

New UKR & UTR series *RETROREFLEX* models



FinMasi Group Company



Ultrasonic Sensors

Typical working limits of Ultrasonic Sensors

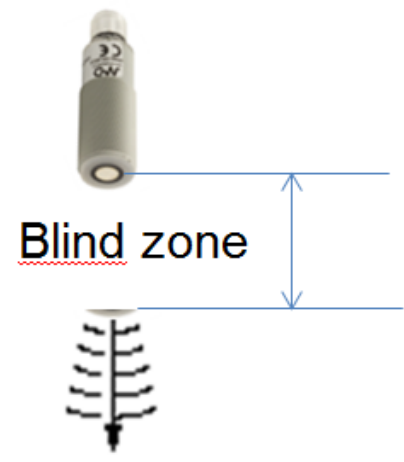
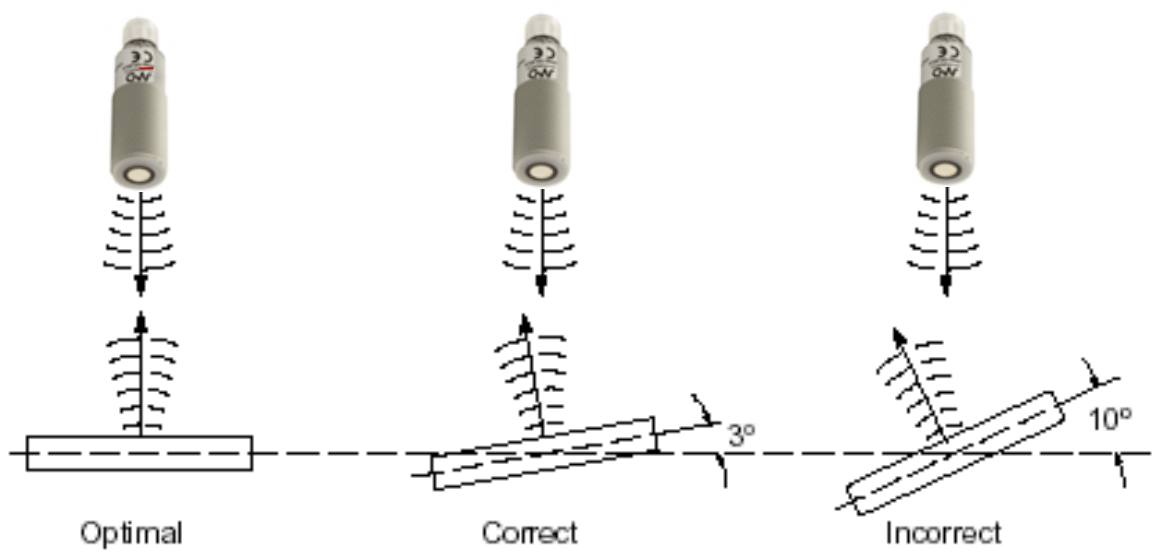
Ultrasonic sensors can detect any type of materials:

- liquids
- solids
- granulars
-

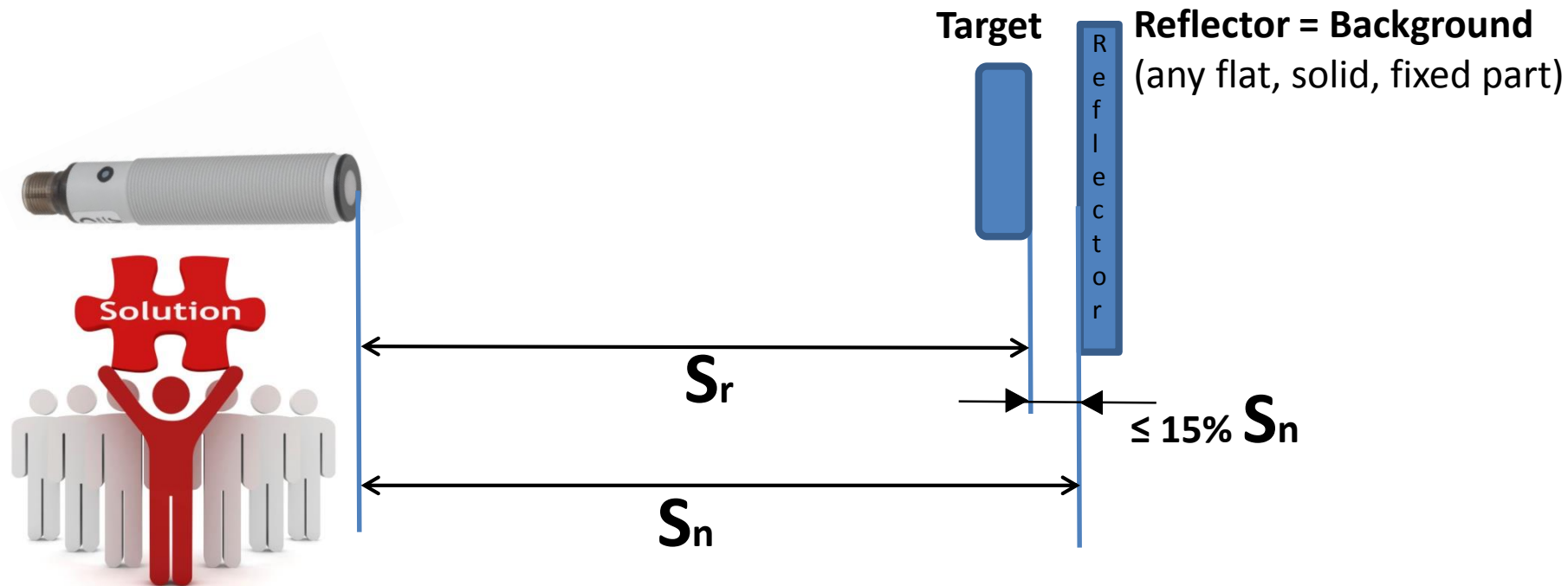
but

→ they have a blind zone

they are very sensitive to the objects tilt



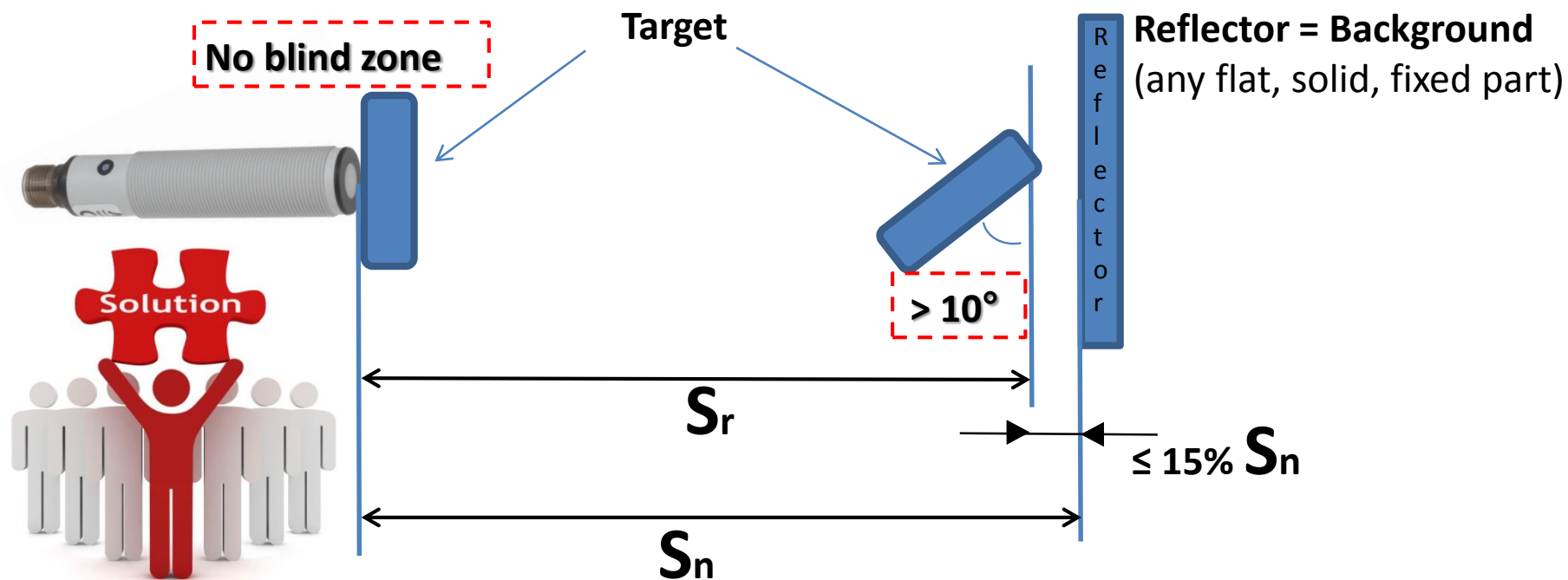
Ultrasonic Sensor with Retroreflective Working Mode



The sensor acquires the position and energy reflected back by the reflector (background), in automatic way it sets the hysteresis at 15% of the operating distance

Any changes of the received energy level is detected by the sensor.

Ultrasonic Sensor with Retroreflective Working Mode



In these situations a standard ultrasonic sensor is not able to work.

