

# 2-OsiSense® XS

## Inductive proximity sensors



**Selection guide** ..... page 2/2

- Applications Overview ..... page 2/8
- Overview ..... page 2/10

### OsiSense® XS, cylindrical

- Basic Series
  - Increased range, flush mountable ..... page 2/20
  - Standard range, flush and non-flush mountable ..... page 2/24
- General Purpose
  - Plastic, non-flush mountable ..... page 2/30
  - Miniature, flush and non-flush mountable ..... page 2/32
  - Increased range, flush mountable ..... page 2/34
  - Standard range, flush mountable ..... pages 2/40 and 2/46
  - Increased range, non-flush mountable ..... page 2/42
  - Increased range, semi-flush mountable ..... page 2/54
  - Multi-voltage, flush and non-flush mountable ..... page 2/56
  - Metal and plastic, flush and non-flush mountable ..... page 2/58
- Sensors for food/beverage and pharmaceutical applications
  - Cylindrical, stainless steel non-flush mountable ..... page 2/62
  - Cylindrical, plastic non-flush mountable ..... page 2/66

### OsiSense® XS, surface mountable type

- Flush mode using teach mode overview ..... page 2/70
- Cylindrical, adjustable range, flush and non-flush mountable ..... page 2/72
- Flat form, increased range, flush or non-flush mountable ..... page 2/74
- Flat form, standard range, flush mountable ..... page 2/76
- 80 x 80 flat form, DIN rail mounting, flush mountable ..... page 2/80
- Limit Switch Style, 5-position turret head ..... page 2/82
- Cubic 40 form, multi-position ..... page 2/86
- Sensors for assembly, packaging, conveying or light handling applications ..... page 2/88

### OsiSense® XS, application

- Sensors for rotation monitoring: overview ..... page 2/92
  - Sensors for rotation monitoring ..... page 2/93
- Sensors with analog output
  - 0 to 10 volt or 4 to 20 mA for position, displacement and deformation control/monitoring ..... page 2/96
  - 0 to 10 volt or 4 to 20 mA ..... page 2/98
  - 0 to 10 volt for position, displacement and deformation control/monitoring ..... page 2/100
  - 4 to 20 mA for position, displacement and deformation control/monitoring ..... page 2/102
- Fixed sensing distance detection for ferrous and non-ferrous materials ..... page 2/104
- Selective detection of ferrous and non-ferrous materials ..... page 2/108
- Sensors for welding machine applications ..... page 2/110
- SG Magnet Actuated Sensors ..... page 2/114

### OsiSense® XS

- Accessories ..... page 2/131
- Operating curves ..... page 2/135
- Substitution table ..... page 2/137

# OsiSense® XS

## Inductive proximity sensors

General Purpose

2

Cylindrical type

Standard range

Flush mountable



Sensing distance Sn, mm (in.)		1,5 (0.06)	2 (0.08)	5 (0.20)	10 (0.39)	
Diameter		Ø 6.5 plain and M8	M12	M18	M30	
Short case	Supply	46				
	3-wire $\text{---}$ (PNP/NPN)	50				
	2-wire $\text{---}$					
Long case	Supply	47				
	3-wire $\text{---}$ (PNP/NPN)	-				
	2-wire $\text{---}$	51				
Function	NO	•	•	•	•	
	NC	•	•	•	•	
		•	•	•	•	
Connection	Pre-cabled (L = 2 m) (1)	•	•	•	•	
	M8 connector, 3-pin (3-wire $\text{---}$ )	•	-	-	-	
	M12 connector	•	•	•	•	
	Remote connector					
Degree of protection		IP 65 and IP 67, IP 68 for pre-cabled version, IP 69K for diameters 12 to 30				
Special temperatures	-40 °C, +70 °C (-40 °F, +158 °F)	Add the suffix TF to the end of the catalog number (2)				
	-25 °C, +85 °C (-13 °F, +185 °F)	Add the suffix TT to the end of the catalog number (2)				
Catalog Number		XS506	XS508	XS512	XS518	XS530
Pages		40-52				

(1) Also available in lengths of 5 and 10 m, depending on model  
 (2) Product availability depends on model: consult the Sensor Competency Center

