCALOBM12 0.050 NC Pre-cabled (L= 2 m) (4) XSF EATCALOBM12 0.050 NST CIATe=L2 NST CIATe=M8 ST CIATE=M2 0.000 NEW Pre-cabled (L= 2 m) (4) XST CIATE=M2 0.000 ST CIATE=M2 0.000 NEW Pre-cabled (L= 2 m) (4) XST CIATE=M2 0.000 ST CIATE=M1 0.000 NEW Pre-cabled (L= 2 m) (4) XST CIATE=M2 0.000 ST CIATE=M1 0.000 NEW Pre-cabled (L= 2 m) (4) XST CIATE=M2 0.000 ST CIATE=M2 0.000 NEW Pre-cabled (L= 2 m) (4) XST CIATE=M2 0.000 ST CIATE=M2 0.000 NEW Pre-cabled (L= 2 m) (4) XST CIATE=M2 0.000 ST CIATE=M2 0.000 NEW Pre-cabled (L= 2 m) (4) XST								
NC Pre-cabled (L = 2 m) (4) XST E1A1DBL2 0.007 MC connector XST E1A1DBL3 0.007 MC connector XST E1A1DBL3 0.000 MC connector XST C1A1PAL1 0.000 NC PNP Pre-cabled (L = 2 m) (4) XST C1A1PAL1 0.000 NC PNP Pre-cabled (L = 2 m) (4) XST C1A1PAL1 0.000 NC PNP Pre-cabled (L = 2 m) (4) XST C1A1PAL2 0.000 NC PNP Pre-cabled (L = 2 m) (4) XST C1A1PAL2 0.000 NC PNP Pre-cabled (L = 2 m) (4) XST C1A1PAL2 0.000 </td <td></td> <td>9 / 2</td> <td></td> <td></td> <td>a = 1 and $4/(2)$</td> <td></td> <td></td> <td></td>		9 / 2			a = 1 and $4/(2)$			
M8 connector X37 E1A10BM8 0.040 KS7 C1A1e-L2 KS7 C1A1e-M8 0.80 NPN Pre-cabled (L=2 m) (4) XS7 C1A1PAL2 0.085 NPN Pre-cabled (L=2 m) (4) XS7 C1A1PAL2 0.095 NPN Pre-cabled (L=2 m) (4) XS7 C1A1PAL2 0.095 NPN Pre-cabled (L=2 m) (4) XS7 C1A1PAL2 0.095 M8 connector XS7 C1A1PAL2 0.090 Remote M12 connector XS7 C1A1PAL2 0.090 M8 connector XS7 C1A1PAL2 0.090 M8 connector XS7 C1A1PAL2 0.090					ais i and 4 (2)	,		
Remote M12 connector XS7 E1A10BL01M12 0.040 XS7 C1A1eeL2 XS7 C1A1eeM8 Flat, form C, 40 x 40 x 15 mm (r) Microsoft XS7 C1A1eeM8 NO PNP Precabled (L= 2 m) (4) XS7 C1A1PAL2 0.060 NO Precabled (L= 2 m) (4) XS7 C1A1PAL2 0.060 Remote M12 connector XS7 C1A1PAL2 0.060 NC PNP Precabled (L= 2 m) (4) XS7 C1A1PAL2 0.060 NC PNP Precabled (L= 2 m) (4) XS7 C1A1PAL2 0.060 NC PNP Precabled (L= 2 m) (4) XS7 C1A1PAL2 0.060 NC PNP Precabled (L= 2 m) (4) XS7 C1A1PAL2 0.060 NC PNP Precabled (L= 2 m) (4) XS7 C1A1PAL2 0.060 NO Precabled (L= 2 m) (4) XS7 C1A1PAL2 0.060 NO Precabled (L= 2 m) (4) XS7 C1A1PAL2 0.060 NO Precabled (L = 2 m) (4) XS7 C1A1PAL2 0.060 NO Remote M12 connector XS7 C1A1PAL2 0.060 NO Remote M12 connector				NC				
Flat, form C, 40 x 40 x 15 mm (t) Tree-wire ::: x57 C1A1+e-L2 0.095 M Connector X57 C1A1PAU2 0.095 M Connector X57 C1A1PAU3 0.060 NP Pre-cabled (L=2 m) (4) X57 C1A1PAU3 0.060 NC PNP Pre-cabled (L=2 m) (4) X57 C1A1PBL2 0.095 NC PNP Pre-cabled (L=2 m) (4) X57 C1A1PBL0 0.060 NP Pre-cabled (L=2 m) (4) X57 C1A1PBL2 0.095 M Connector X57 C1A1PBL0 0.060 NP Pre-cabled (L=2 m) (4) X57 C1A1PBL0 0.060 NP Pre-cabled (L=2 m) (4) X57 C1A1PBL0 0.060 NP Pre-cabled (L=2 m) (4) X57 C1A1DBL0 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
Tree-wire Tree-wire XS7 C1A1ee12 NO PNP Pre-cabled (L=2 m) (4) XS7 C1A1PAL2 0.085 M8 connector NPN Pre-cabled (L=2 m) (4) XS7 C1A1PAL01M12 0.080 Remote M12 connector XS7 C1A1PAL01M12 0.080 Remote M12 connector NPN Pre-cabled (L=2 m) (4) XS7 C1A1PAL01M12 0.080 Remote M12 connector XS7 C1A1PAL01M12 0.080 Remote M12 connector NPN Pre-cabled (L=2 m) (4) XS7 C1A1PAL01M12 0.080 Remote M12 connector XS7 C1A1PAL01M12 0.080 Remote M12 connector NPN Pre-cabled (L=2 m) (4) XS7 C1A1PAL01M12 0.080 Remote M12 connector XS7 C1A1PAL01M12 0.080 Remote M12 connector NPN Pre-cabled (L=2 m) (4) XS7 C1A1PAL01M12 0.080 Remote M12 connector XS7 C1A1PBL01M12 0.080 Remote M12 connector			_				XS7 E1A1DBL01M12	0.040
XST CIAI+e-L2 XST CIAI+e-MB 15 ND PNP Pre-cabled (L = 2 m) (4) XST CIAIPAL2 0.005 MB connector VATURE 0000 Remote M12 connector XST CIAIPALDIMI2 0.006 MB connector XST CIAIPALDIMI2 0.006 Remote M12 connector XST CIAIPALDIMI2 0.006 MB connector NPN Pre-cabled (L = 2 m) (4) XST CIAIPALDIMI2 0.006 Remote M12 connector 0.000 Remote M12 connector XST CIAIPALDIMI2 0.006 Remote M12 connector XST CIAIPALDIMI2 <td></td> <td></td> <td>Flat, form</td> <td>C, 40</td> <td>) x 40 x 15</td> <td>mm (1)</td> <td></td> <td></td>			Flat, form	C, 40) x 40 x 15	mm (1)		
XST C1A1eeL2 MB connector XST C1A1PALM 0.060 Remote M12 connector XST C1A1PBL01M12 0.060 NPN Pre-cabled (L = 2 m) (4) XST C1A1PBL01M12 0.060 NPN Pre-cabled (L = 2 m) (4) XST C1A1PBL01M12 0.060 NPN Pre-cabled (L = 2 m) (4) XST C1A1PBL01M12 0.060 NPN Pre-cabled (L = 2 m) (4) XST C1A1DL1 0.090 MB connector XST C1A1DL01M12 0.060 Remote M12 connector XST C1A1DL01M12 0.060 NO Pre-cabled (L = 2 m) (4) XST C1A1DL01M12 0.060 NO Pre-cabled (L = 2 m) (4) XST C1A1DL1M12 0.060 NO Pre-cabled (L = 2 m) (4) XST C1A1DL1M12 0.060 N			Three-wire					
No. 50. Meth Remote M12 connector XS7 C1A1PALD1M12 0.060 M8 connector NPN Pre-cabled (L=2 m) (4) XS7 C1A1NAMB 0.060 M8 connector NC PNP Pre-cabled (L=2 m) (4) XS7 C1A1NAMB 0.060 M8 connector NC PNP Pre-cabled (L=2 m) (4) XS7 C1A1NABL2 0.060 M8 connector NC PNP Pre-cabled (L=2 m) (4) XS7 C1A1NBL2 0.060 M8 connector NPN Pre-cabled (L=2 m) (4) XS7 C1A1NBL2 0.060 M8 connector NPN Pre-cabled (L=2 m) (4) XS7 C1A1NBL2 0.060 M8 connector NPN Pre-cabled (L=2 m) (4) XS7 C1A1NBL3 0.060 M8 connector NPN Pre-cabled (L=2 m) (4) XS7 C1A1NBL3 0.060 M8 connector NS7 D1A1eeJL3 NO Pre-cabled (L=2 m) (4) XS7 C1A1DAL2 0.060 M8 connector NO Pre-cabled (L=2 m) (4) XS7 C1A1DAL3 0.060 M8 connector XS7 C1A1DAL3 0.060 M8 connector NO Pre-cabled (L=2 m) (4) XS7 D1A1AL2 0.060 M8 connector XS7 D1A1AL2 0.060 M8 connector NO Pre-cabled (L=2 m) (4	<i>V</i>	XS7 C1A1●●M8	15	NO	PNP	. ,,,,		0.095
NPN Pre-cabled (L = 2 m) (4) XS7 C1A1NAL2 0.085 M8 connector NC PNP Pre-cabled (L = 2 m) (4) XS7 C1A1NAL011112 0.085 M8 connector NC PNP Pre-cabled (L = 2 m) (4) XS7 C1A1PBL2 0.095 M8 connector NC PNP Pre-cabled (L = 2 m) (4) XS7 C1A1PBL2 0.095 M8 connector NC PNP Pre-cabled (L = 2 m) (4) XS7 C1A1PBL2 0.095 M8 connector NC PNP Pre-cabled (L = 2 m) (4) XS7 C1A1PBL2 0.095 M8 connector XS7 D1A1eeL2 V V XS7 C1A1PBL2 0.095 M8 connector XS7 C1A1DBL2 0.090 M8 connector XS7 D1A1eeL2 V<	XS7 C1A1eeL2							
NC PNP Pre-cabled (L=2 m) (4) XST C1A1PBL01M12 0.060 NC PNP Pre-cabled (L=2 m) (4) XST C1A1PBL01M12 0.060 NPN Pre-cabled (L=2 m) (4) XST C1A1DAL3 0.060 Remote M12 connector XST C1A1DBL01M12 0.060 ND Pre-cabled (L=2 m) (4) XST C1A1DAL3 0.060 Remote M12 connector XST C1A1DAM8 0.060 ND Pre-cabled (L=2 m) (4) XST C1A1DAL3 0.060 ND Pre-cabled (L=2 m) (4) XST C1A1CAL0M12 0.060 ND Pre-cabled (L=2 m) (4) XST D1A1CAL0M12 0.060 ND	· · ·							
NC PNP Pre-cabled (L=2 m) (4) XST C1A1PBL01M12 0.060 NC PNP Pre-cabled (L=2 m) (4) XST C1A1PBL01M12 0.060 NPN Pre-cabled (L=2 m) (4) XST C1A1DAL3 0.060 Remote M12 connector XST C1A1DBL01M12 0.060 ND Pre-cabled (L=2 m) (4) XST C1A1DAL3 0.060 Remote M12 connector XST C1A1DAM8 0.060 ND Pre-cabled (L=2 m) (4) XST C1A1DAL3 0.060 ND Pre-cabled (L=2 m) (4) XST C1A1CAL0M12 0.060 ND Pre-cabled (L=2 m) (4) XST D1A1CAL0M12 0.060 ND	62086				NPN	. , , , , ,		
NC PNP Pre-cabled (L = 2 m) (4) XS7 C1A1PBM2 0.095 M6 connector XS7 C1A1PBM3 0.060 NPN Pre-cabled (L = 2 m) (4) XS7 C1A1PBM3 0.060 NPN Pre-cabled (L = 2 m) (4) XS7 C1A1PBM3 0.060 NPN Pre-cabled (L = 2 m) (4) XS7 C1A1PBM3 0.060 NPN Pre-cabled (L = 2 m) (4) XS7 C1A1DA12 0.090 NC PNP Pre-cabled (L = 2 m) (4) XS7 C1A1DA12 0.090 NC Pre-cabled (L = 2 m) (4) XS7 C1A1DA12 0.090 NC Pre-cabled (L = 2 m) (4) XS7 C1A1DA12 0.090 NC Pre-cabled (L = 2 m) (4) XS7 C1A1DA12 0.090 NC Pre-cabled (L = 2 m) (4) XS7 C1A1DA12 0.090 NC Pre-cabled (L = 2 m) (4) XS7 C1A1DA12 0.090 NC Pre-cabled (L = 2 m) (4) XS7 C1A1DB12 0.090 NC Pre-cabled (L = 2 m) (4) XS7 C1A1DB12 0.090 NC Pre-cabled (L = 2 m) (4) XS7 D1A1PB12 (5) 0.340								
Remote M12 connector XS7 C1A1PBL01M12 0.060 NPN NPN Pre-cabled (L = 2 m) (4) XS7 C1A1NBL2 0.090 M8 connector MS connector XS7 C1A1NBL 0.090 M8 connector XS7 C1A1NBM 0.060 NB XS7 D1A1ee/M12 XS7 C1A1NBL 0.090 M8 connector XS7 C1A1NBM 0.060 NB XS7 D1A1ee/M12 XS7 D1A1ee/M12 ND Pre-cabled (L = 2 m) (4) XS7 C1A1DAL12 0.090 M8 connector XS7 D1A1ee/M12 XS7 D1A1ee/M12 ND Remote M12 connector XS7 C1A1DAL01M12 0.060 NB NO Remote M12 connector XS7 C1A1DBL01M12 0.090 M8 connector XS7 C1A1DBL01M12 0.090 M8 connector NO Remote M12 connector XS7 C1A1DBL01M12 0.090 M8 connector XS7 C1A1DBL01M12 0.090 M8 connector XS7 C1A1DBL01M12 0.090 M8 connector XS7 C1A1DBL01M12 0.090 M8 connector NS7 C1A1DBL01M12 0.090 M8 connector XS7 C1A1DBL01M12 0.090 M8 connector NS7 C1A1DBL01M12 0.090 M8 connector NS7 C1A1DBL01M12 0.090 M8 connector NS7 C1A1DBL01M12 0.090 M8 connector NS7 C1A1DBL01M12 0.090 M12 connector NS7 D1A1DBM12(5)		× 2			DUD			
Remote M12 connector XS7 C1A1PBL01M12 0.060 XS7 C1A1NBM NPN Pre-cabled (L = 2 m) (4) XS7 C1A1NBM 0.060 M8 connector MPN Pre-cabled (L = 2 m) (4) XS7 C1A1NBM 0.060 M8 connector XS7 D1A1ee/J1 XS7 D1A1ee/J1 0.060 M8 connector XS7 C1A1NBM 0.060 M8 connector XS7 D1A1ee/J1 XS7 D1A1ee/J1 0.060 M8 connector XS7 C1A1DAL12 0.090 M8 connector XS7 D1A1ee/J1 XS7 D1A1ee/J1 0.060 M8 connector XS7 C1A1DAL01M12 0.060 M8 connector NO Remote M12 connector XS7 C1A1DAL01M12 0.090 M8 connector XS7 C1A1DAL01M12 0.090 M8 connector NO Remote M12 connector XS7 C1A1DBL01M12 0.090 M8 connector XS7 C1A1DBL01M12 0.090 M8 connector NO Remote M12 connector XS7 C1A1DBM8 0.090 M8 connector XS7 C1A1DBM8 0.090 M8 connector NC Pre-cabled (L = 2 m) (4) XS7 C1A1DBM12 (5) 0.340 M12 connector 0.40 M12 connector 0.40 M12 connector 0.40 M12 connector 0.340 M12 connector 0.340 M12 connector 0.340 M12 connector 0.340 M12 connector 0.340 M12 connect				NC	PNP	. ,,,,		
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M8 connector XS7 C1A1NBM8 0.060 Remote M12 connector XS7 C1A1NBL01M12 0.060 Remote M12 connector XS7 C1A1DAL2 0.090 XS7 D1A1eeL2 NO Pre-cabled (L=2 m) (4) XS7 C1A1DAL01M12 0.060 NO Remote M12 connector XS7 C1A1DAL01M12 0.060 Remote M12 connector XS7 C1A1DAL01M12 0.060 NO Remote M12 connector XS7 C1A1DAL01M12 0.060 NO Remote M12 connector XS7 C1A1DAL01M12 0.060 NO Remote M12 connector XS7 C1A1DAL01M12 0.060 M8 connector XS7 C1A1DAL01M12 0.060 NC Pre-cabled (L=2 m) (4) XS7 C1A1DBL01M12 0.060 M8 connector XS7 C1A1DBL01M12 0.060 M8 connector XS7 C1A1DBL01M12 0.060 NC Pre-cabled (L=2 m) (4) XS7 C1A1DBL01M12 0.060 M8 connector XS7 C1A1DBL01M12 0.060								
Remote M12 connector XS7 C1A1NBL01M12 0.060 XS7 D1A1eeL2 NO Pre-cabled (L=2 m) (4) XS7 C1A1DAL2 0.090 NO Remote M12 connector XS7 C1A1DAL01M12 0.060 NO Remote M12 connector XS7 C1A1DAL01M12 0.060 NO Remote M12 connector XS7 C1A1DAL01M12 0.060 NO Remote M12 connector XS7 C1A1CAL01M12 0.060 NO Remote M12 connector XS7 C1A1CAL01M12 0.060 NO Remote M12 connector XS7 C1A1CAL0M12 0.060 NO Remote M12 connector XS7 C1A1DBL01M12 0.060 NO Remote M12 connector XS7 C1A1DBL01M12 0.060 NO Remote M12 connector XS7 C1A1DBL01M12 0.060 Remote M12 connector XS7 C1A1DBL01M12 0.060 NO NC Pre-cabled (L=2 m) (4) XS7 D1A1PAL2 (5) 0.340 M12 connector XS7 D1A1PAL2 (5) 0.340 M12 connector XS7 D1A1PAL2 (5) 0.340 NPN Pre-cabled (L=2 m) (4) XS7 D1A1PAL2 (5)								
Two-wire Two-wire Ts Pre-cabled (L = 2 m) (4) XST C1A1DAL2 0.090 M8 connector XST C1A1DAL1 0.060 Remote M12 connector XST C1A1DAL101M12 0.060 NO Remote M12 connector XST C1A1CAL01M12 0.060 NO Remote M12 connector XST C1A1CAL08M12 0.090 NC Pre-cabled (L = 2 m) (4) XST C1A1CAL08M12 0.090 NC Pre-cabled (L = 2 m) (4) XST C1A1CAL08M12 0.090 M8 connector XST C1A1DBL2 0.090 M8 connector XST C1A1DBL3 0.090 NC Pre-cabled (L = 2 m) (4) XST C1A1DBL3 0.090 M8 connector XST C1A1DBL3 0.090 M8 connector XST C1A1DBL3 0.090 NC Pre-cabled (L = 2 m) (4) XST C1A1DBL3 0.090 M12 connector XST D1A1PAL2 (5) 0.340 M12 connector XST D1A1PAL12 (5) 0.240 M12 connector XST D1A1PAL12 (5) 0.240 NC PNP Pre-cabled (L = 2 m) (4) XST D1A1PAL12 (5) 0.240 M12 connecto								
NO Pre-cabled (L=2 m) (4) XST C1A1DAL2 0.090 M8 connector XST C1A1DAM8 0.060 Remote M12 connector XST C1A1DAM8 0.060 NO Remote M12 connector XST C1A1DAM8 0.060 NO Remote M12 connector XST C1A1DAL01M12 0.060 NO Remote M12 connector XST C1A1DAL01M12 0.060 NO Remote M12 connector XST C1A1DAL0M12 0.090 NO Remote M12 connector XST C1A1DBL12 0.090 NO Remote M12 connector XST C1A1DBL12 0.090 NO Pre-cabled (L=2 m) (4) XST C1A1DBL12 0.090 M8 connector XST D1A1PAL2 (5) 0.340 M12 connector XST D1A1NAL2 (5) 0.290 NPN Pre-			Two-wire					0.000
M8 connector XS7 C1A1DAM8 0.060 Remote M12 connector XS7 C1A1DAM8 0.060 Remote M12 connector XS7 C1A1DAL01M12 0.060 NO Remote M12 connector XS7 C1A1DAL01M12 0.060 NO Remote M12 connector XS7 C1A1DBL12 0.090 NC Pre-cabled (L = 2 m) (4) XS7 C1A1DBL2 0.090 NC Pre-cabled (L = 2 m) (4) XS7 C1A1DBL2 0.090 M8 connector XS7 C1A1DBM8 0.060 Remote M12 connector XS7 C1A1DBL2 0.090 NC Pre-cabled (L = 2 m) (4) XS7 C1A1DBL2 0.090 M8 connector XS7 C1A1DBM8 0.060 Remote M12 connector XS7 C1A1DBL01M12 0.060 Remote M12 connector XS7 C1A1DBL01M12 0.060 Remote M12 connector XS7 C1A1DBM8 0.060 Remote M12 connector XS7 C1A1DBL01M12 0.060 Remote M12 connector XS7 C1A1DBL01M12 0.060 M8 connector XS7 D1A1PBL2 (5) 0.340 M12 connector XS7 D1A1PBL2 (5) 0.340 M12 connector XS7 D1A1BM12 (5) </td <td></td> <td></td> <td rowspan="5"></td> <td></td> <td>Pre-cabled $(l = 2 m) (4)$</td> <td>XS7 C1A1DAL2</td> <td>0 090</td>					Pre-cabled $(l = 2 m) (4)$	XS7 C1A1DAL2	0 090	
Remote M12 connector XS7 C1A1DAL01M12 0.060 NO Remote M12 connector XS7 C1A1CAL01M12 0.060 terminals 1 and 4 (2) Remote M12 connector XS7 C1A1CAL01M12 0.090 NC Pre-cabled (L = 2 m) (4) XS7 C1A1DBL2 0.090 M8 connector XS7 C1A1DBL01M12 0.060 Remote M12 connector XS7 C1A1DBL2 0.090 M8 connector XS7 C1A1DBL01M12 0.060 Remote M12 connector XS7 D1A1PAL12 (5) 0.340 M12 connector XS7 D1A1PAM12 (5)<				ne		. ,,,		
NO Remote M12 connector XS7 C1A1CAL0IM12 0.060 XS7 D1A1eeL2 NC Pre-cabled (L=2m) (4) XS7 C1A1CAL0IM12 0.090 M8 connector XS7 C1A1DBL2 0.090 M8 connector XS7 C1A1DBL01M12 0.060 Remote M12 connector XS7 C1A1DBL01M12 0.060 M9 Pre-cabled (L=2m) (4) XS7 C1A1DBL01M12 0.060 M12 connector XS7 D1A1PAL2 (5) 0.340 M12 connector XS7 D1A1NAL2 (5) 0.290 NC PNP Pre-cabled (L=2m) (4) XS7 D1A1PAL2 (5) 0.340 M12 connector XS7 D1A1PBL2 (5) 0.340 M12 connector XS7 D1A1PBL2 (5) 0.340 NPN Pre-cabled (L=2m) (4) XS7 D1A1PBL2 (5) 0.340								
XS7 D1A1eeM12 terminals 1 and 4 (2) Remote M12 connector (3) XS7 C1A1CAL08M12 0.090 NC Pre-cabled (L= 2 m) (4) XS7 C1A1DBL2 0.090 M8 connector XS7 C1A1DBM8 0.060 Remote M12 connector XS7 C1A1DBL2 0.090 M8 connector XS7 C1A1DBL2 0.090 M8 connector XS7 C1A1DBM8 0.060 Remote M12 connector XS7 C1A1DBL2 0.060 Remote M12 connector XS7 C1A1DBL2 0.060 M8 connector XS7 C1A1DBL2 0.060 M12 connector XS7 D1A1PAL2 (5) 0.340 M12 connector XS7 D1A1PAL2 (5) 0.340 M12 connector XS7 D1A1NAM12 (5) 0.290 NC PNP Pre-cabled (L= 2 m) (4) XS7 D1A1NAM12 (5) 0.290 NC PNP Pre-cabled (L= 2 m) (4) XS7 D1A1NAM12 (5) 0.290 NC PNP Pre-cabled (L= 2 m) (4) XS7 D1A1NAM12 (5) 0.290 NC PNP Pre-cabled (L = 2 m) (4) XS7 D1A1NBL2 (5) 0.340 M12 connector XS7 D1A1NBM12 (5) 0.290 NO M12 connector X				NO				
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XS7 D1A1=e12 M8 connector XS7 C1A1DBM8 0.060 Remote M12 connector XS7 C1A1DBL01M12 0.060 Remote M12 connector XS7 C1A1DBL01M12 0.060 Flat, form D, 80 x 80 x 26 mm (1) Three-wire 40 Pre-cabled (L = 2 m) (4) XS7 D1A1PAL2 (5) 0.340 M12 connector XS7 D1A1PAL12 (5) 0.340 M12 connector XS7 D1A1PAL12 (5) 0.340 NC PNP Pre-cabled (L = 2 m) (4) XS7 D1A1NBL12 (5) 0.340 M12 connector XS7 D1A1PBL12 (5) 0.340 M12 connector XS7 D1A1PBL12 (5) 0.340 M12 connector XS7 D1A1NBL12 (5) 0.340 M12 connector XS7 D1A1NBL12 (5) 0.340 M12 connector XS7 D1A1DBL2 (5) 0.340 M12 connector XS7 D1A1DBL2 (5) 0.340 M12 connector XS7 D1A1DAL12 (5) 0.340 M12 connector XS7 D1A1DAL12 (5) 0.340 M12 connector XS7 D1A1DAL2 (5) 0.340 M12 connector XS7 D1A1DAL12 (5) 0.340 M12 connector XS7 D1A1DAL12 (5) 0.340 M12 connect	V			NC				
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Image: Non-State L2DIN Non-State L2DIN Non-State L2DIN Pre-cabled (L = 2 m) (4) XST D1A1DBL2 (5) 0,340 M12 connector XST D1A1eeL2DIN Non-State L2DIN Non-State L2DIN Non-State L2DIN Pre-cabled (L = 2 m) (4) XST D1A1DBL2 (5) 0,340 M12 connector XST D1A1eeL2DIN Non-State L2DIN Pre-cabled (L = 2 m) (4) XST D1A1DBL2 (5) 0,340 M12 connector XST D1A1eeL2DIN Non-State L2DIN Pre-cabled (L = 2 m) (4) XST D1A1DBL2 (5) 0,340 M12 connector XST D1A1DBL2 (5) 0,340 M12 connector XST D1A1DBL2 (5) 0,340 M12 connector XST D1A1DBL2 (5) 0,340 M12 connector XST D1A1DBL2 (5) 0,340 M12 connector XST D1A1DBL2 (5) 0,340 M12 connector XST D1A1DBL2 (5) 0,340 M12 connector XST D1A1DBL2 (5) 0,340 M12 connector XST D1A1DBL2 (5) 0,340 M12 connector XST D1A1DBL2 (5) 0,340 M12 connector XST D1A1DBL2 (5) 0,340 M12 connector XST D1A1DBL2 (5) 0,290 Non-State Connector						Remote M12 connector	XS7 C1A1DBL01M12	0.060
Image: Non-State L2DIN Non-State L2DIN Non-State L2DIN Pre-cabled (L = 2 m) (4) XST D1A1DBL2 (5) 0,340 M12 connector XST D1A1eeL2DIN Non-State L2DIN Non-State L2DIN Non-State L2DIN Pre-cabled (L = 2 m) (4) XST D1A1DBL2 (5) 0,340 M12 connector XST D1A1eeL2DIN Non-State L2DIN Pre-cabled (L = 2 m) (4) XST D1A1DBL2 (5) 0,340 M12 connector XST D1A1eeL2DIN Non-State L2DIN Pre-cabled (L = 2 m) (4) XST D1A1DBL2 (5) 0,340 M12 connector XST D1A1DBL2 (5) 0,340 M12 connector XST D1A1DBL2 (5) 0,340 M12 connector XST D1A1DBL2 (5) 0,340 M12 connector XST D1A1DBL2 (5) 0,340 M12 connector XST D1A1DBL2 (5) 0,340 M12 connector XST D1A1DBL2 (5) 0,340 M12 connector XST D1A1DBL2 (5) 0,340 M12 connector XST D1A1DBL2 (5) 0,340 M12 connector XST D1A1DBL2 (5) 0,340 M12 connector XST D1A1DBL2 (5) 0,340 M12 connector XST D1A1DBL2 (5) 0,290 Non-State Connector			Flat, form	D, 80	x 80 x 26	mm (1)		
M12 connector XS7 D1A1PAM12 (5) 0,290 NPN Pre-cabled (L = 2 m) (4) XS7 D1A1NAL2 (5) 0,340 M12 connector XS7 D1A1NAM12 (5) 0,290 NC PNP Pre-cabled (L = 2 m) (4) XS7 D1A1PBL2 (5) 0,340 M12 connector XS7 D1A1PBM12 (5) 0,290 NC PNP Pre-cabled (L = 2 m) (4) XS7 D1A1PBL2 (5) 0,340 M12 connector XS7 D1A1PBM12 (5) 0,290 NPN Pre-cabled (L = 2 m) (4) XS7 D1A1DBL2 (5) 0,340 M12 connector XS7 D1A1DBL2 (5) 0,340 M12 connector XS7 D1A1DBL2 (5) 0,290 NO Pre-cabled (L = 2 m) (4) XS7 D1A1DAL2 (5) 0,290 NO minals 1 and 4 (2) M12 connector XS7 D1A1DAL2 (5) 0,290 NO minals 1 and 4 (2) M12 connector XS7 D1A1DBL2 (5) 0,290 NC Pre-cabled (L = 2 m) (4) XS7 D1A1DBL2 (5) 0,290 NO minals 1 and 4 (2) M12 connector XS7 D1A1DBL2 (5) 0,290 NC Pre-cabled (L = 2 m) (4) XS7 D1A1DBL2 (5) 0,290 NC Pre-cabled (L = 2 m) (4) XS7 D1A1DBL2 (5)								
M12 connector XS7 D1A1PAM12 (5) 0,290 NPN Pre-cabled (L = 2 m) (4) XS7 D1A1NAL2 (5) 0,340 M12 connector XS7 D1A1NAM12 (5) 0,290 NC PNP Pre-cabled (L = 2 m) (4) XS7 D1A1PBL2 (5) 0,340 M12 connector XS7 D1A1PBM12 (5) 0,290 NC PNP Pre-cabled (L = 2 m) (4) XS7 D1A1PBL2 (5) 0,340 M12 connector XS7 D1A1PBM12 (5) 0,290 NPN Pre-cabled (L = 2 m) (4) XS7 D1A1DBL2 (5) 0,340 M12 connector XS7 D1A1DBL2 (5) 0,340 M12 connector XS7 D1A1DBL2 (5) 0,290 NO Pre-cabled (L = 2 m) (4) XS7 D1A1DAL2 (5) 0,290 NO minals 1 and 4 (2) M12 connector XS7 D1A1DAL2 (5) 0,290 NO minals 1 and 4 (2) M12 connector XS7 D1A1DBL2 (5) 0,290 NC Pre-cabled (L = 2 m) (4) XS7 D1A1DBL2 (5) 0,290 NO minals 1 and 4 (2) M12 connector XS7 D1A1DBL2 (5) 0,290 NC Pre-cabled (L = 2 m) (4) XS7 D1A1DBL2 (5) 0,290 NC Pre-cabled (L = 2 m) (4) XS7 D1A1DBL2 (5)	R N	$\sum \left[\frac{1}{2} \right] = \sum \left[\frac{1}{2} \right]$			PNP	Pre-cabled $(L = 2 m) (4)$	XS7 D1A1PAL2 (5)	0,340
NPN Pre-cabled (L = 2 m) (4) XS7 D1A1NAL2 (5) 0,340 M12 connector XS7 D1A1NAM12 (5) 0,290 NC PNP Pre-cabled (L = 2 m) (4) XS7 D1A1PBL2 (5) 0,340 M12 connector XS7 D1A1PBM12 (5) 0,290 NPN Pre-cabled (L = 2 m) (4) XS7 D1A1PBM12 (5) 0,290 NPN Pre-cabled (L = 2 m) (4) XS7 D1A1PBM12 (5) 0,290 NPN Pre-cabled (L = 2 m) (4) XS7 D1A1PBM12 (5) 0,290 NPN Pre-cabled (L = 2 m) (4) XS7 D1A1DBM12 (5) 0,290 NPN Pre-cabled (L = 2 m) (4) XS7 D1A1DBM12 (5) 0,290 NO Pre-cabled (L = 2 m) (4) XS7 D1A1DBM12 (5) 0,290 NO terminals 1 and 4 (2) M12 connector XS7 D1A1DBM12 (5) 0,290 NC Pre-cabled (L = 2 m) (4) XS7 D1A1DBL2 (5) 0,340 M12 connector XS7 D1A1DBM12 (5) 0,290 NC Pre-cabled (L = 2 m) (4) XS7 D1A1DBL2 (5) 0,340 M12 connector XS7 D1A1DBM12 (5) 0,290 NC Pre-cabled (L = 2 m) (4)<	(0)							
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M12 connector XS7 D1A1NBM12 (5) 0,290 M12 connector XS7 D1A1NBM12 (5) 0,290 Two-wire 40 NO Pre-cabled (L = 2 m) (4) XS7 D1A1DAL2 (5) 0,340 NO M12 connector XS7 D1A1DAM12 (5) 0,290 NO terminals 1 and 4 (2) M12 connector XS7 D1A1DAM12 (5) 0,290 NO terminals 1 and 4 (2) M12 connector XS7 D1A1DBM12 (5) 0,290 NC Pre-cabled (L = 2 m) (4) XS7 D1A1DBL2 (5) 0,340 M12 connector XS7 D1A1DBM12 (5) 0,290 NC Pre-cabled (L = 2 m) (4) XS7 D1A1DBL2 (5) 0,340 M12 connector XS7 D1A1DBM12 (5) 0,290 NC Pre-cabled (L = 2 m) (4) XS7 D1A1DBL2 (5) 0,340 M12 connector XS7 D1A1DBM12 (5) 0,290 NC Pre-cabled (L = 2 m) (4) XS7 D1A1DBL2 (5) 0,340 M12 connector XS7 D1A1DBM12 (5) 0,290						M12 connector	XS7 D1A1PBM12 (5)	0,290
Two-wire		\ - \			NPN	Pre-cabled (L = 2 m) (4)	XS7 D1A1NBL2 (5)	0,340
40 NO Pre-cabled (L = 2 m) (4) XS7 D1A1DAL2 (5) 0,340 M2 connector XS7 D1A10eM12DIN M12 connector XS7 D1A1DAM12 (5) 0,290 NO terminals 1 and 4 (2) M12 connector XS7 D1A1DAM12 (5) 0,290 NC Pre-cabled (L = 2 m) (4) XS7 D1A1DBL2 (5) 0,290 NC Pre-cabled (L = 2 m) (4) XS7 D1A1DBL2 (5) 0,340 M12 connector XS7 D1A1DBL2 (5) 0,340 M12 connector XS7 D1A1DBM12 (5) 0,290						M12 connector	XS7 D1A1NBM12 (5)	0,290
40 NO Pre-cabled (L = 2 m) (4) XS7 D1A1DAL2 (5) 0,340 XS7 D1A1••M12DIN M12 connector XS7 D1A1DAM12 (5) 0,290 NO terminals 1 and 4 (2) M12 connector XS7 D1A1CAM12 (5) 0,290 NC Pre-cabled (L = 2 m) (4) XS7 D1A1DBL2 (5) 0,340 M12 connector XS7 D1A1DAM12 (5) 0,290 NC Pre-cabled (L = 2 m) (4) XS7 D1A1DBL2 (5) 0,340 M12 connector XS7 D1A1DBM12 (5) 0,340 M12 connector XS7 D1A1DBM12 (5) 0,340			Two-wire					
XS7 D1A1••M12DIN NO terminals 1 and 4 (2) M12 connector XS7 D1A1CAM12 (5) 0,290 NC Pre-cabled (L = 2 m) (4) XS7 D1A1DBL2 (5) 0,340 M12 connector XS7 D1A1DBM12 (5) 0,290			40	NO		Pre-cabled (L = 2 m) (4)	XS7 D1A1DAL2 (5)	0,340
XS7 D1A100L2DIN Pre-cabled (L = 2 m) (4) XS7 D1A1DBL2 (5) 0,290 MC Pre-cabled (L = 2 m) (4) XS7 D1A1DBL2 (5) 0,340 M12 connector XS7 D1A1DBM12 (5) 0,290	ų					XS7 D1A1DAM12 (5)	0,290	
XS7 D1A100L2DIN M12 connector XS7 D1A1DBM12 (5) 0,290	<i>U</i>	λ37 D1A1●M12DIN			minals 1 and 4 (2		XS7 D1A1CAM12 (5)	0,290
M12 connector XS7 D1A1DBM12 (5) 0,290	XS7 D1A1eeL2DIN			NC		. ,,,		
		0//00	() E = :					

(1) For accessories, see page 2/106.

(2) The NO output is connected to terminals 1 and 4 of the M12 connector. (3) 0.8 m flying lead with remote connector.

(4) For a 5 m long cable, replace L2 with L5, and for a 10 m long cable, replace L2 with L10. Example: XS7 J1A1PAL2 becomes XS7 J1A1PAL5 with a 5 m long cable.
(5) For clipping onto 35 mm omega rail or 80 x 80 x 40 mm format, add DIN to the end of the reference. Example: XS7 D1A1PAL2 becomes XS7 D1A1PAL2DIN.

Inductive proximity sensors Osiprox[®] Optimum Flat, flush mountable, forms E, C and D Two-wire, d.c. supply Three-wire, d.c. supply, solid-state output

Characteristics										
Sensor type				XS7 E••••M8, XS7 C••••M8, XS7 D•••••M12	XS7 E•••••L01M12, XS7 C••••L01M12	XS7 E0000L2, XS7 C0000L2, XS7 D0000L2				
Product certifications				UL, CSA, CE						
Connection	Connector			M8 except M12 on XS7 DeeeeM12	0.15 m flying lead with remo M12 for XS7 •••••L01M					
	Pre-cabled			-	-	Length: 2				
Operating zone	XS7 E		mm	08						
	XS7 C		mm	012						
	XS7 D		mm	032						
Differential travel			%	115 of real sensing dista						
Degree of protection	Conforming to IEC	60529		IP 67 double insulation (except for M8 connector: IP 67) IP 68						
Storage temperature range			ି ଅନ୍	- 40+ 85						
Operating temperature range Materials	Case		с С	- 25+70 PBT						
Materials	Pre-cabled			-	PvR 3 x 0.34 mm ² or 2 x 0.	31 mm ²				
Vibration resistance	Conforming to IEC	60068-2-6		- 25 gn, amplitude ± 2 mm (f		J- IIIII				
Shock resistance	Conforming to IEC			50 gn, duration 11 ms						
Output state indication				Yellow LED						
Rated supply voltage			v	1224 with protection aga	inst reverse polarity					
Voltage limits (including ripple))		V	1036						
Current consumption, no-load	3-wire		mA	≤10						
Residual current, open state	2-wire		mA	≤0.5						
Switching capacity	3-wire		mA	< 100 with overload and sh	ort-circuit protection					
	2-wire		mA	1.5100 with overload and	short-circuit protection					
Voltage drop, closed state	3-wire		۷	≤2						
	2-wire		۷	≤4						
Maximum switching frequency			kHz	1						
	XS7 D		Hz	100						
Delays	First-up	3-wire	ms	10 for XS7 E and XS7 C, 3						
		2-wire	ms	5 for XS7 E and XS7 D, 10						
	Response	3-wire	ms	2 for XS7 E and XS7 C, 5 f						
		2-wire	ms	0.3 for XS7 E and XS7 D,						
	Recovery	3-wire 2-wire	ms ms	6 for XS7 E, 5 XS7 C, 35 fo 0.7 for XS7 E and XS7 D,						
Wiring cohomo		2-00110	1115							
Wiring scheme	Describe		DND	M40 on M0		0.0000000000000000000000000000000000000				
Connector	Pre-cabled		PNP/	M12 or M8	2-wire, NO / M12 or M8	2-wire, NC / M12 or M8				
M12 M8	BU: Blue BN: Brown		BN/1	+	BN/3 +/-	BN/1 +/				
	BK: Black		PNP	BK/4 (NO)						
			\odot			BU/2 (M12) L _/.				
			BU/3			BU/4 (M8)				
See connection on page 9/45.			NPN/	M12 or M8	2-wire, NO/M12 XS7 •••	•CA•••				
			BN/1							
			BN/1 NPN		BN/1 +/-					
			NPN			For M8 connector, NO and				
					BN/1 +/- NO BU/4 -/+	For M8 connector, NO and NC output on terminal 4.				
Setting_up			NPN	BK/4 (NO) BK/2 (NC)						
Setting-up			NPN Dime	BK/4 (NO) BK/2 (NC) ensions		NC output on terminal 4.				
Minimum mounting distan			NPN ↔ BU/3 Dimo XS7 (BK/4 (NO) BK/2 (NC) ensions		NC output on terminal 4.				
Minimum mounting distan Side by side e ≥	XS7 E XS7 C			BK/4 (NO) BK/2 (NC) ensions	NO BU/4 C/D	NC output on terminal 4.				
Minimum mounting distan Side by side e ≥ Image: Side by side Image: Side by side	XS7 E XS7 C	XS7 D 40	NPN ↔ BU/3 Dimo XS7 (BK/4 (NO) BK/2 (NC) ensions		NC output on terminal 4.				
Minimum mounting distan Side by side e ≥	XS7 E XS7 C			BK/4 (NO) BK/2 (NC) ensions	NO BU/4 C/D	NC output on terminal 4.				
Minimum mounting distan Side by side e ≥ Image: Side by side Image: Side by side	XS7 E XS7 C			BK/4 (NO) BK/2 (NC) ensions	C/D B E (1)	NC output on terminal 4.				
Minimum mounting distan Side by side e ≥ Image: Side by side Image: Side by side	2 XS7 E XS7 C 4 5	40		BK/4 (NO) BK/2 (NC) ensions	C/D B E (1)	NC output on terminal 4.				
Minimum mounting distan Side by side e ≥ Image: Side by side Image: Side by side	 XS7 E XS7 C 4 5 XS7 E XS7 C 	40 XS7 D		BK/4 (NO) BK/2 (NC) ensions	C/D B E (1)	NC output on terminal 4.				
Minimum mounting distan Side by side e ≥ Image: side by side image: side by side Image: side by side by side Image: side by	2 XS7 E XS7 C 4 5	40		BK/2 (NO) BK/2 (NC) ensions C/D/E XS7		NC output on terminal 4.				
Minimum mounting distan Side by side e≥	 XS7 E XS7 C 4 5 XS7 E XS7 C 	40 XS7 D		BK/2 (NO) BK/2 (NC) ensions C/D/E XS7		NC output on terminal 4.				
Minimum mounting distan Side by side e ≥ Image: side by side image: side by side Image: side by side by side image: side by	 XS7 E XS7 C 4 5 XS7 E XS7 C 	40 XS7 D		BK/2 (NO) BK/2 (NC) ensions C/D/E XS7		NC output on terminal 4.				
Minimum mounting distan Side by side e ≥ Image: side by side image: side by side Image: side by side by side image: side by	 XS7 E XS7 C 4 5 XS7 E XS7 C 	40 XS7 D		BK/4 (NO) BK/2 (NC) ensions C/D/E XS7		NC output on terminal 4.				
Minimum mounting distan Side by side e ≥ Image: side by side image: side by side Image: side by side by side Image: side by	 XS7 E XS7 C 4 5 XS7 E XS7 C 72 110 	40 XS7 D 300		BK/2 (NO) BK/2 (NC) ensions C/D/E XS7		NC output on terminal 4.				
Minimum mounting distan Side by side e >	 XS7 E XS7 C 4 5 XS7 E XS7 C 72 110 XS7 E XS7 C XS7 E XS7 C 	40 XS7 D 300		BK/4 (NO) BK/2 (NC) ensions C/D/E XS7		NC output on terminal 4.				
Minimum mounting distan Side by side e >	 XS7 E XS7 C 4 5 XS7 E XS7 C 72 110 XS7 E XS7 C XS7 E XS7 C 	40 XS7 D 300 XS7 D		BK/4 (NO) BK/2 (NC) ensions C/D/E XS7		NC output on terminal 4. XS7 E (1) (1) LED				
Minimum mounting distan Side by side e >	 XS7 E XS7 C 4 5 XS7 E XS7 C 72 110 XS7 E XS7 C XS7 E XS7 C 	40 XS7 D 300 XS7 D 120		BK/4 (NO) BK/2 (NC) ensions C/D/E XS7		NC output on terminal 4. XS7 E (1) (1) LED (2) For CHC type screws				
Minimum mounting distan Side by side e >	 XS7 E XS7 C 4 5 XS7 E XS7 C 72 110 XS7 E XS7 C XS7 E XS7 C 	40 XS7 D 300 XS7 D 120		BK/4 (NO) BK/2 (NC) ensions C/D/E XS7 Ensions C/D/E XS7 Ensions C/D/E XS7 Ensions C/D/E XS7 Ensions C/D/E XS7 Ensions C/D/E XS7 A (cable) A (cable) A (cable)	C/D B C/D C/D C/D C/D C/D C/D C/D C/D C/D C/D	NC output on terminal 4. XS7 E (1) (1) LED (2) For CHC type screws D E F				
Minimum mounting distan Side by side e >	 XS7 E XS7 C 4 5 XS7 E XS7 C 72 110 XS7 E XS7 C XS7 E XS7 C 	40 XS7 D 300 XS7 D 120		BK/4 (NO) BK/2 (NC) ensions C/D/E XS7 E (2) T A (cable) A	C/D B (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	NC output on terminal 4. XS7 E (1) (1) LED (2) For CHC type screws D E 8,8 20 3.5				

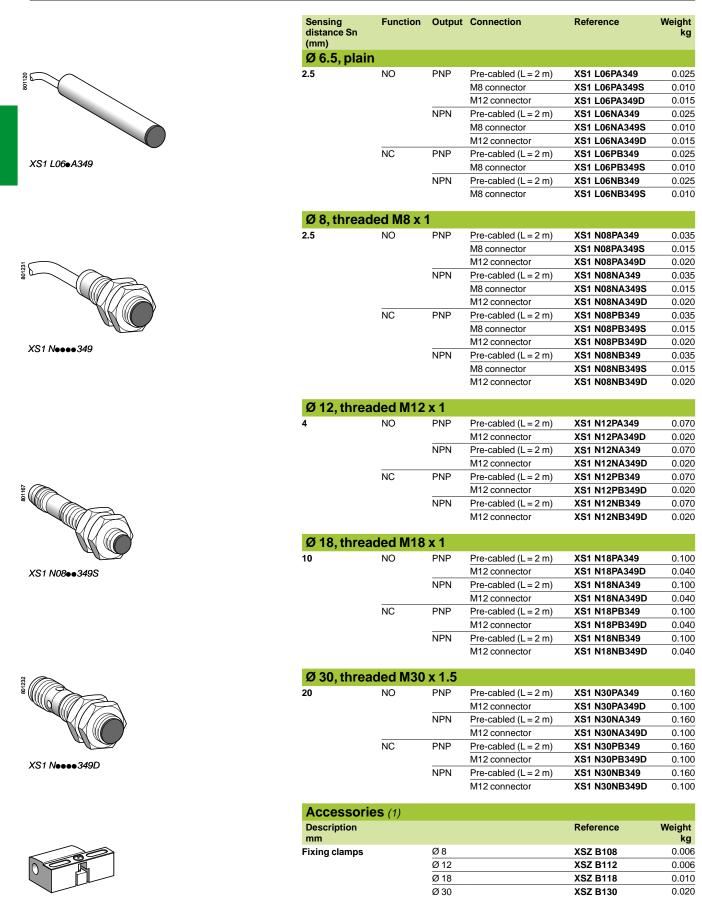
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2

