XXS30P8PPM12

Ultrasonic sensor, plastic, cylindrical M30, straight, 8 m, 4...20 mA+PNP

Main

Range of product	OsiSense XX
Sensor type	Ultrasonic sensor
Series name	General purpose
Sensor name	XXS
Sensor design	Cylindrical M30
Detection system	Diffuse
[Sn] nominal sensing distance	8 M adjustable with teach push-button 8 m software with kit
Material	Plastic
Type of output signal	Analogue + discrete
Discrete output function	1 NO or 1 NC programmable
Wiring technique	5-wire
Discrete output type	PNP
Analogue output function	4...20 mA
[Us] rated supply voltage	12...24 V DC with reverse polarity protection
Electrical connection	Male connector M12 5 pins
[Sd] sensing range	0.290…8 m
IP degree of protection	IP65 conforming to IEC 60529 IP67

Complementary

Enclosure material	PBT
Front material	Epoxy Rubber Resin
Thread type	M30 x 1.5
Supply voltage limits	10…30 V DC
Function available	With synchronisation mode Software configurable
[Sa] assured operating distance	0.290…8 m (teach mode)
Blind zone	290 mm
Transmission frequency	75 kHz
Repeat accuracy	0.1 %
Deviation angle from 90° of object to be detected	-4…12 °
Minimum size of detected object	Cylinder diameter 12 mm at 1.8 m
Status LED	Output state: 1 LED (green/yellow) Output state: 1 LED (multi-colour) Echo state: 1 LED (green)
Current consumption	50 mA
Maximum switching current	100 mA with overload and short-circuit protection
Maximum switching capacity	250 Ohm with 12 V DC overload and short-circuit protection 850 Ohm with 24 V DC
Maximum voltage drop	2 V
Switching frequency	<= 2 Hz
Setting-up	Teach mode Configurator software
Maximum delay first up	600 ms
Maximum delay recovery	500 ms

| Marking	CE
Threaded length	43.2 mm
Height	30 mm
Width	43.2 mm
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	-25…70 °C
Ambient air temperature for storage	-40…85 °C
Vibration resistance	+/-1 mm conforming to IEC 60068-2-6 (f = 10…55 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

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Dimensions

XXS30P8PPM12
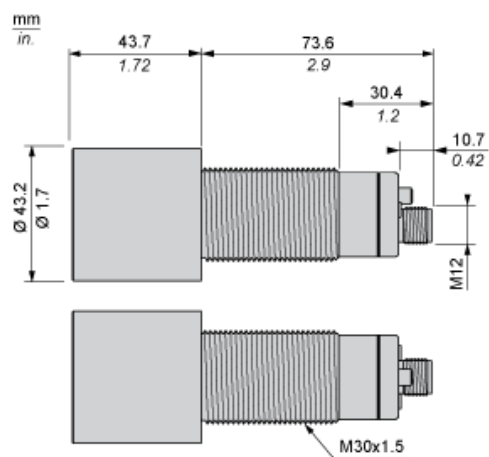
Connections

Connector Wiring
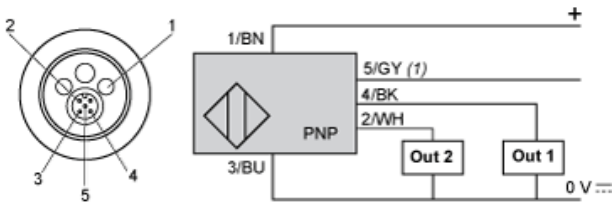
(1) : Synchronization

Pin number	Wire color	Description
1	BN: Brown	+12…24VDC
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)
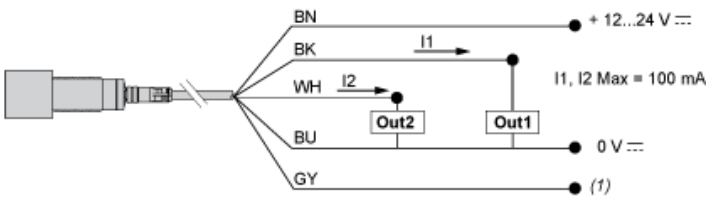
(1) : Synchronization

