

SBPBASEA



Carpark base holder



Benefits

- **Plug & Play** installation
- **One base holder** suitable for the SBPSUSxxx sensors and SBPILED indicator
- **On board chip** with the SIN code and detachable connector for Dupline® 3-wire

Description

The SBPBASEA is part of the Dupline® Carpark system.

It is a base holder for the SBPSUSxxx sensors and SBPILED indicator.

The base holder contains the wiring terminals, the chip with the SIN code and a RJ12 connector for the sensor / indicator.

It is designed for cable tray and conduit/ pipe mounting where the wires enter the base holder from the top.

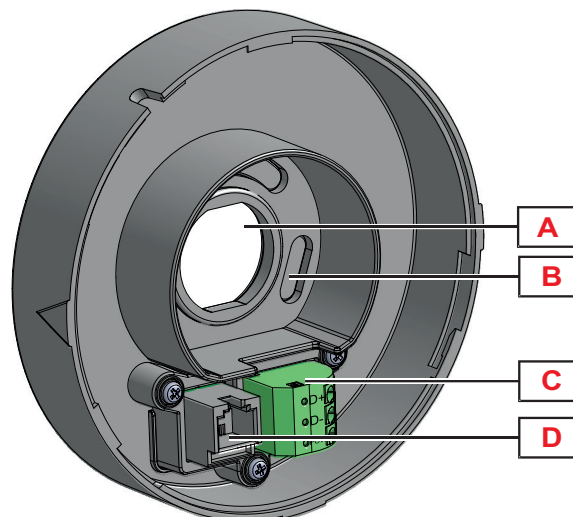
Applications

Parking Guidance Systems

Main functions

- Base holder for Dupline® carpark sensors and indicators.

Structure

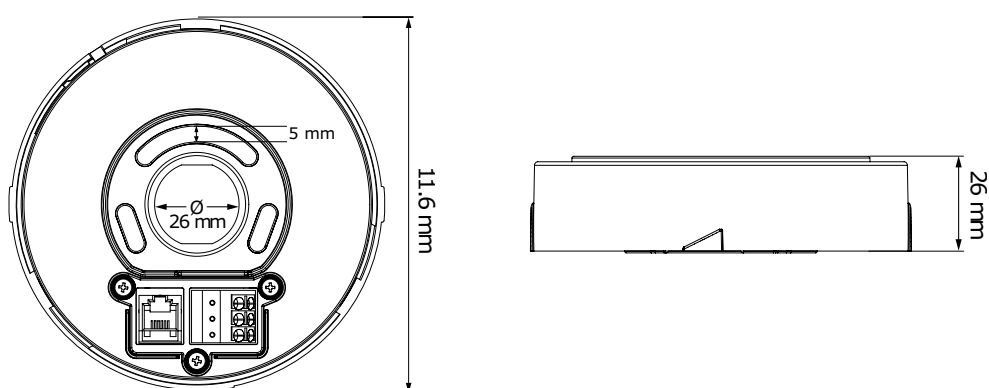


Element	Component	Function
A		The wires enter the base holder from the top
B	Pre-punched screw holes	The base holder can be mounted by means of selftapping screws by using the pre-punched screw holes
C	2 x 3 PIN connector	Wiring terminals (POW, D+, D-) for power supply and communication (Smart Dupline®)
D	RJ12 female connector	It is used to connect the sensor (SBPSUxxx) or indicator (SBPILED) to the base holder

Features

General

Material	ABS
Housing colour	Light grey
Dimensions	26 x 116 mm
Weight	25 g



Environmental

Operating temperature	-40 to 70°C (-40 to 158°F)
Storage temperature	-40 to 80°C (-40 to 176°F)
Humidity	5-98% Relative humidity
Pollution degree	3 (IEC60664)