UKR & UTR series



PRODUCT HIGHLIGHTS

Models

- M18 sensor with short housing
- M18 sensor with standard housing
- M30 sensor

- **Single Digital Output**
- NPN or PNP
- NO/NC selectable

Connection

- M12 plug cable exit

NO Blind Zone 

NO Perpendicular reading limit 

Ultrasonic Sensors

MODELS

Housing	Models ⁽³⁾	Sensing Distance ^{(1) (2)}
M18 short	UKR6A/Dx-0E	... 300 mm (Sr: 0 ... 255 mm)
M18 standard	UKR1A/Ex-0E	... 400 mm (Sr: 0 ... 340 mm)
M18 standard	UKR1C/Ex-0E	... 900 mm (Sr: 0 ... 765 mm)
M18 standard	UKR1D/Ex-0E	... 1600 mm (Sr: 0 ... 1360 mm)
M18 standard	UKR1F/Ex-0E	... 2200 mm (Sr: 0 ... 1870 mm)
M30 standard	UTR1B/Ex-0E	... 3500 mm (Sr: 0 ... 2975 mm)
M30 large front	UTR2F/Ex-0E	... 6000 mm (Sr: 0 ... 5100 mm)



- (1) effective working distance (Sn) and usable range (Sr) [to be confirmed once the project is completed]
- (2) minimum working distance refers to minimum distance between sensor and reflector (background)
- (3) x=P for PNP models; x=N for NPN models

Easy Setting Procedure

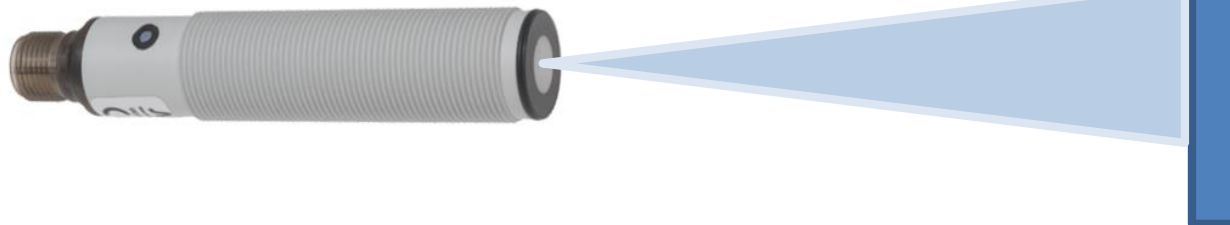
REFLECTOR ACQUISITION

- Press the push-button for 1 time to acquire the reflector's distance
- Released the push-button, the yellow LED will flash 5 times confirming the successful setting procedure.

FUNCTION MODE SETTING

- Press the push-button for > 8sec. the sensor will change the function mode from N.O. to N.C.

Reflector = Background
(any flat, solid, fixed part)



Ultrasonic Sensors



Application: storage line in bottling systems

Need: the bottles have to be detected independently from shape (cylindrical or rectangular) and position on the conveyor. The bottle can rotate or vibrate on its vertical axes.

How: a retroreflective ultrasonic sensor, setted on a background can detect the bottles independently from shape, transparency, ...



Application: underground garbage storage

Need: level garbage detection. The shape, color, position of the garbage shouldn't have any effect on the detection. When the internal box is full, a press reduce the volume of the garbage or the system calls for emptying operation.

How: the sensor uses as a reflector the wall of the internal basket. Presence of dust or liquids, don't interfere with the detection.

Ultrasonic Sensors



Application: car park system management

Need: detection of the presence of the car, independently from color, type, If the car is present, the light is **red**, if the park is free the light is **green**.

How: a retroreflective ultrasonic sensor, setted on a background (floor) can detect the presence of the vehicle without any interference from windscreen, hood and bodywork design

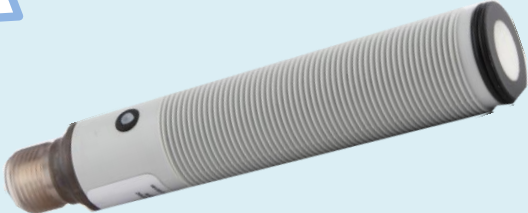


Application: vials or bottle detection in the material accumulation zone

Need: irregular objects can not be easily detected by a standard ultrasonic sensor. Angled parts can deflect the ultrasonic beam and the detection could be not stable

How: if a stable background is present (part of the machine, floor, ..) a retroreflective ultrasonic sensor can detect the presence of irregular objects without any problem

Ultrasonic Sensors




No Blind Zone

Easy Teach-in mode

Retroreflective Mode

cULus Approval



NO/NC selectable

Single Digital Output

M18 and M30 housing

ENJOY THE FUTURE