Inductive proximity sensors

Osiprox[®] Optimum Cylindrical, flush mountable, increased range

Three-wire, d.c. supply, solid-state output



XSZ B100

Schneider Gelectric

Inductive proximity sensors Osiprox[®] Optimum Cylindrical, flush mountable, increased range Three-wire, d.c. supply, solid-state output

Sensor type			XS1 ●●●●●349D	XS1 ●●●●349S	XS1 ••••349	
Product certifications			UL, CSA, CE	UL, CSA, CE		
Connection			M12 connector	M12 connector M8 connector Pre-cabled,		
Operating zone	Ø 6.5 and Ø 8	mm	02	•	·	
	Ø 12	mm	03.2			
	Ø 18	mm	08			
	Ø 30	mm	016			
Differential travel		%	115 of real sensing d	listance (Sr)		
Degree of protection	Conforming to IEC 60529		IP 67 IP 68, doub (except Ø 6			
	Conforming to DIN 40050		IP 69K from Ø 12 to Ø	30		
Storage temperature		°C	- 40+ 85			
Operating temperature		°C	- 25+ 70			
Materials	Case		Nickel plated brass			
	Cable		-		PvR 3 x 0.34 mm ² except Ø 6.5 and Ø 8: 3 x 0.11 mm ²	
Vibration resistance	Conforming to IEC 60068-2-6		25 gn, amplitude ± 2 m	m (f = 10 to 55 Hz)		
Shock resistance	Conforming to IEC 60068-2-27		50 gn, duration 11 ms			
Output state indication			Yellow LED, 4 viewing	ports at 90°	Yellow LED, annular	
Rated supply voltage		v	= 1224 with protecti	ion against reverse polarity		
Voltage limits (including ripple)		٧	1036			
Switching capacity		mA	≤ 200 with overload and	short-circuit protection		
Voltage drop, closed state		v	≤2			
Current consumption, no-load		mA	≤10			
Maximum switching frequency	Ø 6.5, Ø 8 and Ø 12	Hz	2500			
	Ø 18	Hz	1000			
	Ø 30	Hz	500			
Delays	First-up	ms	≤5			
	Response	ms	≤ 0.2 for Ø 8 and Ø 12,	≤ 0.3 for Ø 18, ≤ 0.6 for Ø 30		
	Recovery	ms	≤ 0.2 for Ø 8 and Ø 12	≤ 0.7 for Ø 18, ≤ 1.4 for Ø 30		

Connector	Pre-cabled	PNP 3-wire	NPN 3-wire
$M8 \qquad M12$ $1 \bigcirc 3 \qquad 4 \bigcirc 3$ $1 \bigcirc 2$	BU: Blue BN: Brown BK: Black	BN/1 + PNP BK/4 (NO) → BK/2 (NC) BU/3 -	BN/1 + NPN BK/4 (NO) BU/3 −

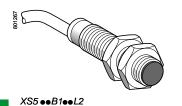
See connection on page 9/45. Setting-up

	Minimum mounting	distances (mm)				
Sensor	Side by side	Face to face	Facing a metal obj	ject	Mounted in	a metal support
Ø 6.5	e≥5	e ≥ 30		e≥7.5	d	d≥10h≥1.6
Ø8	e≥5	mAnAm _ mAnAm e≥30	mfmfm	e≥7.5		d≥10h≥1.6
Ø 12		2 B e≥48	£ AAAA →	e≥12	-	d≥14 h≥2.4
Ø 18	e≥20	e≥96	00	e≥30		d≥28 h≥3.6
Ø 30	e ≥ 40	e≥240	_	e≥60		d≥50 h≥6

Dimensions

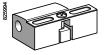
		Flush	mounta	ble in met	al		
	Sensor	Pre-ca	bled	M8 con	nector	M12 connect	tor
		а	b	а	b	а	b
	Ø 6.5	33	30	42	34	45	24
b b	Ø 8	33	25	42	26	45	23
а	Ø 12	35	25	-	_	50	29
	Ø 18	38	28	-	-	50.3	28
	Ø 30	42.3	32	-	-	54.5	32

Inductive proximity sensors Osiprox[®] Optimum Cylindrical, flush mountable Three-wire, d.c. supply, solid-state output





XS5 ●●B1●●M12



XSZ B1ee

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Ø 8, thread	led M8 x	1			
Sensing distance (Sn)	Function	Output	Connection	Reference	Weight
mm					kg
1.5	NO	PNP	Pre-cabled $(L = 2 m)$ (1) XS5 08B1PAL2	0.035
			M8 connector	XS5 08B1PAM8	0.025
			M12 connector	XS5 08B1PAM12	0,025
		NPN	Pre-cabled (L = 2 m) (1)XS5 08B1NAL2	0.035
			M8 connector	XS5 08B1NAM8	0.025
			M12 connector	XS5 08B1NAM12	0.025
	NC	PNP	Pre-cabled (L = 2 m) (1)XS5 08B1PBL2	0.035
			M8 connector	XS5 08B1PBM8	0.025
			M12 connector	XS5 08B1PBM12	0.025
		NPN	Pre-cabled (L = 2 m) (1)XS5 08B1NBL2	0.035
			M8 connector	XS5 08B1NBM8	0.025
			M12 connector	XS5 08B1NBM12	0.025

Ø 12, threa	Ided M12	2 x 1			
Sensing distance (Sn) mm	Function	Output	Connection	Reference	Weight kg
2	NO	PNP	Pre-cabled (L = 2 m)	(1) XS5 12B1PAL2	0.075
			M12 connector	XS5 12B1PAM12	0.035
		NPN	Pre-cabled (L = 2 m)	(1) XS5 12B1NAL2	0.075
			M12 connector	XS5 12B1NAM12	0.035
	NC	PNP	Pre-cabled (L = 2 m)	(1) XS5 12B1PBL2	0.075
			M12 connector	XS5 12B1PBM12	0.035
		NPN	Pre-cabled (L = 2 m)	(1) XS5 12B1NBL2	0.075
			M12 connector	XS5 12B1NBM12	0.035

Ø 18, threa	ided M18	3 x 1			
Sensing distance (Sn)	Function	Output	Connection	Reference	Weight
mm					kg
5	NO	PNP	Pre-cabled (L = 2 m)	(1) XS5 18B1PAL2	0.120
			M12 connector	XS5 18B1PAM12	0.060
		NPN	Pre-cabled (L = 2 m)	(1) XS5 18B1NAL2	0.120
			M12 connector	XS5 18B1NAM12	0.060
	NC	PNP	Pre-cabled (L = 2 m)	(1) XS5 18B1PBL2	0.120
			M12 connector	XS5 18B1PBM12	0.060
		NPN	Pre-cabled (L = 2 m)	(1) XS5 18B1NBL2	0.120
			M12 connector	XS5 18B1NBM12	0.060

Ø 30, threa	ded M30	x 1.5			
Sensing distance (Sn) mm	Function	Output	Connection	Reference	Weight kg
10	NO	PNP	Pre-cabled (L = 2 m)	(1) XS5 30B1PAL2	0.205
			M12 connector	XS5 30B1PAM12	0.145
		NPN	Pre-cabled (L = 2 m)	(1) XS5 30B1NAL2	0.205
			M12 connector	XS5 30B1NAM12	0.145
	NC	PNP	Pre-cabled (L = 2 m)	(1) XS5 30B1PBL2	0.205
			M12 connector	XS5 30B1PBM12	0.145
		NPN	Pre-cabled (L = 2 m)	(1) XS5 30B1NBL2	0.205
			M12 connector	XS5 30B1NBM12	0.145

Accessories (2)		
Description		Reference	Weight kg
Fixing clamps	Ø 8	XSZ B108	0.006
	Ø 12	XSZ B112	0.006
	Ø 18	XSZ B118	0.010
	Ø 30	XSZ B130	0.020

(1) For a 5 m long cable, replace L2 with L5, and for a 10 m long cable, replace L2 with L10. Example: XS5 08B1PAL2 becomes XS5 08B1PAL5 with a 5 m long cable. (2) For further information, see page 2/106.

Schneider Blectric

Inductive proximity sensors Osiprox® Optimum Cylindrical, flush mountable Three-wire, d.c. supply, solid-state output

Characteristics				NOT DA LO	
Sensor type			XS5 ••B1••M8, XS5 ••B1••M12	XS5 ••B1••L2	
Product certifications Connection	Connector		UL, CSA, CE M8 on Ø 8, M12 on Ø 8, M12 on Ø 12, Ø 18 and Ø 30	-	
	Pre-cabled			Length: 2 m	
Operating zone	Ø 8	mm	- 01.2	Lengui. 2 m	
Operating zone	Ø 12				
	Ø 12 Ø 18	mm	01.6		
	Ø 30	mm	08		
Differential travel	0 30	mm %			
Degree of protection	Conforming to IEC 60520	70	115 of real sensing distance (Sr)		
Degree of protection	Conforming to IEC 60529			IP 68 (except Ø 8: IP 67)	
Conforming to DIN 40050		°C	IP 69K for Ø12 to Ø30		
Storage temperature range			- 40+ 85		
Operating temperature ra	-	°C	- 25+ 70		
Materials	Case		Nickel plated brass		
	Pre-cabled		-	PvR 3 x 0.34 mm ² (except XS5 08 3 x 0.11 mm ²)	
Vibration resistance	Conforming to IEC 60068-2-6		25 gn, amplitude ± 2 mm (f = 10 to 50 Hz)		
Shock resistance	Conforming to IEC 60068-2-27		50 gn, duration 11 ms		
Output state indication			LED (yellow): 4 viewing ports at 90° LED (yellow): annular		
Rated supply voltage					
Voltage limits (including ripple)					
Switching capacity			≤ 200 with overload and short-circuit protection		
Voltage drop, closed stat	e	mA V	≤2		
Current consumption, no		w mA	≤10		
1 /	uency XS5 08B1000, XS5 12B1000	kHz	5		
naximum switching req	XS5 18B1000	kHz	2		
	XS5 30B10000	kHz	1		
Delays	First-up	ms	≤ 10		
Jeldys	Response	ms		a < 0.15 for XS5 18B1	
			≤ 0.1 for XS5 08B1eeee and XS5 12B1eeee, ≤ 0.15 for XS5 18B1eeee, ≤ 0.3 for XS5 30B1eeee		
	Recovery	ms	\leq 0.1 for XS5 08B1eeee and XS5 12B1eeee, \leq 0.35 for XS5 18B1eeee, \leq 0.7 for XS5 30B1eeee		
Wiring scheme					
Connector	Pre-cabled	PNP	NPN		
$\begin{array}{c} M8 \\ 1 \\ {0} \\ 1 \\ {0} \\ 1 \\ {0} \\ 1 \\ {0} \\ 1 \\ {0} \\ 2 \\ 1 \\ {0} \\ 2 \\ 1 \\ {0} \\ 2 \\ 1 \\ {0} \\ 2 \\ 1 \\ 1 \\ {0} \\ 2 \\ 1 \\ 1 \\ 0 \\ 2 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1$	BU: Blue BN: Brown BK: Black	BN/1 PNP D BU/3		+ sk/4 (NO) sk/2 (NC) -	
See connection on page 9/45.		For Ma	8 connector, NO and NC output on terminal 4		
Setting-up					
		Mini	mum mounting distances (mm)		

3 ε ΩΩΩ -e

	Side by side
Ø8	e≥3
Ø 12	e≥4
Ø 18	e ≥ 10
Ø 30	e≥20

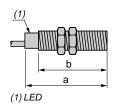
Face to face	
e≥18	
e ≥ 24	
e ≥ 60	
e ≥ 120	

amfanfam	
Facing a metal	objed
e≥4.5	

e≥4.5	
e ≥ 6	
e ≥ 15	
e ≥ 30	

Dimensions

XS5



	Pre-cab	led	Conne	ctor	
XS5	а	b		а	b
Ø8	33	25	M8	42	26
			M12	45	24
Ø 12	35	25	M12	50	29
Ø 18	38	28	M12	50.3	28
Ø 30	42.3	32	M12	54.5	32

Inductive proximity sensors Osiprox® Optimum

Weight kg 0.035 0.025

0.025

0.050

0.035 0.025

Weight kg 0.075

> 0.035 0.035

> 0.060 0.075

0.035

Weight kg 0.120 0.060 0.060

> 0.085 0.120 0.060

Weight kg 0.205

> 0.145 0.145

> 0.170 0.205 0.145

Cylindrical, flush mountable Two-wire, d.c. supply

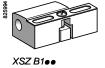
v/ >>	Ø 8, threaded	M8 x 1		
	Sensing distance (Sn) mm		Connection	Reference
	1.5	NO	Pre-cabled (L = 2 m) (1)	XS5 08B1DAL2
			M12 connector	XS5 08B1DAM12
Del2		NO terminals 1 and 4	M12 connector	XS5 08B1CAM12
		(2)	Remote M12 connector (3)	XS5 08B1CAL08M12
		NC	Pre-cabled (L = 2 m) (1)	XS5 08B1DBL2
			M12 connector	XS5 08B1DBM12
	Ø 12, threade	d M12 x 1		
	Sensing distance (Sn) mm	Function	Connection	Reference
	2	NO	Pre-cabled (L = 2 m) (1)	XS5 12B1DAL2
			M12 connector	XS5 12B1DAM12
		NO terminals 1 and 4	M12 connector	XS5 12B1CAM12
		(2)	Remote M12 connector (3)	XS5 12B1CAL08M12
		NC	Pre-cabled (L = 2 m) (1)	XS5 12B1DBL2
			M12 connector	XS5 12B1DBM12
	Ø 18, threade			
	Sensing distance (Sn) mm	Function	Connection	Reference
	5	NO	Pre-cabled (L = 2 m) (1)	XS5 18B1DAL2
			M12 connector	XS5 18B1DAM12
		NO terminals 1 and 4	M12 connector	XS5 18B1CAM12
		(2)	Remote M12 connector (3)	XS5 18B1CAL08M12
		NC	Pre-cabled (L = 2 m) (1)	XS5 18B1DBL2
			M12 connector	XS5 18B1DBM12
	Ø 30, threade	d M30 x 1.5		
	Ø 30, threade Sensing distance (Sn) mm		Connection	Reference
	Sensing distance		Connection Pre-cabled (L = 2 m) (1)	
	Sensing distance (Sn) mm	Function	Pre-cabled (L = 2 m)	
	Sensing distance (Sn) mm	Function	Pre-cabled (L = 2 m) (1)	XS5 30B1DAL2
	Sensing distance (Sn) mm	Function NO NO	Pre-cabled (L = 2 m) (1) M12 connector	XS5 30B1DAL2 XS5 30B1DAM12
	Sensing distance (Sn) mm	Function NO NO terminals 1 and 4	Pre-cabled (L = 2 m) (1) M12 connector M12 connector Remote M12	XS5 30B1DAL2 XS5 30B1DAM12 XS5 30B1CAM12 XS5 30B1CAL08M12

Accessorie	S (4)		
Description		Reference	Weight kg
Fixing clamps	Ø 8	XSZ B108	0.006
	Ø 12	XSZ B112	0.006
	Ø 18	XSZ B118	0.010
	Ø 30	XSZ B130	0.020

For a 5 m long cable replace L2 by L5; for a 10 m long cable replace L2 by L10. Example: XS5 08B1DAL2 becomes XS5 08B1DAL5 with a 5 m long cable.
 The NO output is connected to terminals 1 and 4 of the M12 connector.
 0.8 m flying lead with M12 connector.
 For further information, see page 2/106.

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Inductive proximity sensors Osiprox[®] Optimum Cylindrical, flush mountable Two-wire, d.c. supply

Characteristics					
Sensor type			XS5 ••B1••M12	XS5 eeB1CAL08M12	XS5 eeB1DeL2
Product certifications			UL, CSA, CE	•	•
Connection	Connector		M12	0.80 m flying lead with M1 connector	2 –
	Pre-cabled		-		Length: 2 m
Operating zone	Ø 8	mm	01.2		
	Ø 12	mm	01.6		
	Ø 18	mm	04		
	Ø 30	mm	08		
Differential travel		%	115 of real sensing of	listance (Sr)	
Degree of protection	Conforming to IEC 60529		IP 67		IP 68 (except Ø 8: IP 67)
Storage temperature		°C	- 40+ 85		
Operating temperature		°C	- 25+ 70		
Materials	Case		Nickel plated brass (ex	ccept XS5 08: stainless steel, grad	e 303)
	Cable		-	PvR 2 x 0.34 mm ² (except	XS5 08 : 2 x 0.11 mm ²)
Vibration resistance	Conforming to IEC 60068-2-6		25 gn, amplitude ± 2 m	nm (f = 10 to 55 Hz)	
Shock resistance	Conforming to IEC 60068-2-27		50 gn, duration 11 ms		
Output state indication			Yellow LED: 4 viewing	ports at 90°	Yellow LED: annular
Rated supply voltage		v			•
Voltage limits (including	ripple)	v	1058		
Switching capacity		mA	1.5100 with overloa	d and short-circuit protection	
Voltage drop, closed sta	te	v	≤4	•	
Residual current, open s		mA	≤0.5		
Maximum switching	XS5 08B1Deee, XS5 12B1Deee	Hz	4000		
frequency	XS5 18B1Deee	Hz	3000		
	XS5 30B1Deee	Hz	2000		
Delays First-up		ms	≤ 10		
	Response	ms	≤ 0.2 XS5 08B1●●● 8 ≤ 0.15 XS5 18B1●●● ≤ 0.3 XS5 30B1●●●		
	Recovery	ms	≤ 0.2 (except XS5 30E	81●●●: ≤ 0.3)	
Wiring schemes					
Connector	Pre-cabled	2-wi	re non polarised		2-wire non polarised
M12		NO o	utput		NC output
4 3	BU: Blue		•B1DA•••	XS5 eeB1CAeee	XS5 ••B1DB•••
	BN: Brown		BN/3 +/-	BN/1 +/-	BN/1 +/-
See connection on page 9,	/44.	\Diamond	NO BU/4 -/+	NO BU/4 -/+	₩ NC BU/2 -/+
Setting-up					
		Mini	mum mounting dist	ances (mm)	

₽ <mark>₩₽₽₩</mark> ₽₽₽₩₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽	3
Face to face	

e≥18

e ≥ 24

e ≥ 60

e ≥ 120

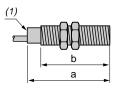
ace	Facing
	e≥4.5
	e ≥ 6
	e ≥ 15
	e ≥ 30



a metal object

Dimensions

XS5



	Pre-cabled (mm)		Connecto	or (mm)	
	а	b	а	b	
Ø8	50	42	61	40	
Ø 12	50	42	61	42	
Ø 18	52.5	44	64.6	44	
Ø 30	50	42	62.2	41	

Side by side

e≥3

e ≥ 4

e ≥ 10

e ≥ 20

Ø 8

Ø 12 Ø 18

Ø 30

Inductive proximity sensors Osiprox[®] Technology

Weight kg

> 0.025 0.025 0.025 0.025

> 0.030 0.030 0.030 0.030 0.030 0.020 0.020 0.020

> 0.060
> 0.060
> 0.060

0.060

0.065 0.065 0.065 0.065 0.065 0.030 0.065

0.030

0.090 0.090 0.090

0.090

0.100 0.100 0.100 0.100

0.100 0.040 0.100 0.040

0.120 0.120 0.120 0.120 0.140 0.140 0.140 0.140 0.140 0.140 0.080 0.140

Osiprox[®] lechnology Plastic, cylindrical, non flush mountable Two-wire, a.c. or d.c. supply Three-wire, d.c. supply, solid-state output

Sensing dist	Eunotion	Output	Connection	Deference
Sn (mm)	. Function	Output	Connection	Reference
Ø 8, thread	ed M8 x 1			
Three-wire				
2.5	NO	PNP	Pre-cabled (L = 2 m) (1) (2)	XS4 P08PA340
		NPN	Pre-cabled (L = 2 m) (1) (2)	XS4 P08NA340
	NC	PNP	Pre-cabled (L = 2 m) (1) (2)	XS4 P08PB340
Thursday in the	- 40 40 1/	NPN	Pre-cabled (L = 2 m) $(1) (2)$	XS4 P08NB340
Three-wire = 2.5			Dra cabled $(l - 2m)$ (1)	
2.5	NO	PNP NPN	Pre-cabled (L = 2 m) (1) Pre-cabled (L = 2 m)	XS4 P08PA370 XS4 P08NA370
	NC	PNP	Pre-cabled (L = 2 m)	XS4 P08PB370
	NO	NPN	Pre-cabled (L = 2 m)	XS4 P08NB370
Two-wire \sim (or 24-24			
2.5	NO		Pre-cabled (L = 2 m) (1)	XS4 P08MA230
			1/2"-20UNF connector	XS4 P08MA230K
	NC		Pre-cabled (L = 2 m) (1)	XS4 P08MB230
			1/2"-20UNF connector	XS4 P08MB230K
Ø 12, threa	ded M12 >	c1		
Three-wire				
4	NO	PNP	Pre-cabled (L = 2 m) (1) (3)	
		NPN	Pre-cabled (L = 2 m) (1) (3)	XS4 P12NA340
	NC		Pre-cabled (L = 2 m) (1) (3) Pre-cabled (L = 2 m) (1) (3)	
Three-wire	- 12-19 \/	NPN	Pre-cabled (L = 2 m) $(1) (3)$	XS4 P12NB340
4	NO	PNP	Pre-cabled (L = 2 m) (1) (3)	XS4 P12PA370
-	NO	NPN	Pre-cabled (L = 2 m) (1) (3) Pre-cabled (L = 2 m) (1) (3)	XS4 P12NA370
	NC	PNP	Pre-cabled (L = 2 m) (1) (3)	XS4 P12PB370
		NPN	Pre-cabled (L = 2 m) (3)	XS4 P12NB370
Two-wire \sim (or 24-24	٥v		
4	NO		Pre-cabled (L = 2 m) (1)	XS4 P12MA230
			1/2"-20UNF connector	XS4 P12MA230K
	NC		Pre-cabled (L = 2 m) (1)	XS4 P12MB230
G 40 (have			1/2"-20UNF connector	XS4 P12MB230K
Ø 18, thread		CI		
	- 1 2-24 V NO	PNP	Pre-cabled (L = 2 m) $(1) (3)$	XS4 P18P4 340
		1 1 1		
0		NPN		
0	NC	NPN PNP	Pre-cabled (L = 2 m) $(1) (3)$	XS4 P18NA340
o	NC	NPN PNP NPN		XS4 P18NA340 XS4 P18PB340
8 Three-wire 		PNP	Pre-cabled (L = 2 m) (1) (3) Pre-cabled (L = 2 m) (1) (3)	XS4 P18NA340 XS4 P18PB340
Three-wire		PNP	Pre-cabled (L = 2 m) (1) (3) Pre-cabled (L = 2 m) (1) (3)	XS4 P18NA340 XS4 P18PB340
Three-wire	± 12-48 V	PNP NPN	Pre-cabled (L = 2 m) (1) (3) Pre-cabled (L = 2 m) (1) (3) Pre-cabled (L = 2 m) (1) (3)	XS4 P18NA340 XS4 P18PB340 XS4 P18NB340 XS4 P18PA370
Three-wire	± 12-48 V	PNP NPN PNP	Pre-cabled (L = 2 m) (1) (3) Pre-cabled (L = 2 m) (1) (3) Pre-cabled (L = 2 m) (1) (3) Pre-cabled (L = 2 m) (1) (3)	XS4 P18NA340 XS4 P18PB340 XS4 P18NB340 XS4 P18PA370
Three-wire 8	- 12-48 V NO NC	PNP NPN PNP NPN PNP NPN	$\begin{array}{l} \mbox{Pre-cabled (L = 2 m) (1) (3)} \\ \mbox{Pre-cabled (L = 2 m) (1) (3)} \end{array}$	XS4 P18NA340 XS4 P18PB340 XS4 P18NB340 XS4 P18PA370 XS4 P18NA370
Three-wire $=$ 8 Two-wire \sim 0	- 12-48 V NO NC	PNP NPN PNP NPN PNP NPN	$\begin{array}{l} \mbox{Pre-cabled (L = 2 m) (1) (3)} \\ \mbox{Pre-cabled (L = 2 m) (3)} \end{array}$	XS4 P18NA340 XS4 P18PB340 XS4 P18NB340 XS4 P18NA370 XS4 P18NA370 XS4 P18PB370 XS4 P18NB370
Three-wire $=$ 8 Two-wire \sim 0	- 12-48 V NO NC	PNP NPN PNP NPN PNP NPN	$\begin{array}{l} \mbox{Pre-cabled } (L=2\ m)\ (1)\ (3) \\ \mbox{Pre-cabled } (L=2\ m)\ (3) \\ \mbox{Pre-cabled } (L=2\ m)\ (3) \\ \mbox{Pre-cabled } (L=2\ m)\ (1) \end{array}$	XS4 P18NA340 XS4 P18PB340 XS4 P18NB340 XS4 P18NA370 XS4 P18NA370 XS4 P18PB370 XS4 P18NB370 XS4 P18NB370
Three-wire $=$ 8 Two-wire \sim 0	- 12-48 V NO NC Dr 24-240 NO	PNP NPN PNP NPN PNP NPN	$\begin{array}{l} \mbox{Pre-cabled (L = 2 m) (1) (3)} \\ \mbox{Pre-cabled (L = 2 m) (3)} \\ \mbox{Pre-cabled (L = 2 m) (1)} \\ Pre-cab$	XS4 P18NA340 XS4 P18PB340 XS4 P18NB340 XS4 P18NA370 XS4 P18NA370 XS4 P18PB370 XS4 P18NB370 XS4 P18NB370 XS4 P18MA230 XS4 P18MA230K
8	- 12-48 V NO NC	PNP NPN PNP NPN PNP NPN	$\begin{array}{l} \mbox{Pre-cabled } (L=2\ m)\ (1)\ (3) \\ \mbox{Pre-cabled } (L=2\ m)\ (1) \\ \mbox{I}\ (2) \\ \mbox{Pre-cabled } (L=2\ m)\ (1) \\ \mbox{I}\ (2) \\ \mbox{Pre-cabled } (L=2\ m)\ (1) \\ \mbox{I}\ (2) \\ \mbox{Pre-cabled } (L=2\ m)\ (1) \\ \mbox{I}\ (2) \\ \mbox{Pre-cabled } (L=2\ m)\ (1) \\ \mbox{I}\ (2) \mbox{I}$	XS4 P18NA340 XS4 P18PB340 XS4 P18NB340 XS4 P18NA370 XS4 P18NA370 XS4 P18NB370 XS4 P18NB370 XS4 P18NB370 XS4 P18MA230 XS4 P18MA230K XS4 P18MB230
Three-wire 8 Two-wire ∼ 6 8	- 12-48 V NO NC or 24-244 NO NC	PNP NPN NPN PNP NPN NPN DV	$\begin{array}{l} \mbox{Pre-cabled (L = 2 m) (1) (3)} \\ \mbox{Pre-cabled (L = 2 m) (3)} \\ \mbox{Pre-cabled (L = 2 m) (1)} \\ Pre-cab$	XS4 P18NA340 XS4 P18PB340 XS4 P18NB340 XS4 P18NA370 XS4 P18NA370 XS4 P18NB370 XS4 P18NB370 XS4 P18NB370 XS4 P18MA230 XS4 P18MA230K XS4 P18MB230
Three-wire == 8 Two-wire ~ 0 8 Ø 30, thread	- 12-48 V NO NC or 24-244 NO NC ded M30 o	PNP NPN NPN PNP NPN NPN DV	$\begin{array}{l} \mbox{Pre-cabled } (L=2\ m)\ (1)\ (3) \\ \mbox{Pre-cabled } (L=2\ m)\ (1) \\ \mbox{I}\ (2) \\ \mbox{Pre-cabled } (L=2\ m)\ (1) \\ \mbox{I}\ (2) \\ \mbox{Pre-cabled } (L=2\ m)\ (1) \\ \mbox{I}\ (2) \\ \mbox{Pre-cabled } (L=2\ m)\ (1) \\ \mbox{I}\ (2) \\ \mbox{Pre-cabled } (L=2\ m)\ (1) \\ \mbox{I}\ (2) \mbox{I}$	XS4 P18NA340 XS4 P18PB340 XS4 P18NB340 XS4 P18NA370 XS4 P18NA370 XS4 P18NB370 XS4 P18NB370 XS4 P18NB370 XS4 P18MA230 XS4 P18MA230K XS4 P18MB230
Three-wire === 8 Two-wire ~ 0 8 Ø 30, threa Three-wire ==	- 12-48 V NO NC or 24-244 NO NC ded M30 o	PNP NPN PNP PNP NPN DV	Pre-cabled (L = 2 m) (1) (3) Pre-cabled (L = 2 m) (1) 1/2"-20UNF connector Pre-cabled (L = 2 m) (1) 1/2"-20UNF connector	XS4 P18NA340 XS4 P18PB340 XS4 P18NB340 XS4 P18NA370 XS4 P18NA370 XS4 P18NB370 XS4 P18NB370 XS4 P18NB370 XS4 P18MA230 XS4 P18MA230K XS4 P18MB230 XS4 P18MB230K
Three-wire === 8 Two-wire ~ 0 8 Ø 30, threa Three-wire ==	- 12-48 V NO NC or 24-244 NO NC ded M30 p - 12-24 V	PNP NPN NPN PNP NPN NPN DV	$\begin{array}{l} \mbox{Pre-cabled } (L=2\ m)\ (1)\ (3) \\ \mbox{Pre-cabled } (L=2\ m)\ (1) \\ \mbox{I}\ (2) \\ \mbox{Pre-cabled } (L=2\ m)\ (1) \\ \mbox{I}\ (2) \\ \mbox{Pre-cabled } (L=2\ m)\ (1) \\ \mbox{I}\ (2) \\ \mbox{Pre-cabled } (L=2\ m)\ (1) \\ \mbox{I}\ (2) \\ \mbox{Pre-cabled } (L=2\ m)\ (1) \\ \mbox{I}\ (2) \mbox{I}$	XS4 P18NA340 XS4 P18PB340 XS4 P18NB340 XS4 P18NA370 XS4 P18NA370 XS4 P18NB370 XS4 P18NB370 XS4 P18NB370 XS4 P18MA230 XS4 P18MB230 XS4 P18MB230 XS4 P18MB230K
Three-wire === 8 Two-wire ~ 0 8 Ø 30, threa Three-wire ==	- 12-48 V NO NC or 24-244 NO NC ded M30 p - 12-24 V	PNP NPN PNP NPN NPN DV	Pre-cabled (L = 2 m) (1) (3) Pre-cabled (L = 2 m) (1) 1/2"-20UNF connector Pre-cabled (L = 2 m) (1) 1/2"-20UNF connector Pre-cabled (L = 2 m) (1) 1/2"-20UNF connector	XS4 P18NA340 XS4 P18PB340 XS4 P18NB340 XS4 P18NA370 XS4 P18NA370 XS4 P18NB370 XS4 P18NB370 XS4 P18MA230 XS4 P18MA230K XS4 P18MB230 XS4 P18MB230K XS4 P18MB230K
Three-wire == 8 Two-wire ~ 0 8 Ø 30, threa Three-wire == 15	- 12-48 V NO NC or 24-244 NO NC ded M30 o - 12-24 V NO NC	PNP NPN PNP NPN NPN DV (1.5 PNP NPN	Pre-cabled (L = 2 m) (1) (3) Pre-cabled (L = 2 m) (1) 1/2"-20UNF connector Pre-cabled (L = 2 m) (1) 1/2"-20UNF connector Pre-cabled (L = 2 m) (1) (3) Pre-cabled (L = 2 m) (1) (3)	XS4 P18NA340 XS4 P18PB340 XS4 P18NB340 XS4 P18NB340 XS4 P18NA370 XS4 P18NB370 XS4 P18NB370 XS4 P18NB370 XS4 P18MA230 XS4 P18MB230 XS4 P18MB230 XS4 P18MB230 XS4 P18MB230 XS4 P30PA340 XS4 P30NA340
Three-wire ====================================	- 12-48 V NO NC or 24-244 NO NC ded M30 o - 12-24 V NO NC	PNP NPN PNP NPN NPN OV	Pre-cabled (L = 2 m) (1) (3) Pre-cabled (L = 2 m) (1) 1/2"-20UNF connector Pre-cabled (L = 2 m) (1) 1/2"-20UNF connector Pre-cabled (L = 2 m) (1) 1/2"-20UNF connector Pre-cabled (L = 2 m) (1) (3) Pre-cabled (L = 2 m) (1) (3) Pre-cabled (L = 2 m) (1) (3)	XS4 P18NA340 XS4 P18PB340 XS4 P18NB340 XS4 P18NB340 XS4 P18NA370 XS4 P18NA370 XS4 P18NB370 XS4 P18NB370 XS4 P18NB370 XS4 P18MA230 XS4 P18MB230 XS4 P18MB230 XS4 P18MB230 XS4 P30PA340 XS4 P30PA340 XS4 P30PB340
Three-wire == 8 Two-wire ~ 0 8 Ø 30, threa Three-wire == 15	- 12-48 V NO NC or 24-244 NO NC ded M30 o - 12-24 V NO NC	PNP NPN PNP NPN NPN OV	Pre-cabled (L = 2 m) (1) (3) Pre-cabled (L = 2 m) (1) 1/2"-20UNF connector Pre-cabled (L = 2 m) (1) 1/2"-20UNF connector Pre-cabled (L = 2 m) (1) (3) Pre-cabled (L = 2 m) (1) (3)	XS4 P18NA340 XS4 P18PB340 XS4 P18NB340 XS4 P18NB340 XS4 P18NA370 XS4 P18NB370 XS4 P18NB370 XS4 P18NB370 XS4 P18NB370 XS4 P18MB230 XS4 P18MB230 XS4 P18MB230 XS4 P18MB230 XS4 P30PA340 XS4 P30PA340 XS4 P30PB340 XS4 P30PB340
Three-wire ====================================	- 12-48 V NO NC or 24-244 NO NC - 12-24 V NO NC - 12-48 V NO	PNP NPN PNP NPN NPN OV (1.5 PNP NPN PNP NPN PNP NPN PNP NPN	Pre-cabled (L = 2 m) (1) (3) Pre-cabled (L = 2 m) (1) 1/2"-20UNF connector Pre-cabled (L = 2 m) (1) 1/2"-20UNF connector Pre-cabled (L = 2 m) (1) (3) Pre-cabled (L = 2 m) (1) (3)	XS4 P18NA340 XS4 P18PB340 XS4 P18NB340 XS4 P18NB340 XS4 P18NA370 XS4 P18NB370 XS4 P18NB370 XS4 P18NB370 XS4 P18NB370 XS4 P18MA230 XS4 P18MB230 XS4 P18MB230 XS4 P18MB230 XS4 P18MB230 XS4 P30PA340 XS4 P30PA340 XS4 P30PA370 XS4 P30PA370 XS4 P30NA370
Three-wire ====================================	- 12-48 V NO NC or 24-244 NO NC - 12-24 V NO NC - 12-48 V	PNP NPN PNP NPN NPN OV (1.5 PNP NPN PNP NPN PNP NPN PNP	Pre-cabled (L = 2 m) (1) (3) Pre-cabled (L = 2 m) (1) 1/2"-20UNF connector Pre-cabled (L = 2 m) (1) 1/2"-20UNF connector Pre-cabled (L = 2 m) (1) (3)	XS4 P18NA340 XS4 P18PB340 XS4 P18NB340 XS4 P18NB340 XS4 P18NA370 XS4 P18NA370 XS4 P18NB370 XS4 P18NB370 XS4 P18NB370 XS4 P18MB230 XS4 P18MB230 XS4 P18MB230 XS4 P18MB230 XS4 P30PA340 XS4 P30PA340 XS4 P30PB340 XS4 P30PA370 XS4 P30PA370 XS4 P30PA370 XS4 P30PA370 XS4 P30PB370
Three-wire ====================================	12-48 V NO NC or 24-244 NO NC ded M30 x	PNP NPN PNP NPN NPN OV (1.5 PNP NPN PNP NPN PNP NPN PNP NPN	Pre-cabled (L = 2 m) (1) (3) Pre-cabled (L = 2 m) (1) 1/2"-20UNF connector Pre-cabled (L = 2 m) (1) 1/2"-20UNF connector Pre-cabled (L = 2 m) (1) (3) Pre-cabled (L = 2 m) (1) (3)	XS4 P18NA340 XS4 P18PB340 XS4 P18NB340 XS4 P18NB340 XS4 P18NA370 XS4 P18NB370 XS4 P18NB370 XS4 P18NB370 XS4 P18NB370 XS4 P18MA230 XS4 P18MA230 XS4 P18MB230 XS4 P18MB230 XS4 P18MB230 XS4 P30PA340 XS4 P30PA340 XS4 P30PA370 XS4 P30PA370 XS4 P30NA370
Three-wire ====================================	- 12-48 V NO NC or 24-244 NO NC - 12-24 V NO NC - 12-48 V NO NC	PNP NPN PNP NPN NPN OV (1.5 PNP NPN PNP NPN PNP NPN PNP	Pre-cabled (L = 2 m) (1) (3) Pre-cabled (L = 2 m) (1) 1/2"-20UNF connector Pre-cabled (L = 2 m) (1) 1/2"-20UNF connector Pre-cabled (L = 2 m) (1) (3) Pre-cabled (L = 2 m) (3) Pre-cabled (L = 2 m) (3) Pre-cabled (L = 2 m) (3)	XS4 P18NA340 XS4 P18PB340 XS4 P18PB340 XS4 P18NB340 XS4 P18NA370 XS4 P18NA370 XS4 P18NB370 XS4 P18NB370 XS4 P18NB370 XS4 P18MA230 XS4 P18MB230 XS4 P18MB230 XS4 P18MB230 XS4 P18MB230 XS4 P30PA340 XS4 P30PA340 XS4 P30PB340 XS4 P30PA370 XS4 P30PA370 XS4 P30PA370 XS4 P30PA370 XS4 P30PB370 XS4 P30PB370
Three-wire ====================================	12-48 V NO NC or 24-244 NO NC ded M30 x	PNP NPN PNP NPN NPN OV (1.5 PNP NPN PNP NPN PNP NPN PNP	Pre-cabled (L = 2 m) (1) (3) Pre-cabled (L = 2 m) (1) 1/2"-20UNF connector Pre-cabled (L = 2 m) (1) 1/2"-20UNF connector Pre-cabled (L = 2 m) (1) (3) Pre-cabled (L = 2 m) (3)	XS4 P18NA340 XS4 P18PB340 XS4 P18NB340 XS4 P18NB340 XS4 P18NA370 XS4 P18NB370 XS4 P18NB370 XS4 P18NB370 XS4 P18NB370 XS4 P18MA230 XS4 P18MB230 XS4 P18MB230 XS4 P18MB230 XS4 P30PA340 XS4 P30PA340 XS4 P30PA340 XS4 P30PA370 XS4 P30PA370 XS4 P30PA370 XS4 P30PA370 XS4 P30PB370 XS4 P30NB370 XS4 P30NB370
Three-wire ====================================	- 12-48 V NO NC or 24-244 NO NC - 12-24 V NO NC - 12-48 V NO NC	PNP NPN PNP NPN NPN OV (1.5 PNP NPN PNP NPN PNP NPN PNP	Pre-cabled (L = 2 m) (1) (3) Pre-cabled (L = 2 m) (1) 1/2"-20UNF connector Pre-cabled (L = 2 m) (1) 1/2"-20UNF connector Pre-cabled (L = 2 m) (1) (3) Pre-cabled (L = 2 m) (3) Pre-cabled (L = 2 m) (1) (3) Pre-cabled (L = 2 m) (3) Pre-cabled (L = 2 m) (3) Pre-cabled (L = 2 m) (1) Pre-cabled (L = 2 m) (1) Pre-cabled (L = 2 m) (3) Pre-cabled (L = 2 m) (3) Pre-cabled (L = 2 m) (1) Pre-cabled (L = 2 m) (1) Pre-cabled (L = 2 m) (1)	XS4 P18NA340 XS4 P18PB340 XS4 P18NB340 XS4 P18NB340 XS4 P18NA370 XS4 P18NB370 XS4 P18NB370 XS4 P18NB370 XS4 P18NB370 XS4 P18MB230 XS4 P18MB230 XS4 P18MB230 XS4 P18MB230 XS4 P30PA340 XS4 P30PA340 XS4 P30PB340 XS4 P30PA370 XS4 P30PA370
Three-wire $=$ 8 Two-wire ~ 6 8 Ø 30, threa Three-wire $=$ 15 Three-wire $=$	- 12-48 V NO NC or 24-244 NO NC - 12-24 V NO NC - 12-48 V NO NC	PNP NPN PNP NPN NPN OV (1.5 PNP NPN PNP NPN PNP NPN PNP	Pre-cabled (L = 2 m) (1) (3) Pre-cabled (L = 2 m) (1) 1/2"-20UNF connector Pre-cabled (L = 2 m) (1) 1/2"-20UNF connector Pre-cabled (L = 2 m) (1) (3) Pre-cabled (L = 2 m) (3)	XS4 P18NA340 XS4 P18PB340 XS4 P18NB340 XS4 P18NB340 XS4 P18NA370 XS4 P18NB370 XS4 P18NB370 XS4 P18NB370 XS4 P18NB370 XS4 P18MA230 XS4 P18MB230 XS4 P18MB230 XS4 P18MB230 XS4 P30PA340 XS4 P30PA340 XS4 P30PA340 XS4 P30PA370 XS4 P30PA370 XS4 P30PA370 XS4 P30PA370 XS4 P30PB370 XS4 P30NB370 XS4 P30NB370

(1) For a 5 m long cable, add L1 to the reference and for a 10 m long cable, add L2. Example: XS4 P08PA340 becomes XS4 P08PA340L1 with a 5 m long cable.
 (2) For an M8 connector, add S to the reference. Example: XS4 P08PA340 becomes XS4 P08PA340S with an M8 connector.
 (3) For an M12 connector, add D to the reference. Example: XS4 P12PA370 becomes XS4 P12PA370D with an M12 connector.