Compatibility and conformity

CE-marking	CE
Approvals	c(UL)us

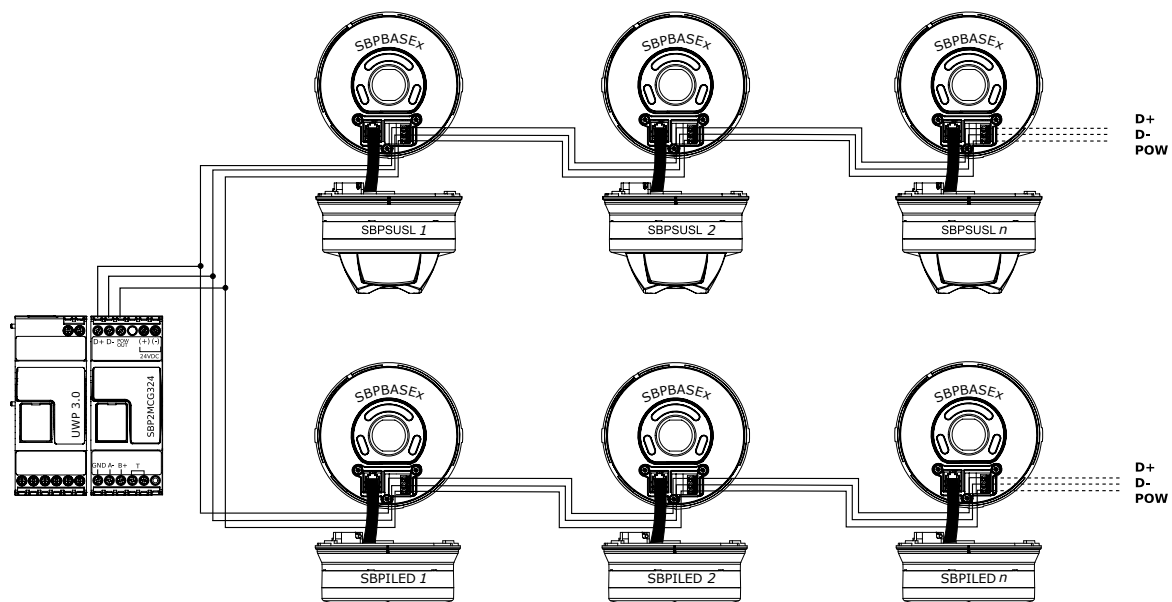
Power Supply

Power supply	By the Dupline® bus via the RJ12 connector
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Communication

Protocol	Smart-Dupline®
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Connection Diagram



Mode of operation

The following mounting suggestions are the standard ones; for any type of application other than those shown below, please contact our technical assistance before installing the SBPBASEA and the SBPSUSxxx sensors and SBPILED indicator.

Installation of the SBPBASEA together with the SBPSUSL45

The SBPBASEA together with the SBPSUSL45 sensor should be placed at a height between 2.2 to 2.4m. The depth of detection is 1.5 m.

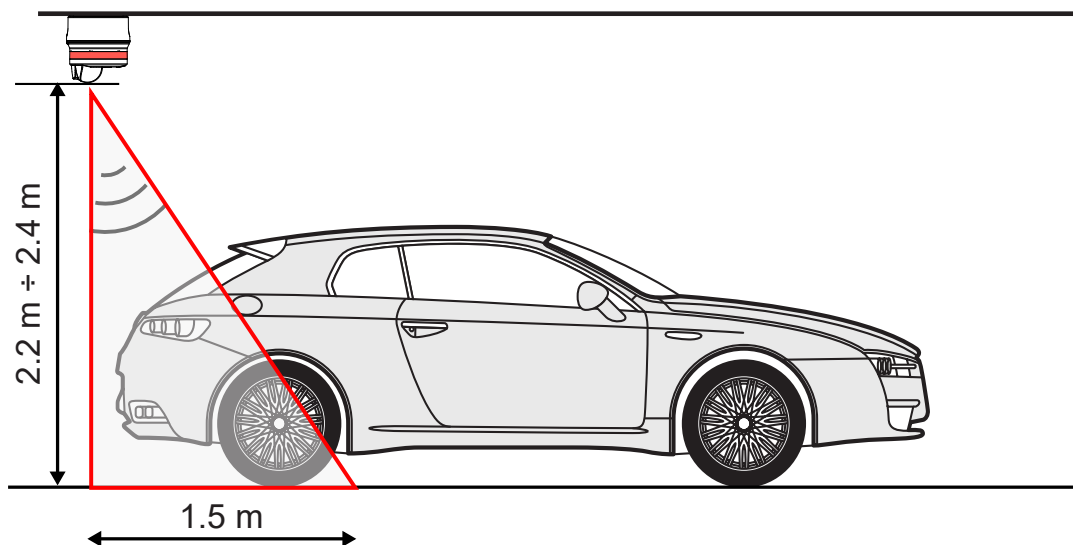
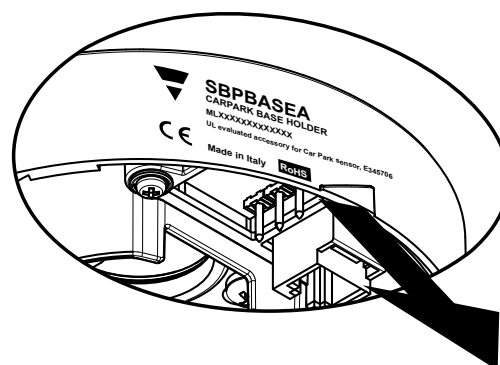