# OsiSense® XS

## Inductive proximity sensors

General Purpose

**Increased range**

Flush mountable



Non-flush mountable



2

2,5 (0.10)	4 (0.16)	8 (0.31)	15 (0.59)	7 (0.28)	12 (0.47)	22 (0.87)
Ø 6.5 plain and M8	M12	M18	M30	M12	M18	M30
20 and 32				–		
34				–		
36				42		
34				–	44	
–	38			–		
•	•	•	•	•	•	•
•	•	•	•	•	•	•
•	•	•	•	•	•	•
•	–	–	–	–	–	–
•	•	•	•	•	•	•
–	•	•	•	–	•	•
Remote connectors available: M8, M12, M18, screw terminal, 7/8", DIN: consult the Sensor Competency Center				IP 65 and IP 67, IP 68 for pre-cabled version, IP 69K for diameters 12 to 30		
IP 65 and IP 67, IP 68 for pre-cabled version, IP 69K for diameters 12 to 30				IP 65 and IP 67, IP 68 for pre-cabled version, IP 69K for diameters 12 to 30		
Add the suffix <b>TF</b> to the end of the catalog number (2)						
Add the suffix <b>TT</b> to the end of the catalog number (2)						
<b>XS1+6, XS606</b>	<b>XS108, XS608</b>	<b>XS112, XS612</b>	<b>XS118, XS618</b>	<b>XS130, XS630</b>	<b>XS612</b>	<b>XS618</b>
20, 34		21, 34		42		

(2) Product availability depends on model: consult the Sensor Competency Center

# OsiSense® XS

## Inductive proximity sensors

General Purpose

2

**Block type**

**Standard range**  
Flush mountable



Sensing distance Sn, mm (in.)		2.5 (0.10)	5 (0.20)	10 (0.39)
Dimensions (mm) (W x H x D)		8 x 22 x 8	15 x 32 x 8	26 x 26 x 13
<b>Supply</b>	3-wire ☐ (PNP/NPN)	Page 76		Page 78
	2-wire ☐	Page 76		Page 78
	~	-	-	-
	~	-	-	-
<b>Function</b>	NO	•	•	•
	NC	•	•	•
	NO + NC	-	-	-
	NO/NC	-	-	-
<b>Connection</b>	Pre-cabled (L = 2 m) (1)	•	•	•
	M8 connector, 3-pin (3-wire ☐)	-	-	•
	M12 connector	-	-	-
	1/2"-20UNF connector	-	-	-
	Screw terminals	-	-	-
	Remote connector	•	•	•
	M8	-	-	-
	M12	-	-	•
1/2"-20UNF	-	-	-	
Other remote connectors available		M18, screw terminal, 7/8", DIN: consult the Sensor Competency Center		
<b>Degree of protection</b>		IP 67	IP 67, double insulation ☐ or IP 68, double insulation ☐, depending on model	
<b>Special temperatures</b>	- 40 °C, + 70 °C (-40 °F, +158 °F)	Add the suffix <b>TF</b> to the end of the catalog number (2)		
	- 25 °C, + 85 °C (-13 °F, +185 °F)	Add the suffix <b>TT</b> to the end of the catalog number (2)		
<b>Catalog Number</b>		<b>XS7J</b>	<b>XS7F</b>	<b>XS7E</b>
<b>Pages</b>		76		78

(1) Also available in lengths of 5 and 10 m, depending on model  
 (2) Product availability depends on model: consult the Sensor Competency Center

# OsiSense® XS

## Inductive proximity sensors

General Purpose

Standard range		Increased range	
Flush mountable	Non-flush mountable	Flush or non-flush mountable	Flush or non-flush mountable using teach mode



2

15 (0.59)	40 (1.57)	15 (0.59)	20 (0.79)	40 (1.57)	15 (0.59)	25 (0.98)	60 (2.36)
40 x 40 x 15	80 x 80 x 26	Limit switch style			26 x 26 x 13	40 x 40 x 15	80 x 80 x 26
78		82			74		
78		82			74		
-	-	•			-		
-	-	84			74		
•	•	•	•	•	•	•	•
•	•	-	-	-	•	•	•
-	-	•	•	•	-	-	-
-	-	•	•	-	-	-	-
•	•	-	-	-	•	•	•
•	-	-	-	-	•	•	-
-	•	-	-	-	-	-	•
-	-	-	-	-	-	-	•
-	-	•	•	•	-	-	-
-	-	-	-	-	-	-	-
•	-	-	-	-	•	•	-
-	-	-	-	-	•	•	-
M18, screw terminal, 7/8", DIN: consult the Sensor Competency Center							
IP 67, double insulation ☐ or IP 68, double insulation ☐, depending on model		IP 65 and IP 67			IP 67, double insulation ☐ or IP 68, double insulation ☐, depending on model		
Add the suffix <b>TF</b> to the end of the catalog number (2)							
Add the suffix <b>TT</b> to the end of the catalog number (2)							
<b>XS7C</b>	<b>XS7D</b>	<b>XS7C40, XS8C40</b>			<b>XS8E</b>	<b>XS8C</b>	<b>XS8D</b>
78		82			74		