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XS4 P••••340 XS4 P••••370

XS4 Peeee230

XS4 P••••340D XS4 P••••370D XS4 P••••230D



Inductive proximity sensors Osiprox[®] Technology Plastic, cylindrical, non flush mountable Two-wire, a.c. or d.c. supply Three-wire, d.c. supply, solid-state output

Sensor type			XS4 Peeee340e	XS4 Peeee370e	XS4 PeeMe230e
Product certifications			UL, CSA, C€		
Connection	Pre-cabled		Length: 2 m		
	Connector		M8 on Ø8		1/2"-20UNF
			M12 on Ø 12, Ø 18 and Ø 3	0	
Operating zone	Ø 6.5 and Ø 8	mm	02	-	_
oporating zono	Ø 12	mm	03.2		
		_			
	Ø 18	mm	06.4		
	Ø 30	mm	012		
Differential travel		%	115 of real sensing distar		
Degree of protection	Conforming to IEC 60529		IP 68, double insulation 回 f	or pre-cabled version (except	Ø 8: IP 67)
			IP 67 for connector version		
Storage temperature		°C	- 40+ 85		
Operating temperature		°C	- 25+ 70		
Vaterials	Case		PPS		
	Cable	_	PvR 3 x 0.34 mm ² except Ø	6.5 and 8: 3 x 0.11 mm ²	PvR 2 x 0.34 mm ²
	Cubio				except Ø 8: 2 x 0.11 mm ²
Vibration resistance	Conforming to	_	25 gn, amplitude ± 2 mm (f	= 10 to 55 Hz)	
	IEC 60068-2-6			- 10 10 00 112)	
Shock resistance	Conforming to		50 gn, duration 11 ms		
Shook resistaned	IEC 60068-2-27		oo gii, uuruuon 11 mo		
Output state indication	L		Yellow LED: annular on pre	cabled version	
Supul State multation				at 90° on connector version	
Rated supply voltage		v	= 1224 with protection	= 1248 with protection	\sim or = 24240
Rated supply voltage		v	against reverse polarity	against reverse polarity	(50/60 Hz)
Voltage limits (including ripple)		v			\sim or = 20264
Switching capacity		mA	≤ 200 with overload and she	ort-circuit protection	5100 for Ø 8, 5200 for Ø 12,
					5200 101 € 12, 5200 and 5300 ~
					for Ø 18 and 30
laters drep along datate		v	≤2		
/oltage drop, closed state		_			≤5.5
Residual current, open state		mA	-		≤0.6
Current consumption, no-load		mA	≤ 10		-
Maximum switching frequency	Ø 6.5, Ø 8 and Ø 12	Hz	5000	$= 3000, \sim 25$	
	Ø 18	Hz	2000		$\pm 2000, \sim 25$
	Ø 30	Hz	1000	· 1000, ∼ 25	
Delays	First-up	ms	≤ 10		≤40
Delaye	· · · · ·	ms	≤ 0.1 for Ø 8 and Ø 12, ≤ 0.1	≤ 0.2	
	Response	_		≤ 0.2 for Ø 8, Ø 12 and Ø	
	Recovery	ms	≤ 0.1 for Ø 8 and Ø 12, ≤ 0.3	<0.2 for Ø 30 ≤ 0.4 for Ø 30	
					≤ 0.4 101 € 30
Wiring schemes					
Connector	Pre-cabled	PNP	NF	'N	2-wire \sim or $=$
M8 M12	BU: Blue		PN/	· · · · · · · · · · · · · · · · · · ·	
		BN/1	+ BN/ BK/4 (NO) NP		
4 4 3	BN: Brown				BN/2+/_
	BN: Brown BK: Black	PNP		NВК/4 (NO)	
			BK/2 (NC)	BK/2 (NC)	
4 4 3		PNP		BK/2 (NC)	
4 1 1 1 2 1 2 2 1 2		PNP DU/3	BK/2 (NC)	BK/2 (NO) BK/2 (NC)	
4 1/2"-20UNF ≂: 2		PNP DU/3		BK/2 (NO) BK/2 (NC)	
4 3 1/2"-20UNF		PNP DU/3		BK/2 (NO) BK/2 (NC)	
4 ()2"-20UNF $\overline{\sim}: 2$		PNP DU/3		BK/2 (NO) BK/2 (NC)	
4 4 1 2 2 2 2 2 3 4 4 1 2 2 2 3 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3		PNP DU/3		BK/2 (NO) BK/2 (NC)	
4 1 2 2 2 2 2 3 3 2 2 2 3 3 3 3 3 3 3 3 3 3		PNP DU/3		BK/2 (NO) BK/2 (NC)	
4 4 1 2 4 1 2 1 2 2 3 3 3 4 4 1 2 2 3 3 3 3 3 3 3 3 3 3	BK: Black	PNP bU/3 For M8	BK/2 (NC) BU/3	BK/2 (NO) BK/2 (NC)	
$1 \underbrace{\bigcirc}^{4}_{2} 3 \\ 1 \underbrace{\bigcirc}^{2}_{2} 2 \\ \underbrace{\bigcirc}^{3}_{3} \\ \underbrace{\bigcirc}^{4}_{1} \underbrace{\bigcirc}^{3}_{2} \\ \underbrace{\frown}^{1}_{2} 2 \\ \\ \overline{\frown}^{2}_{3} \\ \underbrace{\frown}^{2}_{3} \\ \underbrace{\underbrace{\bullet}^{2}_{3} \\ \underbrace{\bullet}^{2}_{3} \\ \underbrace{\bullet}^{2}_{3} \\ \underbrace{\bullet}^{2}_{3} \\ \underbrace{\bullet}^{2$		PNP bU/3 For M8	BK/2 (NC) B connector, NO and NC outp	uts on terminal 4	
$1 \underbrace{\bigcirc}^{4}_{2} 3 \\ 1 \underbrace{\bigcirc}^{2}_{2} 2 \\ \underbrace{\bigcirc}^{3}_{3} \\ \underbrace{\bigcirc}^{4}_{1} \underbrace{\bigcirc}^{3}_{2} \\ \underbrace{\frown}^{1}_{2} 2 \\ \\ \overline{\frown}^{2}_{3} \\ \underbrace{\frown}^{2}_{3} \\ \underbrace{\underbrace{\bullet}^{2}_{3} \\ \underbrace{\bullet}^{2}_{3} \\ \underbrace{\bullet}^{2}_{3} \\ \underbrace{\bullet}^{2}_{3} \\ \underbrace{\bullet}^{2$	BK: Black	For Ma	BK/2 (NC) B connector, NO and NC outp	BK/2 (NO) BK/2 (NC)	₽U/3 -/+
$1 \underbrace{\bigcirc}^{4}_{2} 3 \\ 1 \underbrace{\bigcirc}^{2}_{2} 2 \\ \underbrace{\bigcirc}^{3}_{3} \\ \underbrace{\bigcirc}^{4}_{1} \underbrace{\bigcirc}^{3}_{2} \\ \underbrace{\frown}^{1}_{2} 2 \\ \\ \overline{\frown}^{2}_{3} \\ \underbrace{\frown}^{2}_{3} \\ \underbrace{\underbrace{\bullet}^{2}_{3} \\ \underbrace{\bullet}^{2}_{3} \\ \underbrace{\bullet}^{2}_{3} \\ \underbrace{\bullet}^{2}_{3} \\ \underbrace{\bullet}^{2$	BK: Black	For Ma	BK/2 (NC) B connector, NO and NC outp	uts on terminal 4	Mounted in a metal suppo
4 $1 \bigoplus_{1}^{4} 3$ $1/2"-20UNF$ $2 \bigoplus_{2}^{1} 3$ See connection on page 9/45. Setting-up $\boxed{\emptyset 8}$	BK: Black Minimum mounting di Side by side	For Ma	BK/2 (NC) BConnector, NO and NC outp s (mm) to face $e ≥ 30$ 0	ting a metal object $e \ge 7.5$	Mounted in a metal support $d \rightarrow d \geq 24 h \geq d$
$\frac{4}{12^{n}-20UNF}$ $\frac{1}{2^{n}-20UNF}$ $\frac{1}{2^{n}-20UNF}$ $\frac{1}{2^{n}-20UNF}$ $\frac{1}{2^{n}-20UNF}$ $\frac{1}{2^{n}-20UNF}$ See connection on page 9/45. Setting-up $\frac{\sqrt{8}}{\sqrt{9}}$	BK: Black Minimum mounting di Side by side $\underbrace{e \ge 10}{e \ge 16}$	For Ma	$BK/2 (NC) \qquad BU/3 B connector, NO and NC outp s (mm) to face E \ge 30e \ge 48 df = 100$	ting a metal object $e \ge 7.5$ $e \ge 12$	Mounted in a metal support $d = \frac{d \ge 24 h \ge}{d \ge 36 h \ge}$
$ \begin{array}{c} 4\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\$	BK: Black Minimum mounting di Side by side $\underbrace{e \ge 10}_{e \ge 16}$ $\underbrace{e \ge 16}_{e \ge 16}$	For Ma	s (mm) to face $\frac{e}{e \ge 96} e^{\frac{2}{2} (MC)}$	ting a metal object $e \ge 7.5$ $e \ge 12$ $e \ge 24$	Mounted in a metal support $d = d = d = d = 24 h \ge d \ge 36 h \ge d \ge 54 h \ge 10^{-1}$
$ \begin{array}{c} 4\\ 6\\ 1\\ 2\\ 3\\ 3\\ 3\\ 3\\ 3\\ 3\\ 3\\ 3\\ 3\\ 3\\ 3\\ 3\\ 3\\$	BK: Black Minimum mounting di Side by side $\underbrace{e \ge 10}{e \ge 16}$	For Ma	$BK/2 (NC) \qquad BU/3 B connector, NO and NC outp s (mm) to face E \ge 30e \ge 48 df = 100$	ting a metal object $e \ge 7.5$ $e \ge 12$	Mounted in a metal support $d \rightarrow d \ge 24 h \ge d \ge 36 h \ge d \ge 54 h \ge 25 h \ge 25 h = 10 $
$ \begin{array}{c} 4\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\$	BK: Black Minimum mounting di Side by side $\underbrace{e \ge 10}_{e \ge 16}$ $\underbrace{e \ge 16}_{e \ge 16}$	For Ma	s (mm) to face $\frac{e}{e \ge 96} e^{\frac{2}{2} (MC)}$	ting a metal object $e \ge 7.5$ $e \ge 12$ $e \ge 24$	Mounted in a metal support $d \rightarrow d \ge 24 h \ge d \ge 36 h \ge d \ge 54 h \ge 25 h \ge 25 h = 10 $
$ \begin{array}{c} 4\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\$	BK: Black Minimum mounting di Side by side $\underbrace{e \ge 10}_{e \ge 16}$ $\underbrace{e \ge 16}_{e \ge 16}$	For Ma	s (mm) to face $\frac{e}{e \ge 96} e^{\frac{2}{2} (MC)}$	ting a metal object $e \ge 7.5$ $e \ge 12$ $e \ge 24$	Mounted in a metal support $d \rightarrow d \ge 24 h \ge d \ge 36 h \ge d \ge 54 h \ge 25 h \ge 25 h = 10 $
$ \begin{array}{c} 4\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\$	BK: Black Minimum mounting di Side by side $\underbrace{e \ge 10}_{e \ge 16}$ $\underbrace{e \ge 16}_{e \ge 16}$	For ME	s (mm) to face $\frac{e}{e \ge 96}$	its on terminal 4	Mounted in a metal support $d = \frac{d}{d \ge 24 h \ge d \ge 36 h \ge d \ge 54 h \ge d \ge 90 h \ge 0 = 0$
$ \begin{array}{c} 4\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\$	BK: Black Minimum mounting di Side by side $\underbrace{e \ge 10}_{e \ge 16}$ $\underbrace{e \ge 16}_{e \ge 16}$	For ME	s (mm) to face $\frac{e}{e \ge 96} e^{\frac{2}{2} (MC)}$	$\frac{BK/4 (NO)}{BK/2 (NC)}$ $\frac{E}{BK/2 (NC)}$ $$	Mounted in a metal support $d = \frac{d}{d \ge 24 h \ge d \ge 36 h \ge d \ge 54 h \ge d \ge 54 h \ge d \ge 90 h \ge d \ge 90 h \ge d \ge 8 V \text{ or}$
$ \frac{4}{100}3 \qquad 4 \qquad 3 \\ 1/2"-20UNF \qquad \hline \hline \\ \hline \\ \hline \\ 2 \qquad 3 \\ \hline \\ \hline$	BK: Black Minimum mounting di Side by side $\underbrace{e \ge 10}_{e \ge 16}$ $\underbrace{e \ge 16}_{e \ge 16}$	For ME	s (mm) to face $e \ge 96$ $e \ge 180$ e = 12-24 V	ting a metal object $e \ge 7.5$ $e \ge 12$ $e \ge 24$ $e \ge 24$ $e \ge 45$ 3-wire $$ 12-4 2-wire $\sim/2$	Mounted in a metal support $d = \frac{d}{d \ge 24 h \ge d \ge 36 h \ge d \ge 54 h \ge d \ge 54 h \ge d \ge 90 h \ge d \ge 90 h \ge 0$ 8 V or 4-240 V
$ \begin{array}{c} 4\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\$	BK: Black Minimum mounting di Side by side $\underbrace{e \ge 10}_{e \ge 16}$ $\underbrace{e \ge 16}_{e \ge 16}$	For ME	s (mm) to face $\frac{e}{e \ge 96}$	ting a metal object $e \ge 7.5$ $e \ge 12$ $e \ge 24$ $e \ge 24$ $e \ge 45$ 3-wire $$ 12-4 2-wire $\sim/2$	Mounted in a metal support $d = \frac{d}{d \ge 24 h \ge d \ge 36 h \ge d \ge 54 h \ge d \ge 54 h \ge d \ge 54 h \ge d \ge 90 h \ge 0 + 20 h = 0 + 0$
$ \frac{4}{100}3 \qquad 4 \qquad 3 \\ 1/2"-20UNF \qquad \hline \hline \\ \hline \\ \hline \\ 2 \qquad 3 \\ \hline \\ \hline$	BK: Black Minimum mounting di Side by side $\underbrace{e \ge 10}_{e \ge 16}$ $\underbrace{e \ge 16}_{e \ge 16}$	For ME	s (mm) to face $e \ge 96$ $e \ge 180$ e = 12-24 V	ting a metal object $e \ge 7.5$ $e \ge 12$ $e \ge 24$ $e \ge 24$ $e \ge 45$ 3-wire $$ 12-4 2-wire $\sim/2$	Mounted in a metal support $d = \frac{d}{d \ge 24 \text{ h} \ge 36 \text{ h} = 3$
$ \frac{4}{100}3 \qquad 4 \qquad 3 \\ 1/2"-20UNF \qquad \hline \hline \\ \hline \\ \hline \\ 2 \qquad 3 \\ \hline \\ \hline$	BK: Black Minimum mounting di Side by side $\underbrace{e \ge 10}{e \ge 16}$ $\underbrace{e \ge 16}{e \ge 60}$ XS4 P	For ME	s (mm) to face $e \ge 30$ $e \ge 180$ $e \ge 180$ $e \ge 180$ $e \ge 180$ $e \ge 180$ $e \ge 180$ $e \ge 180$	ting a metal object $e \ge 12$ $e \ge 24$ $e \ge 24$ $e \ge 45$ $e \ge 12$ $e \ge 24$ $e \ge 12$ $e \ge 24$ $e \ge 12$ $e \ge 12$ $e \ge 12$ $e \ge 12$ $e \ge 24$ $e \ge 12$ $e \ge 12$ e =	Mounted in a metal support
$ \frac{4}{100}3 \qquad 4 \qquad 3 \\ 1/2"-20UNF \qquad \hline \hline \\ \hline \\ \hline \\ 2 \qquad 3 \\ \hline \\ \hline$	BK: Black Minimum mounting di Side by side $e \ge 10$ $e \ge 16$ $e \ge 16$ $e \ge 60$ XS4 P Ø 8	For ME	s (mm) to face e = 12-24 V re $-$ 12-24 V re 26 42 26	bind the second state of	Mounted in a metal support $d = \frac{d}{d \ge 24 \text{ h} \ge d}$ $d \ge 24 \text{ h} \ge d \ge 36 \text{ h} \ge d \ge 54 \text{ h} \ge 1$ $d \ge 54 \text{ h} \ge 1$ $d \ge 61 = 40$
$ \frac{4}{100}3$ $ \frac{4}{100}3$ $ \frac{4}{100}3$ $ \frac{1}{100}2$	BK: Black Minimum mounting di Side by side $e \ge 10$ $e \ge 16$ $e \ge 16$ $e \ge 60$ x = 16 $e \ge 60$ x = 16 $e \ge 10$ $e \ge 0$ $e \ge 10$ $e \ge 0$ $e \ge 0$	For ME	s (mm) to face e = 12-24 V re $$	bind a metal object $e \ge 7.5$ $e \ge 12$ $e \ge 24$ $e \ge 24$ $e \ge 45$ $e \ge 12$ $e \ge 24$ $e \ge 45$ $e \ge 12$ $e \ge 24$ $e \ge 45$ $e \ge 12$ $e \ge 12$ $e \ge 24$ $e \ge 45$ $e \ge 12$ $e \ge 12$ $e \ge 24$ $e \ge 45$ $e \ge 12$ $e \ge 24$ $e \ge 12$ $e \ge 24$ $e \ge 12$ $e \ge 12$ e	Mounted in a metal suppo $d = \frac{d}{d \ge 24 h \ge d \ge 36 h \ge d \ge 54 h \ge 1}{d \ge 90 h \ge 3}$ 8 V or 4-240 V h) Connector (mm) a b 61 40 61 42
$ \frac{4}{10}3$ $ \frac{4}{10}3$ $\frac{4}{10}3$ $\frac{4}{10}3$ $\frac{1}{10}2$ $\frac{1}{2}$ $$	BK: Black Minimum mounting di Side by side $e \ge 10$ $e \ge 16$ $e \ge 16$ $e \ge 60$ XS4 P Ø 8	For ME	s (mm) to face e = 12-24 V re $-$ 12-24 V re 26 42 26	bind the second state of	Mounted in a metal suppo $d = \frac{d}{d \ge 24 h \ge d} = \frac{d}{d \ge 36 h \ge 1} = \frac{d}{d \ge 54 h \ge 1} = \frac{d}{d \ge 90 h \ge 3} = \frac{36 h \ge 1}{d \ge 90 h \ge 3} = \frac{1}{2} = $

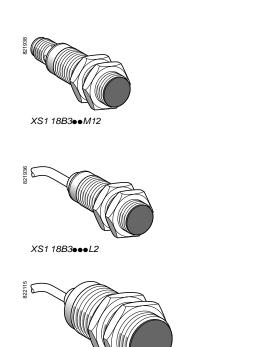
Inductive proximity sensors Osiprox[®] Technology Basic, cylindrical, flush mountable, increased range Three-wire d.c. Solid-state output

	Sensing distance Sn (mm))	Output	Connection	Sold in minimum lots of	Unit reference	Weight kg
	Ø 6.5, p	lain					
	Three-w	ire 12-24	V, flush	mountable			
	2	NO	PNP	Pre-cabled $(L = 2 m) (1)$	1	XS1 06B3PAL2	0.060
				M8 connector	1	XS1 06B3PAM8	0.030
				M12 connector	1	XS1 06B3PAM12	0.050
				Pre-cabled (L = 2 m)	20	XS1 06B3PAL2TQ	0.980
				M8 connector	20	XS1 06B3PAM8TQ	0.320
XS1 06B3••L2			NPN	Pre-cabled (L = 2 m)	1	XS1 06B3NAL2	0.060
				M8 connector	1	XS1 06B3NAM8	0.030
		NC	PNP	Pre-cabled (L = 2 m) (1)	1	XS1 06B3PBL2	0.060
				M8 connector	1	XS1 06B3PBM8	0.030
001167		eaded M8					
				mountable			
	2	NO	PNP	Pre-cabled (L = 2 m) (1)		XS1 08B3PAL2	0.070
				M8 connector	1	XS1 08B3PAM8	0.030
				M12 connector	1	XS1 08B3PAM12	0.060
XS1 08B3••M8				Pre-cabled (L = 2 m)	20	XS1 08B3PAL2TQ	1.120
				M8 connector	20	XS1 08B3PAM8TQ	0.460
				M12 connector	20	XS1 08B3PAM12TQ	0.940
			NPN	Pre-cabled (L = 2 m) (1)	1	XS1 08B3NAL2	0.070
				M8 connector	1	XS1 08B3NAM8	0.030
				M12 connector	1	XS1 08B3NAM12	0.060
				Pre-cabled (L = 2 m)	20	XS1 08B3NAL2TQ	1.120
				M8 connector	20	XS1 08B3NAM8TQ	0.460
		NC	PNP	Pre-cabled (L = 2 m) (1)	1	XS1 08B3PBL2	0.070
				M8 connector	1	XS1 08B3PBM8	0.030
				M12 connector	1	XS1 08B3PBM12	0.060
			NPN	Pre-cabled (L = 2 m) (1)	1	XS1 08B3NBL2	0.070
				M8 connector	1	XS1 08B3NBM8	0.030
				M12 connector	1	XS1 08B3NBM12	0.060
1214	Q 40 44	readed M	10 - 1				
				mountable			
	4	NO	PNP	Pre-cabled $(L = 2 m) (1)$	1	XS1 12B3PAL2	0.090
	•	NO		M12 connector	1	XS1 12B3PAM12	0.030
				Pre-cabled (L = 2 m)	20	XS1 12B3PAL2TQ	1.600
				M12 connector	20	XS1 12B3PAM12TQ	0.470
XS1 12B3••L2			NPN	Pre-cabled (L = 2 m) (1)		XS1 12B3NAL2	0.090
				M12 connector	1	XS1 12B3NAM12	0.030
				Pre-cabled (L = 2 m)	20	XS1 12B3NAL2TQ	1.600
				12000000000000000000000000000000000000	20	XS1 12B3NAL21Q	
		NC	PNP				
		NC	PNP	$\frac{\text{Pre-cabled (L = 2 m) (1)}}{M_{12}}$		XS1 12B3PBL2	0.090
				M12 connector	1	XS1 12B3PBM12	0.030
				M12 connector	20	XS1 12B3PBM12TQ	0.470
			NPN	$\frac{\text{Pre-cabled (L = 2 m) (1)}}{\text{M12 connector}}$		XS1 12B3NBL2	0.090
				M12 connector	1	XS1 12B3NBM12	0.030
				e L2 by L5. becomes XS1 06B3PAL :	5 with a 5 r	n long cable.	

Characteristics: page 2/44

References (continued)

Inductive proximity sensors Osiprox[®] Technology Basic, cylindrical, flush mountable, increased range Three-wire d.c. Solid-state output



XS1 30B3••L2



XSZ B1••

Sensing distance Sn (mm)	Function	Output	Connection	Sold in minimum lots of	Unit reference	Weight kg
Ø 18, th	readed M	18 x 1				
Three-wi	re 12-24	V, flush i	mountable			
8	NO	PNP	Pre-cabled (L = 2 m) (1)	1	XS1 18B3PAL2	0.110
			M12 connector	1	XS1 18B3PAM12	0.060
			Pre-cabled (L = 2 m)	20	XS1 18B3PAL2TQ	2.000
			M12 connector	20	XS1 18B3PAM12TQ	1.140
		NPN	Pre-cabled $(L = 2 m) (1)$	1	XS1 18B3NAL2	0.110
			M12 connector	1	XS1 18B3NAM12	0.060
			Pre-cabled (L = 2 m)	20	XS1 18B3NAL2TQ	2.000
			M12 connector	20	XS1 18B3NAM12TQ	1.140
	NC	PNP	Pre-cabled (L = 2 m) (1)	1	XS1 18B3PBL2	0.110
			M12 connector	1	XS1 18B3PBM12	0.060
		NPN	Pre-cabled $(L = 2 m) (1)$	1	XS1 18B3NBL2	0.110
			M12 connector	1	XS1 18B3NBM12	0.060

Ø 30	, threaded	I M30 X 1.	5				
Three-wire == 12-24 V, flush mountable							
15	NO	PNP	Pre-cabled $(L = 2 m)$ (1) 1			
			M12 connector	1			
			Pre-cabled (L = 2 m)	20			

		M12 connector	1	XS1 30B3PAM12	0.130
		Pre-cabled (L = 2 m)	20	XS1 30B3PAL2TQ	3.360
		M12 connector	20	XS1 30B3PAM12TQ	2.000
	NPN	Pre-cabled $(L = 2 m) (1)$	1	XS1 30B3NAL2	0.180
		M12 connector	1	XS1 30B3NAM12	0.130
		M12 connector	20	XS1 30B3NAM12TQ	2.000
NC	PNP	Pre-cabled (L = 2 m) (1)	1	XS1 30B3PBL2	0.180
		M12 connector	1	XS1 30B3PBM12	0.130
	NPN	Pre-cabled (L = 2 m) (1)	1	XS1 30B3NBL2	0.180
		M12 connector	1	XS1 30B3NBM12	0.130

XS1 30B3PAL2

0.180

Accessories (2)			
Description	For use with sensors	Reference	Weight kg
Fixing clamps	Ø = 6.5 (plain)	XSZ B165	0.005
	Ø 8 (M8 x 1)	XSZ B108	0.006
	Ø 12 (M12 x 1)	XSZ B112	0.006
	Ø 18 (M18 x 1)	XSZ B118	0.010
	Ø 30 (M30 x 1.5)	XSZ B130	0.020

(1) For a 5 m long cable replace L2 by L5.
 Example: XS1 18B3PAL2 becomes XS1 18B3PAL5 with a 5 m long cable.
 (2) For further information, see page 2/106.

Characteristics:	Schemes:	Dimensions:	
page 2/44	page 2/44	page 2/47	
		Schneider Electric	

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Characteristics, schemes

Inductive proximity sensors Osiprox[®] Technology

Basic, cylindrical, flush mountable, increased range Three-wire d.c. Solid-state output

Sensor type			XS1 eeB3eeM8	XS1 ••B3••M12	XS1 eeB3eeL2
Product certifications			UL, CSA, C€		
Connection	Connector		M8	M12	-
	Pre-cabled		-	-	Length 2 m
Operating zone (1)	Ø 6.5 and Ø 8	mm			
	Ø 12	mm	*****		
	Ø 18	mm			
	Ø 30	mm	012		
Differential travel		%	115 of effective sensing di	stance (Sr)	
Degree of protection	Conforming to IEC 60529		IP 65 and IP 67		
Storage temperature		°C	- 40+ 85		
Operating temperature		°C	- 25+ 70		
Materials	Case		Nickel plated brass		
	Cable		-		PvR 3 x 0.34 mm ² except Ø 6.5 and 8: 3 x 0.11 mm ²
Vibration resistance	Conforming to IEC 60068-2-6		25 gn, amplitude ± 2 mm (f =	= 10 to 55 Hz)	
Shock resistance	Conforming to IEC 60068-2-27		50 gn, duration 11 ms		
Output state indication			Yellow LED, 4 viewing ports	at 90°	Yellow LED, annula
Rated supply voltage		V	== 1224 with protection ag	gainst reverse polarity	
Voltage limits (including ripple)		V	1036		
Switching capacity		mA	≤ 200 with overload and sho	ort-circuit protection	
Voltage drop, closed state		v	≤2		
Current consumption, no-load		mA	≤10		
Maximum switching frequency	Ø 6.5, Ø 8 and Ø 12	Hz	2500		
	Ø 18	Hz	1000		
	Ø 30	Hz	500		
Delays	First-up	ms	≤10		
	Response	ms	≤ 0.2 for Ø 8 and Ø 12, ≤ 0.3	6 for Ø 18, ≤ 0.6 for Ø 30	
	Recovery	ms	≤ 0.2 for Ø 8 and Ø 12, ≤ 0.7 for Ø 18, ≤ 1.4 for Ø 30		

(1) Detection curves, see page 2/110.

Wiring schemes Connector NPN Pre-cabled M12



2

BU: Blue BN: Brown BK: Black

PNP Ę BN/1 BN/1 + + BK/4 (NO) __BK/2 (NC) PNP NPN ||С \Box BU/3 BU/3

+

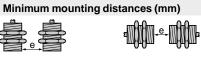
See connection on page 9/45.

For M8 connector, NO and NC outputs on terminal 4

Setting-up, dimensions

Inductive proximity sensors Osiprox[®] Technology Basic, cylindrical, flush mountable, increased range Three-wire d.c. Solid-state output

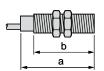
Setting-up



₽**____**e•

Sensors		Side by side	Face to face	Facing a metal object	
Ø 6.5 flush mountable	XS1 06 B3	e≥4	e≥24	e≥6	
Ø 8 flush mountable	XS1 08 B3	e≥4	e≥24	e≥6	
Ø 12 flush mountable	XS1 12 B3	e≥8	e≥50	e≥12	
Ø 18 flush mountable	XS1 18 B3	e≥16	e≥100	e≥25	
Ø 30 flush mountable	XS1 30 B3	e≥30	e≥180	e≥45	

Dimensions

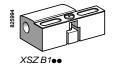


		Flush r	nountable ir	n metal				
Sensors					M8 connector (mm)		M12 connector (mm)	
		а	b	а	b	а	b	
Ø 6.5	XS1 06 B3	33	30	42	34	45	24	
Ø 8	XS1 08 B3	33	25	42	26	45	23	
Ø 12	XS1 12 B3	35	25	_	-	50	29	
Ø 18	XS1 18 B3	38	28	_	-	50.3	28	
Ø 30	XS1 30 B3	42.3	32	_	-	54.5	32	

Inductive proximity sensors Osiprox[®] Technology Basic, plastic, cylindrical, non flush mountable Three-wire, d.c. supply, solid-state output

901331
XS2 ••AL••L2





Sensing distance Sn	Function	Output	Connection	Reference	Weight
(mm)					kg
Ø 8, thread					
Three-wire	,				
2.5	NO	PNP	Pre-cabled (L = 2 m) (1)	XS2 08ALPAL2	0.030
		NPN	Pre-cabled (L = 2 m) (1)	XS2 08ALNAL2	0.030
NC		PNP	Pre-cabled (L = 2 m) (1)	XS2 08ALPBL2	0.003
		NPN	Pre-cabled (L = 2 m) (1)	XS2 08ALNBL2	0.030
Ø 12, threa	ded M12 x	(1			
Three-wire		on flush n	nountable		
4	NO	PNP	Pre-cabled (L = 2 m) (2)	XS2 12ALPAL2	0.065
			M12 connector	XS2 12ALPAM12	0.010
		NPN	Pre-cabled (L = 2 m) (2)	XS2 12ALNAL2	0.065
			M12 connector	XS2 12ALNAM12	0.010
	NC	PNP	Pre-cabled (L = 2 m) (2)	XS2 12ALPBL2	0.065
			M12 connector	XS2 12ALPBM12	0.010
		NPN	Pre-cabled (L = 2 m) (2)	XS2 12ALNBL2	0.065
			M12 connector	XS2 12ALNBM12	0.010
Ø 18, threa	dod M18 v	/ 1			0.010
Three-wire			ountable		
8	NO	PNP	Pre-cabled (L = 2 m) (2)	XS2 18ALPAL2	0.095
8	NU	FINF	M12 connector		
				XS2 18ALPAM12	0.025
		NPN	Pre-cabled $(L = 2 m) (2)$	XS2 18ALNAL2	0.095
			M12 connector	XS2 18ALNAM12	0.025
	NC	PNP	Pre-cabled (L = 2 m) (2)	XS2 18ALPBL2	0.095
		NPN	M12 connector	XS2 18ALPBM12	0.025
			Pre-cabled (L = 2 m) (2)	XS2 18ALNBL2	0.095
			M12 connector	XS2 18ALNBM12	0.025
Ø 30, threa			nountable		
15	NO	PNP	Pre-cabled (L = 2 m) (2)	XS2 30ALPAL2	0.135
			M12 connector	XS2 30ALPAM12	0.065
		NPN	Pre-cabled (L = 2 m) (2)	XS2 30ALNAL2	0.000
			M12 connector	XS2 30ALNAM12	0.065
	NC	PNP	Pre-cabled (L = 2 m) (2)	XS2 30ALPBL2	0.135
	NO		M12 connector	XS2 30ALPBM12	0.160
		NPN	Pre-cabled (L = 2 m) (2)	XS2 30ALNBL2	0.000
		INFIN	12000000000000000000000000000000000000	XS2 30ALNBM12	0.130
Accessorie	(2)			ASZ SUALINDINI Z	0.065
Accessorie	s (3)			Deference	14/-1-1-1
Description				Reference	Weight kg
Fixing clamps	2		Ø8	XSZ B108	0.006
· ixing claimps			Ø 12	XSZ B100	0.000
			Ø 12 Ø 18	XSZ B112 XSZ B118	0.000
				XSZ B118 XSZ B130	
(1) For a 5 m lo			Ø 30	Y27 B130	0.020

(1) For a 5 m long cable replace L2 by L5. Example: XS2 08ALPAL2 becomes XS2 08ALPAL5 with a 5 m long cable.
 (2) For a 5 m long cable replace L2 by L5; for a 10 m long cable replace L2 by L10. Example: XS2 18ALPAL2 becomes XS2 18ALPAL5 with a 5 m long cable.
 (3) For further information, see page 2/106.

Characteristic page 2/49	s: Schemes: page 2/49	Dimensions: page 2/49	
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Inductive proximity sensors Osiprox[®] Technology

Basic, plastic, cylindrical, non flush mountable Three-wire, d.c. supply, solid-state output

Sensor type			XS2 ••ALP•L2 XS2 ••ALN•L2	XS2 ••ALP•M12 XS2 ••ALN•M12		
Product certifications			UL, CSA, CE			
Connection	Pre-cabled		Length: 2 m	-		
	Connector		-	M12		
Operating zone (1)	Ø8	mm	02	•		
	Ø 12	mm	03.2			
	Ø 18	mm	06.4			
	Ø 30	mm	012			
Differential travel		%	115 of real sensing distance (Sr)			
Degree of protection	Conforming to IEC 60529		IP 67			
Storage temperature		°C	- 40+ 85			
Operating temperature		°C	- 25+ 70			
Materials	Case		PPS			
	Cable		PVC 3 x 0.34 mm ² except Ø 8: 3 x 0.11 mm ²	-		
Vibration resistance	Conforming to IEC 60068-2-6		25 gn, amplitude \pm 2 mm (f = 10 to 55 Hz)			
Shock resistance	Conforming to IEC 60068-2-27		50 gn, duration 11 ms			
Output state indication			Yellow LED, on rear	Yellow LED: 4 viewing ports at 90°		
Rated supply voltage		v	== 1224 with protection against reverse polarity			
Voltage limits (including ripple)		v				
Switching capacity		mA	≤ 100 (except Ø 8: ≤ 50) with overload and	I short-circuit protection		
Voltage drop, closed state		V	≤2			
Current consumption, no-load		mA	≤10			
Maximum switching frequency	Ø 8	Hz	3000			
	Ø 12	Hz	1000			
	Ø 18	Hz	250			
	Ø 30	Hz	60			
Delays	First-up	ms	≤ 5 (except Ø 30 ≤ 10)			
	Response	ms	≤ 0.5 for Ø 8, Ø 12, ≤ 1 for Ø 18, ≤ 2 for Ø 3	30		
	Recovery	ms	≤ 1 for Ø 8, ≤ 0.5 for Ø 12, ≤ 2 for Ø 18, ≤ 6	for Ø 30		

(1) Detection curves, see page 2/110.

Wiring schemes			
Connector	Pre-cabled	PNP	NPN
M12 4 1 2	BU: Blue BN: Brown BK: Black	BN/1 + PNP BK/4 (NO) ⊕ BK/2 (NC) BU/3	BN/1 + NPN BK/4 (NO) BU/3 −

See connection on page 9/45.

Setting-up

Minimum mounting distances (mm)

			ſŢŢŢŢŢŧĊŧŢŢŢŢŢ₽	a the the test of tes	
Sensors		Side by side	Face to face	Facing a metal object	Mounted in a metal support
Ø8	XS2 08AL	e > 10	e > 30	e > 7.5	d > 24 h > 5
Ø 12	XS2 12AL	e > 16	e > 48	e > 12	d > 36 h > 8
Ø 18	XS2 18AL	e > 16	e > 96	e > 24	d > 54 h > 16

e > 45

Di		-		-	_		-
	m	Δ	n	C I		n	c

XS2 30AL

e > 60

Ø 30

			Non flush i	nountable in metal			
	Sensors		Pre-cabled (mm)	Connector (m	Connector (mm)	
			а	b	а	b	
	Ø 8	XS2 08AL	49	40	-	-	
	Ø 12	XS2 12AL	49	42	61	42	
a 🔒	Ø 18	XS2 18AL	58.8	51.5	70.3	51.5	
	Ø 30	XS2 30AL	58.8	51.5	70.3	51.5	

2

e > 180

d > 90 h > 30

Inductive proximity sensors Osiprox[®] Technology Basic, cylindrical, metal, flush and non flush mountable Two-wire, a.c. supply

Three-wire, d.c. supply, solid-state output

Sensing distance Sn	Function	Output	Connection	Reference	Weigh	
(mm)						
Ø 6.5, plain						
Three-wire	-					
1.5	NO	PNP	Pre-cabled $(L = 2 m) (1)$	XS1 06BLPAL2	0.0	
		NPN	Pre-cabled (L = 2 m) (1)	XS1 06BLNAL2	0.0	
	NC	PNP	Pre-cabled (L = 2 m) (1)	XS1 06BLPBL2	0.0	
G 0 threads	- I MO - 4	NPN	Pre-cabled (L = 2 m) (1)	XS1 06BLNBL2	0.0	
Ø 8, threade Three-wire			utable.			
1.5	NO	PNP	Pre-cabled (L = 2 m) (1)	XS1 08BLPAL2	0.0	
1.0	NO		M8 connector	XS1 08BLPAM8	0.0	
			M12 connector	XS1 08BLPAM12	0.0	
		NPN	Pre-cabled (L = 2 m) (1)	XS1 08BLNAL2	0.0	
			M8 connector	XS1 08BLNAM8	0.0	
			M12 connector	XS1 08BLNAM12	0.0	
	NC	PNP	Pre-cabled (L = 2 m) (1)	XS1 08BLPBL2	0.0	
	NO		M8 connector	XS1 08BLPBM8	0.0	
			M12 connector	XS1 08BLPBM12	0.0	
		NPN	Pre-cabled (L = 2 m) (1)	XS1 08BLNBL2	0.0	
			M8 connector	XS1 08BLNBM8	0.	
			M12 connector	XS1 08BLNBM12	0.0	
Three-wire	12-24 V. n	on flush n		XOT CODENDINT2	0.	
2.5	NO	PNP	Pre-cabled (L = 2 m) (1)	XS2 08BLPAL2	0.	
			M8 connector	XS2 08BLPAM8	0.	
			M12 connector	XS2 08BLPAM12	0.	
		NPN	Pre-cabled (L = 2 m) (1)	XS2 08BLNAL2	0.	
			M8 connector	XS2 08BLNAM8	0.0	
			M12 connector	XS2 08BLNAM12	0.	
	NC	PNP	Pre-cabled (L = 2 m) (1)	XS2 08BLPBL2	0.	
			M8 connector	XS2 08BLPBM8	0.	
			M12 connector	XS2 08BLPBM12	0.	
		NPN	Pre-cabled (L = 2 m) (1)	XS2 08BLNBL2	0.	
			M8 connector	XS2 08BLNBM8	0.0	
			M12 connector	XS2 08BLNBM12	0.0	
Ø 12, thread	ded M12 >	(1				
Three-wire	: 12-24 V, fl	ush mour	ntable			
2	NO	PNP	Pre-cabled (L = 2 m) (2)	XS1 12BLPAL2	0.	
			M12 connector	XS1 12BLPAM12	0.0	
		NPN	Pre-cabled (L = 2 m) (2)	XS1 12BLNAL2	0.0	
			M12 connector	XS1 12BLNAM12	0.	
	NC	PNP	Pre-cabled (L = 2 m) (2)	XS1 12BLPBL2	0.	
			M12 connector	XS1 12BLPBM12	0.	
		NPN	Pre-cabled (L = 2 m) (2)	XS1 12BLNBL2	0.	
_			M12 connector	XS1 12BLNBM12	0.0	
Two-wire \sim 2	,	ish moun				
2	NO		Pre-cabled (L = 2 m) (2)	XS1 12BLFAL2	0.	
Three-wire	- 12-24 V m	on fluch n	nountable			
4	NO	PNP	Pre-cabled (L = 2 m) (2)	XS2 12BLPAL2	0.	
-			M12 connector	XS2 12BLPAM12	0.	
		NPN	Pre-cabled (L = 2 m) (2)	XS2 12BLNAL2	0.0	
			M12 connector	XS2 12BLNAM12	0.	
	NC	PNP	Pre-cabled (L = 2 m) (2)	XS2 12BLPBL2	0.	
			M12 connector	XS2 12BLPBM12	0.0	
		NPN	Pre-cabled (L = 2 m) (2)	XS2 12BLNBL2	0.0	
			(, (-		0.1	

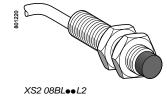
Example: XS1 06BLPAL2 becomes **XS1 06BLPAL5** with a 5 m long cable. (2) For a 5 m long cable replace L2 by L5; for a 10 m long cable replace L2 by L10. able.

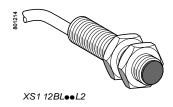
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XS1 06BL •• L2







Schemes: page 2/52

Dimensions: page 2/53

Characteristics: page 2/52 2/50

Schneider Blectric

References (continued)

Inductive proximity sensors Osiprox[®] Technology Basic, cylindrical, metal, flush and non flush mountable Two-wire, a.c. supply Three-wire, d.c. supply, solid-state output

	Sensing distance Sn	Function	Output	Connection	Reference	Weight
	(mm)	dod M10 v	· 1			kg
	Ø 18, threa			6.1.L.		
	Three-wire	-				0.405
	5	NO	PNP	Pre-cabled (L = 2 m) (1)	XS1 18BLPAL2	0.105
				M12 connector	XS1 18BLPAM12	0.035
410			NPN	$\frac{\text{Pre-cabled (L = 2 m) (1)}}{\text{MAQ}}$	XS1 18BLNAL2	0.105
				M12 connector	XS1 18BLNAM12	0.035
XS1 18BL••M12		NC	PNP	Pre-cabled (L = 2 m) (1)	XS1 18BLPBL2	0.105
X31 TODLOOMITZ				M12 connector	XS1 18BLPBM12	0.035
			NPN	$\frac{\text{Pre-cabled (L = 2 m) (1)}}{\text{M12 connector}}$	XS1 18BLNBL2 XS1 18BLNBM12	0.105
	Two wine o	04 040V fl.			AST TODENDINTZ	0.035
	Two-wire \sim :	-	isn moun			0.400
	5 Three wire -	NO	an fluch m	Pre-cabled $(L = 2 m) (1)$	XS1 18BLFAL2	0.120
	Three-wire	-				0.405
	8	NO	PNP	Pre-cabled (L = 2 m) (1)	XS2 18BLPAL2	0.105
				M12 connector Bra cohled (l - 2 m) (1)	XS2 18BLPAM12	0.035
			NPN	$\frac{\text{Pre-cabled (L = 2 m) (1)}}{\text{M12 connector}}$	XS2 18BLNAL2	0.105
XS1 18BL•••L2				M12 connector	XS2 18BLNAM12	0.035
AGI IODLOOLZ		NC	PNP	$\frac{\text{Pre-cabled (L = 2 m) (1)}}{\text{M12 connector}}$	XS2 18BLPBL2	0.105
				M12 connector	XS2 18BLPBM12	0.035
\bigcirc			NPN	Pre-cabled $(L = 2 m) (1)$	XS2 18BLNBL2	0.105
				M12 connector	XS2 18BLNBM12	0.035
	Ø 30, threa					
	Three-wire	-				
	10	NO	PNP	Pre-cabled $(L = 2 m) (1)$	XS1 30BLPAL2	0.165
				M12 connector	XS1 30BLPAM12	0.075
All All			NPN	Pre-cabled $(L = 2 m) (1)$	XS1 30BLNAL2	0.165
			DND	M12 connector	XS1 30BLNAM12	0.075
		NC	PNP	Pre-cabled $(L = 2 m) (1)$	XS1 30BLPBL2	0.165
XS1 30BL••L2				M12 connector	XS1 30BLPBM12	0.075
			NPN	Pre-cabled $(L = 2 m) (1)$	XS1 30BLNBL2	0.165
				M12 connector	XS1 30BLNBM12	0.075
	Two-wire \sim :	-	isn moun			0.005
	10	NO		Pre-cabled $(L = 2 m) (1)$	XS1 30BLFAL2	0.205
	Three-wire	-			NO0 005: 511 5	o : ==
	15	NO	PNP	Pre-cabled $(L = 2 m) (1)$	XS2 30BLPAL2	0.155
				M12 connector	XS2 30BLPAM12	0.085
WLY			NPN	Pre-cabled (L = 2 m) (1)	XS2 30BLNAL2	0.155
-		10	DND	M12 connector	XS2 30BLNAM12	0.085
XS2 30BL●●L2		NC	PNP	Pre-cabled (L = 2 m) (1)	XS2 30BLPBL2	0.155
AGZ BUDLOOLZ				M12 connector	XS2 30BLPBM12	0.085
			NPN	$\frac{\text{Pre-cabled} (L = 2 \text{ m}) (1)}{1}$	XS2 30BLNBL2	0.155
				M12 connector	XS2 30BLNBM12	0.085
	Accessorie	es (2)				
	Description				Reference	Weight kg
	Fixing clamp	S		Ø 6.5	XSZ B165	0.005
				Ø 8	XSZ B108	0.006
				Ø 12	XSZ B112	0.006
XSZ B1●●				Ø 18	XSZ B118	0.010
				Ø 30	XSZ B130	0.020

(2) For further information, see page 2/106.

Characteristics: Schemes: page 2/52 page 2/52	Dimensions: page 2/53
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Characteristics, schemes

2

Inductive proximity sensors Osiprox[®] Technology Basic, cylindrical, metal, flush and non flush mountable Two-wire, a.c. supply Three-wire, d.c. supply, solid-state output

Sensor type				XS1 ••BLP•M• XS1 ••BLN•M•		XS2 ••BLP•M• XS2 ••BLN•M•	XS1 ••BLFAL2
Product certifications			UL, CSA, CE				
Connection	Pre-cabled		Length 2 m	-	Length 2 m	-	Length 2 m
	Connector		-	M8 on Ø 8 M12 on Ø 8, Ø 12, Ø 18 and Ø 30	-	M8 on Ø 8 M12 on Ø 8, Ø 12, Ø 18 and Ø 30	-
Operating zone (1)	Ø 6.5	mm	01.2		-		-
	Ø8	mm	01.2		02		-
	Ø 12	mm	01.6		03.2		01.6
	Ø 18	mm	04		06.4		04
	Ø 30	mm	08		012		08
Differential travel		%	115 of real sen	sing distance (Sr)			
Degree of protection	Conforming to IEC 60529		IP 67				
Storage temperature		°C	- 40+ 85				
Operating temperature		°C	- 25+ 70				
Materials	Case		Nickel plated bra	SS			
	Cable		PVC 3 x 0.34 mm ² except Ø 6.5 and 8: 3 x 0.11 mm ²	-	PVC 3 x 0.34 mm ² except Ø 6.5 and 8: 3 x 0.11 mm ²	-	PVC 2 x 0.34 mm ²
Vibration resistance	Conforming to IEC 60068-2-6		25 gn, amplitude	25 gn, amplitude \pm 2 mm (f = 10 to 55 Hz)			
Shock resistance	Conforming to IEC 60068-2-27		50 gn, duration 1	l ms			
Output state indication			Yellow LED, on rear	Yellow LED: 4 viewing ports at 90°	Yellow LED, on rear	Yellow LED: 4 viewing ports at 90°	Yellow LED, on rear
Rated supply voltage		V	1224 with protection against reverse polarity				\sim 24240
Voltage limits (including ripple)		V	1036				\sim 20264
Switching capacity		mA	≤ 100 (except Ø e protection	6.5 and 8: ≤ 50) wit	h overload and sh	ort-circuit	5300 (5200 for Ø 12) <i>(</i> 2 <i>)</i>
Voltage drop, closed state		v	≤2				≤ 4.5 (≤ 7 for Ø 12)
Current consumption, no-load		mA	≤ 10				-
Residual current, open state							≤ 1.5
Maximum switching frequency	Ø 6.5, Ø 8	Hz	3000				-
	Ø 12	Hz	2000		1000		25
	Ø 18	Hz	2000		250		25
	Ø 30	Hz	200		60		25
Delays	First-up	ms	≤ 5 (except Ø 30	≤ 10)			≤40
	Response	ms	≤ 0.5 for Ø 8, Ø 1	2, ≤ 1 for Ø 18, ≤ 2	for Ø 30		≤10
	Recovery	ms	≤ 1 for Ø 8, ≤ 0.5	for Ø 12, ≤ 2 for Ø	18, ≤ 6 for Ø 30		≤15

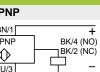
(1) Detection curves, see page 2/110. (2) These sensors do not incorporate overload or short-circuit protection and therefore, it is essential to connect a 0.4 A "quick-blow" fuse in series with the load, see page 2/106.

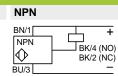
Wiring schemes



M12	
4 - 3	
$(\bullet \bullet)$	
1 2	

Pre-cabled	PN
BU: Blue BN: Brown BK: Black	BN/ PN





2-wire \sim BN \Diamond

BU

+

See connection on page 9/45.