Fig. 1 Sensor height and distance

The SIN indication and connectors must face the parking bay (see picture below):



Parking bay

Example 1

In this example the SBPBASEA together with the sensor could have been installed closer to the parking bay.



The SBPBASEA is wrongly mounted on the left hand of the cable tray

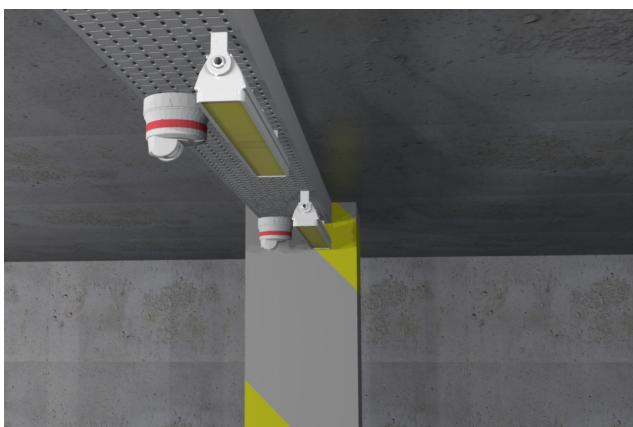


Put the SBPBASEA on the right hand of the cable tray

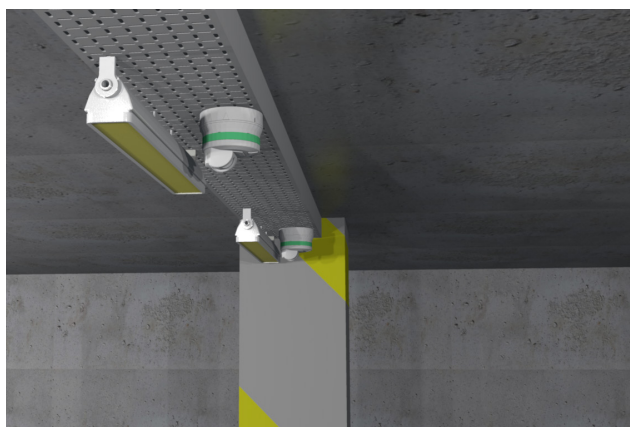


Example 2

In this example the LED lamp is too close to the sensor and wrongly mounted in front of the sensor, obstructing the visibility.



The LED lamp is wrongly mounted in front of the sensor

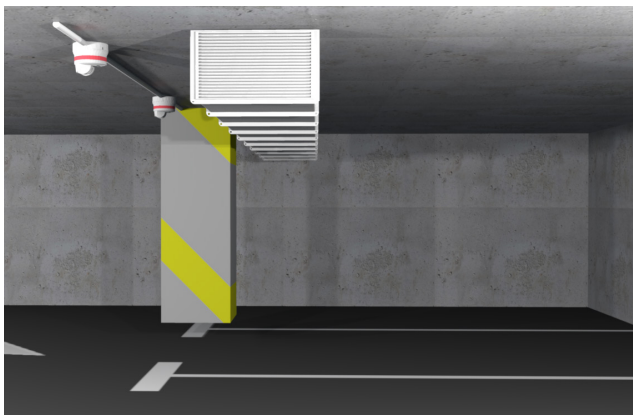


Put the SBPBASEA together with the sensor in front of the LED lamp

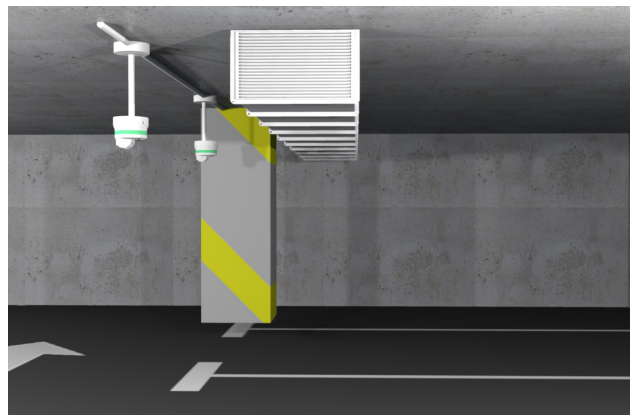


**Example 3**

If the distance between the obstacle and the sensor is less than 2.5 m, the base of the sensor must be installed at least 5 cm below the obstacle.



