Product data sheet
Characteristics

XXW54P3HPL05
Ultrasonic sensor, plastic, Wide Beam Φ54, 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	Ø 54 mm
Detection system	Diffuse
[Sn] nominal sensing distance	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 with reverse polarity protection
Electrical connection	Cable 5 pins, 0.5 m cable length
[Sd] sensing range	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	0.425…3 m (configurator software)
Maximum differential travel	20 mm
Blind zone	425 mm
Transmission frequency	48 kHz
Repeat accuracy	0.1 %
Minimum size of detected object	Cylinder diameter 12 mm at 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 with 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	54 mm
Width	79 mm

Depth	32.5 mm
Net weight	0.115 kg

Environment

Standards	IEC 60947-5-2 CSA C22.2 No 14 UL 508
Product certifications	cULus[RETURN]E2
Ambient air temperature for operation	-40…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 8 kV air, 4 kV contact 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 Height	4.000 cm
Package 1 Width	9.500 cm
Package 1 Length	13.000 cm
Package 1 Weight	150.000 g
Unit Type of Package 2	S01
Number of Units in Package 2	4
Package 2 Height	15 cm
Package 2 Width	15 cm
Package 2 Length	40 cm
Package 2 Weight	800.000 g

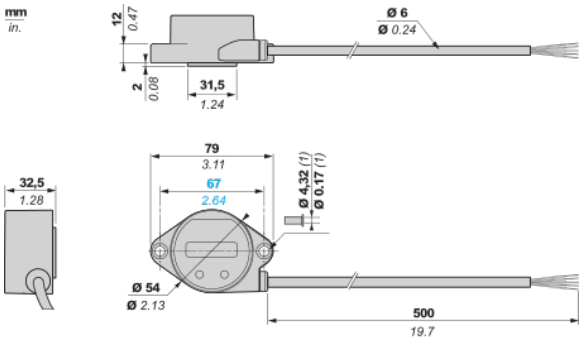
Offer Sustainability

WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
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
For all Reach Rohs enquiries contact us at	sustainability@tesensors.com

Contractual warranty

Warranty	18 months

Dimensions

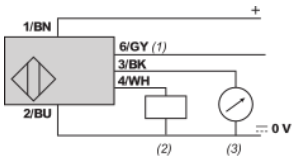


(1): The sensor is supplied with 2 stainless steel inserts and 2 silicone washers. M4 screws not provided.

Connection and schema

Cable wiring

Cable model: 5 wires - 0.34 mm^2 / 22 AWG



(1): Synchronization

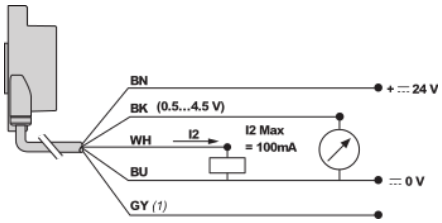
(2): Output 2

(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

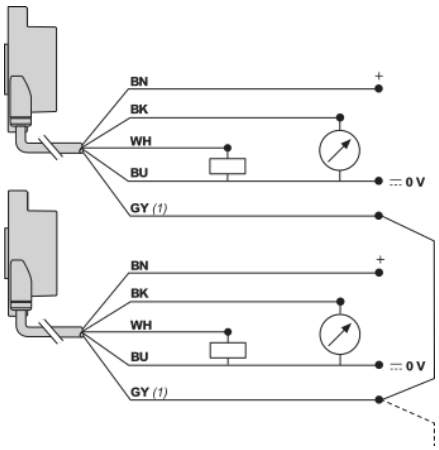
Wiring diagram



(1): Synchronization

Analog output load: 2 kΩ…∞

Synchronization function diagram (side by side application)

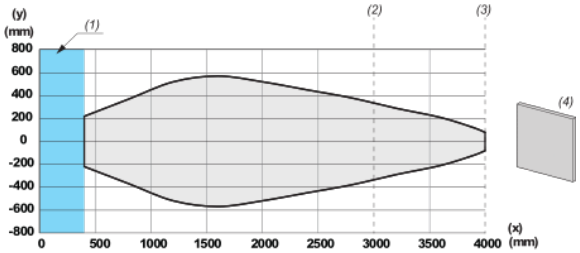


(1): Synchronization

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.

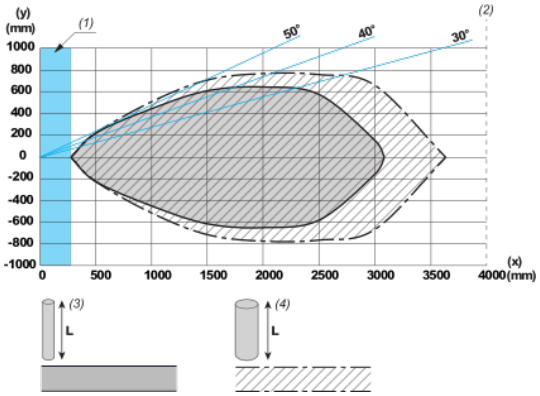
Performance Curves

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

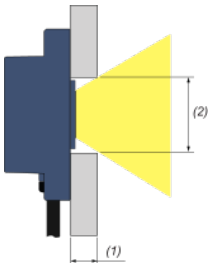
Detection curve with round bar



(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

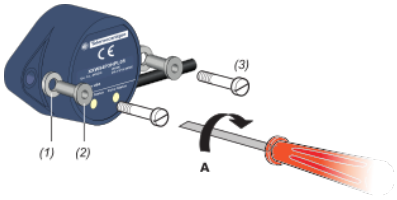
Flush mounting recommendations



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

(2): Ø min: 33 mm / 1.3 in.

Tightening torque



A ≤ 3 Nm / 26.6 lb-in

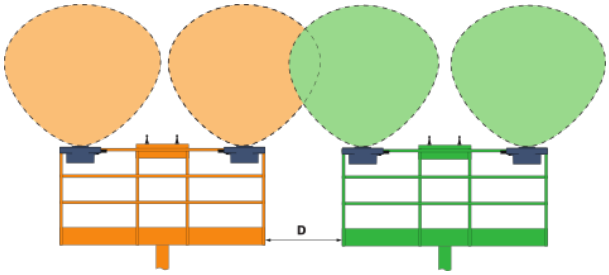
(1): 2 silicone washers provided with the sensor

(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.