References:	
pages 2/50 and 2/51	

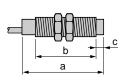
Dimensions: page 2/53

Setting-up, dimensions

Inductive proximity sensors Osiprox[®] Technology Basic, cylindrical, metal, flush and non flush mountable Two-wire, a.c. supply Three-wire, d.c. supply, solid-state output

Setting-up					
		Minimum mountin	g distances (mm)		
			⋬ <mark>╢<mark>╢</mark>┫╢┿╧┿║╢╢<mark>╔</mark>а</mark>	e e	
Sensors		Side by side	Face to face	Facing a metal object	Mounted in a metal support
Ø 6.5 flush mountable	XS1 06	e≥3	e≥18	e≥4.5	d≥6,5 h≥0
Ø 8 flush mountable	XS1 08	e≥3	e≥18	e≥4.5	d≥8 h≥0
Ø 8 non flush mountable	XS2 08	e≥10	e≥30	e≥7.5	d≥24 h≥5
Ø 12 flush mountable	XS1 12	e≥4	e≥24	e≥6	d≥12 h≥0
Ø 12 non flush mountable	XS2 12	e≥16	e≥48	e≥12	d≥36 h≥8
Ø 18 flush mountable	XS1 18	e≥10	e≥60	e≥15	d≥18 h≥0
Ø 18 non flush mountable	XS2 18	e≥16	e≥96	e≥24	d≥54 h≥16
Ø 30 flush mountable	XS1 30	e≥20	e≥120	e≥30	d≥30 h≥0
Ø 30 non flush mountable	XS2 30	e≥60	e≥180	e≥45	d≥90 h≥30

Dimensions



		Flush r	nountable in					
Sensors		Pre-cabled (mm)		M8 co (mm)	nnector	M12 c (mm)	M12 connector (mm)	
		а	b	а	b	а	b	
Ø 6.5	XS1 06	42	-	_	-	_	-	
Ø 8	XS1 08	42	39.4	52.2	41.3	61.4	39	
Ø 12	XS1 12	41.3	38.7		-	53	39	
Ø 18	XS1 18	51.3	48.4		-	64	48.5	
Ø 30	XS1 30	51.3	48.4		-	64	48.5	

		Non flu	sh mountabl							
Sensors		Pre-cab (mm)	Pre-cabled (mm)		M8 connector (mm)			M12 connector (mm)		
		а	b	а	b	С	а	b	С	
Ø 8	XS2 08	42	35.8	52.2	37.7	4	61.4	35.4	4	
Ø 12	XS2 12	41.3	34.1	_	-	_	52.6	34	5	
Ø 18	XS2 18	50.6	40.4		-	_	63.4	40.5	8	
Ø 30	XS2 30	50.6	35.4		-	_	63.4	35.5	13	

References: pages 2/50 and 2/51	Characteristics: page 2/52	Schemes: page 2/52	
			2/53

2

Inductive proximity sensors Osiprox[®] Technology Miniature, cylindrical, flush and non flush mountable Three-wire, d.c. supply, solid-state output

Ø 4 plain (1)			• •		
Sensing distance (Sn) mm	Function	Output	Connection (2)	Reference	Weig
Brass case, fl	ush mount	able			
1	NO	PNP	Pre-cabled (L = 2 m)	XS1 L04PA310	0.0
			M8 connector	XS1 L04PA310S	0.0
		NPN	Pre-cabled (L = 2 m)	XS1 L04NA310	0.0
			M8 connector	XS1 L04NA310S	0.
	NC	PNP	Pre-cabled (L = 2 m)	XS1 L04PB310	0.
			M8 connector	XS1 L04PB310S	C
		NPN	Pre-cabled (L = 2 m)	XS1 L04NB310	(
			M8 connector	XS1 L04NB310S	(
Stainless stee	el case, flus	h mounta	able		
0.8	NO	PNP	Pre-cabled (L = 2 m)	XS1 L04PA311	C
			M8 connector	XS1 L04PA311S	(
		NPN	Pre-cabled (L = 2 m)	XS1 L04NA311	
			M8 connector	XS1 L04NA311S	
Q E thread					
Ø 5, thread Sensing	Function	J.O (1) Output	Connection	Reference	W
distance (Sn)	runction	Output	(2)	Kelerence	
mm Brass case, fl	ush mount	able			
1	NO	PNP	Pre-cabled (L = 2 m)	XS1 N05PA310	
•	NO	NPN	Pre-cabled $(L = 2 m)$	XS1 N05NA310	
	NC	PNP	Pre-cabled $(L = 2 m)$	XS1 N05PB310	
	110	NPN	Pre-cabled (L = 2 m)	XS1 N05NB310	
			, , , , , , , , , , , , , , , , , , ,		
Stainless stee					
0.8	NO	PNP	Pre-cabled $(L = 2 m)$	XS1 N05PA311	
			M8 connector	XS1 N05PA311S	
		NPN	$\frac{\text{Pre-cabled (L = 2 m)}}{\text{M8 connector}}$	XS1 N05NA311 XS1 N05NA311S	
			We connector	Xor NoshAstro	
Ø 6.5 plain	(1)				
Sensing	Function	Output	Connection	Reference	W
distance (Sn)			(2)		
mm					
	el case, flus	h mounta	able		
mm	el case, flus NO	h mounta PNP	Pre-cabled (L = 2 m)	XS1 L06PA340	
mm Stainless stee				XS1 L06PA340 XS1 L06PA340S	
mm Stainless stee		PNP	Pre-cabled (L = 2 m) M8 connector M12 connector	XS1 L06PA340S XS1 L06PA340D	
mm Stainless stee			Pre-cabled (L = 2 m) M8 connector	XS1 L06PA340S	
mm Stainless stee		PNP	Pre-cabled (L = 2 m) M8 connector M12 connector Pre-cabled (L = 2 m) M8 connector	XS1 L06PA340S XS1 L06PA340D XS1 L06NA340 XS1 L06NA340	
mm Stainless stee	NO	PNP NPN	Pre-cabled (L = 2 m) M8 connector M12 connector Pre-cabled (L = 2 m) M8 connector M12 connector	XS1 L06PA340S XS1 L06PA340D XS1 L06NA340 XS1 L06NA340S XS1 L06NA340D	
mm Stainless stee		PNP	Pre-cabled (L = 2 m) M8 connector M12 connector Pre-cabled (L = 2 m) M8 connector M12 connector Pre-cabled (L = 2 m)	XS1 L06PA340S XS1 L06PA340D XS1 L06NA340 XS1 L06NA340S XS1 L06NA340D XS1 L06PB340	
mm Stainless stee	NO	PNP NPN PNP	Pre-cabled (L = 2 m) M8 connector M12 connector Pre-cabled (L = 2 m) M8 connector M12 connector Pre-cabled (L = 2 m) M8 connector M12 connector M12 connector M12 connector M12 connector M12 connector M12 connector M8 connector	XS1 L06PA340S XS1 L06PA340D XS1 L06NA340 XS1 L06NA340S XS1 L06NA340D XS1 L06PB340 XS1 L06PB340S	
mm Stainless stee	NO	PNP NPN	$\label{eq:constant} \begin{split} & \frac{\text{Pre-cabled} \left(\text{L} = 2 \text{ m} \right) }{\text{M8 connector}} \\ & \frac{\text{M12 connector}}{\text{M12 connector}} \\ & \frac{\text{Pre-cabled} \left(\text{L} = 2 \text{ m} \right) }{\text{M12 connector}} \\ & \frac{\text{Pre-cabled} \left(\text{L} = 2 \text{ m} \right) }{\text{M8 connector}} \\ & \frac{\text{Pre-cabled} \left(\text{L} = 2 \text{ m} \right) }{\text{M8 connector}} \\ \end{array}$	XS1 L06PA340S XS1 L06PA340D XS1 L06NA340 XS1 L06NA340S XS1 L06NA340D XS1 L06PB340 XS1 L06PB340S XS1 L06NB340	
mm Stainless stee	NO	PNP NPN PNP	Pre-cabled (L = 2 m) M8 connector M12 connector Pre-cabled (L = 2 m) M8 connector M12 connector Pre-cabled (L = 2 m) M8 connector M12 connector M12 connector M12 connector M12 connector M12 connector M12 connector M8 connector	XS1 L06PA340S XS1 L06PA340D XS1 L06NA340 XS1 L06NA340S XS1 L06NA340D XS1 L06PB340 XS1 L06PB340S	
mm Stainless stee		PNP NPN PNP	Pre-cabled (L = 2 m) M8 connector M12 connector Pre-cabled (L = 2 m) M8 connector M12 connector Pre-cabled (L = 2 m) M8 connector	XS1 L06PA340S XS1 L06PA340D XS1 L06NA340 XS1 L06NA340S XS1 L06NA340D XS1 L06PB340 XS1 L06PB340S XS1 L06NB340	
mm Stainless stee 1.5		PNP NPN PNP	Pre-cabled (L = 2 m) M8 connector M12 connector Pre-cabled (L = 2 m) M8 connector M12 connector Pre-cabled (L = 2 m) M8 connector	XS1 L06PA340S XS1 L06PA340D XS1 L06NA340 XS1 L06NA340S XS1 L06NA340D XS1 L06PB340 XS1 L06PB340S XS1 L06NB340	
mm Stainless stee 1.5 Stainless stee	NO NC el case, non	PNP NPN PNP NPN	Pre-cabled (L = 2 m) M8 connector M12 connector Pre-cabled (L = 2 m) M8 connector M12 connector Pre-cabled (L = 2 m) M8 connector Pre-cabled (L = 2 m) M8 connector Pre-cabled (L = 2 m) M8 connector	XS1 L06PA340S XS1 L06PA340D XS1 L06NA340 XS1 L06NA340S XS1 L06NA340D XS1 L06PB340 XS1 L06PB340S XS1 L06NB340 XS1 L06NB340S	
mm Stainless stee 1.5 Stainless stee	NO NC el case, non	PNP NPN PNP NPN	$\begin{tabular}{ c c c } Pre-cabled (L = 2 m) \\ \hline M8 connector \\ \hline M12 connector \\ \hline Pre-cabled (L = 2 m) \\ \hline M8 connector \\ \hline Pre-cabled (L = 2 m) \\ \hline M8 connector \\ \hline Pre-cabled (L = 2 m) \\ \hline M8 connector \\ \hline Pre-cabled (L = 2 m) \\ \hline \end{tabular}$	XS1 L06PA340S XS1 L06PA340D XS1 L06NA340 XS1 L06NA340D XS1 L06NA340D XS1 L06PB340 XS1 L06PB340S XS1 L06NB340 XS1 L06NB340S XS1 L06NB340S	
mm Stainless stee 1.5 Stainless stee	NO NC el case, non	PNP NPN PNP NPN	Pre-cabled (L = 2 m) M8 connector M12 connector Pre-cabled (L = 2 m) M8 connector	XS1 L06PA340S XS1 L06PA340D XS1 L06NA340 XS1 L06NA340D XS1 L06NA340D XS1 L06PB340 XS1 L06PB340 XS1 L06NB340 XS1 L06NB340S XS1 L06NB340S XS2 L06PA340 XS2 L06PA340S	
mm Stainless stee 1.5 Stainless stee	NO NC el case, non	PNP NPN NPN NPN NPN nflush mo PNP	Pre-cabled (L = 2 m) M8 connector M12 connector Pre-cabled (L = 2 m) M8 connector M12 connector Pre-cabled (L = 2 m) M8 connector Pre-cabled (L = 2 m) M8 connector Pre-cabled (L = 2 m) M8 connector M12 connector	XS1 L06PA340S XS1 L06PA340D XS1 L06NA340 XS1 L06NA340D XS1 L06NA340D XS1 L06PB340 XS1 L06PB340S XS1 L06NB340 XS1 L06NB340S XS2 L06PA340 XS2 L06PA340S XS2 L06PA340D	

Inductive proximity sensors Osiprox[®] Technology

Miniature, cylindrical, flush and non flush mountable Three-wire, d.c. supply, solid-state output

Sensor type			XS1 •••••••S; XS1 ••••••D; XS2 L06•A340•	XS1 ••••••; XS2 L06•A340				
Product certifications			UL, CSA, C€					
Connection	Connector		M8 on XS1 •••••• S and M12 on XS1 •••••• D	-				
	Pre-cabled		-	Length: 2 m				
Operating zone (1)	Ø 4	mm	00.8 (brass), 00.6 (stainless steel)					
	Ø 5	mm	00.8 (brass), 00.6 (stainless steel)					
	Ø 6.5 flush mountable	mm	01.2 (stainless steel)					
	Ø 6.5 non flush mountable	mm	02 (stainless steel)					
Degree of protection	Conforming to IEC 60529		IP 67					
Storage temperature		°C	- 40+ 85					
Operating temperature		°C	- 25+ 70					
Materials	Case		Nickel plated brass or stainless steel grade 303					
	Pre-cabled		PvR, 3 x 0.11 mm ² or 4 x 0.08 mm ²					
Vibration resistance	Conforming to IEC 60068-2-6		25 gn, amplitude ± 2 mm (f = 10 to 55 Hz)				
Shock resistance	Conforming to IEC 60068-2-27		50 gn, duration 11 ms					
Output state indication			Yellow LED, 4 viewing ports at 90°	Yellow LED, annular				
Rated supply voltage		V						
Voltage limits (including	ipple)	V						
Current consumption, no	-load	mA	≤10					
Switching capacity	3-wire PNP/NPN	mA	≤ 100 with overload and short-circuit pro ≤ 200 for XS● L06 with overload and sho					
Voltage drop, closed state	3	٧	≤2					
Maximum switching frequ	Jency	kHz	5					
Delays	First-up	ms	≤5					
	Response	ms	≤0.1					
	Recovery	ms	≤0.1					

Wiring schemes

Connector M8 M12

1((•

Pre-cabled BU : Blue BN : Brown BK : Black WH: White



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For M8 connector, NO and NC outputs on terminal 4.

NPN 3-wire BN/1 + Ь NPN _____BK/4 (NO) \Diamond BK/2 (NC) BU/3

٠ See connection on page 9/45.

Setting-up			
Minimum mounting d	listances (mm)		
Sensor	Side by side	Face to face	Facing a metal object
Ø 4	e≥2	e≥12	$e \ge 3$ $d1 \xrightarrow{d2} d1 \ge 4, h \ge 0$ -
Ø 5	e≥2		e≥3 (→ → ↓ → d1≥5, h≥0 –
Ø 6.5		_ ɛ //// ₊ /// ʑ <u>e ≥ 18</u>	$e \ge 4.5$ $= 1$ $d \ge 3, h \ge 0$ $-$
Ø 6.5, XS2 L06•A340•	e≥5	_ <u>m0+0m m0+0m</u> <u>e≥30</u>	$e \ge 7.5$ $e \ge 7.5$ $d1 \ge 10, h \ge 1.6 d2 \ge 6.5, x \ge 1.3$

Tightening torque

Stainless steel: 2.2 N.m Brass: 1.6 N.m

> b а

Di	me	nci	ion	2
וט	IIIC	113	IUI I	13

0115											
	Sensor	Pre-ca	Pre-cabled			M8 connector			M12 connector		
_		а	b	С	а	b	С	а	b	с	
Ammu	Ø 4	29	29	-	41	24	-	-	-	-	
Runn	Ø 5	29	29	-	41	24	-	-	-	-	
	Ø 6.5	33	30	-	42	34	_	45	24	-	
·> 	Ø 6.5, XS2 L06•A340•	33	27	3	46	35	3	49	25	3	

Inductive proximity sensors

Osiprox[®] Technology

Function

Cylindrical, flush mountable and non flush mountable Two-wire, a.c. or d.c. supply, short-circuit protection

Connection

Reference

XS1 M12MA250K

XS1 M12MB250K

XS2 M12MA250K

XS1 M18MA250K

XS1 M18MB250K

XS2 M18MA250K

XS2 M18MB250

XS2 M18MB250K

XS1 M30MA250K

XS1 M30MB250K

XS2 M30MA250K

XS2 M30MB250K

Reference

XSZ B112

XSZ B118

XSZ B130

Weight kg

0.075

0.025

0.075

0.025

0.075

0.025

0.075

0.120

0.060

0.120

0.060

0.120

0.060

0 1 2 0

0.060

0205

0.145

0205

0.145

0205

0 145

0205

0.145

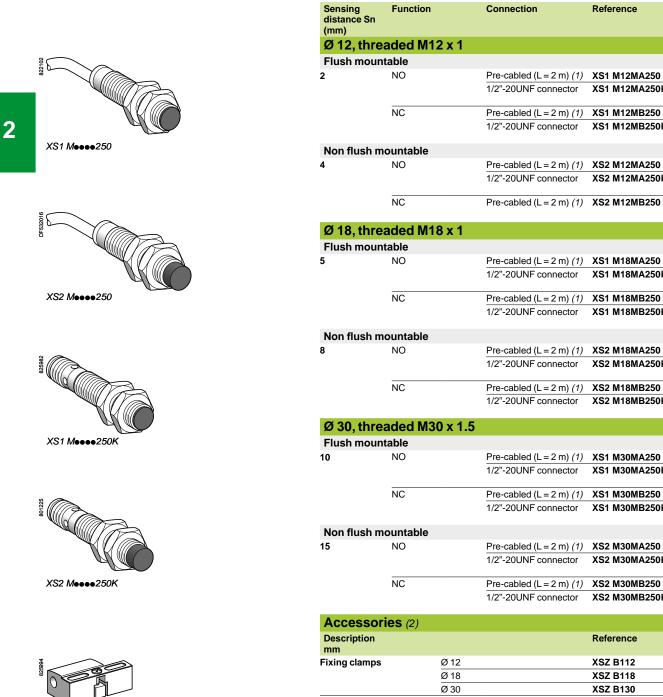
Weight

kg

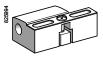
0.006

0.010

0.020



(1) For a 5 m long cable, add L1 to the reference and for a 10 m long cable, add L2 to the reference. Example: XS1 M18MA250 becomes XS1 M18MA250L1 with a 5 m long cable. (2) For further information, see page 2/106.

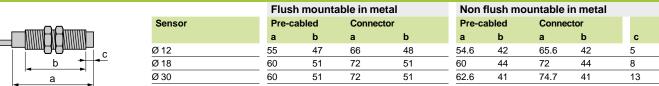




Schneider Gelectric

Inductive proximity sensors Osiprox[®] Technology Cylindrical, flush mountable and non flush mountable Two-wire, a.c. or d.c. supply, short-circuit protection

Characteristics Sensor type			XSe MeeMe250K	XSe MeeM	le250			
Product certifications					10230			
			UL, CSA, CE	Due estated	la a ath i O an			
Connection	C 10 ft als an alabla		1/2"-20UNF connector	Pre-cabled	, length: 2 m			
Operating zone	Ø 12 flush mountable	mm	01.6					
	Ø 12 non flush mountable		03.2					
	Ø 18 flush mountable	mm	04					
	Ø 18 non flush mountable	mm	06.4					
	Ø 30 flush mountable	mm	08					
	Ø 30 non flush mountable	mm	012					
Differential travel		%	115 of real sensing distance (Sr)					
Degree of protection	Conforming to IEC 60529		IP 67 IP 68, double insulation					
Storage temperature		°C	- 40+ 85	•				
Operating temperature		°C	- 25+ 70					
Vaterials	Case		Nickel plated brass					
	Cable		_	PvR 2 x 0.34	4 mm ²			
Vibration resistance	Conforming to		$25 \text{ gn}, \text{ amplitude } \pm 2 \text{ mm} (f = 10 \text{ to } 55 \text{ Hz})$					
	IEC 60068-2-6		25 gri, amplitude $\pm 2 \min (1 = 10 \text{ to 55 Hz})$					
Shock resistance	Conforming to		50 gn, duration 11 ms					
	IEC 60068-2-27		5,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
Indicators	Output state		Red LED, 4 viewing ports at 90°	Red LED				
	Supply on		Green LED: 4 viewing ports at 90° (onl	y Green LED	(only on Ø 18 and Ø 30)			
	11 V 1		on Ø 18 and Ø 30)		()			
Rated supply voltage		v	\sim 24240 (50/60 Hz) or == 24210	•				
Voltage limits (including ripple)		v	∼ or == 20264					
Switching capacity		mA	\sim 5300 or = 5200 (except Ø 12: \sim	or == 5200)	with overload and short-circuit			
			protection					
Voltage drop, closed state		v	≤ 5.5					
Current consumption, no-load		mA	-					
Residual current, open state		mA	≤1.5					
Maximum switching frequency	Ø 12	Hz	\sim 25 or == 4000					
maximum switching requercy	Ø 18	Hz	$\sim 25 \text{ or } = 2000$					
	Ø 30 flush mountable	Hz	\sim 25 or == 2000					
		Hz						
D	Ø 30 non flush mountable		\sim 25 or 1000					
Delays	First-up	ms	≤70					
	Response	ms	≤ 0.2 for Ø 12, ≤ 2 for Ø 18 and Ø 30					
	Recovery	ms	≤ 0.2 for Ø 12, ≤ 4 for Ø 18, ≤ 5 for Ø 30) flush mountab	le, ≤ 10 for Ø 30 non flush			
			mountable					
Wiring schemes								
1/2"-20UNF connector	Pre-cabled	2-wir	re \sim or $=$					
1	BU: Blue	NO or	NC output					
+/-:2	BN: Brown		BN/2 ~~					
$\begin{pmatrix} \bullet \bullet \end{pmatrix} = \frac{1}{2}$								
2 3 +/-: 3		$\mathbf{\nabla}$	BU/3					
		±/1	1					
See connection on page 9/45.		±.on (connector models only.					
		on c	serme end end end.					
Setting-up								
	Minimum mounting of	distan	ces (mm)					
Sensor	Side by side	Face	to face Facing a meta	al object	Mounted in a metal suppo			
Ø 12 flush mountable	e≥4		e≥24	e≥6	d d≥12h≥0			
Ø 12 non flush mountable		անոնո	nomΩnΩm e≥48 mΩnΩm	e≥12	d≥36h≥8			
Ø 18 flush mountable		<u>۹</u>	$e \ge 60$ ϵ	e≥15	_ d≥18h≥0			
Ø 18 non flush mountable	$ e \in \frac{e}{e^{16}}$	-0.0-	e≥96	e≥24	$\frac{d \ge 10 \text{ m} \ge 0}{d \ge 54 \text{ h} \ge 16}$			
Ø 30 flush mountable	$\frac{e \ge 10}{e \ge 20}$		e≥30 e≥120	e≥24 e≥30	<u>d≥30h≥0</u>			
Ø 30 non flush mountable			e≥120 e≥180	<u>e≥30</u> e≥45	$\frac{d \ge 30 \text{ h} \ge 0}{d \ge 90 \text{ h} \ge 30}$			
	<u>e > 00</u>		6 > 100	<u> </u>	u > 30 11 > 30			
Dimensions								
Dimensions								
		Flus	h mountable in metal	Non flush m	ountable in metal			
60	Sensor	Pre-c	abled Connector	Pre-cabled	Connector			



References

Inductive proximity sensors Osiprox[®] Technology Cylindrical, metal and plastic, flush mountable and non flush mountable Four-wire, d.c. supply, solid-state NO + NC output

Reference

Weight

	Sensing			
	distance Sn (mm)	Function	Output	Connection
\sim	Ø 6.5 plai	n		
\sim		eel case, flu	sh mour	table
	1.5	NO + NC	PNP	Pre-cabled (L
	1.5	HO PHO	NPN	Pre-cabled (L
	Ø 8, threa	ded M8 x	1	
	Stainless st	eel case, flu	sh moun	ntable
	1.5	NO + NC	PNP	Pre-cabled (L
				M12 connect
			NPN	Pre-cabled (M12 connect
	Stainless st	eel case, no	n fluch n	
	2.5	NO + NC	PNP	Pre-cabled (I
N N	2.5		1 1 1	M12 connect
b			NPN	Pre-cabled (
				M12 connec
	Ø 12, thre	aded M12	x 1	
		, flush mount		
	2	NO + NC	PNP	Pre-cabled (
				M12 connec
			NPN	Pre-cabled (
	-			M12 connect
		non flush m		
A	4	NO + NC	PNP	Pre-cabled (
			NPN	M12 connec
			INFIN	Pre-cabled (M12 connec
	Ø 18, thre	aded M18	x 1	
		flush mount		
	5	NO + NC	PNP	Pre-cabled (
	-			M12 connec
			NPN	Pre-cabled (
				M12 connec
		<i>a</i> .		
3	Brass case			
	Brass case	, non flush m NO + NC	ountable PNP	Pre-cabled
			PNP	Pre-cabled (M12 connec
				Pre-cabled (M12 connec Pre-cabled (
	8	NO + NC	PNP NPN	Pre-cabled (M12 connect Pre-cabled (
	8 Ø 30, thre	NO+NC	PNP NPN x 1.5	Pre-cabled (M12 connect Pre-cabled (
>	8 Ø 30, three Brass case	NO + NC aded M30 flush mount	PNP NPN x 1.5 table	Pre-cabled (M12 connect Pre-cabled (M12 connect
	8 Ø 30, thre	NO+NC	PNP NPN x 1.5	Pre-cabled (M12 connect Pre-cabled (M12 connect Pre-cabled (
	8 Ø 30, three Brass case	NO + NC aded M30 flush mount	PNP NPN x 1.5 table PNP	Pre-cabled (M12 connect Pre-cabled (M12 connect Pre-cabled (M12 connect
	8 Ø 30, three Brass case	NO + NC aded M30 flush mount	PNP NPN x 1.5 table	Pre-cabled (M12 connect Pre-cabled (M12 connect Pre-cabled (M12 connect Pre-cabled (
10D	8 Ø 30, thre Brass case 10	NO + NC aded M30 flush mount	PNP NPN x 1.5 table PNP NPN	Pre-cabled (M12 connect Pre-cabled (M12 connect Pre-cabled (M12 connect Pre-cabled (M12 connect
	8 Ø 30, thre Brass case 10	NO + NC aded M30 flush mount NO + NC	PNP NPN x 1.5 table PNP NPN	Pre-cabled (M12 connect Pre-cabled (M12 connect Pre-cabled (M12 connect Pre-cabled (M12 connect Pre-cabled (M12 connect Pre-cabled (
	8 Ø 30, three Brass case 10 Brass case	NO + NC aded M30 flush mount NO + NC	PNP NPN x 1.5 table PNP NPN ountable PNP	Pre-cabled (I M12 connect Pre-cabled (I M12 connect Pre-cabled (I M12 connect Pre-cabled (I M12 connect e (2) Pre-cabled (I M12 connect
	8 Ø 30, three Brass case 10 Brass case	NO + NC aded M30 flush mount NO + NC	PNP NPN x 1.5 table PNP NPN ountable	Pre-cabled (I M12 connect Pre-cabled (I M12 connect Pre-cabled (I M12 connect Pre-cabled (I M12 connect e (2) Pre-cabled (I M12 connect Pre-cabled (I
410D	8 Ø 30, three Brass case 10 Brass case	NO + NC aded M30 flush mount NO + NC	PNP NPN x 1.5 table PNP NPN ountable PNP	Pre-cabled (I M12 connect Pre-cabled (I M12 connect Pre-cabled (I M12 connect Pre-cabled (I M12 connect e (2) Pre-cabled (I M12 connect
	8 Ø 30, three Brass case 10 Brass case 15 Accesso	NO + NC aded M30 , flush mount NO + NC , non flush m NO + NC	PNP NPN x 1.5 table PNP NPN ountable PNP	Pre-cabled (M12 connect Pre-cabled (M12 connect Pre-cabled (M12 connect Pre-cabled (M12 connect e (2) Pre-cabled (M12 connect Pre-cabled (M12 connect
	8 Ø 30, three Brass case 10 Brass case 15 Accessor Description	NO + NC aded M30 , flush mount NO + NC , non flush m NO + NC	PNP NPN x 1.5 table PNP NPN ountable PNP	Pre-cabled (M12 connect Pre-cabled (M12 connect Pre-cabled (M12 connect Pre-cabled (M12 connect e (2) Pre-cabled (M12 connect Pre-cabled (
	8 Ø 30, three Brass case 10 Brass case 15 Accessor Description mm	NO + NC aded M30 ,flush mount NO + NC ,non flush m NO + NC	PNP NPN table PNP NPN Ountable PNP NPN	Pre-cabled (M12 connect Pre-cabled (M12 connect Pre-cabled (M12 connect Pre-cabled (M12 connect e (2) Pre-cabled (M12 connect Pre-cabled (M12 connect Pre-cabled (
	8 Ø 30, three Brass case 10 Brass case 15 Accessor Description	NO + NC aded M30 ,flush mount NO + NC ,non flush m NO + NC	PNP NPN x 1.5 table PNP NPN ountable PNP	Pre-cabled (M12 connect Pre-cabled (M12 connect)
	8 Ø 30, three Brass case 10 Brass case 15 Accessor Description mm	NO + NC aded M30 ,flush mount NO + NC ,non flush m NO + NC	PNP NPN x 1.5 table PNP NPN NPN NPN	Pre-cabled (M12 connect Pre-cabled (M12 connect Pre-cabled (M12 connect Pre-cabled (M12 connect e (2) Pre-cabled (M12 connect Pre-cabled (M12 connect

distance Sn (mm)	runction	Culput	Connection	Reference	kg
Ø 6.5 plain					
Stainless stee	el case, flus	sh mour	table		
.5	NO + NC	PNP	Pre-cabled (L = 2 m) (1)	XS1106PC410	0.025
		NPN	Pre-cabled $(L = 2 m) (1)$		0.025
			· · · · · · · · · · · · · · · · · · ·		0.020
Ø 8, thread	ed M8 x ′	1			
Stainless stee	el case, flus	sh mour	table		
.5	NO + NC	PNP	Pre-cabled (L = 2 m)	XS1 M08PC410	0.035
			M12 connector	XS1 M08PC410D	0.025
		NPN	Pre-cabled (L = 2 m)	XS1 M08NC410	0.035
			M12 connector	XS1 M08NC410D	0.025
Stainless stee	el case, nor	n flush n	nountable		
.5	NO + NC	PNP	Pre-cabled (L = 2 m)	XS2 M08PC410	0.035
			M12 connector	XS2 M08PC410D	0.025
		NPN	Pre-cabled (L = 2 m)	XS2 M08NC410	0.035
			M12 connector	XS2 M08NC410D	0.025
a 10 three		× 4			
Ø 12, threa					
Brass case, fl					
	NO + NC	PNP	Pre-cabled $(L = 2 m) (1)$		0.070
			M12 connector	XS1 N12PC410D	0.020
		NPN	Pre-cabled $(L = 2 m) (1)$		0.070
D			M12 connector	XS1 N12NC410D	0.020
Brass case, n				No. 11.07.0	
	NO + NC	PNP	Pre-cabled $(L = 2 m) (1)$		0.070
			M12 connector	XS2 N12PC410D	0.020
		NPN	$\frac{\text{Pre-cabled (L = 2 m) (1)}}{\text{M40 composition}}$		0.070
			M12 connector	XS2 N12NC410D	0.020
Ø 18, threa	ded M18	x 1			
Brass case, fl					
51455 6456, 11	NO + NC	PNP	Pre-cabled (L = 2 m) (1)	XS1 N18PC410	0.100
			M12 connector	XS1 N18PC410D	0.040
		NPN	Pre-cabled (L = 2 m) (1)		0.100
			M12 connector	XS1 N18NC410D	0.040
Brass case, n	on flush m	ountabl			
	NO + NC	PNP	Pre-cabled $(L = 2 m) (1)$	XS2 N18PC410	0.100
			M12 connector	XS2 N18PC410D	0.040
		NPN	Pre-cabled $(L = 2 m) (1)$		0.100
			M12 connector	XS2 N18NC410D	0.040
Ø 30, threa	ded M30	x 1.5			
Brass case, fl	ush mount	able			
0	NO + NC	PNP	Pre-cabled $(L = 2 m) (1)$	XS1 N30PC410	0.160
			M12 connector	XS1 N30PC410D	0.100
		NPN	Pre-cabled $(L = 2 m) (1)$	XS1 N30NC410	0.160
			M12 connector	XS1 N30NC410D	0.100
Brass case, n	on flush m	ountabl	e (2)		
5	NO + NC	PNP	Pre-cabled (L = 2 m) (1)	XS2 N30PC410	0.160
			M12 connector	XS2 N30PC410D	0.100
		NPN	Pre-cabled (L = 2 m) (1)	XS2 N30NC410	0.160
			M12 connector	XS2 N30NC410D	0.100
Accessorie	es (3)				
Description				Reference	Weight
mm Tixing clamps		Ø8		XSZ B108	kg
ixing clamps		00		XSZ B108	0.006

Ø 30 XSZ B130 0.020 For a 5 m long cable, add L1 to the reference and for a 10 m long cable, add L2 to the reference. Example: XS1 N12PC410 becomes XS1 N12PC410L1 with a 5 m long cable.
 For a sensor with a plastic case, non flush mountable, replace 2N by 4P in the reference. Example: XS2 N12PC410 becomes XS4 P12PC410 with a plastic case.

XSZ B112

XSZ B118

0.006

0.010

(3) For further information, see page 2/106.

Inductive proximity sensors Osiprox[®] Technology Cylindrical, metal and plastic, flush mountable and non flush mountable Four-wire, d.c. supply, solid-state NO + NC output

Characteristics					
Sensor type			XSe eeeeC410D		XS• ••••C410
Product certifications			UL, CSA, C€		
Connection			M12 connector		Pre-cabled, length: 2 m
Operating zone	Ø 6.5 and Ø 8 flush mtble.	mm	01.2		
	Ø 8 non flush mountable	mm	02		
	Ø 12 flush mountable	mm	01.6		
	Ø 12 non flush mountable	mm	03.2		
	Ø 18 flush mountable	mm	04		
	Ø 18 non flush mountable	mm	06.4		
	Ø 30 flush mountable	mm	08		
	Ø 30 non flush mountable	mm	012		
Differential travel		%	115 of real sensing	distance (Sr)	
Degree of protection	Conforming to IEC 60529		IP 67		IP 68, double insulation (except Ø 6.5 and Ø 8: IP 67)
Storage temperature		°C	- 40+ 85		
Operating temperature		°C	- 25+ 70		
Materials	Case		Nickel plated brass for XS1 N and XS2 N Stainless steel, grade 303, for XS1 L06, XS1 M08 and XS2 M08 Plastic, PPS, for XS4 P		
	Cable		-		PvR 4 x 0.34 mm ² except Ø 6.5 and Ø 8 4 x 0.08 mm ²
Vibration resistance	Conforming to IEC 60068-2-6		25 gn, amplitude \pm 2 mm (f = 10 to 55 Hz)		
Shock resistance	Conforming to IEC 60068-2-27		50 gn, duration 11 ms		
Output state indication			Yellow LED, 4 viewing	ports at 90°	Yellow LED, annular
Rated supply voltage		V	= 1224 with protect	tion against revers	e polarity
Voltage limits (including ripple)		v	1036		
Switching capacity		mA	≤ 200 with overload and	d short-circuit protec	tion
Voltage drop, closed state		v	≤2	· ·	
Current consumption, no-load		mA	≤ 10		
Maximum switching frequency	Ø 6.5, Ø 8 and Ø 12	Hz	5000		
2,	Ø 18	Hz	2000		
	Ø 30	Hz	1000		
Delays	First-up	ms	≤5		
-	Response	ms	≤ 0.1 for Ø 8 and Ø 12	, ≤ 0.15 for Ø 18, ≤	\$ 0.3 for Ø 30
	Recovery	ms	≤ 0.1 for Ø 8 and Ø 12	, ,	
Wiring schemes	, 				
M12 connector	Pre-cabled	DND	4-wire	NPN 4-wire	
	BU: Blue BN: Brown BK: Black WH: White	BN/1 PNP DU/3	BK/4 (NO) +	BN/1 NPN BK/4 (N BU/3	
See connection on page 9/45.					

	Minimum mounting	distances (mm)				
Sensor	Side by side	Face to face	Facing a metal	object	Mounted in	n a metal support
Ø 6.5 flush mountable XS1 L06	e≥3	e≥18		e≥4.5	d	d≥6.5 h≥0
Ø 8 flush mountable XS1 M08	e≥3	manan a manan e≥18	manam a	e≥4.5		d≥8h≥0
Ø 8 non flush mountable XS2 M08	€ • ≥ 10	₽	₽	e≥7.5	4	d≥24 h≥5
Ø 12 flush mountable XS1 N12	e≥ 4	00 00 <u>e≥24</u>	-00-	e≥6		d≥12h≥0
Ø 12 non flush mtble XS1 N12 or XS4 P12	e≥16	e≥48		e≥12		d≥36 h≥8
Ø 18 flush mountable XS1 N18	e≥10	e≥60		e≥15		d≥18h≥0
Ø 18 non flush mtble XS2 N18 or XS4 P18	e≥16	e≥96		e≥24		d≥54 h≥16
Ø 30 flush mountable XS1 N30	e≥20	e≥120		e≥30		d≥30 h≥0
Ø 30 non flush mtble XS2 N30 or XS4 P30	e≥60	e≥180		e≥45		d≥90 h≥30
Dimensions						

		Flush	n mount	able in m	etal	Non	Non flush mountable in metal			
22	Sensor	Pre-ca	abled	Connec	ctor	Pre-ca	abled	Conne	ctor	
		а	b	а	b	а	b	а	b	с
	Ø 6.5 metal	50	47	-	-	-	-	-	-	-
	Ø 8 metal	50	42	61	42	50	36	61	36	4
a	Ø 12 metal	33	25	48	29	37.6	25	52.6	29	5
	Ø 12 plastic	_	-	_	_	33	25	48	29	0
	Ø 18 metal	36.5	28	48.6	28	36.5	20	48.6	20	8
	Ø 18 plastic	_	_	_	-	33.5	26	48	29	0
	Ø 30 metal	40.6	32	52.7	32	40.5	19	52.6	19	13
	Ø 30 plastic	_	_	_	_	40.5	33	50	34	0

Inductive proximity sensors Osiprox[®] Technology Cylindrical, metal and plastic, flush and non flush mountable Four-wire, d.c. supply, solid-state PNP + NPN NO/NC programmable output

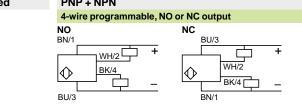
	Sensing distance Sn (mm)	Function	Output	Connection	Reference	Weight kg
	Ø 12, thre	aded M12 >	(1			
	Metal case,	flush mounta	ble			
	2	NO/NC programmable	PNP + NPN	Pre-cabled $(L = 2 m)$ (1)	XS1 M12KP340	0.075
				M12 connector	XS1 M12KP340D	0.025
	Metal case,	non flush mo	untable			
XS1 M●●KP340 XS4 P●●KP340	4	NO/NC programmable	PNP + NPN	$\frac{\text{Pre-cabled (L = 2 m)}}{(1)}$		0.075
				M12 connector	XS2 M12KP340D	0.025
	Plastic case	, non flush m	ountable			
9	4	NO/NC programmable		Pre-cabled (L = 2 m) (1)	XS4 P12KP340	0.075
DESERV				M12 connector	XS4 P12KP340D	0.025
	Ø 18, thre	aded M18 3	(1			
	Metal case, f	flush mounta	ble			
XS2 M••KP340	5	NO/NC programmable	PNP + NPN	$\frac{\text{Pre-cabled (L = 2 m)}}{(1)}$		0.120
				M12 connector	XS1 M18KP340D	0.060
	Metal case,	non flush mo	untable			
*	8	NO/NC programmable	PNP + NPN	Pre-cabled (L = 2 m) (1)	XS2 M18KP340	0.120
858				M12 connector	XS2 M18KP340D	0.060
	Plastic case	, non flush m	ountable			
	8	NO/NC programmable		Pre-cabled (L = 2 m) (1)	XS4 P18KP340	0.120
XS1 M●•KP340D				M12 connector	XS4 P18KP340D	0.060
XS4 PeeKP340D	Ø 30, thre	aded M30 x	c 1.5			
	Metal case,	flush mounta	ble			
82	10	NO/NC programmable	PNP + NPN	$\frac{\text{Pre-cabled (L = 2 m)}}{(1)}$	XS1 M30KP340	0205
B013				M12 connector	XS1 M30KP340D	0.145
	Metal case.	non flush mo	untable			
	15	NO/NC programmable		Pre-cabled (L = 2 m) (1)	XS2 M30KP340	0205
XS2 Mee KP340D				M12 connector	XS2 M30KP340D	0.145
X32 MOORP 340D	Plactic coco	, non flush m	ountable			
	15	NO/NC		Pre-cabled $(L = 2 m)$	XS4 P30KP340	0205
	10	programmable		(1)		
				M12 connector	XS4 P30KP340D	0.145
	Accessor	ies (2)				
	Description mm				Reference	Weight kg
	Fixing clamps		Ø 12		XSZ B112	0.006
XSZ B100			Ø 18		XSZ B118	0.010
	(1) For a 5 m lor	na cable, add L1	Ø 30 to the refere	nce and for a 10 m lor	XSZ B130	0.020

For a 5 m long cable, add L1 to the reference and for a 10 m long cable, add L2 to the reference. Example: XS1 M12KP340 becomes XS1 M12KP340L1 with a 5 m long cable.
 For further information, see page 2/106.



Inductive proximity sensors Osiprox[®] Technology Cylindrical, metal and plastic, flush and non flush mountable Four-wire, d.c. supply, solid-state PNP + NPN NO/NC programmable output

Sensor type			XSe MeeKP340D	XSe MeeKP340
Product certifications			UL, CSA, CE	
Connection			M12 connector	Pre-cabled, length: 2 m
Operating zone	Ø 12 flush mountable	mm	01.6	-
	Ø 12 non flush mountable	mm	03.2	
	Ø 18 flush mountable	mm	04	
	Ø 18 non flush mountable	mm	06.4	
	Ø 30 flush mountable	mm	08	
	Ø 30 non flush mountable	mm	012	
Differential travel		%	115 of real sensing distance (Sr)	
Degree of protection	Conforming to IEC 60529		IP 67	IP 68, double insulation
Storage temperature		°C	- 40+ 85	
Operating temperature		°C	- 25+ 70	
Materials	Case		Nickel plated brass for XS1 M and XS2 M	1, PPS for XS4 P
	Cable		-	PvR 4 x 0.34 mm ²
Vibration resistance	Conforming to IEC 60068-2-6		25 gn, amplitude ± 2 mm (f = 10 to 55 Hz)	
Shock resistance	Conforming to IEC 60068-2-27		50 gn, duration 11 ms	
Dutput state indication			Yellow LED, 4 viewing ports at 90°	Yellow LED, annular
Rated supply voltage		٧	= 1224 with protection against reverse	e polarity
/oltage limits (including ripple)		٧		
Switching capacity		mA	≤ 200 with overload and short-circuit protect	tion
/oltage drop, closed state		٧	≤2.6	
Current consumption, no-load		mA	≤ 10	
Maximum switching frequency	Ø 12	Hz	5000	
	Ø 18	Hz	2000	
	Ø 30 flush mountable	Hz	1000	
	Ø 30 non flush mountable	Hz	1000	
Delays	First-up	ms	≤5	
	Response	ms	≤ 0.1 for Ø 12, ≤ 0.15 for Ø 18, ≤ 0.3 for Ø	30
	Recovery	ms	≤ 0.1 for Ø 12, ≤ 0.35 for Ø 18, ≤ 0.7 for Ø	30
Wiring schemes				
M12 connector	Pre-cabled	PNP	+ NPN	
	BU: Blue	4-wire	e programmable, NO or NC output	
4 3	BN: Brown BK: Black	NO BN/1	NC BU/3	



See connection on page 9/45.

Setting-up

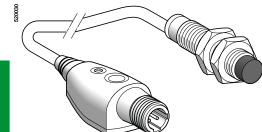
WH: White

	Minimum mounting distances (mm)										
Sensor	Side by side	Face to face	Facing a metal object	Mounted in a metal support							
Ø 12 flush mountable XS1 M12 Ø 12 non flush mountable XS2 M12 and XS4 P12	e≥4 e≥16	e ≥24 e≥48	e ≥6 e≥12	$d \rightarrow d \ge 12h \ge 0$ $d \ge 36h \ge 8$							
Ø 18 flush mountable XS1 M18 Ø 18 non flush mountable XS2 M18 and XS4 P18	e≥10 e≥16	$\begin{array}{c} 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 $	e≥15 e≥24	d≥18h≥0 d≥54h≥16							
Ø 30 flush mountable XS1 M30 Ø 30 non flush mountable XS2 M30 and XS4 P30	e≥20 e≥60	e≥120 e≥180	e ≥ 30 e ≥ 45	d ≥ 30 h ≥ 0 d ≥ 90 h ≥ 30							

Dimensions

		Flus	Flush mountable			Non	flush me	in metal		
~~	Sensor	Pre-c	abled	Conne	ector	Pre-ca	Pre-cabled		Connector	
		а	b	а	b	а	b	а	b	с
	Ø 12 metal	50	42	61	42	54.6	42	65.6	42	5
b +	Ø 12 plastic	_	_	-	-	50	42	61	42	0
a	Ø 18 metal	60	51	72	51	60	44	72	44	8
	Ø 18 plastic	_	_	-	_	60	51	70	51	0
	Ø 30 metal	60	51	72	51	62.6	41	74.7	41	13
	Ø 30 plastic		_	_	_	60	51	70	51	0

Inductive proximity sensors Osiprox[®] Universal, **Osi**concept[®] (1) Cylindrical, flush mountable or non flush mountable Three-wire, d.c. supply, solid-state output



520031

2

XS6 •• B2•• L01M12

Ø 12, threa	ded M12	2 x 1			
Sensing distance (Sn)	Function	Output	Connection	Reference	Weight
mm					kg
5	NO	PNP	0.15 m flying lead with M12 connector	XS6 12B2PAL01M12	0.100
		NPN	0.15 m flying lead with M12 connector	XS6 12B2NAL01M12	0.100
	NC	PNP	0.15 m flying lead with M12 connector	XS6 12B2PBL01M12	0.100
		NPN	0.15 m flying lead with M12 connector	XS6 12B2NBL01M12	0.100

Ø18, threaded M18 x 1 Sensing distance (Sn) **Function Output** Connection Reference Weight mm 9 NO PNP 0.15 m flying lead with XS6 18B2PAL01M12 0.140 M12 connector 0.15 m flying lead with XS6 18B2NAL01M12 NPN 0.140 M12 connector NC PNP 0.15 m flying lead with XS6 18B2PBL01M12 0.140 M12 connector

NPN

kg

0.140

Ø 30. threaded M30 x 1.5

5

Sensing distance (Sn) mm	Function	Output	Connection	Reference	Weight kg
8	NO	PNP	0.15 m flying lead with M12 connector	XS6 30B2PAL01M12	0.220
		NPN	0.15 m flying lead with M12 connector	XS6 30B2NAL01M12	0.220
	NC	PNP	0.15 m flying lead with M12 connector	XS6 30B2PBL01M12	0.220
		NPN	0.15 m flying lead with M12 connector	XS6 30B2NBL01M12	0.220

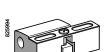
M12 connector

0.15 m flying lead with XS6 18B2NBL01M12

Accessories (2)			
Description		Reference	Weight kg
Remote control fixing clamp		XSZ BPM12	0.015
Sensor fixing clamps	Ø 12	XSZ B112	0.006
	Ø 18	XSZ B118	0.010
	Ø 30	XSZ B130	0.020

(1) For further information on **Osi**concept[®], see page 2/20.

(2) For further information, see page 2/106.



XSZ Beee

Inductive proximity sensors Osiprox[®] Universal, Osiconcept[®] (1)

Osiprox[®] Universal, **Osi**concept[®] (1) Cylindrical, flush mountable or non flush mountable Three-wire, d.c. supply, solid-state output

Characteristics				
Sensor type				XS6 ••B2••L01M12
Product certifications				UL, CSA, CE
Connection	Connector			0.15 m flying lead with M12 connector
Sensing distance and adjustment zone	Ø 12 Nominal sensing distance Sn		mm	05 non flush mounted configuration / 03.4 flush mounted configuration
		Fine adjustment zone	mm	1.75 non flush mounted configuration / 1.73.4 flush mounted configuration
	Ø 18	Nominal sensing distance Sn	mm	09 non flush mounted configuration / 06 flush mounted configuration
		Fine adjustment zone	mm	39 non flush mounted configuration / 36 flush mounted configuration
	Ø 30	Nominal sensing distance Sn	mm	018 non flush mounted configuration / 011 flush mounted configuration
		Fine adjustment zone	mm	618 non flush mounted configuration / 611 flush mounted configuration
Differential travel			%	115 of real sensing distance (Sr)
Degree of protection	Conforming to	IEC 60529		IP 67 🛛
Storage temperature range		°C	- 40+ 85	
Operating temperature ra	ange		°C	- 25+ 70
Materials Case Remote control			Nickel plated brass	
			PBT	
	Pre-cabled			PvR - Ø 4.2 mm
Vibration resistance	Conforming to	IEC 60068-2-6		25 gn, amplitude ± 2 mm (f = 10 to 55 Hz)
Shock resistance	Conforming to	IEC 60068-2-27		50 gn, duration 11 ms
Indicator	Output state			Yellow LED
	Supply on and	teach mode		Green LED
Rated supply voltage			۷	1224 with protection against reverse polarity
Voltage limits (including	ripple)		۷	1036
Switching capacity			mA	≤ 100 with overload and short-circuit protection
Voltage drop, closed stat	e		۷	≤2
Current consumption, no	o-load		mA	≤ 10
Maximum switching freq	uency		Hz	1000
Delays	First-up		ms	≤ 10
	Response		ms	≤0.3
Recovery		ms	≤0.7	

Wiring scheme

Connector

M12

See connection on page 9/45.

PNP

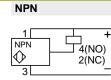
1

3

PNP

 \Diamond





Setting-up

Dimensions

Minimum mounting distances (mm)

+ 4(NO)

<u>_2(NC)</u>



Side by side flush mounted	non flush mounted	
e ≥ 14	50	
e ≥ 28	100	
e≥48	180	
	flush mounted $e \ge 14$ $e \ge 28$	

non flush

mounted

100

200

360

Face to face

flush

<u>e</u> ≥ 50

e ≥ 100

e ≥ 180

mounted

ε

Facing a metal object

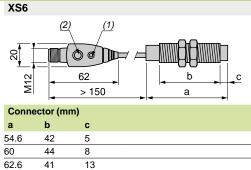
e≥3.4		
e≥6		
e ≥ 11		

v

Ø 12

Ø 18

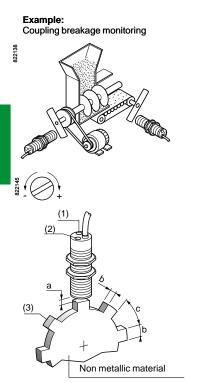
Ø 30



(1) LED (2) Teach mode button

Functions. principle, setting-up

2



Inductive proximity sensors

Osiprox[®] Application Sensors for rotation monitoring, slip detection, shaft overload detection Cylindrical type

Functions

These self-contained rotation speed monitoring sensors have the special feature of incorporating, in the same case, the pulse sensing and processing electronics as well as the output switching amplifier that are required to establish an integrated rotation monitoring device.

The unit provides an economical solution for detecting slip, belt breakage, drive shaft shear and overloading, etc., in the following applications: conveyor belts, bucket elevators, Archemedian screws, grinders, crushers, pumps, centrifugal driers, mixers, etc.

Operating principle

The output signal of this type of sensor is processed by an impulse comparator incorporated in the sensor. The impulse frequency Fc generated by the moving part to be monitored is compared to the frequency Fr preset on the sensor. The output switching circuit of the sensor is in the closed state for Fc > Fr and the open state for Fc < Fr.

