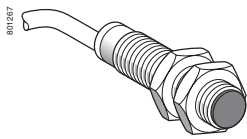


# OSICONCEPT™ Proximity Sensors

## XS6 Extended Range and Auto-Adaptable Inductive Sensor

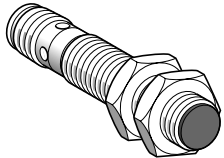
### Metal Tubular, DC and AC/DC



XS6 ••B1••L2

thread  
M8x1

thread  
M12x1



XS6 ••B1••M12

thread  
M18x1

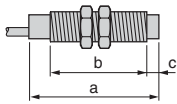
thread  
M30x1.5

#### Features:

Entire range of fully shielded metal body cylindrical inductive proximity sensors.

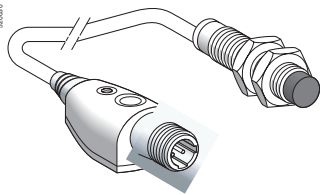
- Increased sensing range, fully shielded
- 2 wire AC/DC and 3 wire DC
- Normally Open or Normally Closed outputs available
- Cable and connector versions
- PNP or NPN, DC
- Self-Teach available on 12-30mm versions

#### Dimensions



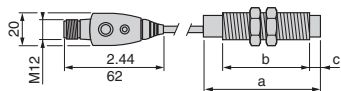
	Cable		Connector	
	a	b	a	b
∅ 8	1.9 (50)	1.6 (42)	2.4 (61)	1.6 (40)
∅ 12	1.9 (50)	1.6 (42)	2.4 (61)	1.6 (42)
∅ 18	2.3 (60)	0.09 (51)	2.8 (72.2)	2.0 (51)
∅ 30	2.3 (60)	0.09 (51)	2.8 (72.2)	2.0 (51)

inches (mm)



XS6••B2••L01M12

#### Dimensions



	Connector M12		
	a	b	c
∅ 12	1.9 (50)	1.4 (37)	0.2 (5)
∅ 18	2.3 (60)	1.5 (38.5)	0.31 (8)
∅ 30	29.9 (760)	1.5 (38.5)	0.5 (13)

inches (mm)

Dual Dimensions  $\frac{\text{inches}}{\text{mm}}$

Nominal Sensing Distance	Circuit Type	Output Mode	Voltage Range	Load Current Max.	Operating Frequency		Catalog Number
					DC	AC	
<b>8 mm Diameter, 2 m (6.6') cable ▲</b>							
2.5 mm	PNP	N.O.★	12-48 Vdc	200 mA	5000 Hz	-	XS608B1PAL2
2.5 mm	NPN	N.O.★	12-48 Vdc	200 mA	5000 Hz	-	XS608B1NAL2
<b>8 mm Diameter, M12 connector</b>							
2.5 mm	PNP	N.O.★	12-48 Vdc	200 mA	5000 Hz	-	XS608B1PAM12
2.5 mm	NPN	N.O.★	12-48 Vdc	200 mA	5000 Hz	-	XS608B1NAM12
<b>12 mm Diameter, 2 m (6.6') cable ▲</b>							
4 mm	2 wire	N.O.★	12-48 Vdc	1.5-100 mA	4000 Hz	25 Hz	XS612B1MAL2
4 mm	PNP	N.O.★	12-48 Vdc	200 mA	5000 Hz	-	XS612B1PAL2
4 mm	NPN	N.O.★	12-48 Vdc	200 mA	5000 Hz	-	XS612B1NAL2
<b>12 mm Diameter, M12 connector</b>							
4 mm	2 wire	N.O.★	24-240 Vac/24-210 Vdc	1.5-100 mA	4000 Hz	25 Hz	XS612B1MAU20
4 mm	PNP	N.O.★	12-48 Vdc	200 mA	5000 Hz	-	XS612B1PAM12
4 mm	NPN	N.O.★	12-48 Vdc	200 mA	5000 Hz	-	XS612B1NAM12
<b>18 mm Diameter, 2 m (6.6') cable ▲</b>							
8 mm	2 wire	N.O.★	24-240 Vac/24-210 Vdc	1.5-100 mA	3000 Hz	25 Hz	XS618B1MAL2
8 mm	PNP	N.O.★	12-48 Vdc	200 mA	2000 Hz	-	XS618B1PAL2
8 mm	NPN	N.O.★	12-48 Vdc	200 mA	2000 Hz	-	XS618B1NAL2
<b>18 mm Diameter, M12 connector</b>							
8 mm	2 wire	N.O.★	24-240 Vac/24-210 Vdc	1.5-100 mA	3000 Hz	25 Hz	XS618B1MAU20
8 mm	PNP	N.O.★	12-48 Vdc	200 mA	2000 Hz	-	XS618B1PAM12
8 mm	NPN	N.O.★	12-48 Vdc	200 mA	2000 Hz	-	XS618B1NAM12
<b>30 mm Diameter, 2m (6.6') cable ▲</b>							
15 mm	2 wire	N.O.★	24-240 Vac/24-210 Vdc	1.5-100 mA	2000 Hz	25 Hz	XS630B1MAL2
15 mm	PNP	N.O.★	12-48 Vdc	200 mA	1000 Hz	-	XS630B1PAL2
15 mm	NPN	N.O.★	12-48 Vdc	200 mA	1000 Hz	-	XS630B1NAL2
<b>30 mm Diameter, M12 connector</b>							
15 mm	2 wire	N.O.★	24-240 Vac/24-210 Vdc	1.5-100 mA	2000 Hz	25 Hz	XS630B1MAU20
15 mm	PNP	N.O.★	12-48 Vdc	200 mA	1000 Hz	-	XS630B1PAM12
15 mm	NPN	N.O.★	12-48 Vdc	200 mA	1000 Hz	-	XS630B1NAM12
<b>Self - Teach version♦ (Auto-Adaptable)</b>							
<b>12 mm Diameter, M12 connector pigtail 0.1m</b>							
5 mm	PNP	N.O.★	12-24 Vdc	100 mA	1000 Hz	-	XS612B2PAL01M12
5 mm	NPN	N.O.★	12-24 Vdc	100 mA	1000 Hz	-	XS612B2NAL01M12
<b>18 mm Diameter, M12 connector pigtail 0.1m</b>							
9 mm	PNP	N.O.★	12-24 Vdc	100 mA	1000 Hz	-	XS618B2PAL01M12
9 mm	NPN	N.O.★	12-24 Vdc	100 mA	1000 Hz	-	XS618B2NAL01M12
<b>30 mm Diameter, M12 connector pigtail 0.1m</b>							
15 mm	PNP	N.O.★	12-24 Vdc	100 mA	1000 Hz	-	XS630B2PAL01M12
15 mm	NPN	N.O.★	12-24 Vdc	100 mA	1000 Hz	-	XS630B2NAL01M12