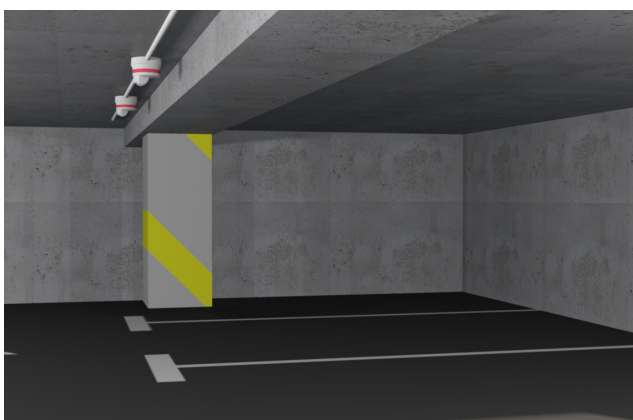
The sensor is obstructed by the obstacle



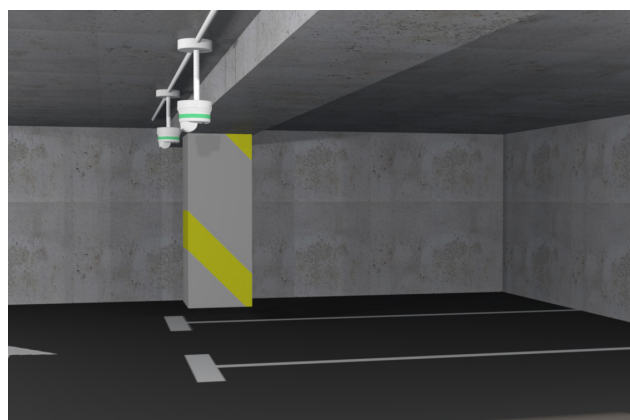
Put the SBPBASEA at least 5 cm below the obstacle

**Example 4**

In this example the obstacle (beam) is lower than the sensor and it is too close (< 2.5 m).



The sensor is obstructed by the obstacle

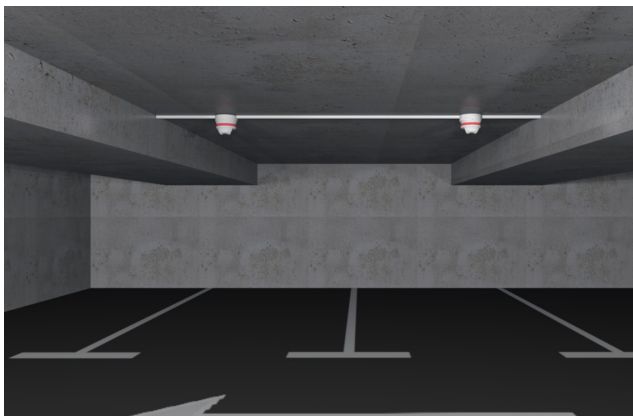


Put the SBPBASEA at least 5 cm below the obstacle

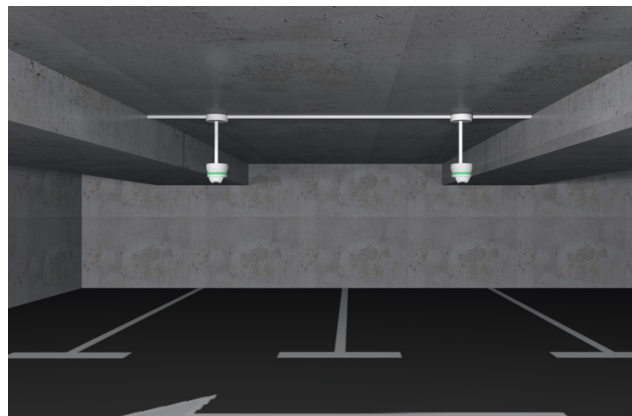


**Example 5**

In this example the obstacle is on the side part of the sensor and the distance between them is less than 1 m. Moreover, the thickness of the obstacle is more than 30 cm. The SBPBASEA for conduit/pipe mounting has to be installed to mount the sensor at least 5 cm below the obstacles.