Sensors XSA-V are particularly suitable for the detection of underspeed: when the speed of the moving part Fc falls below a preset threshold Fr, this causes the output circuit of the sensor to switch off.

Note: following power-up, the operational status of the sensor is subject to a delay of 9 seconds in order for the moving part being monitored to run-up to its nominal speed. During this time, the output of the sensor remains in the closed state.

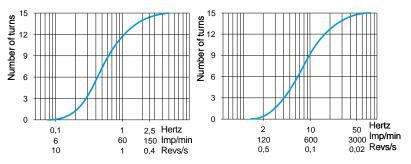
Adjustment of frequency threshold

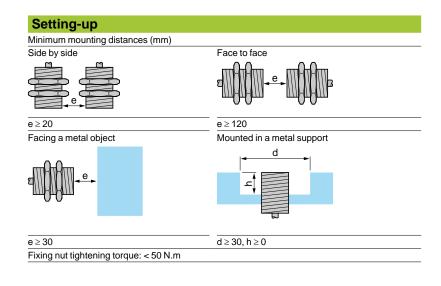
- Adjustment of sensor's frequency threshold: using potentiometer, 15 turns approximately.
 To increase the frequency threshold: turn the adjustment screw clockwise (+).
- To decrease the frequency threshold: turn the adjustment screw anti-clockwise (-).

Potentiometer	Diamete	Diameter of sensor				
LED		а	b	с		
Metal target	M30	46 mm	30 mm	60 mm		

Potentiometer adjustment curves (for XSA V1 \bullet 801, 2-wire \sim or = sensors)

Low speed version (6...150 impulses/minute) High speed version (120...3000 impulses/minute)





Schneider

Inductive proximity sensors

Osiprox[®] Application Sensors for rotation monitoring, slip detection, shaft overload detection Cylindrical type

Flush mountable in metal

Lengths (mm):	a = 81
a = Overall	b = 57
b = Threaded section	Ø = M30

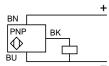
		DC	DC	AC/DC	AC/DC	
Nominal sensi	ng distance (Sn)	10 mm	10 mm	10 mm	10 mm	
Adjustable frequency range		6150 impulses/min	1203000 impulses/min	6150 impulses/min	1203000 impulses/min	
References						
3-wire ===	PNP/NC	XSA V11373	XSA V12373	-	-	
2-wire	$=$ or \sim / NC	-	-	XSA V11801	XSA V12801	

2-wire	π or \sim / NC	-
Weight (kg)		0.300

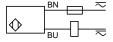
Characteristics					
Connection	Pre-cabled, 3 x 0.34 mm ² , length 2 m (1)	Pre-cabled, 2 x 0.34 mm ² , length 2 m (1)			
Degree of protection conforming to IEC 60529	IP 67				
Operating zone	08 mm				
Repeat accuracy	3% of Sr				
Differential travel	315% of Fr				
Operating temperature	- 25+ 70 °C				
Output state indication	Red LED				
Rated supply voltage	== 1248 V with protection against reverse polarity	\sim 24240 V (50/60 Hz) or \pm 24210 V			
Voltage limits (including ripple)	1058 V	~ or == 20264 V			
Switching capacity	≤ 200 mA with overload and short-circuit protection	\sim 5350 mA or = 5200 mA (2)			
Voltage drop, closed state	≤1.8 V	≤5.7 V			
Residual current, open state	-	≤ 1.5 mA			
Current consumption, no-load	≤ 15 mA	-			
Maximum switching frequency	6 000 impulses/min (for XSA V11•••); 48 000 impulses/min (for XSA V12•••)				
"Run-up" delay following power-up	9 seconds ± 20% + 1/Fr (3)				

Wiring schemes

3-wire ----XSA V1•373



2-wire \sim or =XSA V1•801



(1) For a 5 m long cable add L05 to the reference, for a 10 m long cable add L10 to the reference. Example: XSA V11373 becomes XSA V11373L05 with a 5 m long cable.

(2) These sensors do not incorporate overload or short-circuit protection and therefore, it is essential to connect a 0.4 A "quickblow" fuse in series with the load, see page 2/106.
(3) For a sensor without a "run-up" delay following power-up, replace XSA V1 in the reference by XSA V0.
Example: XSA V11801 becomes XSA V01801 without a "run-up" delay. For a reduced "run-up" delay of 3 s, replace XSA V1

in the reference by XSA V3.

2

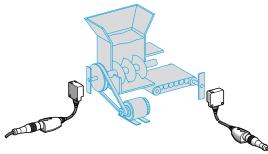
2

Inductive proximity sensors

Osiprox[®] Application

Sensors for rotation monitoring, slip detection, and shaft overload detection with teach mode





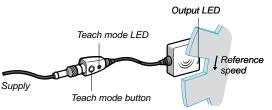
These inductive proximity sensors are designed for monitoring rotational speed or the speed of the flow of objects to be monitored or protected. They operate on the principle of comparing a speed threshold preset by the operator

against the instantaneous measurement of the speed of the moving object to be protected.

■ They provide a simple, economical solution to the problems of detecting slip, belt breakage, coupling and overloading, etc.

■ They are commonly used in grinder/crusher, mixer, pump, centrifugal driver, conveyor belt, bucket elevator, Archimedian screw, etc. type applications.

Installation and setting-up



Setting-up and positioning the sensor

■ In the positioning phase, the XS9 sensor can operate as a standard inductive sensor (Schneider Electric patent pending).

Operation in inductive mode enables validation of reliable detection of all the moving objects to be monitored.

■ Through this system, the positioning is thus made 100 % reliable and able to be checked at any time without modifying the sensor's adjustment.



Speed adjustment in teach mode

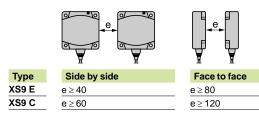
■ The normal or reference speed of the moving object (1) to be monitored is adjusted by simply pressing the teach mode button (2) and is then validated by the display LED.

- □ If in doubt, the sensor can be reset at any time to the factory settings.
- (1) To allow the moving object to reach its normal speed (machine inertia), the sensor holds its output closed for 9 seconds.
- (2) The sensor's default drop-out underspeed corresponds to the preset speed 30 %. Example: if the preset speed is 1000 rpm, the sensor drops out at underspeed when the speed of the moving object drops below 1000 - (1000 x 0.3) = 700 rpm.

- 20 %, - 11 % and - 6 % threshold can be obtained by pressing the teach mode button.

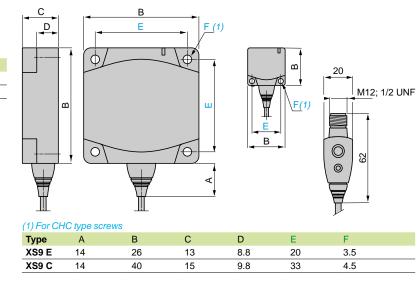
Setting-up

Minimum mounting distances (mm)



Dimensions

XS9 E, XS9 C



References, characteristics, schemes, accessories

Inductive proximity sensors Osiprox® Application Sensors for rotation monitoring, slip detection, and shaft overload detection with teach mode

leight (kg) 0.040 0.060 0.040 0.060 Characteristics roduct certifications 0.15 m flying lead with M12 connector 0.15 m flying lead with 1/2" - 20 UNF connector onmection 0.15 m flying lead with M12 connector 0.15 m flying lead with 1/2" - 20 UNF connector 08 mm 012 mm operating zone 08 mm 012 mm 08 mm 012 mm operating temperature range -40+ 85 °C - - parating temperature range -40+ 85 °C - - parating temperature range -40+ 85 °C - - perating temperature range -40+ 85 °C - - perating temperature range -40+ 85 °C - - otage limits (including ripple) resistance Conforming to IEC 60068-2-27 50 gn, duration 11 ms - dicactor Output state Supply on Green LED - - - ated supply voltage ::::::::::::::::::::::::::::::::::::	Flush mountable in met	al				
mininal sensing distance (Sn) 10 mm 15 mm 10 mm 15 mm dijustable frequency range 0.0000 inpulses/min 2000 inpulses/min 2000 inpulses/min References 0.040 0.060 0.040 0.060 Characteristics 0.040 0.060 0.040 0.060 Characteristics 0.15 m flying lead with M12 connector 0.15 m flying lead with 1/2' - 20 UNF connector preating top accel 0.40 mm 012 mm 03 mm 012 mm gread practicins 04 SS C 03 mm 03 mm 012 mm torage of practicins 0.0.4 obto 0.05 H2/ 0.05 H2/ 0.000 torage of practicins 0.0.4 obto 0.05 H2/ 0.000 0.000 torage of practicins 0.0.4 obto 0.000 M/(1) 0.05 H2/ 0.000 M/(2) 0.000 M/(2) 0.000 torage of practicins Conforming to EC 6005-27 20 g.m. anglitude ± 2 mm (1 = 10 to 55 H2/ 0.00 m/(2) 0.00 m/(2) 0.000 M/(2)			PBT case			
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djustable frequency range References wire PNP / NC XS9 E11RPBL01M12 XS9 C11RPBL01M12 XS9 E11RMBL01U20 XS9 C11RPBL01U20 wire ::::::::::::::::::::::::::::::::::::	Nominal sensing distance	(Sn)	10 mm	15 mm	10 mm	15 mm
References Sept11PBL01M12 Xsp C11RPBL01M12 - - wire m:orx//NC - - Xsp C11RPBL01M12 - - Dilata CettriStics 0.040 0.660 0.040 0.660 0.040 0.660 Characteristics UL, CSA, CE 0.15 m flying lead with M12: 20 UNF connector 0.15 m flying lead with 102: 20 UNF connector onnection 0.6 m 0.45 m flying lead with M12: 20 UNF connector 0.8 mm 012 mm 08 mm 08 mm 08 mm 08 mm 08 mm 012 mm 08 mm 08 mm 08 mm 0						
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wire XS9 E11RMBL01U20 XS9 C11RMBL01U20 Pelght (kg) 0.040 0.060 0.040 0.060 Characcteristics 0.060 0.040 0.060 0.060 roduct cartifications UL, CSA, CE 0.15m flying lead with 1/2 - 20 UNF connector onnection 0.15m flying lead with 1/2 - 20 UNF connector 0.45 m flying lead with 1/2 - 20 UNF connector orage temperature range -40+ 85 °C			YS0 E110000 01M12	VS0 C11PPBI 01M12		
leight (kg) 0.040 0.060 0.040 0.060 Characteristics connection 0.15 m flying lead with M12 connector 0.15 m flying lead with 1/2" - 20 UNF connector 0.15 m flying lead with M12 connector 0.15 m flying lead with 1/2" - 20 UNF connector 0.15 m flying lead with M12 connector 0.15 m flying lead with 1/2" - 20 UNF connector 0.15 m flying lead with M12 connector 0.15 m flying lead with 1/2" - 20 UNF connector 0.15 m flying lead with M12 connector 0.15 m flying lead with 1/2" - 20 UNF connector 0.15 m flying lead with M12 connector 0.15 m flying lead with 1/2" - 20 UNF connector 0.15 m flying lead with M12 connector 0.15 m flying lead with 1/2" - 20 UNF connector 1/404 85 °C 1/404 80	2-wire					
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roduct certifications UL, CSA, C€ onnection 0.15 m flying lead with M12 connector 0.15 m flying lead with 1/2 - 20 UNF connector gree of protection Conforming to IEC 60529 IP67 double insulation III 08 mn 012 mm 08 mn 012 mm orage temperature range -40+85 °C				0.000	0.040	0.000
onnection 1.5 m flying lead with M12 connector 0.15 m flying lead with 1/2 · 20 UNF connector perating zone 08 mm 012 mm 012 mm 08 mm 012 mm 011			UIL 021 11			
perating zone 08 mm 012 mm 03 mm 012 mm egree of protection Conforming to IEC 60028 IP 67 double insulation B2				1440		4/07 00 11015
egree of protection Conforming to IEC 60529 IP 67 double insulation IB iorage temperature range -40+85 °C perating temperature range -28+70 °C ibration resistance Conforming to IEC 60068-2-27 obck resistance Conforming to IEC 60068-2-27 victor Output state Supply on Green LED ated supply voltage =11.224 V ortage temps rature range >2.2270 °C ated supply voltage =11.224 V ottage timits (including ripple) =1036 V witching capacity <100 mA (1)						
Torge temperature range +40+ 85 °C parating temperature range -25+ 70 °C Diraction resistance Conforming to IEC 60068-2/E 25 gn, amplitude ± 2 mm (1 = 10 to 55 Hz) hock resistance Conforming to IEC 60068-2/E 25 gn, amplitude ± 2 mm (1 = 10 to 55 Hz) block resistance Conforming to IEC 60068-2/E 25 gn, amplitude ± 2 mm (1 = 10 to 55 Hz) block resistance Conforming to IEC 60068-2/E Vellow LED sted supply voltage C::::::::::::::::::::::::::::::::::::					08 mm	012 mm
perating temperature range 2.5+70 °C ibration resistance Conforming to IEC 60068-2-6 25 gn, amplitude ± 2 mm (1 = 10 to 55 Hz) hock resistance Conforming to IEC 60068-2-27 dicator Output state Velow LED ated supply voltage 7:1224 V ~ or 7:24240 V (50/60 Hz) otrage fimits (including ripple) 7:1236 V ~ or 7:24240 V (50/60 Hz) otrage drop, closed state \$2 V \$\$5.5 V \$100 mA (1) \$200 mA (1) ~ or 7:5100 mA (2) 1:5200 mA, ~ 5300 mA(2) \$\$5.5 V \$\$600 mA (1) ~ or 7:5100 mA (2) 1:5200 mA, ~ 5300 mA(2) \$\$5.5 V \$\$100 mA (1) \$\$200 mA (1) ~ or 7:24244 V (50.60 Hz) otrage drop, closed state \$\$100 mA (1) \$\$200 mA (1) ~ or 7:25100 mA, ~ 5300 mA, \$\$15 mA \$\$1.5 mA \$\$1.				10		
bration resistance Conforming to IEC 60068-2-6 25 gn, amplitude ± 2 mm (f = 10 to 55 Hz) hock resistance Conforming to IEC 60068-2-7 50 gn, duration 11 ms didator Output state Yellow LED sted supply voltage C= 12.24 V <or> ~or =:= 24240 V (50/60 Hz) ottage limits (including ripple) :== 1224 V <or> ~or =:= 20264 V witching capacity ≤ 100 mA (1) ≤ 200 mA (1) <or> ~or =:= 5100 mA (2) := 5200 mA, ottage limits (including ripple) :== 1224 V <or> ~or =:= 5300 mA (2) := 5300 mA, virrent consumption, no-load ≤ 100 mA (1) ≤ 200 unal (1) <or> ~or :=: 5300 mA, diaximum switching frequency 48 000 inpulses/min <or> ower on "run-up" delay 9 seconds + 1/Fr Connector 1/2" UNF XS9 •11RPBL01M12 XS9 •11RPBL01U20 4 0/2 1/2" SS9 •11RPBL01M12 XS9 •11RPBL01U20 4 0/2 Viring scheme 20</or></or></or></or></or></or>	<u> </u>					
hock resistance Conforming to IEC 60068-2-27 dicator Output state Yellow LED stated supply voltage Original of the Velow LED atted supply voltage Original O		-				
ubicator Output state Supply on Velow LED ated supply voltage Green LED ated supply voltage ::1224 V ~ or ::: 20264 V oltage limits (including ripple) ::1036 V ~ or ::: 20264 V witching capacity < 100 mA (1)	Vibration resistance	Conforming to IEC 60068-2-6	25 gn, amplitude ± 2 m	nm (f = 10 to 55 Hz)		
Supply onGreen LEDated supply voltage $\exists 1224 \lor$ \sim or $\exists 24240 \lor$ (\$0/60 Hz)otdage limits (including ripple) $\exists 1036 \lor$ \sim or $\exists 25264 \lor$ witching capacity $\leq 100 \ mA (1)$ $\leq 200 \ mA (1)$ \sim or $\exists 5200 \ mA (2)$ oltage drop, closed state $\leq 2 \lor$ $\leq 5.5 \lor$ esidual current, open state $\leq 100 \ mA$ $=$ urrent consumption, no-load $\leq 100 \ mA$ $=$ aximum switching frequency48 000 impulses/min $=$ ower on "run-up" delay9 seconds + 1/Fr $=$ Connector(1) With overload and short-circuit protection. (2) It is essential to connect a 0.4 A quick-blow fuse in series with the load.Ning scheme $=$ $2 \lor$ is $=$ seconds + 1/FrConnector $3 \lor$ if $2 \lor$ is $=$ $2 \lor$ is $=$ seconds + 1/Frwith 2 $1/2" UNF$ $XS9 \bullet 11RPBL01M12$ $XS9 \bullet 11RMBL01U20$ $4 \bigcirc 3$ $1 \lor$ is $=$ $2 \lor$ is $=$ seconds + 1/Fr $=$ ee connection on page 9/45. $ACcessory (1)$ $econtrol fixing clamp$ $XSZ BPM12$ $V \downarrow = 0$ $SZ BPM12$ 0.015 S2 BPM12 0.015	Shock resistance	Conforming to IEC 60068-2-27	50 gn, duration 11 ms			
ated supply voltage $=: 1224 \lor$ \sim or $::: 24240 \lor$ (50/60 Hz) oltage limits (including ripple) $::: 1036 \lor$ \sim or $::: 20264 \lor$ witching capacity $\leq 100 mA (1)$ $\leq 200 mA (1)$ \sim or $::: 25200 mA, 2)$ oltage drop, closed state $\leq 2 \lor$ $\leq 5.5 \lor$ esidual current, open state $\leq 100 mA$ $\leq 1.5 mA$ urrent consumption, no-load $\leq 10 mA$ $=$ laximum switching frequency 48 000 inpulses/min $=$ ower on "run-up" delay 9 seconds + 1/Fr $=$ Connector (1) With overload and short-circuit protection. $=$ Viring scheme $=$ 2 -wire \sim or $::$ \times Connector $3.\%$ if $::$ $2.\%$ if \sim or $::$ \times $4^{\circ} \bigcirc 2^{\circ}_{2^{\circ}}$ $2^{\circ}_{3^{\circ}}$ $2^{\circ}_{3^{\circ}}$ $2^{\circ}_{3^{\circ}}$ $4^{\circ} \bigcirc 2^{\circ}_{3^{\circ}}$ $2^{\circ}_{3^{\circ}}$ <	Indicator	Output state	Yellow LED			
ohtage limits (including ripple) IIII 136 V \sim or IIII 20264 V witching capacity \leq 100 mA (1) \leq 200 mA (1) \sim or IIII 20264 V ohtage drop, closed state \leq 2V \leq 5.5 V esidual current, open state \leq 200 mA (1) \sim or IIII 20.00 mA (2) urrent consumption, no-load \leq 100 mA \leq 1.5 mA urrent consumption, no-load \leq 10 mA $-$ aximum switching frequency 48 000 impulses/min $-$ ower on "run-up" delay 9 seconds + 1/Fr (1) With overload and short-circuit protection. (2) It is essential to connect a 0.4 A quick-blow fuse in series with the load. Wiring scheme 2-wire \sim or III XS9 • 11RPBL01M12 XS9 • 11RPBL01U20 4 $\bigcirc 2$ 2 $\bigcirc 2$ $\bigcirc 2$ 4 $\bigcirc 2$ $\bigcirc 2$ $\bigcirc 2$ $\bigcirc 2$ 4 $\bigcirc 2$ $\bigcirc 2$ $\bigcirc 2$ $\bigcirc 2$ 4 $\bigcirc 2$ $\bigcirc 2$ $\bigcirc 2$ $\bigcirc 2$ 5 2 $\bigcirc 2$ $\bigcirc 2$ $\bigcirc 2$ $\bigcirc 2$ 6 $\bigcirc 2$ $\bigcirc 2$ $\bigcirc 2$ $\bigcirc 2$ $\bigcirc 2$ $\bigcirc 2$ <td></td> <td>Supply on</td> <td>Green LED</td> <td></td> <td></td> <td></td>		Supply on	Green LED			
witching capacity $\leq 100 \text{ mA}(1)$ $\leq 200 \text{ mA}(1)$ $\sim \text{or } \dots \text{ 5} 100 \text{ mA}(2)$ $\dots \text{ 5} 200 \text{ mA}, 2 \text{ 5} 300 \text{ mA}(2)$ obtage drop, closed state $\leq 2V$ $\leq 5.5 \text{ V}$ $\leq 5.5 \text{ V}$ esidual current, open state $\leq 100 \text{ mA}$ $\leq 1.5 \text{ mA}$ urrent consumption, no-load $\leq 100 \text{ mA}$ $=$ aximum switching frequency48 0000 impulses/min $=$ ower on "run-up" delay9 seconds + 1/Fr $=$ (1) With overload and short-circuit protection. (2) It is secretial to connect a 0.4 A quick-blow fuse in series with the load.Wiring scheme $=$ Connector 3 -wire $=$ 2 -wire \sim or $=$ 412 $1/2^{\circ}$ UNF 3 -wire $=$ 2 -wire \sim or $=$ 412 12° UNF 412 3° UNF 4203 2° 3° 2° 3° 4203 2° 3° 3° 2° 3° 4203 2° 3° $3^$	Rated supply voltage		1224 V		\sim or == 24240 V (50	/60 Hz)
Image: constraint of the second se	Voltage limits (including ri	pple)	1036 V		\sim or == 20264 V	
esidual current, open state ≤ 100 mA ≤ 1.5 mA urrent consumption, no-load ≤ 100 mA = - laximum switching frequency 48 000 impulses/min ower on "run-up" delay (1) With overload and short-circuit protection. (2) It is essential to connect a 0.4 A quick-blow fuse in series with the load. Wiring scheme Connector (1) With overload and short-circuit protection. (2) It is essential to connect a 0.4 A quick-blow fuse in series with the load. Wiring scheme Connector (1) With overload and short-circuit protection. (2) It is essential to connect a 0.4 A quick-blow fuse in series with the load. Wiring scheme Connector (1) With overload and short-circuit protection. (2) It is essential to connect a 0.4 A quick-blow fuse in series with the load. Wiring scheme Connector (1) With overload and short-circuit protection. (2) It is essential to connect a 0.4 A quick-blow fuse in series with the load. Wiring scheme Connector (1) With overload and short-circuit protection. (2) It is essential to connect a 0.4 A quick-blow fuse in series with the load. Wiring scheme Connector (1) With overload and short-circuit protection. (2) It is essential to connect a 0.4 A quick-blow fuse in series with the load. Wiring scheme Connector (1) With overload and short-circuit protection. (2) It is essential to connect a 0.4 A quick-blow fuse in series with the load. Wiring scheme Connection on page 9/45. Accessory (1) Description Reference Weight kg Remote control fixing clamp XSZ BPM12 0.011 SZ BPM12 SZ BPM12	Switching capacity		≤ 100 mA <i>(1)</i>	≤ 200 mA (1)	\sim or == 5100 mA (2)	
esidual current, open state < 10 mA < 1.5 mA urrent consumption, no-load < 10 mA - laximum switching frequency 48 000 impulses/min ower on "run-up" delay 9 seconds + 1/Fr (1) With overload and short-circuit protection. (2) It is essential to connect a 0.4 A quick-blow fuse in series with the load. Niring scheme Connector 3-wire - 2-wire ~ or - XS9 • 11RMBL01U20 4 4 4 4 5 2 4 4 5 2 4 4 5 2 4 5 2 5 5 5 5 5 5 5 5 5 5 5 5 5	Voltage drop, closed state		≤2V		≤ 5.5 V	
urrent consumption, no-load ≤ 10 mA - aximum switching frequency 48 000 impulses/min - ower on "run-up" delay 9 seconds + 1/Fr (1) With overload and short-circuit protection. (2) It is essential to connect a 0.4 A quick-blow fuse in series with the load. Niring scheme - Connector 3-wire □ Vi2 1/2" UNF XS9 ●11RPBL01M12 XS9 ●11RMBL01U20 4 00 1002 1 1002 1 1003 1 1003 1 1003 1 1003 1 1003 1 1003 1 1003 1 1003 1 1003 1 1003 1 1003 1 1003 1 1003 1 1003 1 1003 1 1003 1 1003 1 1003 1 1004 1 1005 1 1005 1 1005 1 1005 1 1005 1 1005 1			≤ 100 mA		≤ 1.5 mA	
ower on "run-up" delay 9 seconds + 1/Fr (1) With overload and short-circuit protection. (2) It is essential to connect a 0.4 A quick-blow fuse in series with the load. Wiring Scheme Connector 3-wire T.: Vii2 1/2" UNF 4 (1) 2 1/2" UNF 4 (1) 2 1 1 1 2 1 2 1 2 1 2 1 3 1 2 1 2 1 3 1 2 1 2 1 3 1 2 1 2 1 3 1 3 1 3 1 2 1 3 1 3 1 3 1 3 1 4 2 3 1 3 1 4 2 3 1 3 1 4 1 5 2 4 1 5 2 4 1 4 2	Current consumption, no-	load	≤ 10 mA		-	
ower on "run-up" delay 9 seconds + 1/Fr (1) With overload and short-circuit protection. (2) It is essential to connect a 0.4 A quick-blow fuse in series with the load. Wiring Scheme Connector 3-wire T.: Vii2 1/2" UNF 4 (1) 2 1/2" UNF 4 (1) 2 1 1 1 2 1 2 1 2 1 2 1 3 1 2 1 2 1 3 1 2 1 2 1 3 1 2 1 2 1 3 1 3 1 3 1 2 1 3 1 3 1 3 1 3 1 4 2 3 1 3 1 4 2 3 1 3 1 4 1 5 2 4 1 5 2 4 1 4 2	Maximum switching freque	ency	48 000 impulses/min			
(1) With overload and short-circuit protection. (2) It is essential to connect a 0.4 A quick-blow fuse in series with the load. Wiring scheme Connector W12 1/2" UNF 3-wire $-$ 2-wire \sim or $-$ XS9 •11RPBL01M12 XS9 •11RMBL01U20 $1 \xrightarrow{1}{0}$ $2 \xrightarrow{1}{0}$ $3 \xrightarrow{1}{0}$ $3 \xrightarrow{1}{0}$ ee connection on page 9/45. Accessory (1) Description Reference Weight Remote control fixing clamp XSZ BPM12 0.018 SZ BPM12 SZ BPM12						
(2) It is essential to connect a 0.4 Å quick-blow fuse in series with the load. Wiring scheme Connector Wi12 1/2" UNF 3-wire $=$ 2-wire \sim or $=$ Wi12 1/2" UNF XS9 +11RPBL01M12 XS9 +11RMBL01U20 4 $4 \bigcirc 2 \\ 2 \bigcirc 3 \\ 2$	p			hort-circuit protection.		
Connector3-wire =:2-wire \sim or =:W121/2" UNFXS9 •11RPBL01M12XS9 •11RMBL01U20 $4 \bigcirc 3 \\ 1 \bigcirc 2 \end{pmatrix}$ $1 \bigcirc 2 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 &$					use in series with the loa	d.
Connector3-wire =:2-wire \sim or =:W121/2" UNFXS9 •11RPBL01M12XS9 •11RMBL01U20 $4 \bigcirc 3 \\ 1 \bigcirc 2 \end{pmatrix}$ $1 \bigcirc 2 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 &$	Wiring scheme					
M121/2" UNFXS9 •11RPBL01M12XS9 •11RMBL01U20 $4 \bigcirc 3$ $1 \bigcirc 2$ $1 \bigcirc 2$ $2 \bigcirc 3$ $2 \bigcirc 3$ $2 \bigcirc 3$ $2 \bigcirc 2$ $2 \bigcirc 3$ ee connection on page 9/45.Accessory (1)DescriptionReferenceWeight kgRemote control fixing clampXSZ BPM120.013	-		2 wine —			
$4 \underbrace{\bigcirc}_{1} \underbrace{\bigcirc}_{2} \\ ee \text{ connection on page 9/45.} \\ Accessory (1) \\ \hline \\ Bescription \\ Reference \\ Kg \\ Remote control fixing clamp \\ XSZ BPM12 \\ O.019 \\ VSZ BPM12 \\ VSZ$						-
PNP 2 see connection on page 9/45. Accessory (1) Description Reference Weight kg Remote control fixing clamp XSZ BPM12 0.014 SZ BPM12	M12	1/2" UNF	X59 011RPBL01M12		XS9 011RMBL0102	20
PNP 2 see connection on page 9/45. Accessory (1) Description Reference Weight kg Remote control fixing clamp XSZ BPM12 0.014 SZ BPM12	4 ~ 3	1	1	_	2	
ee connection on page 9/45. Accessory (1) Description Reference Weight Remote control fixing clamp XSZ BPM12 0.015 SZ BPM12				+		~
accessory (1) Description Reference Weight kg Remote control fixing clamp XSZ BPM12 0.019 SZ BPM12					lo Lr	
Accessory (1) Description Reference Weight kg Remote control fixing clamp XSZ BPM12 0.018 SZ BPM12	1 2	2 3		_	<u>3</u>	\sim
Accessory (1) Description Reference Weight kg Remote control fixing clamp XSZ BPM12 0.018 SZ BPM12	• •	_		_		
Description Reference Weight kg Remote control fixing clamp XSZ BPM12 0.019 SZ BPM12 SZ BPM12 SZ BPM12). 				
Remote control fixing clamp XSZ BPM12 0.019 SZ BPM12	Accessory (1)					
Remote control fixing clamp XSZ BPM12 0.018			Description		Reference	Weight
	VEZ PRIMA		Remote control fixing	clamp	XSZ BPM12	kg 0.015
		ge 2/106.				

Functions, principle, curves, schemes

Functions Example:

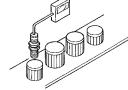
Sorting parts

Inductive proximity sensors

Osiprox[®] Application Sensors with analogue output signal 0...10 V (1) or

4...20 mA

2



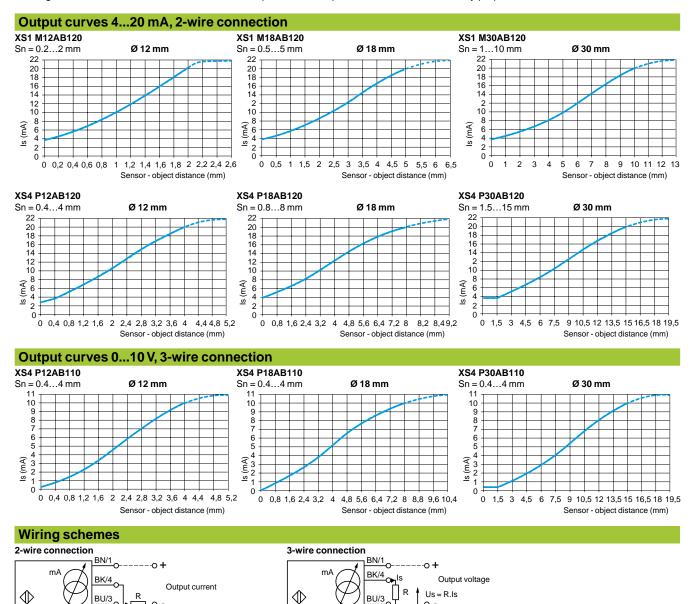
These analogue output proximity sensors are solid-state sensors designed for monitoring displacement. They are not measuring sensors.

They are suitable for use in numerous sectors, particularly for applications involving: deformation and displacement monitoring,

- vibration amplitude and frequency monitoring,
- control of dimensional tolerances,
- position control,
- concentricity or eccentricity monitoring.

Operating principle

The operating principle of the sensor is that of a damped oscillator. The degree of damping will depend on the distance of an object from the sensing face. The sensor will sense the distance and produce an output current with a value directly proportional to this distance.



	Output current	Load impedance value
12 V	420 mA	R ≤ 8.2 Ω
24 V	420 mA	R ≤ 470 Ω

	Output current	Load impedance value	Output voltage
24 V	010 mA	R ≤ 1500 Ω	010 V
48 V	010 mA	R ≤ 3300 Ω	010 V
Ensure	a minimum of 5 V bet	ween the + and the ser	nsor output (terminal 4
	48 V	24 V 010 mA 48 V 010 mA	value 24 V 010 mA R ≤ 1500 Ω

of the sensor.

(1) Voltage range only obtained with a load impedance of 1000Ω .

Characteristics:	
Characteristics.	
pages 2/69 to 2/71	

Schneider

Load impedance value R = 1000 Ω R = 1000 Ω 4).

0

References, characteristics, setting-up

Inductive proximity sensors Osiprox[®] Application Sensors with analogue output signal 0...10 V (1) or 4...20 mA

Sensor	Flush mountable in	metal	Non flush m	ountable in m	etal	
Lengths (mm): a = Overall b = Threaded section	a = 50 b = 42		a = 50 b = 42		a = 50 b = 42	
Nominal sensing distance (Sn)	Metal case 2 mm		Plastic case 4 mm		Plastic case 4 mm	
References	I					
3-wire Output 010 V (2)	-		-		XS4 P12AB110	
2-wire Output 420 mA (2)	XS1 M12AB120		XS4 P12AB120		-	
Weight (kg)	0.075		0.065		0.065	
Characteristics						
Product certifications	CE, UL, CSA					
Connection	Pre-cabled, PvR, 3 x 0.34 mm	n², length	2 m			
Degree of protection conforming to IEC 60529	IP 67					
Operating zone	0.22 mm		0.44 mm		0.44 mm	
Repeat accuracy	± 3%					
Linearity error	± 2 mA				±1V	
Ambient air temperature	For operation: - 25+ 70 °C					
Rated supply voltage	1224 V		1224 V		2448 V	
Voltage limits (including ripple)	1038 V		1038 V		1558 V	
Output current drift Ambient temperature: - 25+ 70 °C	≤ 10%					
Current consumption, no-load	4 mA					
Maximum operating rate	1500 Hz					
	 (1) Voltage range only obtained (2) Output current range Is, see 			00 Ω.		
Setting-up						
Minimum mounting distances (mm)	Side by side			Facing a metal object	t Mounted	in a metal support
XS1 M12AB120 flush mountable		e≥24		e ≥ 6	d≥12, h	
XS4 P12AB110 non flush mountable XS4 P12AB120 non flush mountable		e≥48 e≥48		e≥12 e≥12	d≥36, h d≥36, h	
Fixing nut tightening torque Other versions	< 6 N.m (metal case), < 2 N.m (Please consult your Regional S	plastic cas				
Accessories: Schem page 2/106 page 2						

References, characteristics, setting-up (continued)

Inductive proximity sensors Osiprox[®] Application Sensors with analogue output signal 0...10 V (1) or 4...20 mA

Sensor	Flush mountable in	metal I	Non flush m	ountable in m	etal	
		Ð				
Lengths (mm): a = Overall b = Threaded section c = For non flush mountable sensors	a = 52.5 b = 44 c = 0 Metal case	b C	= 40.6 = 26 = 8 Plastic case		a = 40.6 b = 26 c = 8 Plastic	
Nominal sensing distance (Sn)	5 mm		astic case		8 mm	case
References		ļ				
3-wire Output 010 V (2)	_	-	-		XS4 P1	8AB110
2 wire = 0 wire 4 20 mA (2)	VS1 M194 D120		(SA D194 D120		_	
2-wire Output 420 mA (2)	XS1 M18AB120	· · · · · · · · · · · · · · · · · · ·	(S4 P18AB120		-	
Weight (kg)	0.120	C	0.080		0.080	
Characteristics		·				
Product certifications	CE, UL, CSA					
Connection	Pre-cabled, PvR, 3 x 0.34 mn	m², length 2	m			
Degree of protection conforming to IEC 60529	IP 67					
Operating zone	0.55 mm	0).88 mm		0.881	nm
Repeat accuracy	±3%	I				
Linearity error	±2 mA ±1 V					
Ambient air temperature	For operation: - 25+ 70 °C					
Rated supply voltage	1224 V	=			24	48 V
Voltage limits (including ripple)	1038 V		 1038 V		 15	58 V
Output current drift Ambient temperature: - 25+ 70 °C	≤ 10%	I				
Current consumption, no-load	4 mA					
Maximum operating rate	500 Hz					
	(1) Voltage range only obtained(2) Output current range Is, see			ΟΟ Ω.		
Setting-up						
Minimum mounting distances (mm)	Side by side	Face to face		Facing a metal object	ct	Mounted in a metal support
XS1 M18AB120 flush mountable	e≥10 e	e ≥ 60		e ≥ 15		$d \ge 18, h \ge 0$
XS4 P18AB110 non flush mountable	e≥32 e	e≥96		$e \geq 24$		$d \ge 54, h \ge 16$
XS4 P18AB120 non flush mountable	e≥32 e	e≥96		$e \geq 24$		$d \ge 54, h \ge 16$
Fixing put tightoning torque	< 15 N m (motel ecce) < 5 N m	(plactic acc	<u>`````````````````````````````````````</u>			
Fixing nut tightening torque Other versions	< 15 N.m (metal case), < 5 N.m Please consult your Regional S					

Accessories: page 2/106 2/70

Schneider Gelectric

References, characteristics, setting-up (continued)

Inductive proximity sensors Osiprox[®] Application Sensors with analogue output signal 0...10 V (1) or 4...20 mA

Sensor	Flush mountable in metal	Non flush mountable in m	etal	
Lengths (mm): a = Overall b = Threaded section c = For non flush mountable sensors	a = 50 b = 42 c = 0	a = 52.6 b = 32 c = 13	a = 52.6 b = 32 c = 13	
Nominal sensing distance (Sn)	Metal case 10 mm	Plastic case 15 mm	Plastic case 15 mm	
References	1	1		
3-wire Output 010 V (2)	-	-	XS4 P30AB110	
2-wire Output 420 mA (2)	XS1 M30AB120	XS4 P30AB120	-	
Weight (kg)	0.200	0.100	0.100	
Characteristics				
Product certifications	CE, UL, CSA			
Connection	Pre-cabled, PvR, 3 x 0.34 mm ² , length 2 m			
Degree of protection conforming to IEC 60529	IP 67			
Operating zone	110 mm	1.515 mm	1.515 mm	
Repeat accuracy	± 3%	•		
Linearity error	±2 mA ±1 V			
Ambient air temperature	For operation: - 25+ 70 °C		1	
Rated supply voltage			2448 V	
Voltage limits (including ripple)	1038 V	1038 V	1558 V	
Output current drift Ambient temperature: - 25+ 70 °C	≤ 10%	1		
Current consumption, no-load	4 mA			
Maximum operating rate	300 Hz			
	(1) Voltage range only obtained with a load impedance of 1000 Ω . (2) Output current range Is, see page 2/68.			
Setting-up				
Minimum mounting distances (mm)	Side by side Face to fa	ace Facing a metal obje		
		⋳ ⋳		

XS4 P30AB110 non flush mountable $e \ge 60$ $e \ge 180$ $e \ge 45$ $d \ge 90, h \ge 30$ XS4 P30AB120 non flush mountable $a \ge 60$ $a \ge 180$ $a \ge 45$ $d \ge 90, h \ge 30$	XS1 M30AB120 flush mountable e ≥	≥ 20 e ≥ 120	$e \ge 30$	$d \ge 30, h \ge 0$
XSA P30AB120 non flush mountable $a > 60$ $a > 180$ $a > 45$ $d > 00$ $b > 30$	XS4 P30AB110 non flush mountable e ≥	≥ 60 e ≥ 180	e ≥ 45	$d \ge 90, h \ge 30$
	XS4 P30AB120 non flush mountable e ≥	≥ 60 e ≥ 180	e ≥ 45	$d \ge 90, h \ge 30$

Fixing nut tightening torque	< 40 N.m (metal case), < 20 N.m (plastic case)
Other versions	Please consult your Regional Sales office.

Accessories:	Schemes:		
page 2/106	page 2/68		

2

Inductive proximity sensors

Osiprox[®] Application Sensors with analogue output signal 0...10 V (1)

Functions

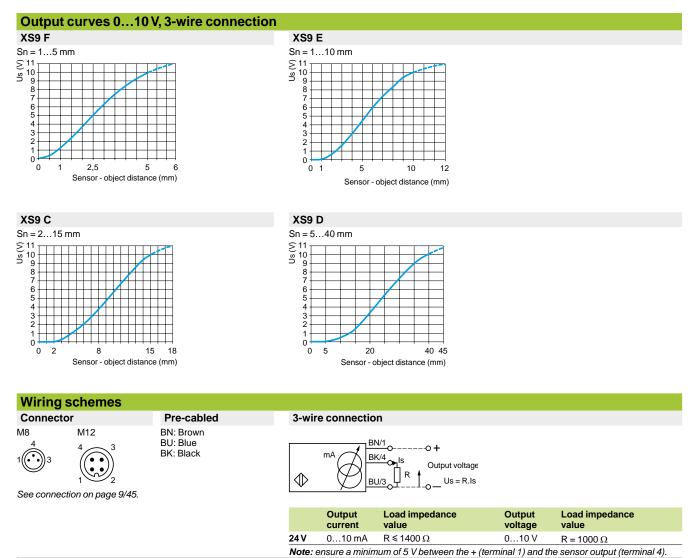
These analogue output proximity sensors are solid-state sensors designed for monitoring displacement. They are not measuring sensors.

They are suitable for use in numerous sectors, particularly for applications involving:

- □ deformation and displacement monitoring,
- □ vibration amplitude and frequency monitoring,
- □ control of dimensional tolerances,
- position control,
- □ concentricity or eccentricity monitoring.

Operating principle

The operating principle of the sensor is that of a damped oscillator. The degree of damping will depend on the distance of an object from the sensing face. The sensor will sense the distance and produce an output current with a value directly proportional to this distance.



(1) Voltage range only obtained with a load impedance of 1000Ω .

References, characteristics, dimensions, setting-up

Inductive proximity sensors Osiprox[®] Application Sensors with analogue output signal 0...10 V (1)

Flush mountable in m	etal						
		PBT case					
Nominal sensing distance	e (Sn)	5 mm	10 mm	15 mm	40 mm		
References			-	-	-		
3-wire	Pre-cabled (L = 2 m) (2)	XS9 F111A1L2	XS9 E111A1L2	XS9 C111A1L2	XS9 D111A1L2		
010 V	Connector	XS9 F111A1L01M8	XS9 E111A1L01M12	XS9 C111A1L01M12	XS9 D111A1M12		
Weight (kg)	Pre-cabled (L = 2 m) (2)	0.060	0.075	0.095	0.340		
	Connector	0.040	0.055	0.075	0.320		
Characteristics							
Product certifications		UL, CSA, CE					
Connection	Pre-cabled	PvR, 3 x 0.34 mm ² , leng	gth 2 m for XS9 •111A•I				
	Connector	M8 connector	0.15 m flying lead with l		M12		
Operating zone		15 mm	110 mm	215 mm	540 mm		
Degree of protection Conforming to IEC 60529	Pre-cabled	IP 68	IP 68, double insulation				
	Connector	IP 67 - 40+ 85 °C	IP 67, double insulation				
Storage temperature Operating temperature		- 40+ 85 °C					
Materials		PBT case					
Vibration resistance	Conforming to IEC 60068-2-6	25 gn, amplitude ± 2 mi	m (f = 10 to 55 Hz)				
Shock resistance	Conforming to IEC 60068-2-27	50 gn, duration 11 ms	(
Output state indication	~	No					
Rated supply voltage		24 V					
Voltage limits (including ri	ipple)	1536 V					
Repeat accuracy		±3%					
Linearity error		±1V					
Current consumption, no-		4 mA with overload ar 2000 Hz	nd short-circuit protection 1000 Hz	n	100 Hz		
Maximum operating frequ Output current drift	ency		operating temperature ra	2000)	100 HZ		
Dimensions			operating temperature ra	ange)			
XS9 F		XS9 E/C/D	XS9 C/D	VS	9 E		
				F (2)	F (2)		
	Туре	A (L2) A (M12) B	C D E	F			
	XS9 E	$\frac{14}{14}$ – 26	13 8.8 20				
	XS9 C XS9 D	$\frac{14}{23}$ $ \frac{40}{14}$ $\frac{14}{80}$	15 9.8 3 26 16 6				
Sotting up (trut	m mounting distances (mm))	∠ى 14 8U	20 10 6	C.C C.			
(1) Voltage range only obtai	Type XS9 F XS9 E XS9 C XS9 D ned with a load impedance of 1000 Ω. lace L2 by L5, for a 10 m long cable rej	Side by side	Face to f	<u>e≥36</u>	$e = \frac{e \ge 15}{e \ge 30}$ $e \ge 45$ $e \ge 120$		
Example: XS9 C111A1L	2 becomes XS9 C111A1L5 with a 5 m	long cable.					

Inductive proximity sensors

Osiprox[®] Application Sensors with analogue output signal 4...20 mA

Functions

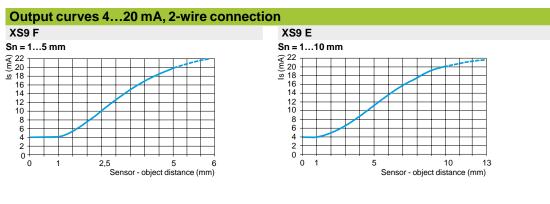
These analogue output proximity sensors are solid-state sensors designed for monitoring displacement. They are not measuring sensors.

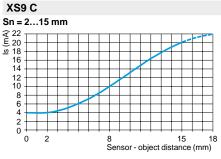
They are suitable for use in numerous sectors, particularly for applications involving:

- □ deformation and displacement monitoring,
- □ vibration amplitude and frequency monitoring,
- □ control of dimensional tolerances,
- □ position control,
- □ concentricity or eccentricity monitoring.

Operating principle

The operating principle of the sensor is that of a damped oscillator. The degree of damping will depend on the distance of an object from the sensing face. The sensor will sense the distance and produce an output current with a value directly proportional to this distance.



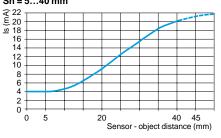


Pre-cabled

BN: Brown

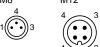
BU: Blue BK: Black

XS9 D Sn = 5...40 mm



Wiring schemes

Connector M8 M12



See connection on page 9/45.

2-wire connection

	Output current	Load impedance value
12 V	420 mA	R ≤8.2 Ω
24 V	420 mA	R≤470Ω
Note: e	ensure a minim	um of 10 V between the + (terminal 1) and - (terminal 3) of the sensor.

