XXA30S1AM12

Ultrasonic sensors XX, ultrasonic sensor, stainless steel, cylindrical M30, angled, 1 m, 4...20 mA

Green Premium™ Product

Main

Range of product	Telemecanique Ultrasonic sensors XX
Sensor type	Ultrasonic sensor
Series name	General purpose
Sensor name	XXA
Sensor design	Cylindrical M30
Detection system	Diffuse (with 90° head)
[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	0.155…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	0.155…1 m (teach mode)
Blind zone	155 mm
Transmission frequency	120 kHz
Repeat accuracy	0.1 %
Deviation angle from 90° of object to be detected	-15…15 °
Minimum size of detected object	Cylinder diameter 1 mm at 1 m
Status LED	Output state: 1 LED (yellow) Echo state: 1 LED (green)
Current consumption	65 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	74.7 mm
Height	30 mm
Width	30 mm

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Depth	129.6 mm
Net weight	0.17 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…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 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

Packing Units

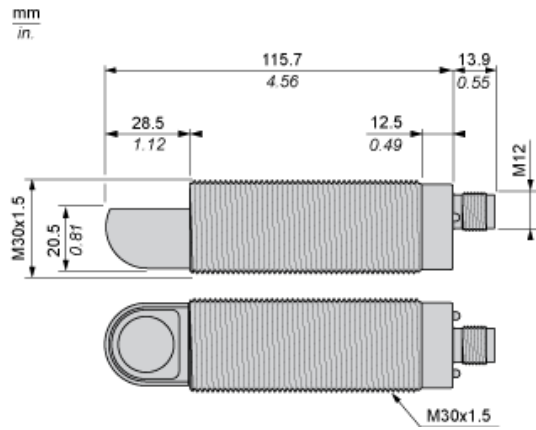|	
Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	235 g
Package 1 Height	13 cm
Package 1 width	4.1 cm
Package 1 Length	9.5 cm

Offer Sustainability

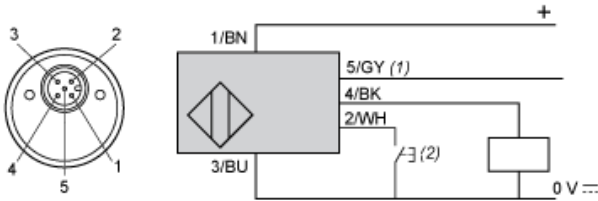|	
Sustainable offer status	Green Premium product
REACh Regulation	REACh Declaration
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Mercury free	Yes
RoHS exemption information	Yes
Environmental Disclosure	Product Environmental Profile
California proposition 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

Contractual warranty

Warranty	18 months

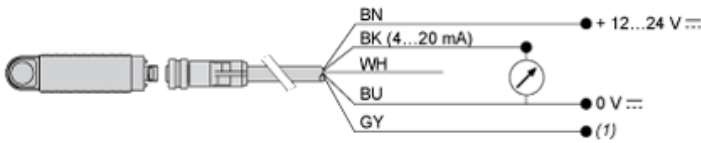## Dimensions

Connections

Connector Wiring

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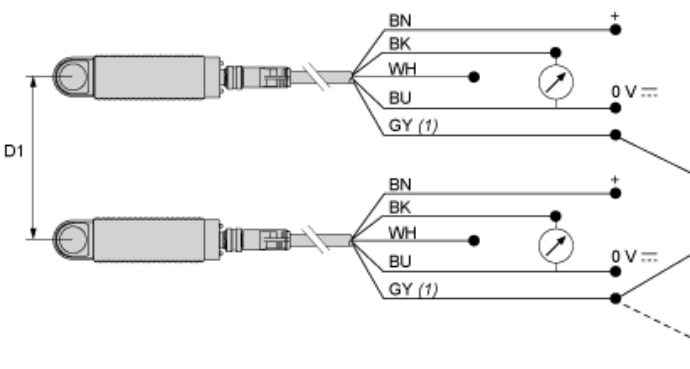(2) : External setting pushbutton or XXZPB100 remote teach pushbutton.

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. Analog Output

(1) : Synchronization

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

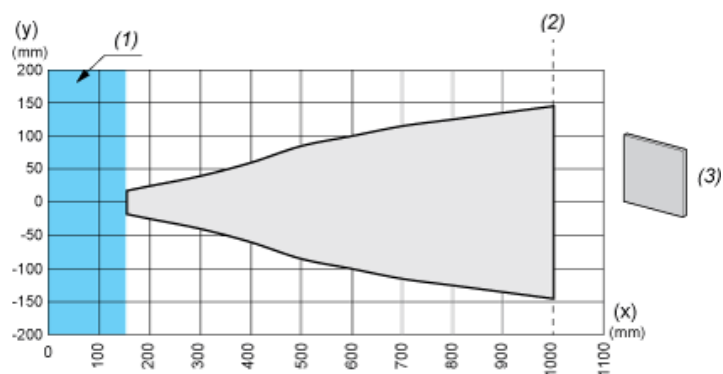### Wiring for the Synchronization Function (Side by Side Application)

(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).
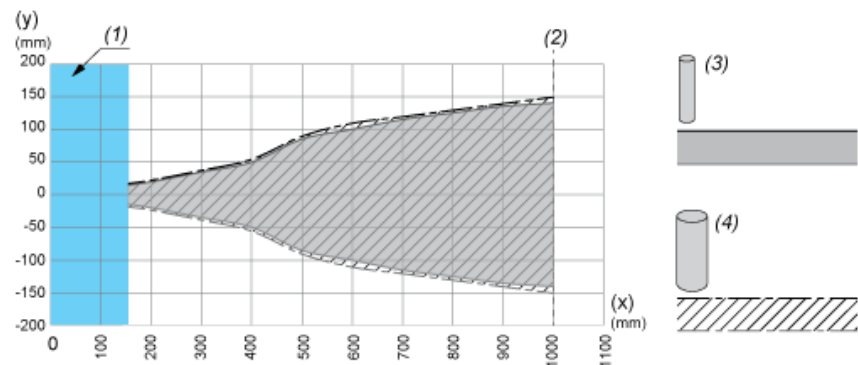
Performance Curves

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

(X) : Target distance
(Y) : Detection limit
(1) : Blind zone: 155 mm / 6.10 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: 155 mm / 6.10 inches
(2) : Sn max.
(3) : Ø 10 mm / 0.394 inches stainless steel cylinder
(4) : Ø 25 mm / 0.984 inches stainless steel cylinder