The obstacle is too close to the sensors



Put the SBPBASEA at least 5 cm below the obstacles



Installation of the SBPBASEA together with the SBPSUSL

The SBPBASEA together with the SBPSUSL sensor should be placed in the middle of the parking bay at a height between 2.0 to 4.0 m.

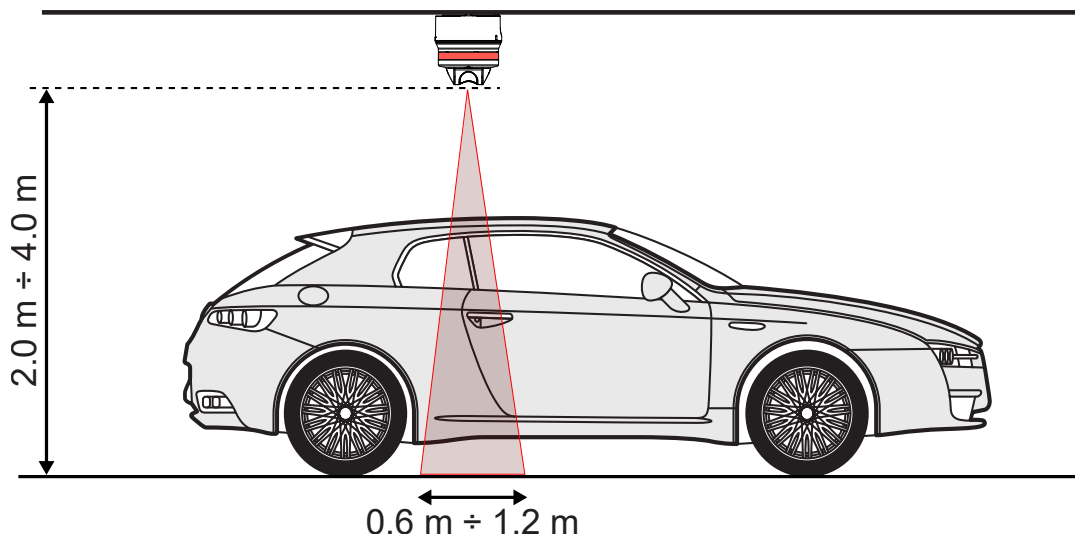


Fig. 2 Sensor height and distance

Example 6

If the distance between the obstacle and the sensor is less than 20 cm, the base of the sensor must be installed at least 5 cm below the obstacle.



The sensor is obstructed by the obstacle



Put the SBPBASEA at least 5 cm below the obstacle



Example 7

In this example the obstacles (beam and conduit) obstruct the sensor and they are too close (< 20 cm).



The sensor is obstructed by the lateral obstacles



Put the SBPBASEA at least 5 cm below the obstacles



Example 8

If there is an obstacle hiding the sensor (which can not be removed) be sure to place the sensor at least 5 cm below it, by using the SBPBASEA together with a pipe.



The sensor is completely obstructed by the obstacle



The sensor is placed outside the obstacle by using the SBPBASEA and a pipe



Installation of the SBPBASEA together with the SBPSUSCNT

The SBPBASEA together with the SBPSUSCNT sensors should be mounted in the driving lane at a height between 2.0 to 2.5 m.

For each detection point the system permits the usage of one sensor or multiple sensors. In order to avoid crosstalk and false detections two sensors should be used.

In this way, the system is also able to detect the direction of the cars.

Example 9

Please refer to the following table to place the two SBPBASEA bases together with the sensors at the proper distance.

