

XXW54P3HPL05

Ultrasonic sensor, plastic, Wide Beam $\Phi 54$,
3m, 0.5...4.5V+PNP, 0.5m cable



Main

Range of Product	Telemecanique Ultrasonic sensors XX
Sensor Type	Ultrasonic sensor
Series name	Application
Sensor name	XXS
Sensor design	$\Phi 54$ mm
Detection system	Diffuse
[Sn] nominal sensing distance	9.84 ft (3 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	0.5...4.5 V
[Us] rated supply voltage	12...24 V DC reverse polarity protection
Electrical connection	Cable 5 pins, 1.64 ft (0.5 m)
[Sd] sensing range	1.39...9.84 ft (0.425...3 m)
Beam angle	50 °
IP degree of protection	IP65 conforming to IEC 60529 IP67 IP69K

Complementary

Enclosure Material	Valox
Front material	Ultem
Supply voltage limits	9...32 V DC
Function Available	Software configurable
[Sa] assured operating distance	1.39...9.84 ft (0.425...3 m) configurator software)
Maximum differential travel	0.79 in (20 mm)
Blind zone	16.73 in (425 mm)
Transmission frequency	48 kHz
Repeat accuracy	0.1 %
Minimum size of detected object	Cylinder diameter 12 mm 9.84 ft (3 m)
Status LED	Output state 1 LED yellow) Echo state and power ON 1 LED green/white)
Current Consumption	30 mA
Maximum switching current	100 mA overload and short-circuit protection
Maximum switching capacity	≥ 2 kOhm overload and short-circuit protection
Maximum voltage drop	2 V
Switching frequency	≤ 1.6 Hz
Setting-up	Configurator software
Maximum delay first up	400 ms
Maximum delay response	300 ms
Maximum delay recovery	300 ms
Marking	CE
Height	2.13 in (54 mm)
Width	3.11 in (79 mm)

Depth	1.28 in (32.5 mm)
Net Weight	0.25 lb(US) (0.115 kg)

Environment

Standards	EN/IEC 60947-5-2 CSA C22.2 No 14 UL 508
Product Certifications	CULus E2
Ambient Air Temperature for Operation	-40...158 °F (-40...70 °C)
Ambient Air Temperature for Storage	-40...185 °F (-40...85 °C)
Vibration resistance	+/-1 mm 10...55 Hz)IEC 60068-2-6
Shock resistance	30 gn in all 3 axes 11 ms IEC 60068-2-27
Resistance to electrostatic discharge	8 kV 8 kV air, 4 kV contact IEC 61000-4-2
Resistance to electromagnetic fields	9.14 V/m (10 V/m) level 3 IEC 61000-4-3
Resistance to fast transients	2 kV IEC 61000-4-4




Ordering and shipping details

Category	22489-SENSORS XX ULTRASONIC GEN PURPOSE
Discount Schedule	DS2
GTIN	3389110000610
Nbr. of units in pkg.	1
Package weight(Lbs)	5.29 oz (150.0 g)
Returnability	Yes
Country of origin	US

Packing Units

Unit Type of Package 1	PCE
Package 1 Height	1.57 in (4 cm)
Package 1 width	3.74 in (9.5 cm)
Package 1 Length	5.12 in (13 cm)
Unit Type of Package 2	S01
Number of Units in Package 2	4
Package 2 Weight	28.22 oz (800.0 g)
Package 2 Height	5.91 in (15 cm)
Package 2 width	5.91 in (15 cm)
Package 2 Length	15.75 in (40 cm)

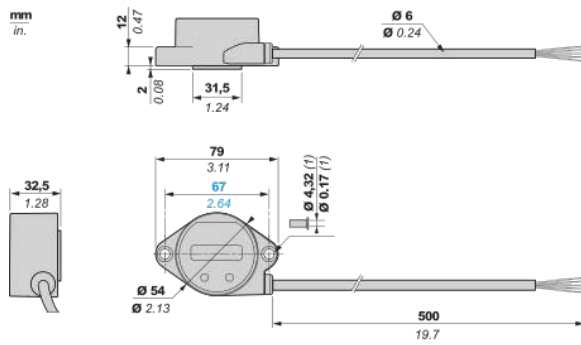
Offer Sustainability

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
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
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.

Contractual warranty

Warranty	18 months
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Dimensions

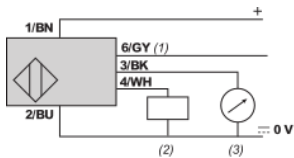


(1): The sensor is supplied with 2 stainless steel inserts and 2 silicone washers. M4 screws not provided.