(2) Product availability depends on model: consult the Sensor Competency Center

# OsiSense® XS

## Inductive proximity sensors

General Purpose

2

Sensor type: flush and Non-flush mountable		Multi-voltage sensors	Sensors with two complementary outputs	
		With short-circuit protection	Solid-state PNP or NPN NO + NC outputs	Solid-state PNP + NPN, NO or NC programmable outputs
Sensing distance Sn mm (in.)	Flush mountable	2–10 (0.08–0.39)	1.5–10 (0.06–0.39)	2–10 (0.08–0.39)
	Non-flush mountable	4–15 (0.16–0.59)	2.5–15(0.10–0.59)	4–15 (0.016–0.59)
Diameter		Threaded: M12, M18, M30	Plain: Ø 6.5 Threaded: M8, M12, M18, M30	Threaded: M12, M18, M30
Case material		Nickel-plated brass	Nickel-plated brass or stainless steel or plastic	Nickel-plated brass or plastic
Supply	<ul style="list-style-type: none"> <li>11</li> <li>2</li> <li>12</li> </ul>	–	•	•
Function	NO	•	–	–
	NC	•	–	–
	NO + NC	–	•	–
	NO/NC	–	–	•
Connection	Pre-cabled (L = 2 m) (1)	•	•	•
	M8 connector, 3-pin (3-wire (3))	–	–	–
	M12 connector	–	•	•
	1/2"-20UNF connector	•	–	–
	Remote connector	Remote connectors available: M8, M12, M18, screw terminal, 7/8", DIN; consult the Sensor Competency Center		
Degree of protection	IP 67 or IP 68, depending on model			
Special temperatures	–40 °C, +70 °C (–40 °F, +158 °F)	Add the suffix <b>TF</b> to the end of the catalog number (2)		
	–25 °C, +85 °C (–13 °F, +185 °F)	Add the suffix <b>TT</b> to the end of the catalog number (2)		
Catalog Number	XS1M XS2M	XS1●●●●C410 XS2●●●●C410	XS1M●●●KP340 XS2M●●●KP340 XS4P●●●KP340	
Pages	56	58	60	

(1) Also available in lengths of 5 and 10 m, depending on model  
 (2) Product availability depends on model; consult the Sensor Competency Center  
 (3) Packed and sold in lots of 20.

# OsiSense® XS

## Inductive proximity sensors

General Purpose

Plastic case sensors	Basic sensors	Semi-flush mountable sensors	Miniature sensors
For chemical processing, marine applications	For repetitive machines		For robotic, transfer machine, assembly line applications



2

–	1.5–10 (0.06–0.39)	2.5–15 (0.10–0.59)	–	1–2.5 (0.04–0.10)
2.5–15 (0.10–0.59)	2.5–15 (0.10–0.59)	–	2.5–20 (0.10–0.79)	–
Threaded: M8, M12, M18, M30	Plain: Ø 6.5 Threaded: M8, M12, M18, M30	Plain: Ø 6.5 Threaded: M8, M12, M18, M30		Plain: Ø 4 Threaded: M5
Plastic	Nickel-plated brass or plastic	Nickel-plated brass		Nickel-plated brass or stainless steel
•	•	•	•	•
–	•	–	–	–
•	–	–	–	–
–	•	•	•	•
•	•	•	•	•
–	–	–	–	–
–	–	–	–	–
•	•	•	•	•
–	•	•	•	•
–	•	•	•	•
•	–	–	–	–
Remote connectors available: M8, M12, M18, screw terminal, 7/8", DIN; consult the Sensor Competency Center				
IP 67 or IP 68, depending on model	IP 67		IP 67 or IP 68	IP 67
Add the suffix <b>TF</b> to the end of the catalog number (2)				
Add the suffix <b>TT</b> to the end of the catalog number (2)				
XS4P	XS1●●BL● XS2●●AL● XS2●●BL●	XS1●●●B3●●●TQ (3)	XS1N●●349	XS1L XS2L XS1N
30	22	20	54	32