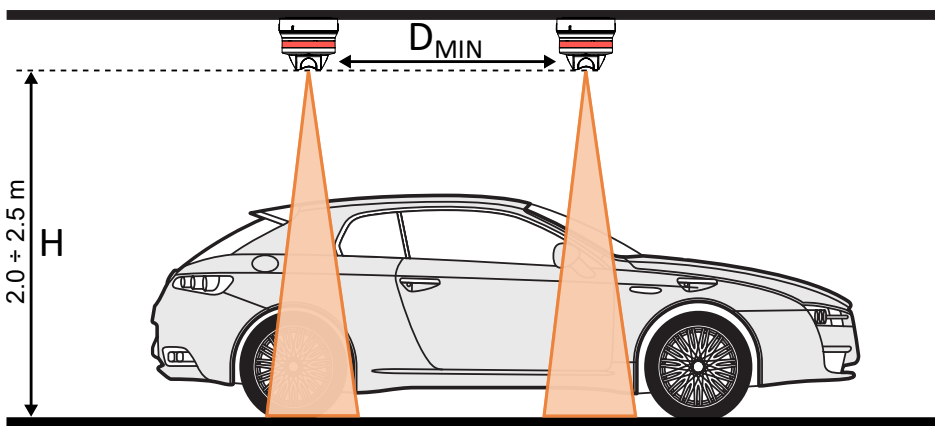


Fig. 3 Sensor height

Sensor height (m)	Min. distance (m)
2.5	0.91
2.4	0.88
2.3	0.84
2.2	0.80
2.1	0.77
2.0	0.73

Tab. 1 Minimum distance between sensors

Example 10

Should the driving lane be larger than the standard (2.5 to 3.25 m), please refer to table 2 to place the two SBPBASEA bases together with the sensors at the proper distance:

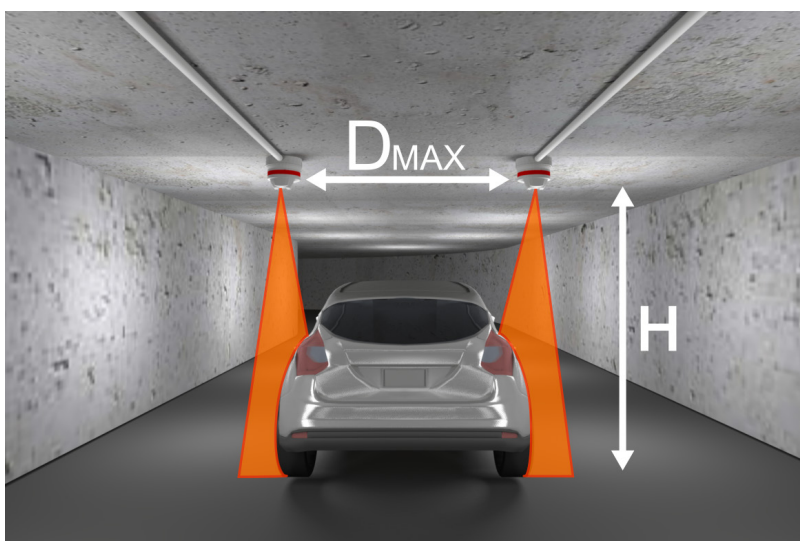


Fig. 4 Sensor height

Sensor height (m)	Max. distance (m)
2.5	2.53
2.4	2.45
2.3	2.38
2.2	2.31
2.1	2.23
2.0	2.16

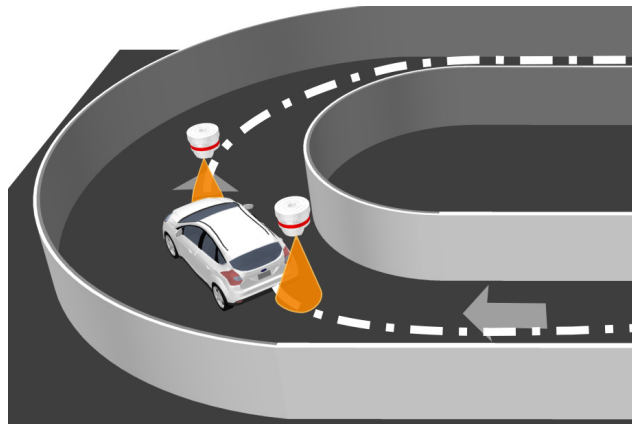
Tab. 2 Maximum distance between sensors

Example 11

In a one-way lane larger than the standard (2.5 to 3.25 m), SBPBASEA bases together with the sensors are placed in the middle of the lane:



One of the SBPBASEA together with the sensor has been placed too far from the middle of the lane