Connection and schema

Cable wiring

Cable model: 5 wires - 0.34 mm² / 22 AWG

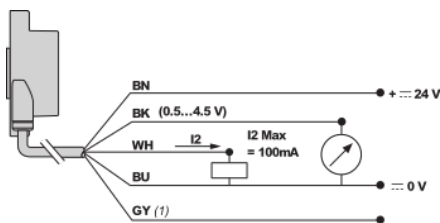


- (1): Synchronization
- (2): Output 2
- (3): Output 1

Wire Color	Description
BN: Brown	+ 12...24 V ■
BU: Blue	0 V ■
BK: Black	0.5...4.5 V Analog Output
WH: White	PNP Digital Output
GY: Grey	Synchronization

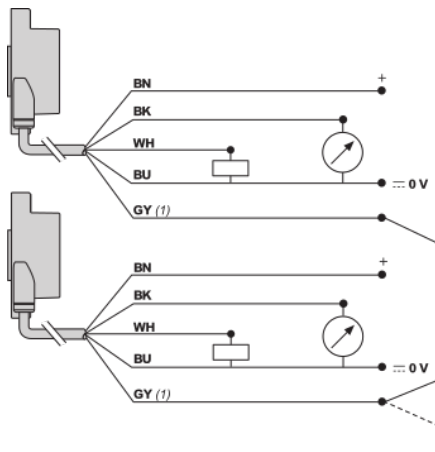
Connection and schema

Wiring diagram



- (1): Synchronization
- Analog output load: 2 kΩ...∞

Synchronization function diagram (side by side application)

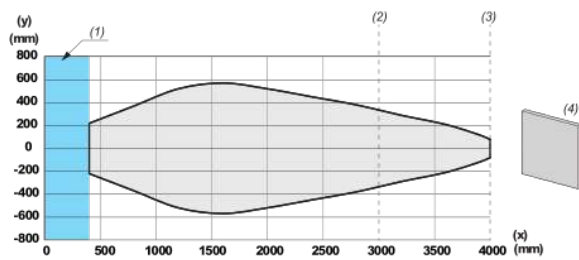


(1): Synchronization

Note: Up to 8 sensors can be synchronized to operate side by side by electrically connecting all pin no.6 (grey) wires together. All sensors must be the same model and have the same cycle time setting.

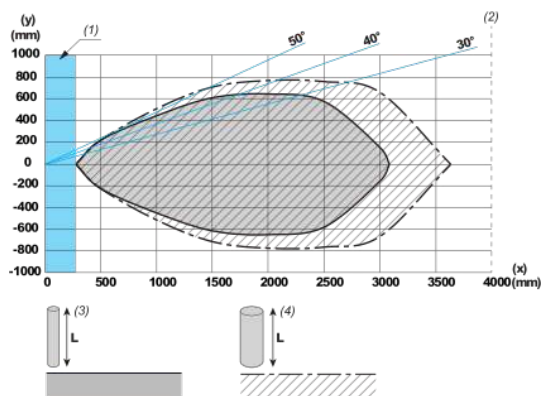
Performance Curves

Detection curve with 100 x 100 mm / 3.94 x 3.94 inches square target



- (X): Target distance
- (Y): Detection limit
- (1): Blind zone: 425 mm / 16.7 inches
- (2): Far limit
- (3): Sn max.
- (4): 100 x 100 mm / 3.94 x 3.94 inches stainless steel plate

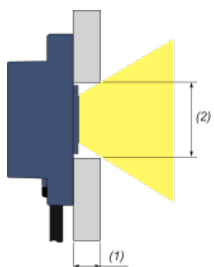
Detection curve with round bar



- (X): Target distance
- (Y): Detection limit
- (1): Blind zone: 425 mm / 16.7 inches
- (2): Sn max.
- (3): Ø 10 mm / 0.394 inches stainless steel cylinder
- (4): Ø 25 mm / 0.984 inches stainless steel cylinder
- L: 1 m / 3.28 ft.

Mounting and Clearance

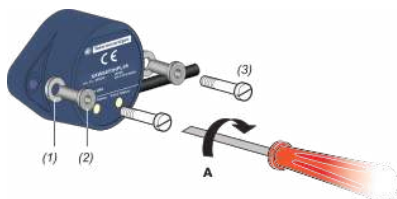
Flush mounting recommendations



(1): E max: 10 mm / 0.39 in.

(2): Ø min: 33 mm / 1.3 in.

Tightening torque



$A \leq 3 \text{ Nm} / 26.6 \text{ lb-in}$

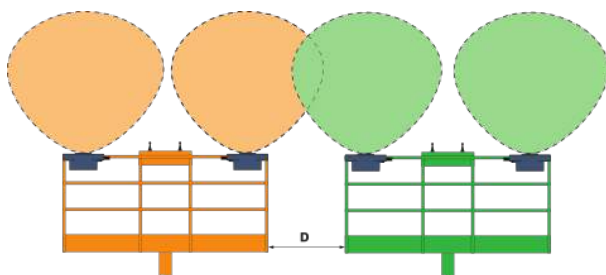
(1): 2 silicone washers provided with the sensor

(2): 2 stainless steel inserts provided with the sensor

(3): 2 M4 screws (not provided)

Mutual interference between two separate pieces of mobile equipment, side by side

Sensors in the same mobile equipment must be synchronized, but sensors in two separate pieces of mobile equipment cannot be synchronized



D min: 2,5 m / 8.2 ft.

Note: For the side by side use, consider the machine manufacturer's prescriptions without ever going below the 2,5 m / 8.2 ft.