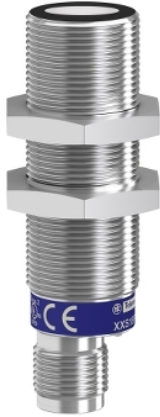# XXS18S1AM12

Ultrasonic sensors XX, ultrasonic sensor cylindrical M18, Sn=1 m, analog 4 20 mA, SYNC, connector M12

Green Premium Product

Main

Range of product	Telemecanique Ultrasonic sensors XX
Sensor type	Ultrasonic sensor
Series name	General purpose
Sensor name	XXS
Sensor design	Cylindrical M18
Detection system	Diffuse
[Sn] nominal sensing distance	1 M adjustable with remote teach push-button 1 m software with kit
Material	Metal
Type of output signal	Analogue
Wiring technique	5-wire
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	0.105…1 m
IP degree of protection	IP65 conforming to IEC 60529 IP67

Complementary

Enclosure material	Stainless steel 316L
Front material	Epoxy Rubber Resin
Supply voltage limits	10…30 V DC
Function available	With synchronisation mode Software configurable
[Sa] assured operating distance	0.105…1 m (teach mode)
Blind zone	105 mm
Transmission frequency	200 kHz
Repeat accuracy	0.1 %
Deviation angle from 90° of object to be detected	-10…10 °
Minimum size of detected object	Cylinder diameter 1 mm at 600 mm
Status LED	Output state: 1 LED (yellow) Echo state: 1 LED (green)
Current consumption	30 mA
Maximum switching capacity	250 Ohm with 12 V DC overload and short-circuit protection 850 Ohm with 24 V DC
Setting-up	Teach mode Configurator software
Maximum delay first up	180 ms
Maximum delay recovery	100 ms
Marking	CE
Threaded length	45 mm
Height	18 mm
Width	18 mm

Depth	64 mm
Net weight	0.05 kg

Environment

|	
Standards	EN/IEC 60947-5-2 CSA C22.2 No 14 UL 508
Product certifications	EAC CULus E2 RCM Ecolab
Ambient air temperature for operation	-25…70 °C
Ambient air temperature for storage	-40…80 °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 level 4 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	1 kV level 3 conforming to IEC 61000-4-4

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	49.986 g
Package 1 Height	4.1 cm
Package 1 width	6.4 cm
Package 1 Length	9.4 cm
Unit Type of Package 2	CAR
Number of Units in Package 2	1
Package 2 Weight	50 g
Package 2 Height	4.1 cm
Package 2 width	6.4 cm
Package 2 Length	9.4 cm
Unit Type of Package 3	S01
Number of Units in Package 3	5
Package 3 Weight	475 g
Package 3 Height	15 cm
Package 3 width	15 cm
Package 3 Length	40 cm

## Offer Sustainability

Sustainable offer status	Green Premium product
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) ⬚EU RoHS Declaration
Mercury free	Yes
RoHS exemption information	⬚Yes
Environmental Disclosure	⬚Product Environmental Profile
California proposition 65	WARNING: This product can expose you to chemicals including: Diisononyl phthalate (DINP), which is known to the State of California to cause cancer, and Di-isodecyl phthalate (DIDP), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

Dimensions
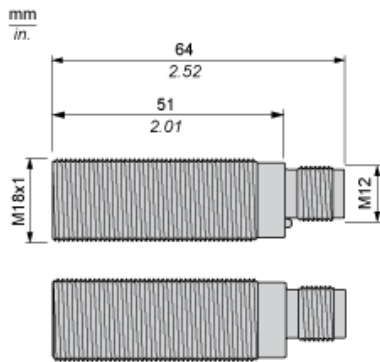
Connections

Connector Wiring
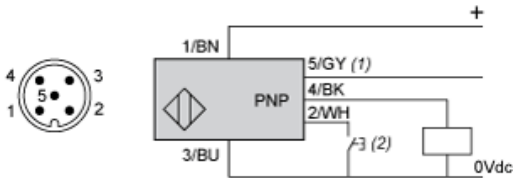
(1) : Synchronization
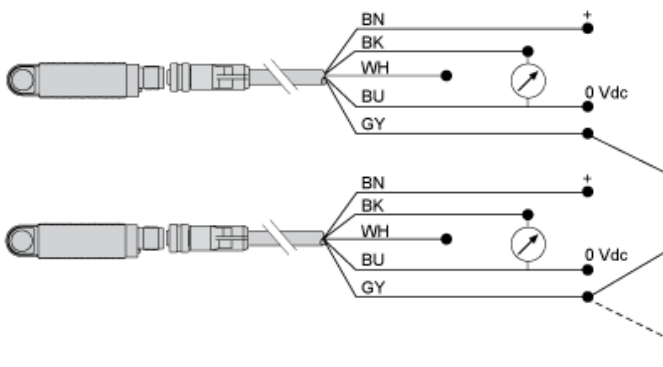(2) : External setting pushbutton or XXZPB100 remote teach pushbutton.