Wiring for the Synchronization Function (Side by Side Application)
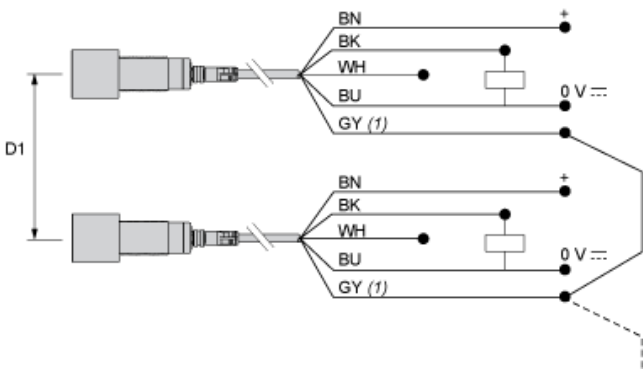
(1) : Synchronization
D1 : 1/8 Sn
BN : Brown
WH : White
BU : Blue
BK : Black
GY : Grey

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).
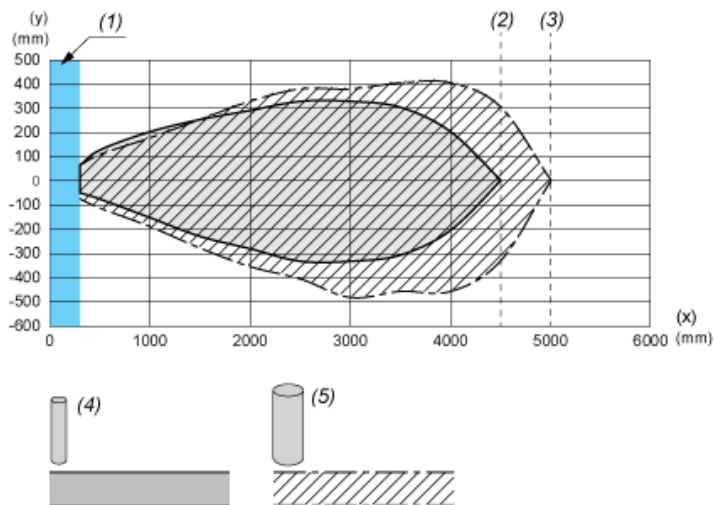
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Performance Curves

Detection Curve with 100 x 100 mm / 3.94 x 3.94 inches Square Target
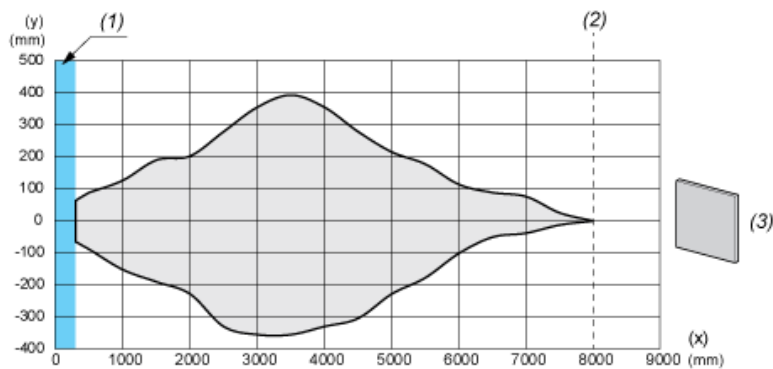
(X) : Target distance
(Y) : Detection limit
(1) : Blind zone: 290 mm / 11.41 inches
(2) : Sn max.
(3) : 100 x 100 mm / 3.94 x 3.94 inches stainless steel plate

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