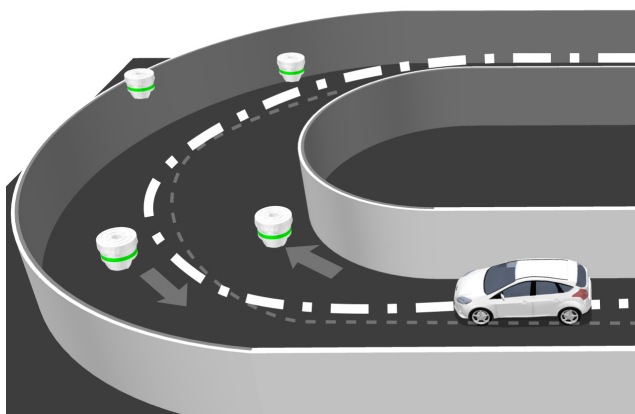


The SBPBASEA are placed in the middle of the driving lane where the car passes

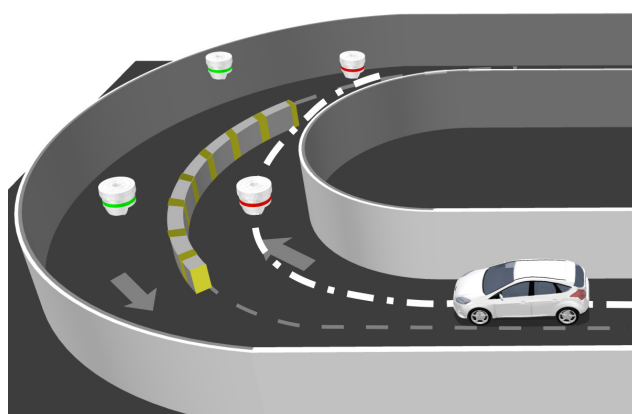


Example 12

In a two-way lane, a delineator should be placed between the lanes to prevent cars from passing in the middle and to permit the correct cars counting.



The car passes in the middle of the lane without activating any sensors



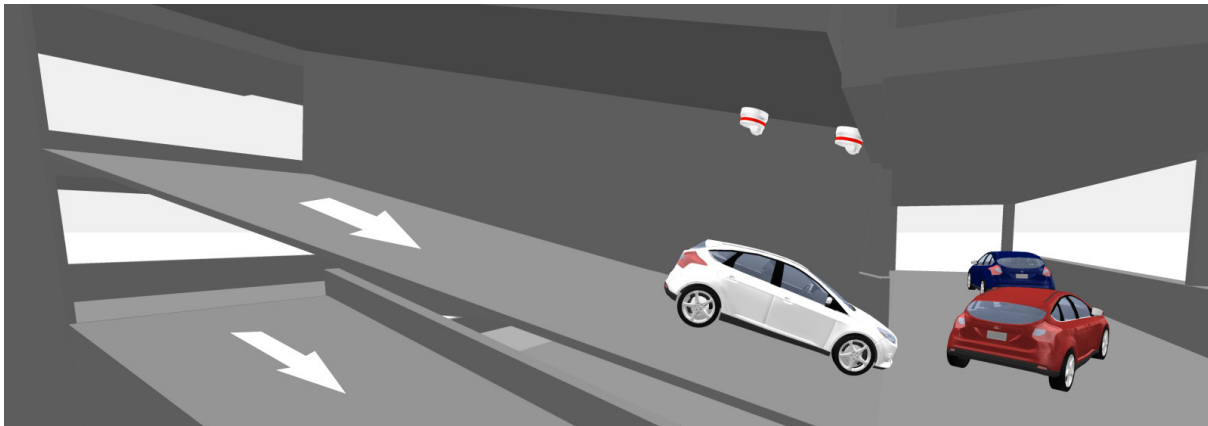
The delineator permits the correct counting for both the lanes