★ To order a normally closed (N.C.) version change the A to B, example: XS518B1PAL2 to XS518B1PBL2.

♦ Self-teach version only

▲ 5m cable length available with L5 suffix / 10m cable length available with L10 suffix.

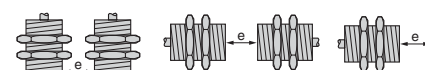
#### Minimum Mounting Clearances " (mm)

##### Auto-Adaptable



	Side by Side		Face to Face	
	Flush	Not Flush	Flush	Not Flush
∅ 12	e ≥ 0.55 (14)	1.9 (50)	e ≥ 1.9 (50)	3.9 (100)
∅ 18	e ≥ 1.1 (28)	3.9 (100)	e ≥ 3.9 (100)	7.9 (200)
∅ 30	e ≥ 1.9 (48)	7.1 (180)	e ≥ 7.1 (180)	14.1 (360)

##### Extended Range



	Side by Side		Face to Face		Face to Metal Object
	Flush	Not Flush	Flush	Not Flush	
∅ 8	e ≥ 0.1 (3)		e ≥ 0.7 (18)		e ≥ 0.17 (4.5)
∅ 12	e ≥ 0.2 (4)		e ≥ 0.9 (24)		e ≥ 0.2 (6)
∅ 18	e ≥ 0.4 (10)		e ≥ 2.4 (60)		e ≥ 0.6 (15)
∅ 30	e ≥ 0.8 (20)		e ≥ 4.7 (120)		e ≥ 1.2 (30)

# OSICONCEPT™ Proximity Sensors

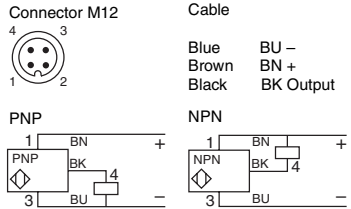
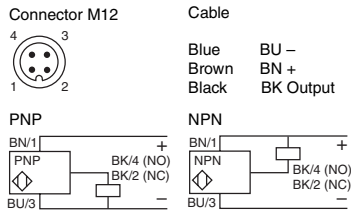
## XS6 Extended Range and Auto-Adaptable Inductive Sensor

### Metal Tubular, DC and AC/DC

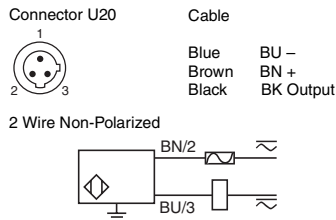
#### Specifications

#### Wiring

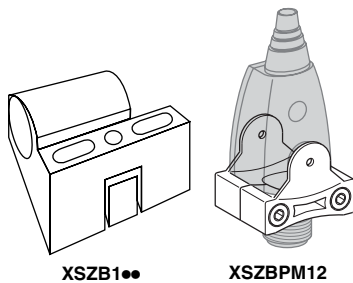
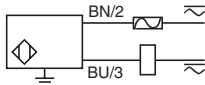
##### 3 Wire Selectable



