## XXS30P8NNM12

Ultrasonic sensor, plastic, cylindrical M30, straight, 8 m, 2 NPN



#### Main

Range of product	OsiSense XX
Sensor type	Ultrasonic sensor
Series name	General purpose
Sensor name	XXS
Sensor design	Cylindrical M30
Detection system	Diffuse Reflex
[Sn] nominal sensing distance	8 M adjustable with teach push-button 8 m software with kit
Material	Plastic
Type of output signal	Discrete
Discrete output function	2 x (1 NO or 1 NC programmable)
Wiring technique	5-wire
Discrete output type	NPN
[Us] rated supply voltage	1224 V DC with reverse polarity protection
Electrical connection	Male connector M12 5 pins
[Sd] sensing range	0.2908 m
IP degree of protection	IP65 conforming to IEC 60529 IP67

Front material         Epoxy Rubber Resin           Thread type         M30 x 1.5           Supply voltage limits         1030 V DC           Function available         Software configurable           [Sa] assured operating distance         0.2908 m (teach mode)           Blind zone         290 mm           Transmission frequency         75 kHz           Repeat accuracy         0.1 %           Deviation angle from 90° of object to be detected         412°           Minimum size of detected object         Cylinder diameter 12 mm at 1.8 m           Current consumption         50 mA           Maximum switching current         100 mA with overload and short-circuit protection           Maximum voltage drop         2 V           Switching frequency         <= 2 Hz           Setting-up         Goom me           Maximum delay first up         600 ms           Maximum delay response         300 ms           Maximum delay recovery         300 ms           Maximum delay recovery         300 ms           Maximum delay float         43.2 mm           Height         43.2 mm           Depth         116.3 mm           Not weight         0.14 kg	Complementary		
Supply voltage limits         1030 V DC           Function available         With synchronisation mode Software configurable           [Sa] assured operating distance         0.2908 m (teach mode)           Blind zone         290 mm           Transmission frequency         75 kHz           Repeat accuracy         0.1 %           Deviation angle from 90° of object to be detected         412 °           Minimum size of detected object         Cylinder diameter 12 mm at 1.8 m           Current consumption         50 mA           Maximum switching current         100 mA with overload and short-circuit protection           Maximum voltage drop         2 V           Switching frequency         <= 2 Hz	Front material	Rubber	
Function available  With synchronisation mode Software configurable  [Sa] assured operating distance  0.2908 m (teach mode)  Blind zone 290 mm  Transmission frequency 75 kHz  Repeat accuracy 0.1 %  Deviation angle from 90° of object to be detected 412°  Minimum size of detected object Cylinder diameter 12 mm at 1.8 m  Current consumption 50 mA  Maximum switching current 100 mA with overload and short-circuit protection  Maximum voltage drop 2 V  Switching frequency = 2 Hz  Setting-up Teach mode Configurator software  Maximum delay first up 600 ms  Maximum delay response 300 ms  Maximum delay recovery 300 ms  Maximum delay recovery 300 ms  Maximum delay recovery 300 ms  Maximum delay first up 43.2 mm  Height Width 43.2 mm  Depth 116.3 mm	Thread type	M30 x 1.5	
Software configurable  [Sa] assured operating distance 0.2908 m (teach mode)  Blind zone 290 mm  Transmission frequency 75 kHz  Repeat accuracy 0.1 %  Deviation angle from 90° of object to be detected 412 °  Minimum size of detected object Cylinder diameter 12 mm at 1.8 m  Current consumption 50 mA  Maximum switching current 100 mA with overload and short-circuit protection  Maximum voltage drop 2 V  Switching frequency <= 2 Hz  Setting-up Teach mode Configurator software  Maximum delay first up 600 ms  Maximum delay response 300 ms  Maximum delay recovery 300 ms  Maximum delay recovery 300 ms  Maximum delay recovery 300 ms  Maximum delay first up 43.2 mm  Height 30 mm  Width 43.2 mm  Depth 116.3 mm	Supply voltage limits	1030 V DC	
Blind zone 290 mm  Transmission frequency 75 kHz  Repeat accuracy 0.1 %  Deviation angle from 90° of object to be detected -412 °  Minimum size of detected object Cylinder diameter 12 mm at 1.8 m  Current consumption 50 mA  Maximum switching current 100 mA with overload and short-circuit protection  Maximum voltage drop 2 V  Switching frequency <= 2 Hz  Setting-up Teach mode Configurator software  Maximum delay first up 600 ms  Maximum delay response 300 ms  Maximum delay recovery 300 ms  Maximum delay recovery 300 ms  Marking CE  Threaded length 43.2 mm  Height 30 mm  Width 43.2 mm  Depth 116.3 mm	Function available		