References, characteristics, dimensions, setting-up

Inductive proximity sensors Osiprox[®] Application Sensors with analogue output signal 4...20 mA

Flush mountable in m	etal	207			
		PBT case	\sim		\sim
lominal sensing distance	e (Sn)	5 mm	10 mm	15 mm	40 mm
References					
-wire ===	Pre-cabled (L = 2 m) (1)	XS9 F111A2L2	XS9 E111A2L2	XS9 C111A2L2	XS9 D111A2L2
20 mA	Connector	XS9 F111A2L01M8	XS9 E111A2L01M12	XS9 C111A2L01M12	XS9 D111A2M12
Veight (kg)	Pre-cabled (L = 2 m)	0.060	0.075	0.095	0.340
	Connector	0.040	0.055	0.075	0.320
Characteristics					
roduct certifications		UL, CSA, C€			
onnection	Pre-cabled		gth 2 m for XS9 •111A•	2	
	Connector		0.15 m flying lead with		M12
		M8 connector			
perating zone		15 mm	110 mm	215 mm	540 mm
egree of protection	Pre-cabled	IP 68	IP 68, double insulation	۱ D	
onforming to IEC 60529	Connector	IP 67	IP 67, double insulatior	n 🗆	
torage temperature		- 40+ 85 °C			
perating temperature		- 25+ 70 °C			
aterials		PBT case			
ibration resistance	Conforming to IEC 60068-2-6	25 gn, amplitude ± 2 m	m (f = 10 to 55 Hz)		
hock resistance	Conforming to IEC 60068-2-27	50 gn, duration 11 ms			
utput state indication		No			
ated supply voltage		1224 V			
oltage limits (including ri	ipple)	1036 V			
epeat accuracy	FF/	±3%			
inearity error		±2 mA			
Current consumption, no-	load		nd short-circuit protectio	n	
laximum operating frequ		2000 Hz	1000 Hz		100 Hz
output current drift			operating temperature ra	ange)	100112
Dimensions			operating temperature in	ange)	
XS9 F		XS9 E/C/D	XS9 C/D	XS) E
					F (1)
	Туре	A (L2) A (M1	•	D E F	
	XS9 E XS9 C	<u>14 –</u> 14 –	26 13 40 15	8.8 20 3.5 9.8 33 4.5	
	XS9 C XS9 D	<u>14 –</u> 23 14	80 26	9.8 33 4.5 16 65 5.5	
0		23 14	80 26	10 00 0.0	
Setting-up (Minimu	m mounting distances (mm))	Cide hurstide	-		a motel at the
	Type XS9 F	Side by side	Face to 1		ng a metal object
	X59 F X59 E X59 C X59 D	e e	$ \begin{array}{c} e \ge 15 \\ e \ge 30 \\ e \ge 45 \\ e \ge 120 \end{array} $	$ \begin{array}{c} $	$e \ge 15$ $e \ge 30$ $e \ge 45$ $e \ge 12$
	lace L2 by L5, for a 10 m long cable r 2 becomes XS9 F111A2L5 with a 5 n		ш	<u>~ 1</u>	

Inductive proximity sensors Osiprox[®] Application Detection at fixed sensing distance. Factor 1 (Fe/Nfe) sensors (1). For ferrous and non ferrous materials Solid-state output

Sensors flush mountable	in metal		
Lengths (mm): a = Overall b = Threaded section		a = 60 b = 51.5 Ø = M18 x 1	a = 70 b = 51.5 Ø = M18 x 1
		Brass case	Brass case
Nominal sensing distance (Sr	n)	5 mm	5 mm
References		• •	
4-wire	PNP/PNP programmable NO/NC	XS1 M18KPM40	XS1 M18KPM40D
Weight (kg)		0.120	0.060
Characteristics		•	
Product certifications		CE, UL, CSA	
Connection		Pre-cabled, PvR 4 x 0.34 mm ² , length 2 m (2)	M12 connector
Degree of protection	Conforming to IEC 60529	IP 68	IP 67
Operating zone		04 mm	
Repeat accuracy		3% of Sr	
Differential travel		115% of Sr	
Operating temperature		0+ 50 °C	
Output state indication		Yellow LED, annular	Yellow LED, 4 viewing ports at 90°
Rated supply voltage		= 1224 V with protection against reverse po	blarity
Voltage limits (including ripple)	1	1038 V	
Switching capacity		0200 mA with overload and short-circuit pro	tection
Voltage drop, closed state		≤2.6 V	
Current consumption, no-load	d	≤ 15 mA	
Maximum switching frequenc	У	1000 Hz	
Delays	First-up	≤ 10 ms	
	Response	≤0.3 ms	
	Recovery	≤ 0.7 ms	
Wiring schemes			
M12 connector	Pre-cabled	4-wire, PNP/NPN programmable, NO	or NC output
		NO	NC
	BN: brown BU: blue BK: black WH: white	BN/1 + BK/4 BU/3	BU/3 WH/2 BK/4 BN/1

See connection on page 9/45.

The variation in sensing distance between ferrous and non ferrous materials is typically less than 5%.
 Sensors available with other cable lengths: please consult your Regional Sales office.

2

References, characteristics, setting-up

Inductive proximity sensors Osiprox[®] Application Detection at fixed sensing distance. Factor 1 (Fe/Nfe) sensors (1). For ferrous and non ferrous materials Solid-state output

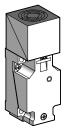
a = 60 b = 51.5 Ø = M30 x 1.5		a = 70 b = 51.5 Ø = M12 x 1		
Stainless steel case		Stainless steel ca	ISE	
10 mm		10 mm		
XS1 M30KPM40		XS1 M30KPM40L	D	
0.205		0.145		
C€, UL, CSA				
Pre-cabled, PvR 4 x 0.34 mm ² , length 2 m (2	?)	M12 connector or	n 0.8 m flying lead	
IP 68		IP 67		
08 mm				
3% of Sr				
115% of Sr				
0+ 50 °C				
Yellow LED, annular				
= 1224 V with protection against reverse	polarity			
1038 V				
0200 mA with overload and short-circuit	protection			
≤2.6 V				
≤ 15 mA				
1000 Hz				
≤5ms				
≤ 0.3 ms				
≤0.7 ms				
Setting-up				
Minimum mounting distances (mm)	Side by side	Face to face	Facing a metal object	Mounted in a metal
				support
		₽ <mark>₩₽₽₽</mark> ₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽	₿ ₽ <mark>₽₽₽₽</mark> ₽₽₽₽	
XS1 M18 flush mountable	e≥10	e≥60	e≥15	d≥18,h≥0
XS1 M30 flush mountable	e≥10 e≥20	e≥120	e≥30	d≥ 18, h≥0 d≥ 30, h≥0
Fixing nut tightening torque: XS1 M18: < 35		0 = 120	€ ≥ 30	u≠30,11≠0

(1) The variation in sensing distance between ferrous and non ferrous materials is typically less than 5%.
(2) Sensors available with other cable lengths: please consult your Regional Sales office.

References, characteristics

Inductive proximity sensors Osiprox[®] Application Fixed sensing distance detection, Factor 1 (Fe/Nfe) sensors (1). For ferrous and non ferrous materials Solid-state output

Flush mountable in metal



Nominal sensing distance (Sn)		15 mm
References		
4-wire	PNP/NPN/NO/NC programmable	XS7 C40KPM40
Weight (kg)		0.220
Characteristics		
Product certifications		CE, CSA, UL
Degree of protection	Conforming to IEC 60529	IP 67
Operating temperature		0+ 50 °C
Connection		Screw terminals, clamping capacity: 4 x 0.34 mm ² (2)
Operating zone		012 mm
Repeat accuracy		3% of Sr
Differential travel		115% of Sr
Output state indication		Yellow LED
Rated supply voltage		1224 V with protection against reverse polarity
Voltage limits (including ripple)		== 1038 V
Current consumption, no-load		≤ 15 mA
Switching capacity		0200 mA with overload and short-circuit protection
Voltage drop, closed state		≤2.6 V
Maximum switching frequency		1000 Hz
Delays	First-up	≤5 ms
	Response	≤0.3 ms
	Recovery	≤0.7 ms

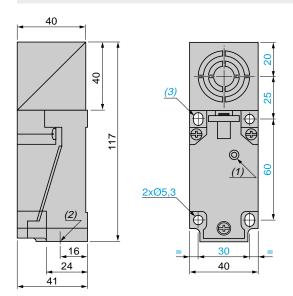
(a) than 5%.
(b) Cable gland not included with sensor. For suitable 13P cable gland (XSZ PE13), see page 2/106.

Dimensions, setting-up, schemes

Inductive proximity sensors

Osiprox[®] Application Fixed sensing distance detection, Factor 1 (Fe/Nfe) sensors (1). For ferrous and non ferrous materials Solid-state output

Dimensions XS7 C40KPM40

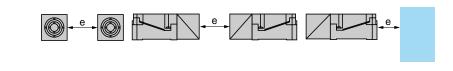


(1) Output LED.

(2) 1 tapped entry for 13P cable gland.
(3) 2 elongated holes Ø 5.3 x 7.

Setting-up

Minimum mounting distances (mm)



Facing a metal object

e≥45

Face to face

e≥120

Tightening torque of cover fix	king screws and clamp screws: < 1.2 N.m

XS7 C40KPM40

Wiring schemes

Sensor flush mountable in metal

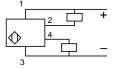
PNP/NPN

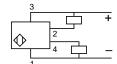
4-wire ---- programmable, NO or NC output NO output



Side by side

e≥40

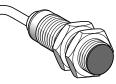




Inductive proximity sensors

Osiprox[®] Application Selective detection of ferrous materials Selective detection of non ferrous materials Cylindrical type, solid-state output

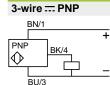
Flush mountable



Stainless steel case

Nominal sensing distance (Sn)		5 mm
References		
3-wire, ferrous version Insensitive to non ferrous materials	PNP NO	XS1 M18PAS40
3-wire, non ferrous version Insensitive to ferrous materials	PNP NO	XS1 M18PAS20
Weight (kg)		0.120
Characteristics		
Product certifications		UL, CSA, C€
Connection		Pre-cabled (PvR) 3 x 0.34 mm ² , length 2 m (1)
Operating zone		04 mm
Degree of protection conforming to IEC 60529		IP 68
Operating temperature range		- 25+ 70 °C
Output state indication		Yellow LED, annular
Rated supply voltage		= 1224 V with protection against reverse polarity
Voltage limits (including ripple)		1038 V
Switching capacity		0200 mA with overload and short-circuit protection
Voltage drop, closed state		≤2.6 ∨
Residual current, open state		-
Current consumption, no-load		≤ 15 mA
Maximum switching frequency		1000 Hz
Delays	First-up	≤ 10 ms
	Response	≤0.3 ms
	Recovery	≤0.7 ms
		(1) Sensors available pre-cabled with other cable lengths: please consult your Regional Sales Office

Wiring scheme



Setting-up

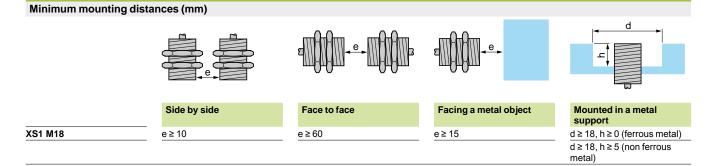




a (mm) 60



51.5



References, characteristics, schemes, dimensions (continued)

Inductive proximity sensors Osiprox[®] Application Selective detection of ferrous materials Selective detection of non ferrous materials Cylindrical type, solid-state output

Flush mountable

Nominal sensing distance (Sn) 5 mm 3-wire, ferrous version PNP NO Insensitive to non ferrous materials XS1 M18PAS40D 3-wire, non ferrous version PNP NO Insensitive to ferrous materials XS1 M18PAS20D Insensitive to ferrous materials 0.060 Weight (kg) 0.060 Characteristics UL, CSA, CE Product certifications UL, CSA, CE Connection M12 connector Degree of protection conforming to IEC 60529 IP 67 Operating zone 04 mm Operating temperature range -25+70 °C Output state indication Yellow LED, 4 viewing ports at 90°	
3-wire, ferrous version PNP NO XS1 M18PAS40D 1nsensitive to non ferrous materials PNP NO XS1 M18PAS20D 3-wire, non ferrous version PNP NO XS1 M18PAS20D Insensitive to ferrous materials 0.060 0.060 Characteristics Product certifications UL, CSA, C€ Connection M12 connector Degree of protection conforming to IEC 60529 IP 67 Operating zone 04 mm Operating temperature range - 25+70 °C	
Insensitive to non ferrous materials 3-wire, non ferrous version PNP NO Insensitive to ferrous materials 0.060 Weight (kg) 0.060 Characteristics Product certifications UL, CSA, C€ Connection M12 connector Degree of protection conforming to IEC 60529 IP 67 Operating zone 04 mm Operating temperature range -25+70 °C	
Insensitive to ferrous materials 0.060 Characteristics UL, CSA, C€ Product certifications UL, CSA, C€ Connection M12 connector Degree of protection conforming to IEC 60529 IP 67 Operating zone 04 mm Operating temperature range -25+70 °C	
Characteristics Product certifications UL, CSA, CE Connection M12 connector Degree of protection conforming to IEC 60529 IP 67 Operating zone 04 mm Operating temperature range - 25+ 70 °C	
Product certifications UL, CSA, C€ Connection M12 connector Degree of protection conforming to IEC 60529 IP 67 Operating zone 04 mm Operating temperature range -25+70 °C	
Connection M12 connector Degree of protection conforming to IEC 60529 IP 67 Operating zone 04 mm Operating temperature range - 25+ 70 °C	
Degree of protection conforming to IEC 60529 IP 67 Operating zone 04 mm Operating temperature range - 25+ 70 °C	
Operating zone 04 mm Operating temperature range - 25+ 70 °C	
Operating temperature range - 25+ 70 °C	
Output state indication Yellow LED, 4 viewing ports at 90°	
Rated supply voltage 1224 V with protection against reverse polarity	
Voltage limits (including ripple) 1038 V	
Switching capacity 0200 mA with overload and short-circuit protection	
Voltage drop, closed state \$2.6 V	
Residual current, open state -	
Current consumption, no-load ≤ 15 mA	
Maximum switching frequency 1000 Hz	
Delays First-up ≤ 10 ms	
Response < 0.3 ms	
Recovery \$0.7 ms	
Wiring scheme Dimensions	
M12 connector 3-wire PNP XS1 M	
$\begin{array}{c} 4 \\ \bullet \bullet \bullet \\ 1 \\ \bullet \bullet \bullet \\ 2 \end{array}$	
See connection on page 9/45.	
Setting-up	
Minimum mounting distances (mm)	
Side by side Face to face Facing a metal object Mounted in a m support	
XS1 M18 e ≥ 10 e ≥ 60 e ≥ 15 d ≥ 18, h ≥ 0 (ferral d ≥ 18, h ≥ 5 (non metal))	etal

Stainless steel case

Inductive proximity sensors Osiprox[®] Application For assembly, packaging and light handling Plastic case: 12 x 26 x 40 mm dc supply, solid-state output

Sensor		Flush mountat	ole in metal		Non flush mou	Non flush mountable in metal		
Nominal sensing distance	e (Sn)		2 mm			4 mm		
References								
3-wire ===	PNP	NO	XS7 G12PA140	-	XS7 G12PA140S	XS8 G12PA140	-	XS8 G12PA1405
	NPN	NO	XS7 G12NA140	-	XS7 G12NA140S	XS8 G12NA140	-	XS8 G12NA1408
4-wire (complementary outputs)	PNP	NO + NC	-	XS7 G12PC440	-	-	XS8 G12PC440	-
(compromonal y compare)	NPN	NO + NC	-	XS7 G12NC440	-	-	XS8 G12NC440	-
Weight (kg)			0.100	0.100	0.030	0.100	0.100	0.030
Characteristics								
Product certifications			CSA, UL, CE					
Connection	Pre-ca	abled	3 x 0.34 mm ² , length 2 m (1)	4 x 0.34 mm ² , length 2 m (1)	-	3 x 0.34 mm ² , length 2 m (1)	4 x 0.34 mm ² , length 2 m (1)	-
	Conn	ector	-	-	M8	-	-	M8
Operating zone			01.6 mm 03.2 mm					
Repeat accuracy			≤ 10 % of Sr					
Differential travel			320 % of Sr					
Degree of protection			IP 67					
Storage temperature range			-40+85 °C					
Operating temperature ra	nge		-25+70 °C					
Materials			Case: PBT, cable:					
Vibration resistance Conforming to IEC 60068-2	2-6			2 mm (f = 10 to 55	Hz)			
Shock resistance Conforming to IEC 60068-2	-27		50 gn, duration 11	ms				
Output state indication	/		Yellow LED, on top of case					
Rated supply voltage			1224 V	1248 V	1224 V	1224 V	1248 V	1224 V
Voltage limits (including r	ipple)		1030 V	1058 V	1030 V	1030 V	1058 V	1030 V
Current consumption, no	-load		≤ 10 mA					
Switching capacity			0100 mA (2)	0200 mA (2)	0100 mA (2)	0100 mA (2)	0200 mA (2)	0100 mA (2)
Voltage drop, closed state	9		≤1.8 V	≤2.6 V	≤1.8 V	≤1.8 V	≤2.6 V	≤ 1.8 mA
Maximum switching frequ			≤2 kHz			≤1 kHz		
Delays	First-u	•	≤4 ms					
	Respo		≤ 0.5 ms					
	Recov	very	≤ 1 ms					
					other cable lengths:			-
			Length of cable	pre-cabled sense	d to references sta ors	ited above for 2 m	-	increase
			5 m	L1			0.120 k	g

L2

(2) With overload and short-circuit protection

Example: sensor XS7 G12PA140 with 5 m cable becomes XS7 G12PA140L1.

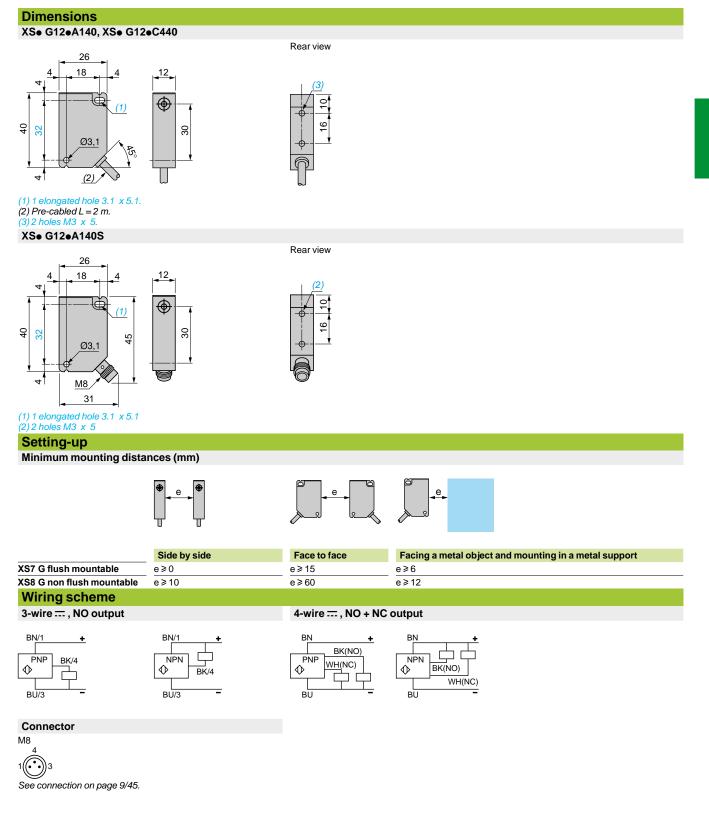
0.320 kg

10 m

Dimensions, setting-up, connections

Inductive proximity sensors

Osiprox[®] Application For assembly, packaging and light handling Plastic case: 12 x 26 x 40 mm dc supply, solid-state output



2

References, characteristics

Sensor

Inductive proximity sensors Osiprox[®] Application For assembly, packaging and light handling Plastic case: 12 x 26 x 40 mm a.c. or d.c. supply

Non flush mountable in metal

2

		0					
Nominal sensing dista	nce (Sn)	2 mm	4 mm				
References							
2-wire \pm or \sim	NO	XS7 G12MA230	XS8 G12MA230				
	NC	XS7 G12MB230	XS8 G12MB230				
Weight (kg)		0.100	0.100				
Characteristics	5						
Product certifications		CSA, UL, CE					
Connection		Pre-cabled 2 x 0.34 mm ² , length 2 r	m (1)				
Operating zone		01.6 mm	03.2 mm				
Repeat accuracy		≤ 10 % of Sr					
Differential travel		320 % of Sr	320 % of Sr				
Degree of protection		IP 67					
Storage temperature ra	ange	- 40+ 85 °C					
Operating temperature	range	- 25+ 70 °C					
Materials Case: PBT, cable: PVC							
Vibration resistance							
Conforming to IEC 6006	8-2-6	50 1 1 11	50 an duration 11 ma				
Shock resistance Conforming to IEC 6006	8-2-27	50 gn, duration 11 ms	50 gn, duration 11 ms				
Output state indication		Yellow LED, on top of case					
Rated supply voltage		∼ 24…240 V (50/60 Hz) or == 24	210 V				
Voltage limits (includin	ng ripple)	∼ or == 20264 V	∼ or 20264 V				
Switching capacity		5200 mA (2)	5200 mA (2)				
Voltage drop, closed s	tate	≤5.5 V	≤5.5 V				
Residual current, open	state	≤ 0.8 mA / 24 V, 1.5 mA / 120 V	≤ 0.8 mA / 24 V, 1.5 mA / 120 V				
Maximum switching fro	equency	\sim 25 Hz or $=$ 250 Hz	\sim 25 Hz or \pm 250 Hz				
Delays	First-up	≤ 40 ms					
	Response	≤1 ms					
	Recovery	≤2 ms					
		(1) Sensors available pre-cabled with					
			ded to references stated above Weight increase				
		for 2 m pre-cak					
		5 m L1 10 m L2	0.120 kg				
		-	0.320 kg				
		Example: sensor XS7 G12MA230 with 5 m cable becomes XS7 G12MA230L1.					

Flush mountable in metal

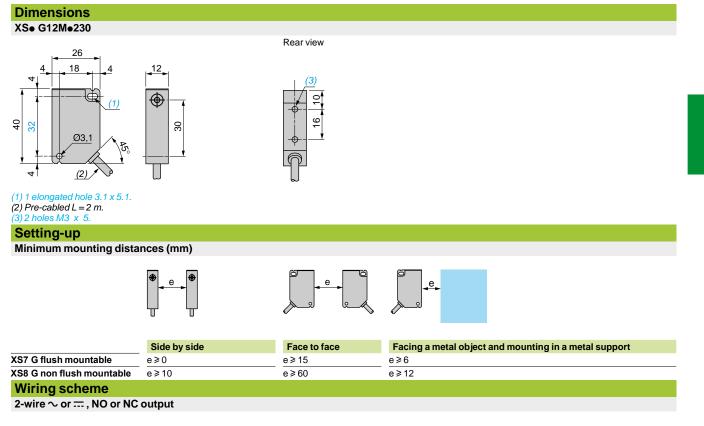
(2) As these sensors do not incorporate overload or short-circuit protection, it is essential to

connect a 0.4 A quick-blow fuse in series with the load.

Dimensions, setting-up, connections

Inductive proximity sensors

Osiprox[®] Application For assembly, packaging and light handling Plastic case: 12 x 26 x 40 mm a.c. or d.c. supply





References, characteristics

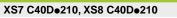
Inductive proximity sensors Osiprox[®] Application Plastic case, form C, plug-in 5 position turret head d.c. supply

Sensor		Flush mountal	ole in metal		Non flush mou	ntable in metal		
Nominal sensing distance	e (Sn)	15 mm	Increased range model 20 mm	15 mm	20 mm	Increased range model 40 mm	20 mm	
References			model 20 mm			model 40 mm		
I-wire	PNP NO+NC	XS7 C40PC440	XS7 C40PC449	-	XS8 C40PC440	XS8 C40PC449	-	
complementary outputs)	NPN NO+NC	XS7 C40NC440	XS7 C40NC449	-	XS8 C40NC440	XS8 C40NC449	-	
2-wire non polarised)	NO	-	-	XS7 C40DA210	-	-	XS8 C40DA210	
,	NO or NC programmable	-	-	XS7 C40DP210	-	-	XS8 C40DP210	
Veight (kg)		0.220	0.220	0.220	0.220	0.220	0.220	
Characteristics								
Product certifications		UL, CSA, CE						
Degree of protection conforming to IEC 60529		IP 67						
Operating temperature		-25+70 °C						
Connection		Screw terminals, o	terminals, clamping capacity: 2 or 4 x 1.5 mm ² (1)					
Operating zone		012 mm	016 mm	012 mm	016 mm	032 mm	016 mm	
Repeat accuracy		≤ 3% of real sensing distance (Sr)						
Differential travel			ensing distance (Sr)					
Status indication	Output	Yellow LED		Yellow LED	Yellow LED		Yellow LED	
Rated supply voltage	Supply on	Green LED - Green LED - == 1248 V with protection against reverse polarity						
/oltage limits (including r	ipple)	1058 V						
Current consumption, no	-load	≤ 10 mA		-	≤ 10 mA		-	
Switching capacity		0200 mA With overload and	d short-circuit protec	1.5100 mA	0200 mA		1.5100 mA	
Residual current, open state		-		≤0.5 mA	-		≤ 0.5 mA	
/oltage drop, closed state	•	≤2V		≤4 V	≤2 V		≤4 V	
Maximum switching frequ	lency	1000 Hz		1500 Hz	1000 Hz	500 Hz	800 Hz	
N.1	First-up	≤5 ms		≤5 ms	≤5 ms	≤5 ms	≤5 ms	
Delays	i ii si-up	101110						
Delays	Response	≤ 0.3 ms		≤2 ms	≤0.3 ms	< 1 ms	≤ 2 ms	

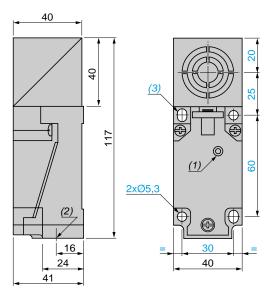
Dimensions, setting-up, schemes

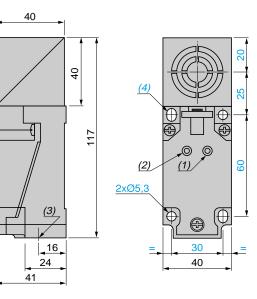
Inductive proximity sensors

Osiprox[®] Application Plastic case, form C, plug-in 5 position turret head d.c. supply



XS7 C40•C44•, XS8 C40•C44•

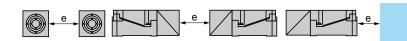




(1) Output LED.
(2) 1 tapped entry for 13P cable gland.
(3) 2 elongated holes Ø 5.3 x 7.

Setting-up

Minimum mounting distances (mm)



		Side by side	Face to face	Facing a metal object
Sensors flush	XS7	e≥40	e≥120	e≥45
mountable in metal	XS7 increased range model	e≥80	e≥240	e≥60
Sensors non flush	XS8	e≥80	e≥160	e≥60
mountable in metal	XS8 increased range model	e≥160	e≥320	e≥120

(1) Output LED.

(2) Supply LED.

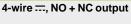
(3) 1 tapped entry for 13P cable gland.

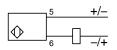
4) 2 elongated holes Ø 5.3 x 7.

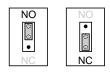
Tightening torque of cover fixing screws and clamp screws: < 1.2 N.m

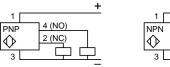
Wiring schemes

2-wire ---- (non polarised), NO or NC output depending on position of link











References, characteristics

Inductive proximity sensors Osiprox[®] Application Plastic case, form C, plug-in 5 position turret head a.c. or d.c. supply

Sensor		Flush mountable	e in metal	Non flush mountable in metal			
		AC	AC/DC	AC	AC/DC		
Nominal sensing dista	nce (Sn)	15 mm		20 mm			
References							
2-wire \sim	NO or NC programmable	XS7 C40FP260	-	XS8 C40FP260	-		
2-wire \sim or $=$	NO or NC programmable	-	XS7 C40MP230	-	XS8 C40MP230		
Weight (kg)		0.220	0.220	0.220	0.220		
Characteristics	;						
Product certifications		UL, CSA, C€					
Degree of protection conforming to IEC 60529		IP 67					
Operating temperature		- 25+ 70 °C					
Connection		Screw terminals, clamping capacity: 2 x 1.5 mm ² (1)					
Operating zone		012 mm		016 mm			
Repeat accuracy		\leq 3% of real sensing	distance (Sr)	•			
Differential travel		320% of real sens	ing distance (Sr)				
Output state indication	1	Yellow LED					
Rated supply voltage with protection against re	everse polarity	∼24…240 V, 50/60 Hz	∼ 24240 V, 50/60 Hz or 210 V	∼ 24…240 V, 50/60 Hz	∼ 24240 V, 50/60 Hz or 24210 V		
Voltage limits (includin	ng ripple)	\sim 20264 V	\sim or $= 20264$ V	\sim 20264 V	\sim or $= 20264$ V		
Current consumption,	no-load	-					
Switching capacity		5500 mA (2) (2 A inrush)	\sim 5300 mA or 5200 mA (2)	5500 mA (2) (2 A inrush)	∼ 5300 mA or 5200 mA (2)		
Residual current, open	i state	≤ 1.5 mA	0.8 mA on 24 V 1.5 mA on 120 V	≤1.5 mA	0.8 mA on 24 V 1.5 mA on 120 V		
Voltage drop, closed st	tate	≤ 5.5 V					
Maximum switching fre	equency	25 Hz	\sim 25 Hz, $=$ 50 Hz	25 Hz	\sim 25 Hz, $=$ 50 Hz		
Delays	First-up	≤ 120 ms		1			
	Response	≤ 30 ms					
	Recovery	≤ 20 ms					

e pag g (. 3), 2/106.

(2) These sensors do not incorporate overload or short-circuit protection and therefore, it is essential to connect a "quick-blow" fuse in series with the load, see page 2/106.

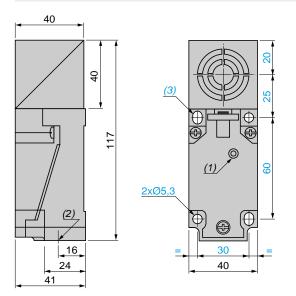
Dimensions, setting-up, schemes

Inductive proximity sensors

Osiprox[®] Application Plastic case, form C, plug-in 5 position turret head a.c. or d.c. supply

Dimensions

XS7 C40FP260, XS7 C40MP230, XS8 C40FP260, XS8 C40MP230

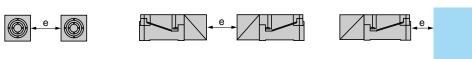


(1) Output LED.

(2) 1 tapped entry for 13P cable gland. 3) 2 elongated holes Ø 5.3 x 7

Setting-up

Minimum mounting distances (mm)



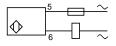
	Side by side
XS7 flush mountable	e≥40
XS8 non flush mountable	e≥80

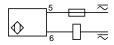
Facing a metal object e≥45

Tightening torque of cover fixing screws and clamp screws: < 1.2 N.m

Wiring schemes

2-wire \sim programmable, NO or NC output 2-wire \sim or = programmable, NO or NC output depending on position of link depending on position of link

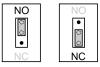




Face to face

e≥120

e≥160



e≥60

2

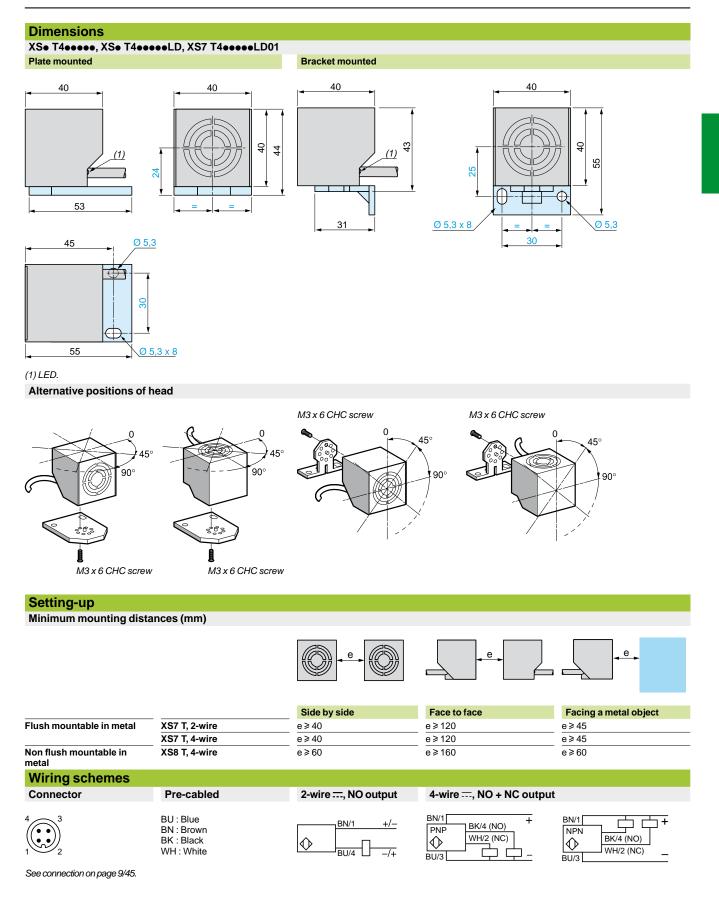
References, characteristics

Inductive proximity sensors Osiprox® Application Plastic case, form C, cubic 40, multi-position d.c. supply

(complementary	O NP NO + NC PN NO + NC		-				20 mm	
References	O NP NO + NC PN NO + NC	XS7 T4DA210	-				20 mm	
References	O NP NO + NC PN NO + NC	XS7 T4DA210	-				20 mm	
2-wire NC (non polarised) 4-wire PN (complementary outputs) NF Weight (kg)	NP NO + NC PN NO + NC	-	_					
(non polarised) 4-wire PN (complementary putputs) NF Weight (kg)	NP NO + NC PN NO + NC	-	-					
A-wire PN (complementary outputs) NF Weight (kg)	PN NO+NC			XS7 T4DA214LD	-	XS7 T4DA214LD01	-	-
outputs) NF		-	XS7 T4PC440	-	XS7 T4PC440LD	-	XS8 T4PC440	XS8 T4PC440LD
			XS7 T4NC440	-	XS7 T4NC440LD	-	XS8 T4NC440	XS8 T4NC440LD
Characteristi		0.265	0.265	0.220	0.220	0.200	0.265	0.220
Characteristi	65							
Product certification	ons	UL, CSA, C€						
Degree of protection Conforming to IEC 60		IP 67						
Operating temperat	ture	- 25+ 70 °C						
Connection Pro	re-cabled	2 x 0.5 mm ² length 2 m (1)	4 x 0.34 mm ² length 2 m (1)	-			4 x 0.34 mm ² length 2 m <i>(1)</i>	-
	emote M12 onnector	-		Cable: length 0.8	m	Cable: length 0.15 m	-	Cable: length 0.8 m
Operating zone		012 mm					016 mm	
Repeat accuracy		\leq 3 % of real set	nsing distance (Sr)				
Differential travel		320 % of real	sensing distanc	e (Sr)				
Supply/output state	eindication	Yellow LED, rea	ar mounted					
Rated supply voltag	ge	1248 V with	h protection aga	inst reverse polarity	/			
Voltage limits (inclu	uding ripple)	1058 V						
Current consumptic	on, no-load	-	≤10 mA	-	≤ 10 mA	-	≤ 10 mA	
Switching capacity		1.5100 mA	0200 mA	1.5100 mA	0200 mA	1.5100 mA	0200 mA	
Residual current, or	pen state	With overload a ≤ 0.7 mA	nd short-circuit ≤0.1 mA	orotection ≤0.7 mA	≤0.1 mA	≤0.7 mA	≤0.1 mA	
Voltage drop, closed	d state	≤5.2 V	≤2V	≤5.2 V	≤2V	≤5.2 V	≤2V	
Maximum switching	a frequency	150 Hz	1000 Hz	150 Hz	1000 Hz	150 Hz	1000 Hz	
	rst-up	≤5 ms	≤7 ms	≤5 ms	≤7 ms	≤5 ms	<pre>1000112</pre> ≤7 ms	
	esponse	≤2 ms	≤0.3 ms	≤2 ms	≤0.3 ms	≤2 ms	≤0.3 ms	
	ecovery	≤5 ms	≤0.7 ms	≤5 ms	≤ 0.7 ms	≤5 ms	≤ 0.7 ms	
(1) Sensors pre-cable	ed with other c	able lenaths :						
Length of cable		U	ed to reference	es stated above fo	r 2 m pre-cabled s	ensors		Weight increase
5 m		L1						0.120 kg
10 m		L2						0.320 kg

Inductive proximity sensors

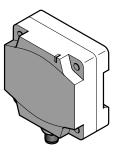
Osiprox[®] Application Plastic case, form C, cubic 40, multi-position d.c. supply



References, characteristics

Sensor

Inductive proximity sensors Osiprox[®] Application Flat sensor, flush mountable, increased range, 300 mA switching capacity Form D, DIN rail mounting, solid-state output



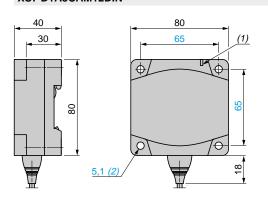
Dimensions (mm)		80 x 80 x 40		
Nominal sensing distance (Sn)		50 mm (not flush mounted: 42 mm)		
References				
2-wire (non polarised)	NO	XS7 D1A3CAM12DIN		
Weight (kg)		0.374		
Characteristics				
Product certifications		C€, CSA, UL: pending		
Degree of protection	Conforming to IEC 60529	IP 67 double insulation		
Temperature	Operation	- 25+ 70 °C		
	Storage	- 40+ 85 °C		
Vibration resistance	Conforming to IEC 60068-2-6	25 gn, amplitude ± 2 mm (f = 10 to 55 Hz)		
Shock resistance	Conforming to IEC 60068-2-27	50 gn, duration 11 ms		
Connection		M12 connector		
Operating zone		040 mm (not flush mounted: 035 mm)		
Repeat accuracy		3% of Sr		
Differential travel		115% of Sr		
Output state indication		Yellow LED		
Rated supply voltage		1248 V with protection against reverse polarity		
Voltage limits (including ripple)		1058 V		
Residual current, open state		≤ 0.5 mA		
Switching capacity		1.5300 mA with overload and short-circuit protection		
Voltage drop, closed state		≤ 4.5 V		
Maximum switching frequency		100 Hz		
Delays	First-up	≤10 ms		
	Response	≤2 ms		
	Recovery	≤5 ms		

Dimensions, setting-up, schemes

Inductive proximity sensors

Osiprox[®] Application Flat sensor, flush mountable, increased range, 300 mA switching capacity Form D, DIN rail mounting, solid-state output

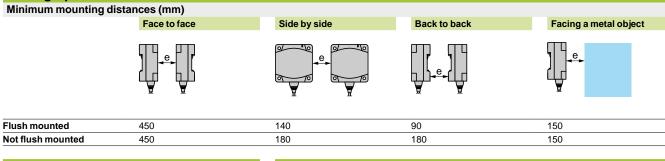
Dimensions XS7 D1A3CAM12DIN



(1) Output LED

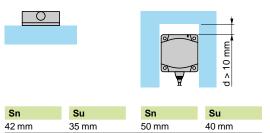
(2) For CHC type screws

Setting-up



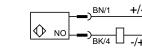
Flush/non flush conditions

In A37 steel



Wiring schemes

2-wire NO/M12 XS7 D1A3CAM12DIN



+/-

See connection on page 9/45.

2

Inductive proximity sensors Osiprox[®] Application Sensors for welding machine applications (1) Cylindrical type. Metal case, Teflon coated steel, threaded

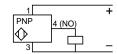
Sensors flush mountable	in metal				
Lengths (mm): a = Overall b = Threaded section c = For non flush mountable sen	ISOTS	a = 60 b = 40 Ø = M12 x 1	a = 60 b = 40 Ø = M18 x 1		
		Teflon front face	Teflon front face		
Nominal sensing distance (Sn)	2 mm	5 mm		
_	7				
References					
3-wire 	PNP, NO	XS1 M12PAW01D	XS1 M18PAW01D		
Weight (kg)		0.025	0.060		
Characteristics					
Product certifications		CE, UL, CSA			
Connection		M12 connector			
Degree of protection	Conforming to IEC 60529	IP 67			
Operating zone		01.6 mm	04 mm		
Repeat accuracy		3% of Sr			
Differential travel		120% of Sr			
Operating temperature		- 25+ 70 °C			
Output state indication		Yellow LED, 4 viewing ports at 90°			
Rated supply voltage		1224 V with protection against reverse polarity			
Voltage limits (including ripple)		1036 V			
Switching capacity		0250 mA with overload and short-circuit pro	tection		
Voltage drop, closed state		≤2.5 V			
Current consumption, no-load		≤15 mA			
Immunity to electromagnetic		≤140 mT	1		
Maximum switching frequenc	-	1000 Hz	500 Hz		
Delays	First-up	≤ 10 ms	≤ 10 ms		
	Response	≤0.1 ms	≤0.2 ms		
	Recovery	≤ 0.4 ms	≤ 0.6 ms		

Wiring schemes

M12 connector

3-wire, PNP, NO output





See connection on page 9/45.

(1) Sensors particularly resistant to welding machine electromagnetic fields.

References, characteristics, setting-up

Inductive proximity sensors Osiprox[®] Application Sensors for welding machine applications (1) Cylindrical type. Metal case, Teflon coated steel, threaded

		Sensors non flus	h mountable in metal	
a = 60 b = 40 Ø = M30 x 1.5		a = 60 b = 36 c = 4 Ø = M12 x 1		
Teflon front face		Teflon front face		
10 mm		4 mm		
XS1 M30PAW01D		XS2 M12PAW01D		
0.145		0.025		
CE, UL, CSA M12 connector IP 67				
08 mm		03.2 mm		
3% of Sr				
120% of Sr				
- 25+ 70 °C				
Yellow LED, 4 viewing ports at 90°				
	polarity			
0250 mA with overload and short-circuit ≤2.5 V	protection			
≤ 2.5 V ≤ 15 mA				
≤ 140 mT				
250 Hz		1000 Hz		
≤ 10 ms		≤ 10 ms		
≤0.7 ms		≤0.2 ms		
≤5 ms		≤0.4 ms		
Setting-up				
Minimum mounting distances (mm)	Side by side	Face to face	Facing a metal object	Mounted in a metal support
		ŧ <u>ſſ</u> ſſIJ~÷≁ſſſſſIJ	: 20000-€-	
XS1 M12 flush mountable	e≥0	e≥7	e≥6	d≥12, h≥0
XS1 M18 flush mountable	e≥0	e≥16	e≥9	d≥18, h≥0
XS1 M30 flush mountable	e≥0	e≥20	e≥20	d≥30, h≥0
XS2 M12 non flush mountable	e≥15	e≥9	e≥11	d≥36, h≥8

Fixing nut tightening torque: XS1 M12, XS2 M12: < 15 N.m, XS1 M18: < 35 N.m, XS1 M30: < 50 N.m

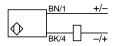
References, characteristics, dimensions, schemes,

Inductive proximity sensors Application series

Sensors for welding machine applications Cylindrical type. Metal case, plain, with shoulder

Flush mountable in metal						
engths (mm) : a = Overall b = To shoulder c = Removal d = Ø shoulder	$\emptyset = 12$ a = 55 b = 50 c = 9 (threaded) d = 15 hexagonal					
Nominal sensing distance (Sn)	3 mm	3 mm	3 mm			
References						
2-wire	XSL C1401393L1	XSL C1401393L3	XSL C1401393L4			
Neight (kg)	0.050	0.065	0.050			
Characteristics						
Connection	Remote M12 connector, length of cable: 1.2 m	Remote M12 connector, length of cable: 0.8 m	Remote M12 connector, length of cable: 0.15 m			
Degree of protection conforming to IEC 60529	IP 67					
Operating zone	02.4 mm					
Repeat accuracy	\leq 3 % of Sr	≤ 3 % of Sr				
Differential travel	115 % of Sr	115 % of Sr				
Operating temperature	- 25+ 80 °C	- 25+ 80 °C				
Output state indication	LED (yellow), annular					
Rated supply voltage	1248 V					
Voltage limits (including ripple)	1058 V					
Switching capacity	1.5100 mA with overload a	1.5100 mA with overload and short-circuit protection				
Voltage drop, closed state	\leq 4 V	≤4 V				
Residual current, open state	\leq 0.5 mA	≤ 0.5 mA				
		-				
Current consumption, no load			800 Hz			
Current consumption, no load Maximum switching frequency		: 0.5 ms ; recovery : ≤ 0.5 ms				

2-wire, non polarised, NO output



Flush mountable in meta	1	Non flush mountable in r	metal		
	\mathcal{I}				
$\emptyset = 18$ a = 40 b = 35 c = 0 (PPS front face) $d = \emptyset 22$		Ø = 18 a = 45 b = 35 c = 20 (Teflon front face and ca d = Ø 22	se)		
6.3 mm		10 mm		10 mm	
XSL C1401392L1		XSL C1401405L3		XSL C1401405	L4
0.100		0.065		0.050	
Remote M12 connector, length of cable: 1.2 m		Remote M12 connector, length of cable: 0.8 m		Remote M12 co length of cable:	
IP 67					
05 mm		08 mm			
3 % of Sr					
115 % of Sr					
- 25+ 70 °C					
LED (yellow), annular					
1248 V					
1058 V					
1.5100 mA with overload an	d short-circuit protection				
\leq 4 V					
\leq 0.5 mA					
- 100 Hz					
First-up : ≤ 10 ms ; response :	$< 10 \mathrm{ms}$; recovery : $< 2 \mathrm{ms}$				
Setting up	2 10 m3, 1000 vory . 22 m3				
Minimum mounting dista					
minimum mounting dista	Side by side	Face to face	Facing a meta	l object	Mounted in a metal support
		allene +e+ []B	المعادمة ()	
XSL C Ø 12 (flush mountable)	e ≥ 10	e≥60	e≥15		d = 12, h = 0
Ø 18 (non flush mountable)	e ≥ 16	e≥96	$e \ge 24$		d = 54, h = 16

References

2

Inductive proximity sensors Osiprox[®] Application, food and beverage processing series Cylindrical, stainless steel, non flush mountable Three-wire, d.c. supply, solid-state output

XS2 •• SA••L2
Desault
XS2 •• SA••M12
XS2 L2SA••L2
XS2 30SA••L2
SSZ BS12
XUZ A118
SSZ BS30

Ø 12, thread	led M12	x 1			
Sensing dist. (Sn) mm	Function	Output	Connection	Reference	Weight kg
7	NO	PNP	Pre-cabled (L = 2 m) (1)	XS2 12SAPAL2	0.075
			M12 connector	XS2 12SAPAM12	0.035
		NPN	Pre-cabled (L = 2 m) (1)	XS2 12SANAL2	0.075
			M12 connector	XS2 12SANAM12	0.035
Ø 18, thread	led M18	x 1			
Sensing dist. (Sn) mm	Function	Output	Connection	Reference	Weight kg
12	NO	PNP	Pre-cabled (L = 2 m) (1)	XS2 18SAPAL2	0.120
			M12 connector	XS2 18SAPAM12	0.060
		NPN	Pre-cabled (L = 2 m) (1)	XS2 18SANAL2	0.120
			M12 connector	XS2 18SANAM12	0.060
Ø 18, plain					
Sensing dist. (Sn) mm	Function	Output	Connection	Reference	Weight kg
12	NO	PNP	Pre-cabled (L = 2 m) (1)	XS2 L2SAPAL2	0.120
			M12 connector	XS2 L2SAPAM12	0.060
		NPN	Pre-cabled (L = 2 m) (1)	XS2 L2SANAL2	0.120
			M12 connector	XS2 L2SANAM12	0.060
Ø 30, thread	led M30 x	x 1.5			
Sensing dist. (Sn) mm	Function	Output	Connection	Reference	Weight kg
22	NO	PNP	Pre-cabled (L = 2 m) (1)	XS2 30SAPAL2	0.205
			M12 connector	XS2 30SAPAM12	0.145
		NPN	Pre-cabled (L = 2 m) (1)	XS2 30SANAL2	0.205
			M12 connector	XS2 30SANAM12	0.145
Accessories	S (2)				
Description			For use with	Reference	Weight kg
Plastic fixing clan 24.1 mm centres, v		crew	Ø 18 sensor, plain case	XUZ B2005	0.007
Stainless steel fix	ing bracket		Ø 12 sensor	XSZ BS12	0.060
			Ø 18 sensor	XUZ A118	0.045
			Ø 30 sensor	XSZ BS30	0.080
Connecting	cables				
Description		Туре	Cable length m	Reference	Weight kg
Pre-wired M12 co Female, 4-pin,	nnectors	Straight	2	XZC PA1141L2	0.090
stainless steel clan	nping ring		5 10	XZC PA1141L5 XZC PA1141L10	0.210
		Elbowed	-		
		LIDOMEO	2 5	XZC PA1241L2 XZC PA1241L5	0.090
			10	XZC PA1241L10	0.410
M12 jumper cable	•	Straight	2	XZC RA151140A2	0.095
Male, 3-pin, stainless steel clan		-	5	XZC RA151140A5	0.200
		L2 by L5 ; f	for a 10 m long cable r	eplace L2 by L10 .	