Pin number	Wire color	Description
1	BN: Brown	+12…24VDC
2	WH: White	Input teach
3	BU: Blue	0 VDC
4	BK: Black	Output
5	GY: Grey	Synchronization

Wiring Scheme

(1) : Synchronization

4-20 mA:	For 12 VDC, load ≤ 250 Ω
	For 24 VDC, load ≤ 850 Ω

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

BN : Brown
WH : White
BU : Blue
BK : Black
GY : Grey

NB: To enable synchronization between several sensors, all of the wires of pin no.5 (Grey) must be electrically connected together.A maximum of 8 sensors can be synchronized. To enable "Multiplexer" function for the sensors, use the XX Configuration Software.Without synchronization or multiplexing, the sensors must be at least 50 cm away from each other in order to avoid mutual interference.
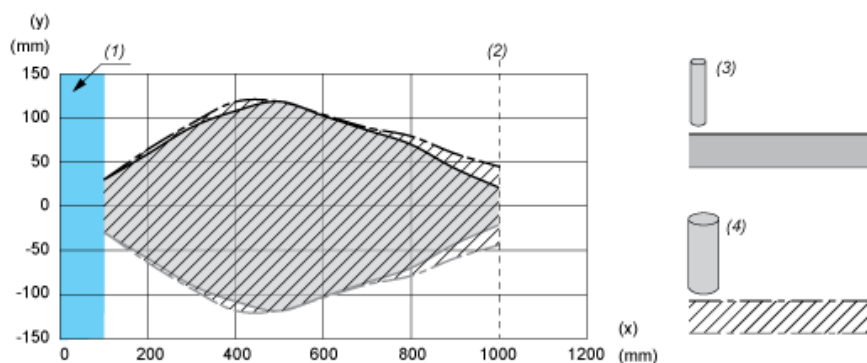
Performance Curves

Detection Curve with 100 x 100 mm / 3.94 x 3.94 in. Square Target
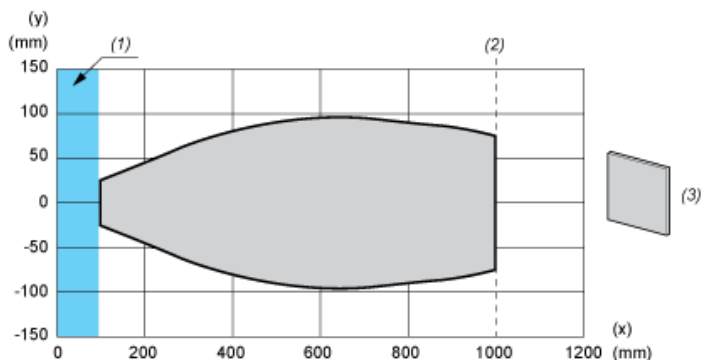
(x)   Target distance
(y)   Detection limit
(1) : Blind zone: 105 mm
(2) : Sn max.
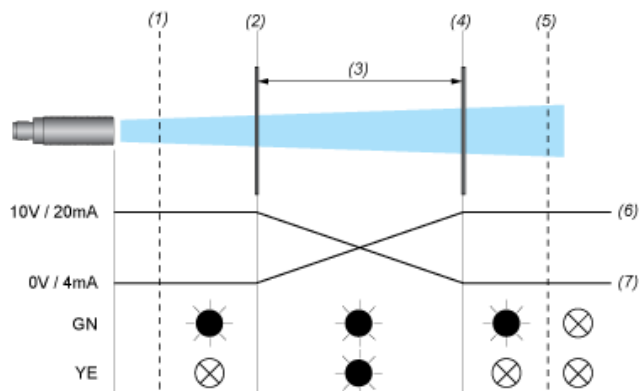(3) : 100 x 100 mm / 3.94 x 3.94 in. stainless steel plate

Detection Curve with Round Bar

(x)   Target distance
(y)   Detection limit
(1) : Blind zone: 105 mm
(2) : Sn max.
(3) : Ø 10 mm / 0.394 in. stainless steel cylinder
(4) : Ø 25 mm / 0.984 in. stainless steel cylinder

Operating Diagram

Near and Far Limits Setting with Teach Procedure

(1) : Blind zone
(2) : Near limit
(3) : Sensing window
(4) : Far limit
(5) : Sn max
(6) : Inverse
(7) : Direct
(8) : ON
(9) : OFF
GN : Green LED
YE : Yellow LED