Transmission frequency 75 kHz  Repeat accuracy 0.1 %  Deviation angle from 90° of object to be detected -412°  Minimum size of detected object Cylinder diameter 12 mm at 1.8 m  Current consumption 50 mA  Maximum switching current 100 mA with overload and short-circuit protection  Maximum voltage drop 2 V  Switching frequency <= 2 Hz  Setting-up Teach mode Configurator software  Maximum delay first up 600 ms  Maximum delay response 300 ms  Maximum delay recovery 300 ms  Marking CE  Threaded length 43.2 mm  Height 30 mm  Wridth 43.2 mm  Depth 116.3 mm	[Sa] assured operating distance	0.2908 m (teach mode)	
Repeat accuracy  Deviation angle from 90° of object to be detected  412°  Minimum size of detected object  Cylinder diameter 12 mm at 1.8 m  Current consumption  50 mA  Maximum switching current  100 mA with overload and short-circuit protection  Maximum voltage drop  2 V  Switching frequency  Setting-up  Teach mode Configurator software  Maximum delay first up  600 ms  Maximum delay response  300 ms  Maximum delay recovery  300 ms  Marking  CE  Threaded length  43.2 mm  Depth  116.3 mm	Blind zone	290 mm	
Deviation angle from 90° of object to be detected  412°  Minimum size of detected object Cylinder diameter 12 mm at 1.8 m  Current consumption 50 mA  Maximum switching current 100 mA with overload and short-circuit protection  Maximum voltage drop 2 V  Switching frequency <= 2 Hz  Setting-up Teach mode Configurator software  Maximum delay first up 600 ms  Maximum delay response 300 ms  Maximum delay recovery 300 ms  Marking CE  Threaded length 43.2 mm  Width 43.2 mm  Depth 116.3 mm	Transmission frequency	75 kHz	
Minimum size of detected object Cylinder diameter 12 mm at 1.8 m  Current consumption 50 mA  Maximum switching current 100 mA with overload and short-circuit protection  Maximum voltage drop 2 V  Switching frequency <= 2 Hz  Setting-up Teach mode Configurator software  Maximum delay first up 600 ms  Maximum delay response 300 ms  Maximum delay recovery 300 ms  Marking CE  Threaded length 43.2 mm  Width 43.2 mm  Depth 116.3 mm	Repeat accuracy	0.1 %	
Current consumption 50 mA  Maximum switching current 100 mA with overload and short-circuit protection  Maximum voltage drop 2 V  Switching frequency <= 2 Hz  Setting-up Teach mode Configurator software  Maximum delay first up 600 ms  Maximum delay response 300 ms  Maximum delay recovery 300 ms  Maximum delay recovery 300 ms  Marking CE  Threaded length 43.2 mm  Height 30 mm  Width 43.2 mm  Depth 116.3 mm	Deviation angle from 90° of object to be detected	-412 °	
Maximum switching current100 mA with overload and short-circuit protectionMaximum voltage drop2 VSwitching frequency<= 2 Hz	Minimum size of detected object	Cylinder diameter 12 mm at 1.8 m	
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Configurator software  Maximum delay first up 600 ms  Maximum delay response 300 ms  Maximum delay recovery 300 ms  Marking CE  Threaded length 43.2 mm  Height 30 mm  Width 43.2 mm  Depth 116.3 mm	Switching frequency	<= 2 Hz	
Maximum delay response         300 ms           Maximum delay recovery         300 ms           Marking         CE           Threaded length         43.2 mm           Height         30 mm           Width         43.2 mm           Depth         116.3 mm	Setting-up		
Maximum delay recovery         300 ms           Marking         CE           Threaded length         43.2 mm           Height         30 mm           Width         43.2 mm           Depth         116.3 mm	Maximum delay first up	600 ms	
Marking         CE           Threaded length         43.2 mm           Height         30 mm           Width         43.2 mm           Depth         116.3 mm	Maximum delay response	300 ms	
Threaded length         43.2 mm           Height         30 mm           Width         43.2 mm           Depth         116.3 mm	Maximum delay recovery	300 ms	
Height         30 mm           Width         43.2 mm           Depth         116.3 mm	Marking	CE	
Width         43.2 mm           Depth         116.3 mm	Threaded length	43.2 mm	
Depth 116.3 mm	Height	30 mm	
- 10°	Width	43.2 mm	
Net weight 0.14 kg	Depth	116.3 mm	
	Net weight	0.14 kg	