(1) For a 5 m long cable replace L2 by L5; for a 10 m long cable replace L2 by L10. Example: XS2 12SAPAL2 becomes XS2 12SAPAL5 with a 5 m long cable.

(2) For further information, see page 2/106.

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Schneider Blectric

Characteristics, schemes, setting-up, dimensions

Inductive proximity sensors Osiprox[®] Application, food and beverage processing series Cylindrical, stainless steel, non flush mountable Three-wire, d.c. supply, solid-state output

Characteristics							
Sensor type				XS2 ••SA••M12	x	S2 ••SA••L2	
Product certifications/app	provals			UL, CSA, CE			
Connection	Connector			M12	-		
	Pre-cabled			_	Le	ngth: 2 m	
Operating zone	Ø 12		mm	05.6	I		
	Ø 18		mm	09.6			
	Ø 30		mm	017.6			
Differential travel			%	115 of real sensing d	listance (Sr)		
Degree of protection	Conforming to IEC 60529)		IP 67	IP	68, double insulation 🗉	
	DIN 40050			IP 69 K			
Storage temperature			°C	- 40+ 85 (1)			
Operating temperature			°C	- 25+ 85			
Materials	Case			Stainless steel, grade			
	Cable			-		on-poisonous PVC, 3 x 0.34 mm ²	
Vibration resistance	Conforming to IEC 60068			25 gn, amplitude ± 2 m	im (f = 10 to 55 Hz)		
Shock resistance	Conforming to IEC 60068	8-2-27	_	50 gn, duration 11 ms			
Output state indication				Yellow LED: 4 viewing		llow LED: annular	
Rated supply voltage	innla)		V V		ion against reverse pola	цу	
Voltage limits (including r Switching capacity	ihhie)		_	1036	d short circuit protection		
Switching capacity Voltage drop, closed state	<u> </u>		mA V	≤ 200 with overload an ≤ 2	d short-circuit protection		
Current consumption, no-			mA	≤2			
Maximum switching	XS2 12SA		Hz	2500			
frequency	XS2 125A0000 XS2 18SA0000 and XS2		Hz	1000			
	XS2 30SA0000 and XS2		Hz	500			
Delays	First-up		ms	≤10			
,-	Response		ms	≤ 0.2 Ø12, ≤ 0.3 Ø18, s	≤0.6Ø30		
	Recovery		ms	≤ 0.2 Ø12, ≤ 0.7 Ø18, s			
			(1) + 1	00 °C for cleaning and si	terilization phases whilst	not in service.	
Wiring schemes							
Connector	Pre-cabled		PNP		NPN		
M12			BN/1		BN/1		
4^{3}	BU: Blue		PNP	+ BK/4 (NO)		+	
$((\bullet \bullet))$	BN: Brown BK: Black		\Diamond		BK/4	NO)	
	DR. DIACK		BU/3		BU/3	_	
See connection on page 9/4	45.						
Setting-up							
			Minii	num mounting dista	ances (mm)		
				indin inouring alon			
	3 Sn _					_	
			m				
					Rm , mRnAm		
					ε ε		
	0 E		HAH		₹ 		
	ო □∔				ε e · ·		
	ო □∔				, <u>mhthm</u> +		
		<u>(12</u>)		by side	Face to face	Facing a metal obje	ect
	ო □∔	$\overline{012}$	e≥48	by side	Face to face e ≥ 84	$\frac{\mathbf{Facing a metal obje}}{e \ge 21}$	ect
	Weeta 3	Ø 18	e≥48 e≥72		Face to face $e \ge 84$ $e \ge 144$	$\frac{\textbf{Facing a metal obje}}{e \ge 21}$	ect
	Weeta 3		e≥48		Face to face e ≥ 84	$\frac{\mathbf{Facing a metal obje}}{e \ge 21}$	ect
Dimensions	Weeta 3	Ø 18	e≥48 e≥72 e≥120)	Face to face $e \ge 84$ $e \ge 144$ $e \ge 264$	$ \begin{array}{c} $	ect
Dimensions XS2	Weeta 3	Ø 18	e≥48 e≥72 e≥120	BS12	Face to face e ≥ 84 e ≥ 144 e ≥ 264	$ \frac{Facing a metal obje}{e \ge 21} $ $ \frac{e \ge 21}{e \ge 36} $ $ e \ge 66 $ XSZ BS30	
Dimensions	Weeta 3	Ø 18	e≥48 e≥72 e≥120)	Face to face e ≥ 84 e ≥ 144 e ≥ 264	$ \begin{array}{c} $	44,45
Dimensions XS2	Weeta 3	Ø 18	e≥48 e≥72 e≥120	BS12	Face to face e ≥ 84 e ≥ 144 e ≥ 264	$ \frac{Facing a metal obje}{e \ge 21} $ $ \frac{e \ge 21}{e \ge 36} $ $ e \ge 66 $ $ XSZ BS30 $ $ \frac{118,2}{2} $	
Dimensions XS2	Object to be detected	Ø 18	e≥48 e≥72 e≥120	BS12	Face to face e ≥ 84 e ≥ 144 e ≥ 264	$ \frac{Facing a metal obje}{e \ge 21} $ $ \frac{e \ge 21}{e \ge 36} $ $ e \ge 66 $ $ XSZ BS30 $ $ \frac{118,2}{2} $	
Dimensions XS2	Object to be detected	Ø 18	e≥48 e≥72 e≥120	BS12	Face to face $e \ge 84$ $e \ge 144$ $e \ge 264$ XUZ A118 \downarrow $2,5$ \downarrow g g g g	$ \frac{Facing a metal obje}{e \ge 21} $ $ \frac{e \ge 21}{e \ge 36} $ $ e \ge 66 $ XSZ BS30	
Dimensions XS2	Object to be detected	Ø 18	e≥48 e≥72 e≥120	BS12	Face to face $e \ge 84$ $e \ge 144$ $e \ge 264$ XUZ A118 2,5	$ \frac{Facing a metal obje}{e \ge 21} $ $ \frac{e \ge 21}{e \ge 36} $ $ e \ge 66 $ $ XSZ BS30 $ $ \frac{118,2}{2} $	
Dimensions xs2	Object to be detected	Ø 18	e≥48 e≥72 e≥120	BS12	Face to face $e \ge 84$ $e \ge 144$ $e \ge 264$ XUZ A118 \downarrow $2,5$ \downarrow g g g g	$Facing a metal obje e \ge 21 e \ge 36 e \ge 66 XSZ BS30 f18,2$	44,45
Dimensions xs2	Object to be detected	Ø 18	e≥48 e≥72 e≥120 XSZ	BS12 0 0 0 0 0 0 0 0 0 0	Face to face $e \ge 84$ $e \ge 144$ $e \ge 264$ XUZ A118 \downarrow 2.5 2.5 2 2.5 2 2.5 2 2.5 2 2.5	Facing a metal obje $e \ge 21$ $e \ge 36$ $e \ge 66$ XSZ BS30 118,2 \downarrow \downarrow \downarrow \uparrow \uparrow \uparrow \uparrow \uparrow \uparrow \uparrow \uparrow	44,45
Dimensions XS2 (1) b a	Object to be detected	Ø 18	e≥48 e≥72 e≥120 XSZ	BS12 0 0 0 0 0 0 0 0 0 0	Face to face $e \ge 84$ $e \ge 144$ $e \ge 264$ XUZ A118 2,5	Facing a metal obje $e \ge 21$ $e \ge 36$ $e \ge 66$ XSZ BS30 118,2 \downarrow $f = \frac{38,10}{932,5^2}$	44,45
Dimensions XS2 (1) (1) LED	Object to be detected	Ø 18	e≥48 e≥72 e≥120 XSZ	BS12 0 0 0 0 0 0 0 0 0 0	Face to face $e \ge 84$ $e \ge 144$ $e \ge 264$ XUZ A118 $\downarrow 2.5$ $\downarrow 2.5$	$Facing a metal obje e \ge 21 e \ge 36 e \ge 66 XSZ BS30 118,2 \overbrace{2,36}^{7,92} \overbrace{2,36}^{7,92} \overbrace{38,10}^{7,92} \overbrace{338,10}^{7,92}$	44,45
Dimensions XS2 (1) (1) LED (1) LED Pre-cabled (m	Object to be detected	Ø 18	e≥48 e≥72 e≥120 XSZ	BS12	Face to face $e \ge 84$ $e \ge 144$ $e \ge 264$ XUZ A118 \downarrow 2.5 2.5 2 2.5 2 2.5 2 2.5 2 2.5	$Facing a metal obje e \ge 21 e \ge 36 e \ge 66 XSZ BS30 118,2 \overbrace{2,36}^{7,92} \overbrace{2,36}^{7,92} \overbrace{38,10}^{7,92} \overbrace{338,10}^{7,92}$	44,45
$\frac{\mathbf{Dimensions}}{\mathbf{XS2}}$	Object to be detected	Ø 18	e≥48 e≥72 e≥120 XSZ	BS12 0 5.6 11.1 3 012.5 22.4	Face to face $e \ge 84$ $e \ge 144$ $e \ge 264$ XUZ A118 $\downarrow 2.5$ $\downarrow 2.5$	Tacing a metal obje $e \ge 21$ $e \ge 36$ $e \ge 66$ XSZ BS30 118.2 7.92 7.92 7.92 7.92 7.92 7.92 $638,10$ 7.92 $638,10$ 7.92 $638,10$ 7.92 $638,10$ 7.92	44,45
$\frac{\mathbf{Dimensions}}{\mathbf{XS2}}$ (1) (1) (1) (1) (1) (1) (1) (2) (2) (2) (2) (2) (2) (2) (2) (2) (3) $($	Dbject to be detected	Ø 18	e≥48 e≥72 e≥120 XSZ	BS12	Face to face $e \ge 84$ $e \ge 144$ $e \ge 264$ XUZ A118 $\downarrow 28$ $\downarrow 28$ $\downarrow 28$ $\downarrow 28$ $\downarrow 28$ $\downarrow 144$ $e \ge 264$ $\downarrow 2.5$ $\downarrow 28$ $\downarrow 144$ $e \ge 264$	$Facing a metal obje e \ge 21 e \ge 36 e \ge 66 XSZ BS30 118,2 \overbrace{2,36}^{7,92} \overbrace{2,36}^{7,92} \overbrace{38,10}^{7,92} \overbrace{338,10}^{7,92}$	44,45
$\frac{\mathbf{Dimensions}}{\mathbf{XS2}}$	Object to be detected	Ø 18 Ø 30	e≥48 e≥72 e≥120 XSZ	BS12	Face to face $e \ge 84$ $e \ge 144$ $e \ge 264$ XUZ A118 $\downarrow 2.5$ $\downarrow 2.5$	$Facing a metal obje e \ge 21 e \ge 36 e \ge 66 XSZ BS30 118,2 \overbrace{2,36}^{7,92} \overbrace{2,36}^{7,92} \overbrace{38,10}^{7,92} \overbrace{338,10}^{7,92}$	44,45

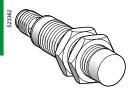
Ø : 2 elongated holes Ø 7.14 x 29.36

Inductive proximity sensors Osiprox[®] Application, food and beverage processing series Cylindrical, stainless steel, non flush mountable Two-wire, a.c. or d.c. supply

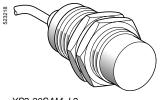
523361	

XS2 18SAMeL2

2



XS2 18SAM•U20



XS2 30SAMeL2





XSZ BS30

Ø 18, threade	d M18 x 1			
Sensing distance (Sn) mm	Function	Connection	Reference	Weight kg
12	NO	Pre-cabled (L = 2 m) (1)	XS2 18SAMAL2	0.120
		1/2" - 20UNF connector	XS2 18SAMAU20	0.060

Ø 30, threade	d M30 x 1.5			
Sensing distance (Sn) mm	Function	Connection		Weight kg
22	NO	Pre-cabled (L = 2 m) (1)	XS2 30SAMAL2	0.205
		1/2" - 20UNF connector	XS2 30SAMAU20	0.145

Connecting	cables (2)			
Description	Туре	Cable length m	Reference	Weight kg
Pre-wired connectors	Straight	5	XZC PA1865L5	0.210
1/2" - 20UNF 3-pin female, stainless		10	XZC PA1865L10	0.410
steel clamping ring	Elbowed	5	XZC PA1965L5	0.250
		10	XZC PA1965L10	0.485
Accessories				
Description		For use with	Reference	Weight kg
Stainless steel fixin	ig bracket	Ø 18 sensor	XUZ A118	0.045

Ø 30 sensor

XSZ BS30

0.080

(1) For a 5 m long cable replace L2 by L5; for a 10 m long cable replace L2 by L10. Example: XS2 18SAMAL2 becomes XS2 18SAMAL5 with a 5 m long cable.
 (2) For further information, see page 2/106.

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Characteristics, schemes, setting-up, dimensions

Inductive proximity sensors Osiprox[®] Application, food and beverage processing series Cylindrical, stainless steel, non flush mountable Two-wire, a.c. or d.c. supply

Characteristics				
Sensor type			XS2 ••SAM•U20	XS2 ••SAM•L2
Product certifications/a	pprovals		UL, CSA, C€	
Connection	Connector		1/2" - 20UNF	-
	Pre-cabled		-	Length: 2 m
Operating zone	Ø 18	mm	09.6	
	Ø 30	mm	017.6	
Differential travel		%	115 of real sensing distance (Sr)	
Degree of protection	Conforming to IEC 60529	70	IP 67	IP 68, double insulation
Degree of protection	*		IP 69 K	
<u></u>	DIN 40050			
Storage temperature		°C	- 40+ 85 (1)	
Operating temperature		°C	- 25+ 85	
Materials	Case		Stainless steel, grade 316 L	
	Cable		-	Non-poisonous PVC, 2 x 0.34 mm ²
Vibration resistance	Conforming to IEC 60068-2-6		25 gn, amplitude ± 2 mm (f = 10 to 55	Hz)
Shock resistance	Conforming to IEC 60068-2-27		50 gn, duration 11 ms	,
Output state indication			Yellow LED: 4 viewing ports at 90°	Yellow LED: annular
•		v		Tellow LED. annulai
Rated supply voltage		-	∼ or == 24240 (~ 50/60 Hz)	
Voltage limits (including	rippie)	V	~ or == 20264	
Switching capacity		mA	~ 5300 or == 5200 (2)	
Voltage drop, closed sta	te	v	≤ 5.5	
Residual current, open s	state	mA	≤0.8	
Maximum switching	XS2 18SAMeee	Hz	\sim 25 or == 1000	
frequency	XS2 30SAMeee	Hz	\sim 25 or $=$ 300	
Delays	First-up	ms	≤ 30	
Deldys	· · · · · · · · · · · · · · · · · · ·			
	Response	ms	≤ 0.5	
	Recovery	ms	≤ 0.5 XS2 18SAM●●●, ≤ 2 XS2 30SA	
			00 °C for cleaning and sterilization phas	
		(2) It is	essential to connect a 0.4 A "quick-blow	w" fuse in series with the load.
Wiring schemes				
Connector	Pre-cabled	2-wi	$ m e \sim m or =$	
1/2" - 20UNF	BU: Blue	NO or	utput	
AC/DC : 2	BN: Brown		BN/2 ~~	
$((\bullet)) = \pm 1$				
AC/DC:3				
2 3 AC/DC : 3			, → _{BU/3} L ~	
2 💛 3			1 00/3 0 1	
See connection on page 9	0/45.	'÷/ ≟`on	1	
See connection on page S)/45	'≟- ÷: on	1 connector models only	
See connection on page S	9/45.		1 connector models only	
1 0	9/45.		1	
	9/45.		1 connector models only	
1 0			1 connector models only	
			1 connector models only	mAnAm mAnAm .
	<u>+3 Sn</u> +		1 connector models only	→∭₽₽₩₽ ₽₩₽₽₩₩→₽→
Setting-up			num mounting distances (mm)	
Setting-up			1 connector models only	►
Setting-up		Minin	1 connector models only mum mounting distances (mm)	
Setting-up	<u>+3 Sn</u> +	Minin	num mounting distances (mm)	Facing a metal object
Setting-up	Object to be detected $\overline{\emptyset}$ 18	Minin	1 connector models only mum mounting distances (mm)	
Setting-up	Object to be detected $\overline{\emptyset}$ 18	Minii Minii Side I	to connector models only mum mounting distances (mm) $e^{e^{-e^{-e^{-e^{-e^{-e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e$	Facing a metal object
Setting-up		Minii Side I e ≥ 72	to connector models only mum mounting distances (mm) $e^{e^{-e^{-e^{-e^{-e^{-e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e$	Facing a metal object e ≥ 36
Setting-up	Object to be detected $\overline{\emptyset}$ 18	Minin Image: Side 1 e ≥ 72 e ≥ 120	the connector models only mum mounting distances (mm) $f = e^{-1}$ by side Face to face $e \ge 144$ o = 264	Facing a metal object e ≥ 36 e ≥ 66
Setting-up	Object to be detected $\overline{\emptyset}$ 18	Minin Image: Side 1 e ≥ 72 e ≥ 120	to connector models only mum mounting distances (mm) $e^{e^{-e^{-e^{-e^{-e^{-e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e$	Facing a metal object e ≥ 36
Setting-up	Object to be detected $\overline{\emptyset}$ 18	Minin Side e ≥ 72 e ≥ 120 XSZ	the connector models only mum mounting distances (mm) $f = e^{-e^{-e^{-e^{-e^{-e^{-e^{-e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e$	Facing a metal object e ≥ 36 e ≥ 66
Setting-up	Object to be detected $\overline{\emptyset}$ 18	Minin Image: Side 1 e ≥ 72 e ≥ 120	the connector models only mum mounting distances (mm) $f = e^{-e^{-e^{-e^{-e^{-e^{-e^{-e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e$	Facing a metal object e ≥ 36 e ≥ 66
Setting-up	Object to be detected $\overline{\emptyset}$ 18	Minin Side e ≥ 72 e ≥ 120 XSZ	the connector models only mum mounting distances (mm) $f = e^{-e^{-e^{-e^{-e^{-e^{-e^{-e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e$	Facing a metal object e ≥ 36 e ≥ 66
Setting-up	Image: Second system Image: Second system Image: Object to be detected Ø 18 Ø 30	Minin Side e ≥ 72 e ≥ 120 XSZ	f connector models only mum mounting distances (mm) $f = e^{\frac{1}{2}}$ by side f = 264 Face to face $e \ge 144$ $e \ge 264$ A118 f = f = f = f = f = f = f = f = f = f =	Facing a metal object e ≥ 36 e ≥ 66 XSZ BS30
Setting-up	Object to be detected $\overline{\emptyset}$ 18	Minin Side e ≥ 72 e ≥ 120 XSZ	f connector models only mum mounting distances (mm) $f = e^{\frac{1}{2}}$ by side f = 264 Face to face $e \ge 144$ $e \ge 264$ A118 f = f = f = f = f = f = f = f = f = f =	Facing a metal object e ≥ 36 e ≥ 66 XSZ BS30
Setting-up	Image: Second system Image: Second system Image: Object to be detected Ø 18 Ø 30	Minin Side e ≥ 72 e ≥ 120 XSZ	the connector models only mum mounting distances (mm) $f = e^{-e^{-e^{-e^{-e^{-e^{-e^{-e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e$	Facing a metal object e ≥ 36 e ≥ 66
Setting-up	Image: Second system Image: Second system Image: Object to be detected Ø 18 Ø 30	Minin Side I e ≥ 72 e ≥ 120 XSZ	the connector models only mum mounting distances (mm) $f = e^{e^{-e^{-e^{-e^{-e^{-e^{-e^{-e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e$	Facing a metal object e ≥ 36 e ≥ 66 XSZ BS30
Setting-up	Image: Second system Image: Second system Image: Object to be detected Ø 18 Ø 30	Minin Side e ≥ 72 e ≥ 120 XSZ	the connector models only mum mounting distances (mm) $f = e^{e^{-e^{-e^{-e^{-e^{-e^{-e^{-e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e$	Facing a metal object e ≥ 36 e ≥ 66 XSZ BS30
Setting-up	Image: Second system Image: Second system Image: Object to be detected Ø 18 Ø 30	Minin Side I e ≥ 72 e ≥ 120 XSZ	the connector models only mum mounting distances (mm) $f = e^{e^{-e^{-e^{-e^{-e^{-e^{-e^{-e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e$	Facing a metal object e ≥ 36 e ≥ 66 XSZ BS30
Setting-up	$\frac{3 \text{ Sn}}{0}$ $\frac{3 \text{ Sn}}{0}$ $\frac{1}{0}$	Minin Side I e ≥ 72 e ≥ 120 XSZ	the connector models only mum mounting distances (mm) $f = e^{e^{-e^{-e^{-e^{-e^{-e^{-e^{-e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e$	Facing a metal object $e \ge 36$ $e \ge 66$ XSZ BS30 7,92 28.6 7,92 28.6 44,45
Setting-up	C C C C C C C C C C C C C C	Minin Side I e ≥ 72 e ≥ 120 XSZ	the connector models only mum mounting distances (mm) $f = e^{e^{-e^{-e^{-e^{-e^{-e^{-e^{-e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e$	Facing a metal object e ≥ 36 e ≥ 66 XSZ BS30
Setting-up	$\frac{3 \text{ Sn}}{0}$ $\frac{3 \text{ Sn}}{0}$ $\frac{9 \text{ 18}}{0}$	Minin Side I e ≥ 72 e ≥ 120 XSZ	the connector models only mum mounting distances (mm) $f = e^{e^{-e^{-e^{-e^{-e^{-e^{-e^{-e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e$	Facing a metal object $e \ge 36$ $e \ge 66$ XSZ BS30 7,92 28.6 7,92 28.6 44,45
Setting-up	$\frac{3 \text{ Sn}}{6}$ $\frac{3 \text{ Sn}}{6}$ $\frac{72 \text{ 44}}{8}$	Minin Side I e ≥ 72 e ≥ 120 XSZ	the connector models only mum mounting distances (mm) $f = e^{e^{-e^{-e^{-e^{-e^{-e^{-e^{-e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e^{e$	Facing a metal object $e \ge 36$ $e \ge 66$ XSZ BS30 7,92 28,6 44,45
Setting-up	$\frac{3 \text{ Sn}}{0}$ $\frac{3 \text{ Sn}}{0}$ $\frac{9 \text{ 18}}{0}$	Minin Side I e ≥ 72 e ≥ 120 XSZ ↓ 2	the connector models only mum mounting distances (mm) the connector models only mum mounting distances (mm) the connector models only Face to face $e \ge 144$ $e \ge 264$ A118 $5 \longrightarrow 0^{18,2}$ $f \longrightarrow 0$	Facing a metal object $e \ge 36$ $e \ge 66$ XSZ BS30 7,92 2,36 7,92 44,45 44,45 6,35 7,55 7,55 7,55 7,55 7,55 7,55 7,55 7,55 7,555 7,555 7,555 7,555 7
Setting-up	$\frac{3 \text{ Sn}}{6}$ $\frac{3 \text{ Sn}}{6}$ $\frac{72 \text{ 44}}{8}$	Minin Side I e ≥ 72 e ≥ 120 XSZ ↓ 2	f connector models only mum mounting distances (mm) $f = e^{i + i + i}$ by side Face to face $e \ge 144$ $e \ge 264$ A118 $f = e^{i + i + i + i + i + i + i + i + i + i +$	Facing a metal object $e \ge 36$ $e \ge 66$ XSZ BS30 7,92 2,36 7,92 44,45 44,45 6,35 7,55 7,55 7,55 7,55 7,55 7,55 7,55 7,55 7,555 7,555 7,555 7,555 7
Setting-up	$\frac{3 \text{ Sn}}{6}$ $\frac{3 \text{ Sn}}{6}$ $\frac{72 \text{ 44}}{8}$	Minin Side I e ≥ 72 e ≥ 120 XSZ ↓ 2	the connector models only mum mounting distances (mm) the connector models only mum mounting distances (mm) the connector models only Face to face $e \ge 144$ $e \ge 264$ A118 $5 \longrightarrow 0^{18,2}$ $f \longrightarrow 0$	Facing a metal object $e \ge 36$ $e \ge 66$ XSZ BS30 7,92 28,6 44,45
Setting-up	$\frac{3 \text{ Sn}}{6}$ $\frac{3 \text{ Sn}}{6}$ $\frac{72 \text{ 44}}{8}$	Minin Side I e ≥ 72 e ≥ 120 XSZ ↓ 2	num mounting distances (mm) $f = \frac{1}{2}$ by side Face to face $e \ge 144$ $e \ge 264$ A118 $f = \frac{50}{\sqrt{918,2}}$ $f = \frac{15}{\sqrt{918,2}}$	Facing a metal object $e \ge 36$ $e \ge 66$ XSZ BS30 7,92 + 28,6 + 6,35 7,92 + 44,45 + 6,35
Setting-up	$\frac{3 \text{ Sn}}{6}$ $\frac{3 \text{ Sn}}{6}$ $\frac{72 \text{ 44}}{8}$	Minin Side I e ≥ 72 e ≥ 120 XSZ ↓ 2	the connector models only mum mounting distances (mm) the connector models only mum mounting distances (mm) the connector models only Face to face $e \ge 144$ $e \ge 264$ A118 $5 \longrightarrow 0^{18,2}$ $f \longrightarrow 0$	Facing a metal object $e \ge 36$ $e \ge 66$ XSZ BS30 7,92 + 28,6 + 6,35 7,92 + 44,45 + 6,35

Ø: 2 elongated holes Ø 7.14 x 29.36

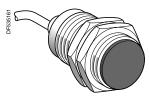
2

References

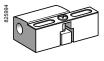
Inductive proximity sensors Osiprox[®] Application, food and beverage processing series Cylindrical, plastic, non flush mountable Three-wire, d.c. supply, solid-state output

DF36119
XS2 ••AA••L2





XS2 30AA••L2



XSZ Beee

Ø 12, threa	aded M12	x 1			
Sensing dist. (Sn) mm	Function	Output	Connection	Reference	Weight kg
7	NO	PNP	Pre-cabled (L = 2 m) (1)	XS2 12AAPAL2	0.065
			M12 connector	XS2 12AAPAM12	0.030
		NPN	Pre-cabled (L = 2 m) (1)	XS2 12AANAL2	0.065
			M12 connector	XS2 12AANAM12	0.030

Ø 18, threa	ded M18	x 1			
Sensing dist. (Sn) mm	Function	Output	Connection	Reference	Weight kg
12	NO	PNP	Pre-cabled (L = 2 m) (1)	XS2 18AAPAL2	0.100
			M12 connector	XS2 18AAPAM12	0.040
		NPN	Pre-cabled (L = 2 m) (1)	XS2 18AANAL2	0.100
			M12 connector	XS2 18AANAM12	0.040

Ø 30, threa	aded M30	x 1.5			
Sensing dist. (Sn) mm	Function	Output	Connection	Reference	Weight kg
22	NO	PNP	Pre-cabled (L = 2 m) (1)	XS2 30AAPAL2	0.140
			M12 connector	XS2 30AAPAM12	0.080
		NPN	Pre-cabled (L = 2 m) (1)	XS2 30AANAL2	0.140
			M12 connector	XS2 30AANAM12	0.080

Accessories (2)		
Description		Reference	Weight kg
Fixing clamps	Ø 12	XSZ B112	0.006
	Ø 18	XSZ B118	0.010
	Ø 30	XSZ B130	0.020

Description	Туре	Cable length m	Reference	Weight kg
Pre-wired M12 connectors Female, 4-pin,	Straight	2	XZC PA1141L2	0.09
stainless steel clamping ring		5	XZC PA1141L5	0.190
		10	XZC PA1141L10	0.370
	Elbowed	2	XZC PA1241L2	0.090
		5	XZC PA1241L5	0.190
		10	XZC PA1241L10	0.370
M12 jumper cable Male, 3-pin,	Straight	2	XZC RA151140A2	0.090
stainless steel clamping ring		5	XZC RA151140A5	0.19

For a 5 m long cable replace L2 by L5; for a 10 m long cable replace L2 by L10. Example: XS2 12AAPAL2 becomes XS2 12AAPAL5 with a 5 m long cable.
 For further information, see page 2/106.

Characteristics, schemes, setting-up, dimensions

Inductive proximity sensors Osiprox[®] Application, food and beverage

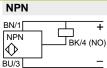
processing series Cylindrical, plastic, non flush mountable Three-wire, d.c. supply, solid-state output

Sensor type			XS2 ••AA••M12	XS2 ••AA••L2
Product certifications/app	rovals		UL, CSA, C€	
Connection	Connector		M12	-
	Pre-cabled		-	Length: 2 m
Operating zone	Ø 12	mm	05.6	
	Ø 18	mm	09.6	
	Ø 30	mm	017.6	
Differential travel		%	115 of real sensing distance (S	r)
Degree of protection	Conforming to IEC 60529		IP 67	IP 68, double insulation
-	DIN 40050		IP 69 K	•
Storage temperature		°C	- 40+ 85	
Operating temperature		°C	- 25+ 85	
Materials	Case		PPS	
	Cable		-	PvR and 3 x 0.34 mm ²
Vibration resistance	Conforming to IEC 60068-2-6		25 gn, amplitude ± 2 mm (f = 10 to	o 55 Hz)
Shock resistance	Conforming to IEC 60068-2-27		50 gn, duration 11 ms	
Output state indication			Yellow LED: annular	
Rated supply voltage		v	1248 for T - 25+ 85 °C	
Voltage limits (including ripple)		v	1058 for T - 25+ 85 °C	
Switching capacity		mA	≤ 200 with overload and short-cire	cuit protection
Voltage drop, closed state		٧	≤2	
Current consumption, no-	load	mA	≤ 10	
Maximum switching freque	ency XS2 12AA	Hz	2500	
5 1	XS2 18AA••••	Hz	1000	
	XS2 30AA	Hz	500	
Delays	First-up	ms	≤10	
-	Response	ms	≤ 0.2 Ø12, ≤ 0.3 Ø18, ≤ 0.6 Ø30	
	Recovery	ms	≤ 0.2 Ø12, ≤ 0.7 Ø18, ≤ 1.4 Ø30	
Wiring schemes				
Connector	Pre-cabled	PNP	NPN	
M12		BN/1	+ BN/1	
$\frac{4}{3}$	BU: Blue	PNP	BK/4 (NO) NPN	

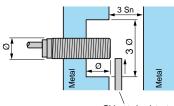
Connect	.01
M12	
4	

BU: Blue BN: Brown BK: Black

BN/1 + BK/4 (NO) PNP |BU/3

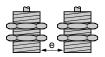


See connection on page 9/45. Setting-up



Object to be detected

Minimum mounting distances (mm)



Side by side Ø 12 e≥48 Ø 18 e≥72 e≥120

XS2

Ø 30

Face to face

e≥84

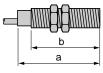
e≥144

e≥264



Facing a metal object e≥21 e≥36 e≥66

Dimensions



	Pre-cab	oled (mm)	Connector (mm)		
XS2	а	b	а	b	
Ø 12	50	42	61	43	
Ø 18	60	51	70	52	
Ø 30	60	51	70	52	

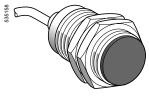
Inductive proximity sensors Osiprox[®] Application, food and beverage processing series Cylindrical, plastic, non flush mountable Two-wire, a.c. or d.c. supply

Ø 18, threaded M18 x 1

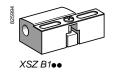
)
XS2 ••AAMeL2	



XS2 ●●AAM●U20



XS2 30AAMeL2



Sensing distance (Sn) mm	Function	Connection	Reference	Weight kg
12	NO	Pre-cabled (L = 2 m) (1)	XS2 18AAMAL2	0.100
		1/2" - 20UNF connector	XS2 18AAMAU20	0.040
Ø 30, threade	d M30 x 1.5			
Sensing distance (Sn) mm	Function	Connection	Reference	Weight kg
	Function NO	Connection Pre-cabled (L = 2 m) (1)		
(Sn) mm		Pre-cabled (L = 2 m)		kg

Accessorie	3 (2)		
Description		Reference	Weight kg
Fixing clamps	Ø 18	XSZ B118	0.010
	Ø 30	XSZ B130	0.020

Connecting	cables			
Description	Туре	Cable length m	Reference	Weight kg
Pre-wired connectors 1/2" - 20UNF 3-pin	Straight	5	XZC PA1865L5	0.180
female, stainless steel 316 L clamping ring		10	XZC PA1865L10	0.350
	Elbowed	5	XZC PA1965L5	0.180
		10	XZC PA1965L10	0.350

For a 5 m long cable replace L2 by L5; for a 10 m long cable replace L2 by L10. Example: XS2 18AAMAL2 becomes XS2 18AAMAL5 with a 5 m long cable.
 For further information, see page 2/106.

Characteristics, schemes, setting-up, dimensions

Inductive proximity sensors Osiprox[®] Application, food and beverage

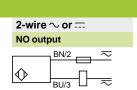
processing series Cylindrical, plastic case, non flush mountable Two-wire, a.c. or d.c. supply

Sensor type			XS2 ••AAM•U20	XS2 eeAAMeL2	
Product certifications/a	pprovals		UL, CSA, C€		
Connection	Connector		1/2" - 20UNF	-	
	Pre-cabled		-	Length: 2 m	
Operating zone	Ø 18	mm	09.6	· · · · · ·	
	Ø 30	mm	017.6		
Differential travel		%	115 of real sensing distance (Sr)		
Degree of protection	Conforming to IEC 60529		IP 67	IP 68, double insulation 🗉	
	DIN 40050		IP 69K		
Storage temperature		°C	- 40+ 85		
Operating temperature		°C	- 25+ 85		
Materials	Case		PPS		
	Cable		-	PvR and 2 x 0.34 mm ²	
Vibration resistance	Conforming to IEC 60068-2-6		25 gn, amplitude ± 2 mm (f = 10 to	55 Hz)	
Shock resistance	Conforming to IEC 60068-2-27		50 gn, duration 11 ms		
Output state indication			Yellow LED: annular		
Rated supply voltage		v	∼ or 24240 (~ 50/60 Hz)		
Voltage limits (including	ı ripple)	v	∼ or 20264		
Switching capacity		mA	~5300 or == 5200 (1)		
Voltage drop, closed sta	te	v	≤5.5		
Residual current, open s	state	mA	≤0.8		
Maximum switching	XS2 18AAMeee	Hz	\sim 25 or $=$ 1000		
frequency	XS2 30AAMeee	Hz	\sim 25 or $=$ 300		
Delays	First-up	ms	≤ 30		
	Response	ms	≤ 0.5		
	Recovery	ms	≤ 0.5 XS2 18AAM●●●, ≤ 2 XS2 30		

Wiring schemes

Connector 1/2" - 20UNF ≂:2 ≂:3

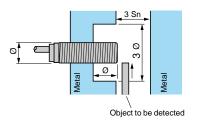
Pre-cabled BU: Blue BN: Brown



See connection on page 9/45.

3

Setting-up



Dimensions

Minimum mounting distances (mm)



Side by side



e≥144

e≥264

Facing a metal object e≥36 e≥66

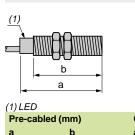
XS2

e≥72

e≥120

Ø 18

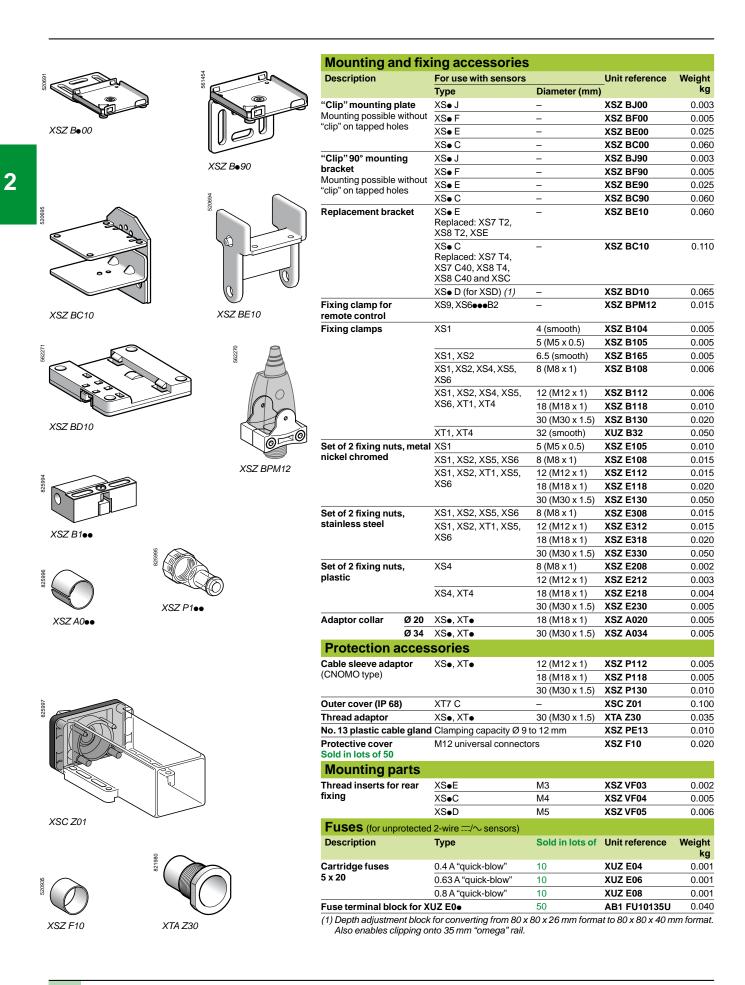
Ø 30



	(1)				
	Pre-cat	oled (mm)	Connect	or (mm)	
XS2	а	b	а	b	
Ø 18	60	51	70	52	
Ø 30	60	51	70	52	

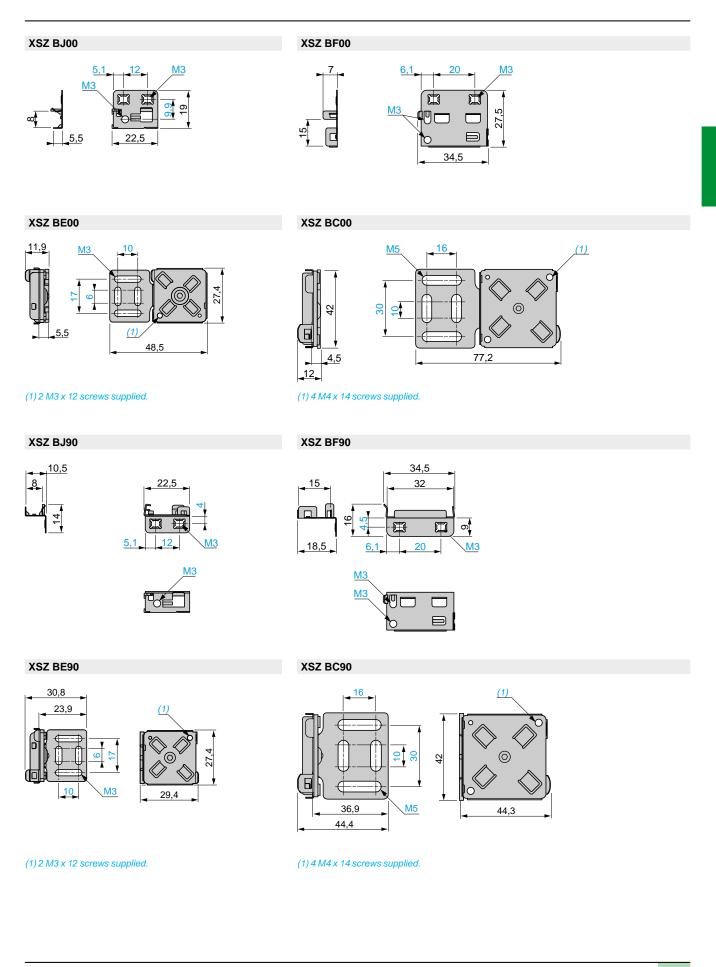
Inductive proximity sensors

Osiprox[®] Accessories



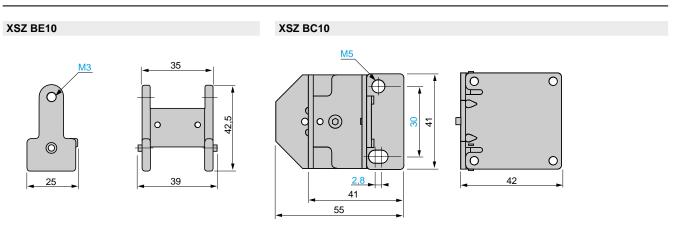


Inductive proximity sensors Osiprox[®] Accessories



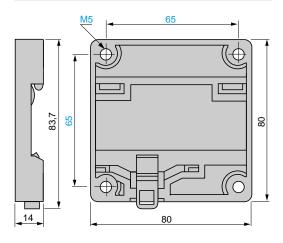
Inductive proximity sensors Osiprox®

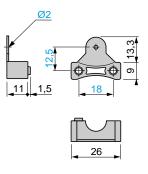
Accessories



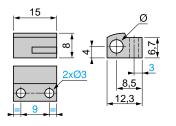
XSZ BD10 (for mounting on XSe Deeee)







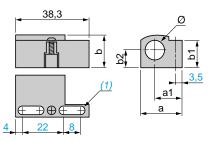
XSZ-B104, B105



B105	5		
B104	4		
XSZ	Ø		

Note: for saddle clamps XSZ B118 and XSZ B130, see setting-up recommendations page 2/17.