##### 2 Wire AC/DC



##### 2 Wire Non-Polarized



XSZB100

XSZBPM12

#### Connector Cables

(M12 or D suffix; U20 or K suffix)

XSZCD101Y	Micro Conn., 4 pin, 2 m, straight
XSZCD111Y	Micro Conn., 4 pin, 2 m, 90°
XSZCK101Y	Micro Conn., 3 pin, 2 m, straight
XSZCK111Y	Micro Conn., 3 pin, 2 m, 90°

For additional cable options and lengths see p. 518

Mechanical		Extended Range	Auto-Adaptable	
			Shielded	Non-shielded
Fine Detection Zone	08 mm	0 – 2 mm	–	–
	12 mm	0 – 3.2 mm	1.7 - 3.4 mm	1.7 - 5 mm
	18 mm	0 – 6.4 mm	3.5 – 6 mm	3.5 – 9 mm
	30 mm	0 – 12 mm	6 – 12 mm	6 – 18 mm
Sn	12 mm	–	0 - 3.4 mm	0 - 5 mm
	18 mm	–	0 – 6 mm	0 – 9 mm
	30 mm	–	0 – 11 mm	0 – 18 mm
Temperature Range	Storage	-40 ° to +185 ° F (-40 ° to +85 ° C)		
	Operation	-13 ° to +158 ° F (-25 ° to +70 ° C)		
Enclosure Rating	NEMA Type	3,4X,6P,12,13		
	IEC Type	IP68 cable versions (IP67 connector versions)		
Enclosure Material	Case	Nickel Plated Brass		
	Face	PBT		
Max. Tightening Torque	08 mm	9 N•m (6.7 lb-ft)		
	12 mm	15 N•m (11 lb-ft)		
	18 mm	35 N•m (26 lb-ft)		
	30 mm	50 N•m (37 lb-ft)		
Vibration	25 g, amplitude +/- 2mm (f=10-55 Hz)			
Shock Resistance	50 g duration 11ms			
Differential (% of Sr)	15%			
Repeatability (% of Sr)	3%			
LED Indicator	Power & Teach	–		Green
	Output	Yellow		
Cable	PVR 3x0.34 mm 2/PVR2x0.5 mm <sup>2</sup>		PVR – 4.2 mm O.D.	
Connector	M12 4 pin / U20 3 pin Micro conn.		M12 Micro conn. 4 pin	
<b>Electrical</b>	<b>2 wire AC/DC</b>		<b>3 wire DC</b>	<b>Auto-adaptable DC</b>
Voltage Range	24-240 Vac; 24-210 Vdc		12 – 48 Vdc	12 - 24 Vdc
Voltage Limit (including ripple)	20-264 Vac/dc		10 – 58 Vdc	10 – 36 Vdc
Voltage Drop	5.5 V		2 V	2 V
(max.) Leakage (Residual) Current-open state	0.8 mA		–	–
Current consumption	–		10 mA	10 mA
Maximum Current Limit	AC: 5...300 mA / DC: 5...200 mA		200 mA	100 mA
Power up Delay (max.)	20 ms-12 mm / 25 ms-18/30 mm		5 ms	5ms
On Delay (max.)	08mm	–	0.2 ms	–
	12mm	0.5 ms	0.2 ms	0.3 ms
	18mm	0.5 ms	0.3 ms	0.3 ms
	30mm	0.5 ms	0.6 ms	0.3 ms
Off Delay (max.)	08mm	–	0.2 ms	–
	12mm	0.2 ms	0.2 ms	0.7 ms
	18mm	0.5 ms	0.7 ms	0.7 ms
	30mm	2 ms	1.4 ms	0.7 ms
Maximum Operating Frequency	08mm	–	2500 Hz	–
	12mm	AC: 25 Hz / DC: 1000 Hz	2500 Hz	1000 Hz
	18mm	AC: 25 Hz / DC: 1000 Hz	1000 Hz	1000 Hz
	30mm	AC: 25 Hz / DC: 500 Hz	500 Hz	1000 Hz
Protective Circuitry	Short Circuit Protection	No	Yes	Yes
	Overload Protection	Yes	Yes	Yes
	Reverse Polarity Protection	Yes	Yes	Yes
Agency Listings	UL		SP	
			CE	

#### Accessories

Description	Catalog Number
Mounting bracket for teach connector	XSZBPM12
8mm tubular mounting bracket	XSZB108
12mm tubular mounting bracket	XSZB112
18mm tubular mounting bracket	XSZB118
30mm tubular mounting bracket	XSZB130