#### **Environment**

Standards	EN/IEC 60947-5-2	
	CSA C22.2 No 14	
	UL 508	
Product certifications	CULus	
	E2	
	EAC	
	RCM	
	Ecolab	
Ambient air temperature for operation	-2570 °C	
Ambient air temperature for storage	-4085 °C	
Vibration resistance	+/-1 mm conforming to IEC 60068-2-6 (f = 1055 Hz)	
Shock resistance	30 gn in all 3 axes for 11 ms conforming to IEC 60068-2-27	
Resistance to electrostatic discharge	8 kV conforming to IEC 61000-4-2	
Resistance to electromagnetic fields	10 V/m level 3 conforming to IEC 61000-4-3	
Resistance to fast transients	2 kV conforming to IEC 61000-4-4	

### Contractual warranty

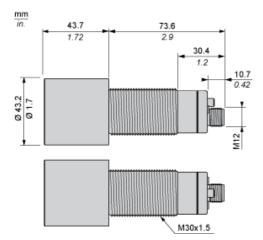
Warranty	18 months



# Product data sheet Dimensions Drawings

# XXS30P8NNM12

### **Dimensions**

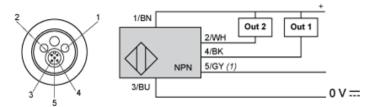


# Product data sheet Connections and Schema

### XXS30P8NNM12

#### Connections

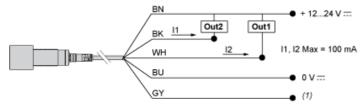
#### **Connector Wiring**



#### (1): Synchronization

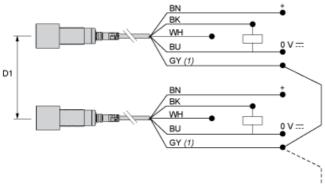
Pin number	Wire color	Description
1	BN: Brown	+1224VDC
2	WH: White	Output 2
3	BU: Blue	0 VDC
4	BK: Black	Output 1
5	GY: Grey	Synchronization

### Wiring Scheme. Digital Output (NO or NC)



#### (1): Synchronization

#### Wiring for the Synchronization Function (Side by Side Application)



(1): Synchronization

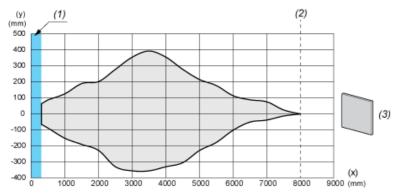
D1: 1/8 Sn BN: Brown WH: White BU: Blue BK: Black GY: Grey

NOTE: Up to 8 sensors can be synchronized to operate side by side by electrically connecting all pin no.5 (grey) wires together.

To synchronize more than 8 sensors, a PLC output can be used (the pins no.5 must be simultaneously driven by the rising edge of a pulse).

#### **Performance Curves**

### Detection Curve with 100 x 100 mm / 3.94 x 3.94 inches Square Target



(X): Target distance

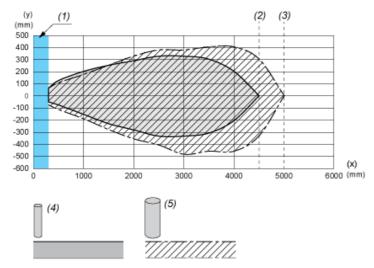
(Y): Detection limit

(1): Blind zone: 290 mm / 11.41 inches

(2): Sn max.

(3): 100 x 100 mm / 3.94 x 3.94 inches stainless steel plate

#### **Detection Curve with Round Bar**



(X): Target distance

(Y): Detection limit

(1): Blind zone: 290 mm / 11.41 inches

(2): Sn max. with Ø 10 mm / 0.394 inches cylinder

(3): Sn max. with Ø 25 mm / 0.984 inches cylinder

(4): Ø 10 mm / 0.394 inches stainless steel cylinder

(5): Ø 25 mm / 0.984 inches stainless steel cylinder