XSZ-B108, B112, B118, B130, B165



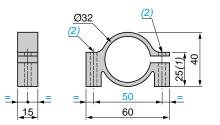
XSZ	а	a1	b	b1	b2	Ø
B108	19.9	14.5	14	12.5	7.5	8
B112	21.9	14.5	16	15.5	8.5	12
B118	26	15.7	22.3	20.1	11.5	18
B130	39	21.7	35.5	31	18.5	30
B165	19.9	14.5	14	12.5	7.5	6.5

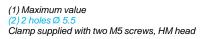
Dimensions (continued)

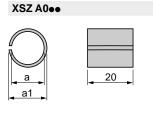
Inductive proximity sensors Osiprox[®]

Accessories



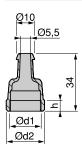




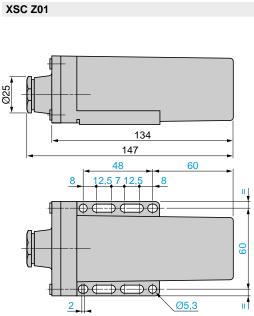


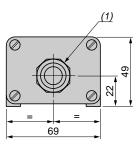
XSZ	а	a1	
A020	Ø18	Ø20	
A034	Ø30	Ø34	

XSZ P112, P118, P130

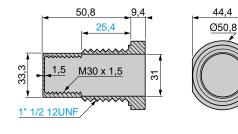


XSZ Ød1 Ød2 h P112 7 12 16.8 P118 6.2 18 23 P130 30 34.4 6.2





XTA Z30

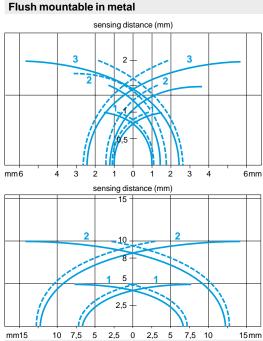


(1) No. 13 plastic cable gland

2

Inductive proximity sensors

Cylindrical type proximity sensors



Sensor (mm)	Standard steel target (mm)	Operating zone (mm)
Ø 4	5 x 5 x 1	00.8
Ø 5	5 x 5 x 1	00.8
Ø 6.5	8 x 8 x 1	01.2
Ø 8	8 x 8 x 1	01.2
Ø 12	12 x 12 x 1	01.6

pick-up points

drop-out points (object approaching from the side)
 4 (plain) XS1 and Ø 5 (M5 x 0.5) XS1

2 Ø 6.5 (plain) XS1 and Ø 8 (M8 x 1) XS5

3Ø 12 (M12 x 1) XS5

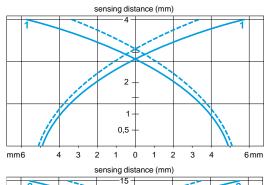
Sensor (mm)	Standard steel target (mm)	Operating zone (mm)
Ø 18	18 x 18 x 1	04
Ø 30	30 x 30 x 1	08

---- drop-out points (object approaching from the side)

1Ø 18 (M18 x 1) XS5

2Ø 30 (M30 x 1.5) XS5

	10	1,0	0	2,0	0	2,0
Non flus	h m	oun	tab	le in	me	tal



10 8

2,5

Sensor (mm)	Standard steel target (mm)	Operating zone (mm)
ð 12	12 x 12 x 1	03.2

Sensor (mm)	Standard steel target (mm)	Operating zone (mm)
Ø 18	24 x 24 x 1	06.4
Ø 30	45 x 45 x 1	012
pick-up	points	

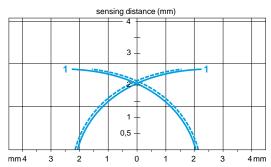
---- drop-out points (object approaching from the side)
1 Ø 18 (M18 x 1), XS4
2 Ø 30 (M30 x 1.5), XS4

mm15 15mm 10 7,5 5 2,5 0 2,5 5 7,5 10 Cylindrical type proximity sensors with increased sensing range

2

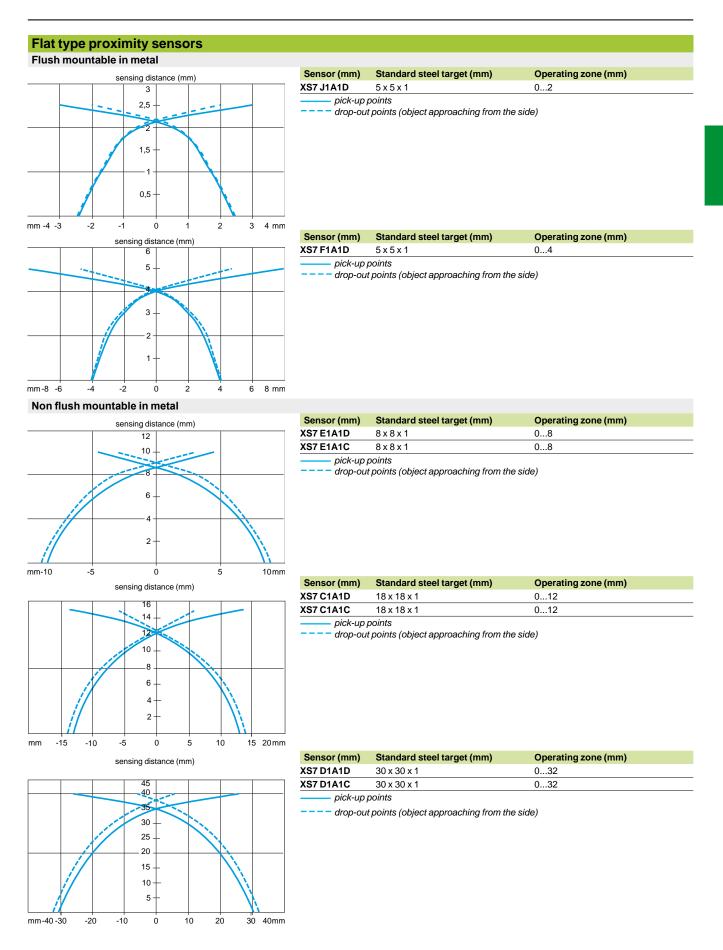
Flush mountable in metal

 $\overline{2}$



nsor (mm)	Standard steel target (mm)	Operating zone (mm)
.5	8 x 8 x 1	02
	t points (object approaching from th	

Detection curves (continued) Inductive proximity sensors



Inductive proximity sensors

Sensors with closest functionalities

Old sensor	New Osiprox sensor	Old sensor	New Osiprox sensor	Old sensor	New Osiprox sensor
Cylindrical type, d.o	c. supply				
Diameter 6.5 mm		XS1N08PA340L2	XS508B1PAL10	Diameter 12 mm	
XS1L06NA140	XS106BLNAL2	XS1N08PA340LD	XS508B1PAM8 (3)	XS1D12NA140	XS112BLNAL2
XS1L06PA140	XS106BLPAL2	XS1N08PA340S	XS508B1PAM8	XS1D12NA140D	XS112BLNAM12
		XS1N08PB340	XS508B1PBL2	XS1D12PA140	XS112BLPAL2
Diameter 8 mm		XS1N08PB340D	XS508B1PBM8 (3)	XS1D12PA140D	XS112BLPAM12
XS1D08NA140	XS108BLNAL2	XS1N08PB340L1	XS508B1PBL5	XS1D12PA140L1	XS112BLPAL5
XS1D08NA140D	XS108BLNAM12	XS1N08PB340L2	XS508B1PBL10		
XS1D08PA140	XS108BLPAL2	XS1N08PB340S	XS508B1PBM8	XS2D12NA140	XS212BLNAL2
XS1D08PA140D	XS108BLPAM12			XS2D12NA140D	XS212BLNAM12
XS1D08PA140L1	XS108BLPAL5	XS2M08NA340	XS608B1NAL2	XS2D12NA140L1	XS212BLNAL5
		XS2N08NA340	XS1N08NA349	XS2D12PA140	XS212BLPAL2
XS1M08DA210	XS508B1DAL2	XS2N08NA340D	XS1N08NA349D	XS2D12PA140D	XS212BLPAM12
XS1M08DA210D	XS508B1DAM12	XS2N08NA340L1	XS1N08NA349L1	XS2D12PA140L1	XS212BLPAL5
XS1M08DA210L1	XS508B1DAL5	XS2N08NA340L2	XS1N08NA349L2		
XS1M08DA210L2	XS508B1DAL10	XS2N08NA340S	XS1N08NA349S	XS1M12DA210	XS512B1DAL2
XS1M08DA210LD	XS508B1DAM12 (1)	XS2N08NB340	XS1N08NB349	XS1M12DA210D	XS512B1DAM12
XS1M08DA214D	XS508B1CAM12	XS2N08NB340D	XS1N08NB349D	XS1M12DA210L1	XS512B1DAL5
XS1M08DA214LD	XS508B1CAL08M12	XS2N08NB340S	XS1N08NB349S	XS1M12DA210L2	XS512B1DAL10
XS1M08DB210	XS508B1DBL2			XS1M12DA210LD	XS512B1DAM12 (1)
XS1M08DB210D	XS508B1DBM12	XS2N08PA340	XS1N08PA349	XS1M12DA214D	XS512B1CAM12
XS1M08DB210L1	XS508B1DBL5	XS2N08PA340D	XS1N08PA349D	XS1M12DA214LD	XS512B1CAL08M12
XS1M08DB210LD	XS508B1DBM12 (1)	XS2N08PA340L1	XS1N08PA349L1	XS1M12DB210	XS512B1DBL2
		XS2N08PA340L2	XS1N08PA349L2	XS1M12DB210D	XS512B1DBM12
XS1M08NA370	XS608B1NAL2	XS2N08PA340S	XS1N08PA349S	XS1M12DB210L1	XS512B1DBL5
XS1M08NA370D	XS608B1NAM12	XS2N08PB340	XS1N08PB349	XS1M12DB210L2	XS512B1DBL10
XS1M08NA370L1	XS608B1NAL5	XS2N08PB340D	XS1N08PB349D	XS1M12DB210LD	XS512B1DBM12 (1)
XS1M08NB370	XS608B1NBL2	XS2N08PB340S	XS1N08PB349S		
XS1M08NB370D	XS608B1NBM12			XS1M12NA370	XS612B1NAL2
		XS3P08NA340	XS508B1NAL2 (4)	XS1M12NA370D	XS612B1NAM12
XS1M08PA370	XS608B1PAL2	XS3P08NA340D	XS508B1NAM8 (3)(4)	XS1M12NA370L1	XS612B1NAL5
XS1M08PA370D	XS608B1PAM12	XS3P08NA340L1	XS508B1NAL5 (4)	XS1M12NA370L2	XS612B1NAL10
XS1M08PA370L1	XS608B1PAL5	XS3P08NA370	XS608B1NAL2 (4)	XS1M12NA370S	XS612B1NAM12 (2)
XS1M08PA370L2	XS608B1PAL10	XS3P08NA370L1	XS608B1NAL5 (4)	XS1M12NB370	XS612B1NBL2
XS1M08PA370LD	XS608B1PAM12 (1)			XS1M12NB370D	XS612B1NBM12
XS1M08PA370S	XS608B1PAM12 (2)	XS3P08PA340	XS508B1PAL2 (4)		
XS1M08PB370	XS608B1PBL2	XS3P08PA340D	XS508B1PAM8 (3) (4)	XS1M12PA370	XS612B1PAL2
XS1M08PB370D	XS608B1PBM12	XS3P08PA340L1	XS508B1PAL5 (4)	XS1M12PA370D	XS612B1PAM12
XS1M08PB370L1	XS608B1PBL5	XS3P08PA370	XS608B1PAL2 (4)	XS1M12PA370L1	XS612B1PAL5
XS1M08PB370L2	XS608B1PBL10	XS3P08PA370L1	XS608B1PAL5 (4)	XS1M12PA370L2	XS612B1PAL10
				XS1M12PA370LD	XS612B1PAM12 (1)
XS1N08NA340	XS508B1NAL2			XS1M12PB370	XS612B1PBL2
XS1N08NA340D	XS508B1NAM8 (3)			XS1M12PB370D	XS612B1PBM12
XS1N08NA340L1	XS508B1NAL5			XS1M12PB370L1	XS612B1PBL5
KS1N08NA340L2	XS508B1NAL10			XS1M12PB370L2	XS612B1PBL10
KS1N08NA340S	XS508B1NAM8			XS1M12PB370LD	XS612B1PAM12 (1)
XS1N08NB340	XS508B1NBL2				(')
XS1N08NB340D	XS508B1NBM8 (3)			XS1N12NA340	XS512B1NAL2
XS1N08NB340D	XS508B1NBM8 (3)			XS1N12NA340D	XS512B1NAM12
				XS1N12NA340L1	XS512B1NAL5
XS1N08PA340	XS508B1PAL2			XS1N12NA340L2	XS512B1NAL10
	XS508B1PAM8 (3)			XS1N12NB340	XS512B1NBL2
XS1N08PA340D	ABJUOD I PANIO (3)			XS1N12NB340 XS1N12NB340D	AUG 12D INDL2

(1) For the new sensor an integral M12 connector replaces the M12 connector on a 0.80 m flying lead.
(2) For the new sensor an M12 connector replaces the M8 connector.
(3) For the new sensor an M8 connector replaces the M12 connector.
(4) For the new Osiprox® sensor the metal case replaces the plastic case.

2

Sensors with closest functionalities

Inductive proximity sensors

r (continued) 12B1PAL2 12B1PAM12 12B1PAL5 12B1PAM12 (1) 12B1PAM12 (2) 12B1PAM12 (2) 12B1PBL2 12B1PBL5 12B1NAL2 12B1NAL5 12B1NAL5 12B1NAL10 12B1NBL2 12B1NBM12 12B1PAL2 12B1PAL2 12B1PAL5 12B1PAL5 12B1PAL5	XS3P12PA340L1 XS3P12PA370 XS3P12PA370 Diameter 18 mm XS1D18NA140 XS1D18NA140 XS1D18NA140L1 XS1D18PA140 XS1D18PA140D XS1D18PA140D XS2D18NA140D XS2D18NA140D XS2D18NA140D XS2D18PA140D XS2D18PA140L1 XS2D18PA140L1 XS1M18DA210 XS1M18DA210D	XS512B1PAL5 (4) XS612B1PAL2 (4) XS612B1PAL5 (4) XS118BLNAL2 XS118BLNAL2 XS118BLNAL5 XS118BLPAL2 XS118BLPAL2 XS118BLPAL2 XS218BLNAL2 XS218BLNAL2 XS218BLPAL2 XS218BLPAL2 XS218BLPAL2 XS218BLPAL2 XS218BLPAL5 XS518B1DAL2	XS1N18NA340L2 XS1N18NB340 XS1N18NB340D XS1N18NB340D XS1N18NB340L2 XS1N18PA340D XS1N18PA340D XS1N18PA340L1 XS1N18PA340L2 XS1N18PB340D XS1N18PB340D XS1N18PB340L2 XS2M18NA370 XS2M18NA370D XS2M18NA370L1 XS2M18NA370L1 XS2M18NA370L2 XS2M18NA370L2 XS2M18NA370L2	XS518B1NAL10 (6) XS518B1NBL2 XS518B1NBM12 XS518B1NBL10 XS518B1PAL2 XS518B1PAL2 XS518B1PAL2 XS518B1PAL5 XS518B1PAL10 XS518B1PBL2 XS518B1PBL10 XS518B1PBL10 XS618B1NAL2 XS618B1NAL2 XS618B1NAL5
12B1PAM12 12B1PAL5 12B1PAL10 12B1PAM12 (1) 12B1PAM12 (2) 12B1PBL2 12B1PBL5 12B1NAL2 12B1NAL2 12B1NAL5 12B1NAL0 12B1NBL2 12B1NBM12 12B1NBM12 12B1PAL2 12B1PAL2 12B1PAL5 12B1PAL10	XS3P12PA370 XS3P12PA370L1 Diameter 18 mm XS1D18NA140 XS1D18NA140D XS1D18NA140D XS1D18PA140D XS1D18PA140D XS1D18PA140D XS2D18NA140D XS2D18NA140D XS2D18PA140D XS2D18PA140D XS2D18PA140L1 XS2D18PA140L1	XS612B1PAL2 (4) XS612B1PAL5 (4) XS118BLNAL2 XS118BLNAL2 XS118BLNAL5 XS118BLPAL2 XS118BLPAL2 XS118BLPAM12 XS118BLPAL5 XS218BLNAL2 XS218BLNAL2 XS218BLPAL2 XS218BLPAL2 XS218BLPAL2 XS218BLPAL5	XS1N18NB340 XS1N18NB340D XS1N18NB340L2 XS1N18PA340 XS1N18PA340D XS1N18PA340L1 XS1N18PA340L2 XS1N18PB340 XS1N18PB340D XS1N18PB340L2 XS1N18PB340L2 XS2M18NA370 XS2M18NA370L1 XS2M18NA370L1	XS518B1NBL2 XS518B1NBL12 XS518B1NBL10 XS518B1PAL2 XS518B1PAL2 XS518B1PAL5 XS518B1PAL5 XS518B1PAL10 XS518B1PBL2 XS518B1PBL10 XS518B1PBL10 XS618B1NAL2 XS618B1NAL2 XS618B1NAL5
12B1PAM12 12B1PAL5 12B1PAL10 12B1PAM12 (1) 12B1PAM12 (2) 12B1PBL2 12B1PBL5 12B1NAL2 12B1NAL2 12B1NAL5 12B1NAL0 12B1NBL2 12B1NBM12 12B1NBM12 12B1PAL2 12B1PAL2 12B1PAL5 12B1PAL10	XS3P12PA370L1 Diameter 18 mm XS1D18NA140 XS1D18NA140D XS1D18NA140D XS1D18PA140D XS1D18PA140D XS1D18PA140D XS2D18NA140D XS2D18NA140D XS2D18PA140D XS2D18PA140D XS2D18PA140D XS2D18PA140D XS2D18PA140D	XS612B1PAL5 (4) XS118BLNAL2 XS118BLNAM12 XS118BLNAL5 XS118BLPAL2 XS118BLPAM12 XS118BLPAL5 XS218BLNAL2 XS218BLNAL2 XS218BLNAM12 XS218BLPAL2 XS218BLPAL2 XS218BLPAL5	XS1N18NB340D XS1N18NB340L2 XS1N18PA340 XS1N18PA340D XS1N18PA340L1 XS1N18PA340L2 XS1N18PB340L XS1N18PB340D XS1N18PB340L2 XS2M18NA370D XS2M18NA370L1 XS2M18NA370L1	XS518B1NBM12 XS518B1NBL10 XS518B1PAL2 XS518B1PAL5 XS518B1PAL5 XS518B1PAL10 XS518B1PBL2 XS518B1PBL2 XS518B1PBL10 XS518B1PBL10 XS618B1NAL2 XS618B1NAL2 XS618B1NAL5
12B1PAL5 12B1PAL10 12B1PAM12 (1) 12B1PAM12 (2) 12B1PBL2 12B1PBL5 12B1NAL2 12B1NAL2 12B1NAL5 12B1NAL10 12B1NBL2 12B1NBL2 12B1NBM12 12B1PAL2 12B1PAL2 12B1PAL5 12B1PAL10	Diameter 18 mm XS1D18NA140 XS1D18NA140D XS1D18NA140D XS1D18NA140L1 XS1D18PA140D XS1D18PA140D XS1D18PA140D XS1D18PA140L1 XS1D18PA140D XS1D18PA140L1 XS2D18PA140L1 XS2D18NA140D XS2D18PA140D XS2D18PA140D XS2D18PA140D XS2D18PA140D XS2D18PA140L1 XS1M18DA210 XS1M18DA210D	XS118BLNAL2 XS118BLNAM12 XS118BLNAL5 XS118BLPAL2 XS118BLPAM12 XS118BLPAL5 XS218BLNAL2 XS218BLNAL2 XS218BLNAM12 XS218BLPAL2 XS218BLPAL2 XS218BLPAL5	XS1N18NB340L2 XS1N18PA340 XS1N18PA340D XS1N18PA340L1 XS1N18PB340 XS1N18PB340 XS1N18PB340D XS1N18PB340L2 XS2M18NA370 XS2M18NA370L1 XS2M18NA370L1 XS2M18NA370L2	XS518B1NBL10 XS518B1PAL2 XS518B1PAL5 XS518B1PAL5 XS518B1PAL10 XS518B1PBL2 XS518B1PBL2 XS518B1PBL10 XS618B1NAL2 XS618B1NAL2 XS618B1NAL5
12B1PAL10 12B1PAM12 (1) 12B1PAM12 (2) 12B1PBL2 12B1PBL5 12B1NAL2 12B1NAL5 12B1NAL10 12B1NBL2 12B1NBM12 12B1NBM12 12B1PAL2 12B1PAL2 12B1PAL10	XS1D18NA140 XS1D18NA140D XS1D18NA140L1 XS1D18PA140 XS1D18PA140D XS1D18PA140D XS1D18PA140L1 XS2D18NA140 XS2D18NA140D XS2D18PA140 XS2D18PA140D XS2D18PA140L1 XS1M18DA210 XS1M18DA210	XS118BLNAM12 XS118BLNAL5 XS118BLPAL2 XS118BLPAM12 XS118BLPAL5 XS218BLNAL2 XS218BLNAM12 XS218BLPAL2 XS218BLPAL2 XS218BLPAM12 XS218BLPAL5	XS1N18PA340 XS1N18PA340D XS1N18PA340L1 XS1N18PA340L2 XS1N18PB340 XS1N18PB340D XS1N18PB340D XS1N18PB340L2 XS2M18NA370 XS2M18NA370L1 XS2M18NA370L1	XS518B1PAL2 XS518B1PAM12 XS518B1PAL5 XS518B1PAL10 XS518B1PBL2 XS518B1PBL10 XS518B1PBL10 XS618B1NAL2 XS618B1NAL2 XS618B1NAL2
12B1PAM12 (1) 12B1PAM12 (2) 12B1PBL2 12B1PBL5 12B1PBL5 12B1NAL2 12B1NAL5 12B1NAL10 12B1NBL2 12B1NBL2 12B1NBM12 12B1PAL2 12B1PAL5 12B1PAL5 12B1PAL10	XS1D18NA140 XS1D18NA140D XS1D18NA140L1 XS1D18PA140 XS1D18PA140D XS1D18PA140D XS1D18PA140L1 XS2D18NA140 XS2D18NA140D XS2D18PA140 XS2D18PA140D XS2D18PA140L1 XS1M18DA210 XS1M18DA210	XS118BLNAM12 XS118BLNAL5 XS118BLPAL2 XS118BLPAM12 XS118BLPAL5 XS218BLNAL2 XS218BLNAM12 XS218BLPAL2 XS218BLPAL2 XS218BLPAM12 XS218BLPAL5	XS1N18PA340D XS1N18PA340L1 XS1N18PA340L2 XS1N18PB340 XS1N18PB340D XS1N18PB340D XS1N18PB340L2 XS2M18NA370 XS2M18NA370D XS2M18NA370L1 XS2M18NA370L2	XS518B1PAM12 XS518B1PAL5 XS518B1PAL10 XS518B1PBL2 XS518B1PBM12 XS518B1PBL10 XS618B1NAL2 XS618B1NAL2 XS618B1NAL5
12B1PAM12 (2) 12B1PBL2 12B1PBL5 12B1NAL2 12B1NAL2 12B1NAL5 12B1NAL5 12B1NBL2 12B1NBL2 12B1NBM12 12B1PAL2 12B1PAL5 12B1PAL10	XS1D18NA140D XS1D18NA140L1 XS1D18PA140 XS1D18PA140D XS1D18PA140D XS2D18NA140 XS2D18NA140D XS2D18PA140D XS2D18PA140D XS2D18PA140D XS2D18PA140L1 XS1M18DA210 XS1M18DA210D	XS118BLNAM12 XS118BLNAL5 XS118BLPAL2 XS118BLPAM12 XS118BLPAL5 XS218BLNAL2 XS218BLNAM12 XS218BLPAL2 XS218BLPAL2 XS218BLPAM12 XS218BLPAL5	XS1N18PA340D XS1N18PA340L1 XS1N18PA340L2 XS1N18PB340 XS1N18PB340D XS1N18PB340D XS1N18PB340L2 XS2M18NA370 XS2M18NA370D XS2M18NA370L1 XS2M18NA370L2	XS518B1PAM12 XS518B1PAL5 XS518B1PAL10 XS518B1PBL2 XS518B1PBM12 XS518B1PBL10 XS618B1NAL2 XS618B1NAL2 XS618B1NAL5
12B1PBL2 12B1PBM12 12B1PBL5 12B1NAL2 12B1NAL2 12B1NAL5 12B1NAL10 12B1NBL2 12B1NBM12 12B1PAL2 12B1PAL2 12B1PAL12	XS1D18NA140L1 XS1D18PA1400 XS1D18PA140D XS1D18PA140L1 XS2D18NA1400 XS2D18NA1400 XS2D18PA1400 XS2D18PA140D XS2D18PA140L1 XS1M18DA210 XS1M18DA210	XS118BLNAL5 XS118BLPAL2 XS118BLPAM12 XS118BLPAL5 XS218BLNAL2 XS218BLNAM12 XS218BLPAL2 XS218BLPAM12 XS218BLPAM12 XS218BLPAL5	XS1N18PA340L1 XS1N18PA340L2 XS1N18PB340 XS1N18PB340D XS1N18PB340D XS1N18PB340L2 XS2M18NA370D XS2M18NA370D XS2M18NA370L1 XS2M18NA370L2	XS518B1PAL5 XS518B1PAL10 XS518B1PBL2 XS518B1PBM12 XS518B1PBL10 XS618B1NAL2 XS618B1NAL2 XS618B1NAM12 XS618B1NAL5
12B1PBM12 12B1PBL5 12B1NAL2 12B1NAL2 12B1NAL5 12B1NAL10 12B1NBL2 12B1NBM12 12B1PAL2 12B1PAL5 12B1PAL5 12B1PAL10	XS1D18PA140 XS1D18PA140D XS1D18PA140L1 XS2D18NA140 XS2D18NA140D XS2D18PA140D XS2D18PA140D XS2D18PA140L1 XS1M18DA210 XS1M18DA210D	XS118BLPAL2 XS118BLPAM12 XS118BLPAL5 XS218BLNAL2 XS218BLNAM12 XS218BLPAL2 XS218BLPAL2 XS218BLPAM12 XS218BLPAL5	XS1N18PA340L2 XS1N18PB340 XS1N18PB340D XS1N18PB340L2 XS2M18NA370 XS2M18NA370D XS2M18NA370L1 XS2M18NA370L2	XS518B1PAL10 XS518B1PBL2 XS518B1PBM12 XS518B1PBL10 XS618B1NAL2 XS618B1NAM12 XS618B1NAL5
12B1PBL5 12B1NAL2 12B1NAL5 12B1NAL5 12B1NAL10 12B1NBL2 12B1NBM12 12B1PAL2 12B1PAL5 12B1PAL10	XS1D18PA140D XS1D18PA140L1 XS2D18NA140 XS2D18NA140D XS2D18PA140 XS2D18PA140D XS2D18PA140L1 XS1M18DA210 XS1M18DA210D	XS118BLPAM12 XS118BLPAL5 XS218BLNAL2 XS218BLNAM12 XS218BLPAL2 XS218BLPAM12 XS218BLPAM12 XS218BLPAL5	XS1N18PB340 XS1N18PB340D XS1N18PB340L2 XS2M18NA370 XS2M18NA370D XS2M18NA370L1 XS2M18NA370L2	XS518B1PBL2 XS518B1PBM12 XS518B1PBL10 XS618B1NAL2 XS618B1NAM12 XS618B1NAL5
12B1NAL2 12B1NAL5 12B1NAL10 12B1NBL2 12B1NBM12 12B1PAL2 12B1PAL2 12B1PAL5 12B1PAL10	XS1D18PA140L1 XS2D18NA140 XS2D18NA140D XS2D18PA140 XS2D18PA140D XS2D18PA140L1 XS1M18DA210 XS1M18DA210D	XS118BLPAL5 XS218BLNAL2 XS218BLNAM12 XS218BLPAL2 XS218BLPAM12 XS218BLPAL5	XS1N18PB340D XS1N18PB340L2 XS2M18NA370 XS2M18NA370D XS2M18NA370L1 XS2M18NA370L2	XS518B1PBM12 XS518B1PBL10 XS618B1NAL2 XS618B1NAM12 XS618B1NAL5
12B1NAM12 12B1NAL5 12B1NAL10 12B1NBL2 12B1NBM12 12B1PAL2 12B1PAL2 12B1PAL5 12B1PAL10	XS2D18NA140 XS2D18NA140D XS2D18PA140 XS2D18PA140D XS2D18PA140D XS2D18PA140L1 XS1M18DA210 XS1M18DA210D	XS218BLNAL2 XS218BLNAM12 XS218BLPAL2 XS218BLPAM12 XS218BLPAL5	XS1N18PB340L2 XS2M18NA370 XS2M18NA370D XS2M18NA370L1 XS2M18NA370L2	XS518B1PBL10 XS618B1NAL2 XS618B1NAM12 XS618B1NAL5
12B1NAM12 12B1NAL5 12B1NAL10 12B1NBL2 12B1NBM12 12B1PAL2 12B1PAL2 12B1PAL5 12B1PAL10	XS2D18NA140D XS2D18PA140 XS2D18PA140D XS2D18PA140L1 XS1M18DA210 XS1M18DA210D	XS218BLNAM12 XS218BLPAL2 XS218BLPAM12 XS218BLPAL5	XS2M18NA370 XS2M18NA370D XS2M18NA370L1 XS2M18NA370L2	XS618B1NAL2 XS618B1NAM12 XS618B1NAL5
12B1NAL5 12B1NAL10 12B1NBL2 12B1NBM12 12B1PAL2 12B1PAM12 12B1PAL5 12B1PAL10	XS2D18NA140D XS2D18PA140 XS2D18PA140D XS2D18PA140L1 XS1M18DA210 XS1M18DA210D	XS218BLNAM12 XS218BLPAL2 XS218BLPAM12 XS218BLPAL5	XS2M18NA370D XS2M18NA370L1 XS2M18NA370L2	XS618B1NAM12 XS618B1NAL5
12B1NAL10 12B1NBL2 12B1NBM12 12B1PAL2 12B1PAM12 12B1PAL5 12B1PAL10	XS2D18PA140 XS2D18PA140D XS2D18PA140L1 XS1M18DA210 XS1M18DA210D	XS218BLPAL2 XS218BLPAM12 XS218BLPAL5	XS2M18NA370D XS2M18NA370L1 XS2M18NA370L2	XS618B1NAM12 XS618B1NAL5
12B1NBL2 12B1NBM12 12B1PAL2 12B1PAM12 12B1PAL5 12B1PAL10	XS2D18PA140D XS2D18PA140L1 XS1M18DA210 XS1M18DA210D	XS218BLPAM12 XS218BLPAL5	XS2M18NA370L1 XS2M18NA370L2	XS618B1NAL5
12B1NBM12 12B1PAL2 12B1PAM12 12B1PAL5 12B1PAL10	XS2D18PA140L1 XS1M18DA210 XS1M18DA210D	XS218BLPAL5	XS2M18NA370L2	
12B1NBM12 12B1PAL2 12B1PAM12 12B1PAL5 12B1PAL10	XS1M18DA210 XS1M18DA210D			
12B1PAL2 12B1PAM12 12B1PAL5 12B1PAL10	XS1M18DA210D	XS518B1DAL2	XS2M18NB370	XS618B1NAL10
12B1PAM12 12B1PAL5 12B1PAL10	XS1M18DA210D	XS518B1DAL2		XS618B1NBL2
12B1PAM12 12B1PAL5 12B1PAL10	XS1M18DA210D		XS2M18NB370D	XS618B1NBM12
12B1PAL5 12B1PAL10		XS518B1DAM12	XS2M18NB370L1	XS618B1NBL5
12B1PAL10	XS1M18DA210L1	XS518B1DAL5	XS2M18NB370L2	XS618B1NBL10
	XS1M18DA210L2	XS518B1DAL10		
12B1PBL2	XS1M18DA210LD	XS518B1DAM12 (1)	XS2M18PA370	XS618B1PAL2
12B1PBM12	XS1M18DA214D	XS518B1CAM12	XS2M18PA370D	XS618B1PAM12
12B1PBL5	XS1M18DA214LD	XS518B1CAL08M12	XS2M18PA370L1	XS618B1PAL5
12B1PBE3	XS1M18DB210	XS518B1DBL2	XS2M18PA370L2	XS618B1PAL10
	XS1M18DB210D	XS518B1DBM12	XS2M18PB370	XS618B1PBL2
N12NA349	XS1M18DB210LD	XS518B1DBM12 (1)	XS2M18PB370D	XS618B1PBM12
N12NA349	XO IM TODDE TOLD		XS2M18PB370L1	XS618B1PBL5
	XS1M18NA370	XS618B1NAL2	XS2M18PB370L2	XS618B1PBL10
N12NA349L1	XS1M18NA370D	XS618B1NAM12	X321010F D370L2	X3010BTFBET0
N12NA349L2	XS1M18NA370L1		VCONTONIADAO	
N12NB349		XS618B1NAL5	XS2N18NA340	XS1N18NA349 (8)
N12NB349D	XS1M18NA370L2	XS618B1NAL10	XS2N18NA340D	XS1N18NA349D (8)
	XS1M18NB370	XS618B1NBL2	XS2N18NA340L1	XS1N18NA349L1 (8)
N12PA349	XS1M18NB370D	XS618B1NBM12	XS2N18NA340L2	XS1N18NA349L2 (8)
N12PA349D	XS1M18NB370L1	XS618B1NBL5	XS2N18NB340	XS1N18NB349 (8)
N12PA349L1	XS1M18NB370L2	XS618B1NBL10	XS2N18NB340D	XS1N18NB349D (8)
N12PA349L2				
N12PB349	XS1M18PA370	XS618B1PAL2	XS2N18PA340	XS1N18PA349 (8)
N12PB349D	XS1M18PA370D	XS618B1PAM12	XS2N18PA340D	XS1N18PA349D (8)
N12PB349L1	XS1M18PA370L1	XS618B1PAL5	XS2N18PA340L1	XS1N18PA349L1 (8)
	XS1M18PA370L2	XS618B1PAL10	XS2N18PA340L2	XS1N18PA349L2 (8)
12B1NAL2 (4)	XS1M18PA370LD	XS618B1PAM12 (1)	XS2N18PB340	XS1N18PB349 (8)
12B1NAM12 (4)	XS1M18PB370	XS618B1PBL2	XS2N18PB340D	XS1N18PB349D (8)
12B1NAL5 (4)	XS1M18PB370D	XS618B1PBM12		
12B1NAL2 (4)	XS1M18PB370L1	XS618B1PBL5	XS3P18NA340	XS518B1NAL2 (4)
12B1NAL5 (4)	XS1M18PB370L2	XS618B1PBL10	XS3P18NA340D	XS518B1NAM12 (4)
			XS3P18NA340L1	XS518B1NAL5 (4)
12B1PAL2 (4)	XS1N18NA340	XS518B1NAL2	XS3P18NA370	XS618B1NAL2 (4)
	XS1N18NA340D	XS518B1NAM12	XS3P18NA370L1	XS618B1NAL5 (4)
	N12PB349D N12PB349L1 12B1NAL2 (4) 12B1NAM12 (4) 12B1NAL5 (4) 12B1NAL2 (4) 12B1NAL5 (4)	N12PB349D XS1M18PA370D N12PB349L1 XS1M18PA370L1 XS1M18PA370L2 XS1M18PA370L2 12B1NAL2 (4) XS1M18PA370LD 12B1NAM12 (4) XS1M18PB370 12B1NAL5 (4) XS1M18PB370D 12B1NAL5 (4) XS1M18PB370L1 12B1NAL5 (4) XS1M18PB370L1 12B1NAL5 (4) XS1M18PB370L2 12B1NAL5 (4) XS1M18PB370L2	N12PB349D XS1M18PA370D XS618B1PAM12 N12PB349L1 XS1M18PA370L1 XS618B1PAL5 XS1M18PA370L2 XS618B1PAL10 12B1NAL2 (4) XS1M18PA370LD XS618B1PAM12 (1) 12B1NAL12 (4) XS1M18PA370LD XS618B1PAM12 (1) 12B1NAL5 (4) XS1M18PB370 XS618B1PBM12 12B1NAL5 (4) XS1M18PB370L1 XS618B1PBM12 12B1NAL5 (4) XS1M18PB370L2 XS618B1PBL5 12B1NAL5 (4) XS1M18PB370L2 XS618B1PBL10 12B1NAL5 (4) XS1M18PB370L2 XS618B1PBL10 12B1NAL5 (4) XS1M18NA340 XS518B1NAL2 12B1PAL2 (4) XS1N18NA340D XS518B1NAL2	N12PB349D XS1M18PA370D XS618B1PAM12 XS2N18PA340D N12PB349L1 XS1M18PA370L1 XS618B1PAL5 XS2N18PA340L1 XS1M18PA370L2 XS618B1PAL10 XS2N18PA340L2 12B1NAL2 (4) XS1M18PA370LD XS618B1PAM12 (1) XS2N18PA340L2 12B1NAL2 (4) XS1M18PA370LD XS618B1PAM12 (1) XS2N18PB340 12B1NAL2 (4) XS1M18PB370 XS618B1PBL2 XS2N18PB340D 12B1NAL5 (4) XS1M18PB370D XS618B1PBM12 XS3P18NA340 12B1NAL5 (4) XS1M18PB370L2 XS618B1PBL5 XS3P18NA340 12B1NAL5 (4) XS1M18PB370L2 XS618B1PBL10 XS3P18NA340 12B1NAL5 (4) XS1M18PB370L2 XS618B1PBL10 XS3P18NA340D 12B1PAL2 (4) XS1N18NA340 XS518B1NAL2 XS3P18NA370 12B1PAL2 (4) XS1N18NA340D XS518B1NAM12 XS3P18NA370L1

For the new sensor an integral M12 connector replaces the M12 connector on a 0.80 m flying lead.
 For the new sensor an M12 connector replaces the M8 connector.
 For the new Osiprox® sensor the metal case replaces the plastic case.
 For the new Osiprox® sensor the length of the product is different.
 For the new sensor, Sn = 10 mm instead of 8 mm.

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Inductive proximity sensors

Sensors with closest functionalities

Old sensor	New Osiprox sensor	Old sensor	New Osiprox sensor	Old sensor	New Osiprox sensor
	:. supply (continued)	VOINDONADIO	VEF20P4NALO	VC2D20N/A070	VECODANALO
Diameter 18 mm		XS1N30NA340	XS530B1NAL2	XS3P30NA370	XS630B1NAL2 (4)
KS3P18PA340	XS518B1PAL2 (4)	XS1N30NA340D	XS530B1NAM12	XS3P30NA370L1	XS630B1NAL5 (4)
KS3P18PA340D	XS518B1PAM12 (4)	XS1N30NA340L1	XS530B1NAL5	VOODOODAGAG	
(S3P18PA340L1	XS518B1PAL5 (4)	V04N00N404040	XOFOOD ANAL 40	XS3P30PA340	XS530B1PAL2 (4)
KS3P18PA370	XS618B1PAL2 (4)	XS1N30NA340L2	XS530B1NAL10	XS3P30PA340D	XS530B1PAM12 (4)
KS3P18PA370L1	XS618B1PAL5 (4)	XS1N30NB340	XS530B1NBL2	XS3P30PA340L1	XS530B1PAL5 (4)
(S3P18PA370L2	XS618B1PAL10 (4)	XS1N30NB340D	XS530B1NBM12	XS3P30PA340L2	XS530B1PAL10 (4)
		VOINCORACIO	VOCODADALO	XS3P30PA370	XS630B1PAL2 (4)
Diameter 30 mm		XS1N30PA340	XS530B1PAL2	XS3P30PA370L1	XS630B1PAL5 (4)
(S1D30NA140	XS130BLNAL2	XS1N30PA340D	XS530B1PAM12	XS3P30PA370L2	XS630B1PAL10 (4)
(S1D30NA140D	XS130BLNAM12	XS1N30PA340L1	XS530B1PAL5		
(S1D30PA140	XS130BLPAL2	XS1N30PA340L2	XS530B1PAL10		
(S1D30PA140D	XS130BLPAM12	XS1N30PB340	XS530B1PBL2		
KS1D30PA140L1	XS130BLPAL5	XS1N30PB340D	XS530B1PBM12		
KS2D30NA140	XS230BLNAL2	V001/001/1070	VOCODANIALO		
KS2D30NA140D	XS230BLNAM12	XS2M30NA370	XS630B1NAL2		
(S2D30PA140	XS230BLPAL2	XS2M30NA370D	XS630B1NAM12		
(S2D30PA140D	XS230BLPAM12	XS2M30NA370L1	XS630B1NAL5		
		XS2M30NA370L2	XS630B1NAL10		
(S1M30DA210	XS530B1DAL2	XS2M30NB370	XS630B1NBL2		
(S1M30DA210D	XS530B1DAM12	XS2M30NB370D	XS630B1NBM12		
(S1M30DA210L1	XS530B1DAL5	XS2M30NB370L1	XS630B1NBL5		
(S1M30DA210L2	XS530B1DAL10	XS2M30NB370L2	XS630B1NBL10		
KS1M30DA210LD	XS530B1DAM12 (1)	V001/00 D1070	¥20000 (D.1. 0		
(S1M30DA214D	XS530B1CAM12	XS2M30PA370	XS630B1PAL2		
(S1M30DA214LD	XS530B1CAL08M12	XS2M30PA370D	XS630B1PAM12		
(S1M30DB210	XS530B1DBL2	XS2M30PA370L1	XS630B1PAL5		
KS1M30DB210D	XS530B1DBM12	XS2M30PA370L2	XS630B1PAL10		
KS1M30DB210LD	XS530B1DBM12 (1)	V001/00 DD070	VOCODADDI O		
		XS2M30PB370	XS630B1PBL2		
KS1M30NA370	XS630B1NAL2	XS2M30PB370D	XS630B1PBM12		
KS1M30NA370D	XS630B1NAM12	XS2M30PB370L1	XS630B1PBL5		
KS1M30NA370L1	XS630B1NAL5	XS2M30PB370L2	XS630B1PBL10		
KS1M30NA370L2	XS630B1NAL10	V001/001/40/0			
KS1M30NB370	XS630B1NBL2	XS2N30NA340	XS1N30NA349 (9)		
(S1M30NB370D	XS630B1NBM12	XS2N30NA340D	XS1N30NA349D (9)		
KS1M30NB370L1	XS630B1NBL5	XS2N30NA340L1	XS1N30NA349L1 (9)		
<s1m30nb370l2< td=""><td>XS630B1NBL10</td><td>XS2N30NA340L2</td><td>XS1N30NA349L2 (9)</td><td></td><td></td></s1m30nb370l2<>	XS630B1NBL10	XS2N30NA340L2	XS1N30NA349L2 (9)		
0.000000		XS2N30NB340	XS1N30NB349 (9)		
(S1M30PA349D	XS630B1PAM12 (5)	XS2N30NB340D	XS1N30NB349D (9)		
(S1M30PA370	XS630B1PAL2	VCONDODAGIO	VEANODACAD (0)		
(S1M30PA370D	XS630B1PAM12	XS2N30PA340	XS1N30PA349 (9)		
(S1M30PA370L1	XS630B1PAL5	XS2N30PA340D	XS1N30PA349D (9)		
(S1M30PA370L2	XS630B1PAL10	XS2N30PA340L1	XS1N30PA349L1 (9)		
(S1M30PA370LD	XS630B1PAM12 (1)	XS2N30PA340L2	XS1N30PA349L2 (9)		
(S1M30PB370	XS630B1PBL2	XS2N30PB340	XS1N30PB349 (9)		
(S1M30PB370D	XS630B1PBM12	XS2N30PB340D	XS1N30PB349D (9)		
KS1M30PB370L1	XS630B1PBL5	VOODOONIAGAS			
(S1M30PB370L2	XS630B1PBL10	XS3P30NA340	XS530B1NAL2 (4)		
		XS3P30NA340D	XS530B1NAM12 (4)		

(1) For the new sensor an integral M12 connector replaces the M12 connector on a 0.80 m flying lead.
(4) For the new Osiprox® sensor the metal case replaces the plastic case.
(5) For the new sensor, Sn = 15 mm instead of 20 mm.
(9) For the new sensor, Sn = 20 mm instead of 15 mm.

Inductive proximity sensors

Sensors with closest functionalities

New Osiprox sensor	Old sensor	New Osiprox sensor	Old sensor	New Osiprox sensor
c. supply				
	Diameter 18 mm		Diameter 30 mm	
XS112BLFAL2	XS1M18FA264	XS118BLFAL2	XS1M30FA264	XS130BLFAL2
XS112BLFAL10				
	XS1M18MA230	XS618B1MAL2	XS1M30MA230	XS630B1MAL2
XS612B1MAL2	XS1M18MA230K	XS618B1MAU20	XS1M30MA230K	XS630B1MAU20
XS612B1MAU20	XS1M18MA230L1	XS618B1MAL5	XS1M30MA230L1	XS630B1MAL5
XS612B1MAL5	XS1M18MA230L2	XS618B1MAL10	XS1M30MA230L2	XS630B1MAL10
XS612B1MAL10	XS1M18MA239	XS618B1MAL2 (7)	XS1M30MA239	XS630B1MAL2 (5)
XS612B1MAL2	XS1M18MA239K	XS618B1MAU20 (7)	XS1M30MB230	XS630B1MBL2
XS612B1MAU20	XS1M18MB230	XS618B1MBL2	XS1M30MB230K	XS630B1MBU20
XS612B1MBL2	XS1M18MB230K	XS618B1MBU20	XS1M30MB230L1	XS630B1MBL5
XS612B1MBU20	XS1M18MB230L1	XS618B1MBL5	XS1M30MB230L2	XS630B1MBL10
XS612B1MBL5	XS1M18MB230L2	XS618B1MBL10		
XS612B1MBL10			XS2M30MA230	XS630B1MAL2
	XS2M18MA230	XS618B1MAL2	XS2M30MA230K	XS630B1MAU20
XS612B1MAL2	XS2M18MA230K	XS618B1MAU20	XS2M30MA230L1	XS630B1MAL5
XS612B1MAU20	XS2M18MA230L1	XS618B1MAL5	XS2M30MA230L2	XS630B1MAL10
XS612B1MAL5	XS2M18MA230L2	XS618B1MAL10	XS2M30MB230	XS630B1MBL2
XS612B1MAL10	XS2M18MB230	XS618B1MBL2	XS2M30MB230K	XS630B1MBU20
XS612B1MBL2	XS2M18MB230K	XS618B1MBU20	XS2M30MB230L1	XS630B1MBL5
XS612B1MBU20	XS2M18MB230L1	XS618B1MBL5	XS2M30MB230L2	XS630B1MBL10
XS612B1MBL5	XS2M18MB230L2	XS618B1MBL10		
XS612B1MBL10			XS3P30MA230	XS630B1MAL2 (4)
	XS3P18MA230	XS618B1MAL2 (4)	XS3P30MA230K	XS630B1MAU20 (4)
XS612B1MAL2 (4)	XS3P18MA230K	XS618B1MAU20 (4)	XS3P30MA230L1	XS630B1MAL5 (4)
XS612B1MAU20 (4)	XS3P18MA230L1	XS618B1MAL5 (4)	XS3P30MA230L2	XS630B1MAL10 (4)
XS612B1MAL5 (4)	XS3P18MA230L2	XS618B1MAL10 (4)	XS3P30MB230	XS630B1MBL2 (4)
XS612B1MAL10 (4)	XS3P18MB230	XS618B1MBL2 (4)	XS3P30MB230K	XS630B1MBU20 (4)
XS612B1MBL2 (4)	XS3P18MB230A	XS618B1MBU20 (4)	XS3P30MB230L1	XS630B1MBL5 (4)
XS612B1MBU20 (4)	XS3P18MB230K	XS618B1MBU20 (4)		
XS612B1MBL5 (4)	XS3P18MB230L1	XS618B1MBL5 (4)		
	XS112BLFAL2 XS112BLFAL10 XS612B1MAL2 XS612B1MAL2 XS612B1MAL5 XS612B1MAL5 XS612B1MAL2 XS612B1MAL2 XS612B1MBL2 XS612B1MBL2 XS612B1MBL5 XS612B1MBL10 XS612B1MAL5 XS612B1MAL5 XS612B1MBL2 XS612B1MBL5 XS612B1MBL5 XS612B1MBL5 XS612B1MBL5 XS612B1MBL5 XS612B1MBL5 XS612B1MAL2 (4) XS612B1MAL2 (4) XS612B1MAL5 (4) XS612B1MAL5 (4) XS612B1MAL5 (4) XS612B1MAL5 (4) XS612B1MAL5 (4) XS612B1MAL5 (4)	Diameter 18 mm XS112BLFAL2 XS1M18FA264 XS112BLFAL10 XS1M18MA230 XS612B1MAL2 XS1M18MA230K XS612B1MAL2 XS1M18MA230L1 XS612B1MAL5 XS1M18MA230L2 XS612B1MAL5 XS1M18MA230L2 XS612B1MAL5 XS1M18MA230L2 XS612B1MAL5 XS1M18MA239K XS612B1MAL2 XS1M18MA239K XS612B1MAL2 XS1M18MA239K XS612B1MAL2 XS1M18MB230L1 XS612B1MBL2 XS1M18MB230L1 XS612B1MBL2 XS1M18MB230L1 XS612B1MBL5 XS1M18MB230L1 XS612B1MBL5 XS2M18MA230 XS612B1MAL2 XS2M18MA230L1 XS612B1MAL2 XS2M18MA230L2 XS612B1MAL5 XS2M18MB230L1 XS612B1MAL10 XS2M18MB230L1 XS612B1MBL5 XS2M18MB230L1 XS612B1MBL5 XS2M18MB230L1 XS612B1MBL5 XS2M18MB230L1 XS612B1MBL5 XS2M18MB230L1 XS612B1MBL5 XS2M18MB230L1 XS612B1MBL5 XS2M18MB230L1 XS612	Diameter 18 mmXS112BLFAL2XS1M1BFA264XS118BLFAL2XS112BLFAL10XS1M1BFA264XS118BLFAL2XS612B1MAL2XS1M1BMA230XS618B1MAL2XS612B1MAL2XS1M1BMA230KXS618B1MAL5XS612B1MAL5XS1M1BMA230L1XS618B1MAL5XS612B1MAL5XS1M1BMA230L2XS618B1MAL5XS612B1MAL10XS1M1BMA230L2XS618B1MAL2 (7)XS612B1MAL2XS1M1BMA239XS618B1MAL2 (7)XS612B1MAL2XS1M1BMA230XS618B1MAL2 (7)XS612B1MAL2XS1M1BMA230XS618B1MBL2XS612B1MAL2XS1M1BMB220KXS618B1MBL2XS612B1MBL5XS1M1BMB230L2XS618B1MBL5XS612B1MBL5XS1M1BMA230XS618B1MAL2XS612B1MBL5XS1M1BMA230XS618B1MAL2XS612B1MAL2XS2M1BMA230XS618B1MAL2XS612B1MAL2XS2M1BMA230L1XS618B1MAL2XS612B1MAL5XS2M1BMA230L2XS618B1MAL2XS612B1MAL5XS2M1BMA230L1XS618B1MAL5XS612B1MAL10XS2M1BMB230XS618B1MAL2XS612B1MAL2XS2M1BMB230L1XS618B1MAL5XS612B1MBL5XS2M1BMB230L1XS618B1MAL2 (4)XS612B1MAL2 (4)XS3P1BMA230LXS618B1MAL2 (4)XS612B1MAL2 (4)XS3P1BMA230L1XS618B1MAL2 (4)XS612B1MAL5 (4)XS3P1BMA230L1XS618B1MAL5 (4)XS612B1MAL5 (4)XS3P1BMA230L2XS618B1MAL5 (4)XS612B1MAL5 (4)XS3P1BM230AXS618B1MAL5 (4)XS612B1MAL2 (4)XS3P1BM230AXS618B1MAL2 (4)XS612B1MAL5 (4)XS3P1BM230A<	Diameter 18 mmDiameter 30 mmXS112BLFAL2 XS112BLFAL10XS1M18FA264XS118BLFAL2XS1M30FA264XS612B1MAL2XS1M18MA230XS618B1MAL2XS1M30MA230XS612B1MAL2XS1M18MA230L1XS618B1MAL20XS1M30MA230L2XS612B1MAL2XS1M18MA230L1XS618B1MAL5XS1M30MA230L2XS612B1MAL5XS1M18MA230L2XS618B1MAL10XS1M30MA230L2XS612B1MAL2XS1M18MA230L2XS618B1MAL10XS1M30MA230L2XS612B1MAL2XS1M18MA239KXS618B1MAL2 (7)XS1M30MA230XS612B1MAL2XS1M18MA239KXS618B1MBL2XS1M30M2230L1XS612B1MBL2XS1M18MB230L1XS618B1MBL2XS1M30MB230L1XS612B1MBL2XS1M18MB230L2XS618B1MBL2XS1M30MA230XS612B1MBL2XS1M18MB230L2XS618B1MBL5XS1M30MA230L2XS612B1MBL5XS1M18MB230L2XS618B1MAL2XS2M30MA230L1XS612B1MBL5XS1M18MA230L1XS618B1MAL2XS2M30MA230L1XS612B1MAL2XS2M18MA230L1XS618B1MAL2XS2M30MA230L1XS612B1MAL5XS2M18MA230L1XS618B1MAL5XS2M30MA230L1XS612B1MAL5XS2M18MB230L1XS618B1MAL5XS2M30MB230L1XS612B1MAL5XS2M18MB230L1XS618B1MAL2 (4)XS3P30MA230XS612B1MAL2XS2M18MB230L1XS618B1MAL2 (4)XS3P30MA230L1XS612B1MAL2XS2M18MB230L1XS618B1MAL2 (4)XS3P30MA230L1XS612B1MAL2XS9718MA230XS618B1MAL2 (4)XS3P30MA230L1XS612B1MAL2XS9718MA230L1XS618B1MAL5 (4)XS3P30MA230L1

(4) For the new Osiprox® sensor the metal case replaces the plastic case.
(5) For the new sensor, Sn = 15 mm instead of 20 mm.
(7) For the new sensor, Sn = 8 mm instead of 10 mm.