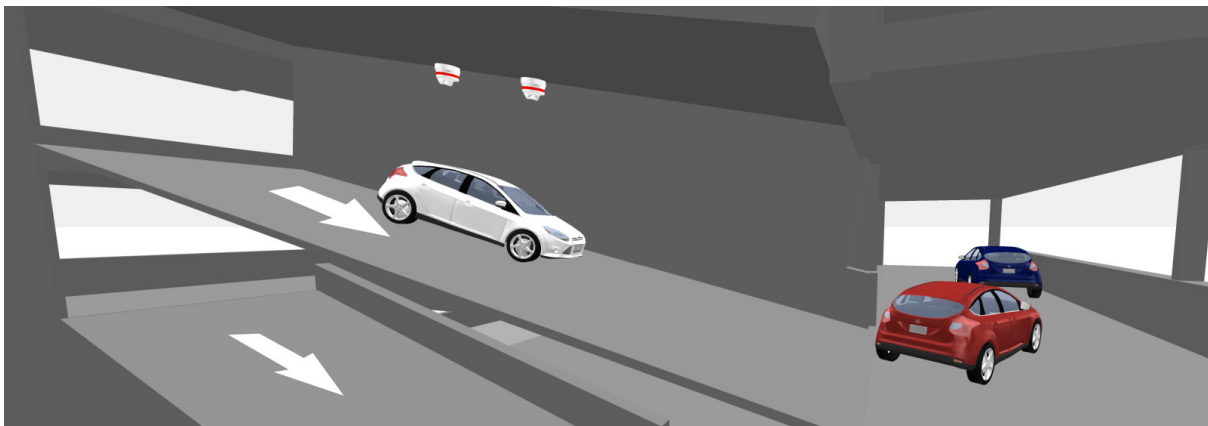
Example 13

To prevent queues from increasing/decreasing the counter wrongly, the base and sensors should be placed in the center of the ramp among the floors instead of at the beginning/end. In queue situations, due to slow speed or bumper-to-bumper driving, the sensors might not be able to distinguish one car from another and the counting might not be performed correctly.

Note: should queues be frequent in the areas where the SBPSUSCNT sensors are placed, a single-bay monitoring solution has to be considered by using the SBPSUSLxx sensors.



The SBPBASEA bases together with the SBPSUSCNT sensors have been placed at the end of the ramp



The SBPSUSCNT sensors work properly if placed in the middle of the ramp



SBPBASEA mounting

Place the sensor with the vertical mark at the tip of the triangle base.
Turn the sensor clockwise until the vertical mark is positioned at the rear end of the triangle. The sensor is now attached to the base.
Release the sensor by turning it anti-clockwise.

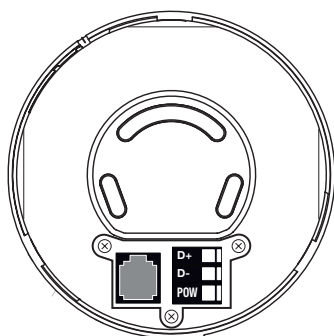


Fig. 5 Basepart: mounted on the ceiling

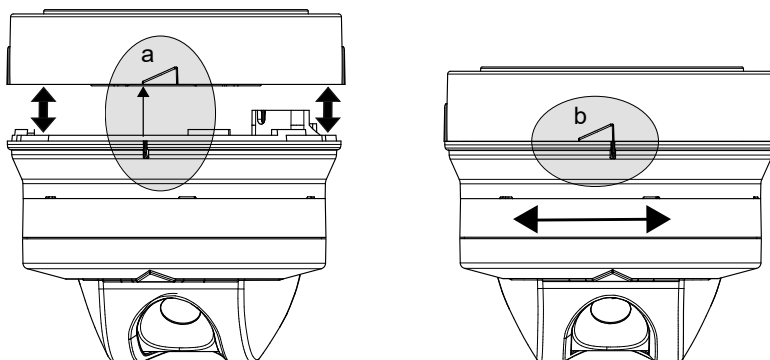


Fig. 6 Mount / Unmount

When mounting the SBPSUSxxx sensor on the ceiling, the sensor must be installed at an angle of maximum ± 5 degrees deviation from the ceiling surface.
Mount the SBPBASEA and the sensor (SBPSUSL45 only) with a maximum horizontal deviation of ± 2 degree to have the best performance in terms of signal reliability.
See drawing below.

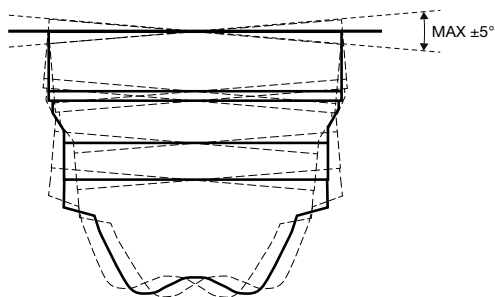


Fig. 7 Maximum $\pm 5^\circ$ vertical deviation

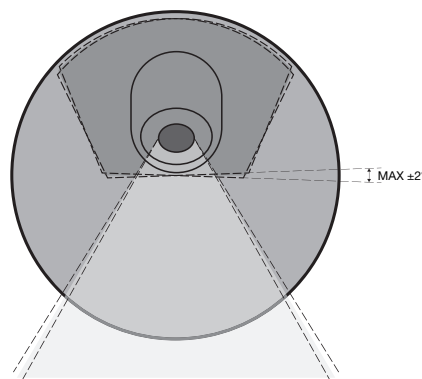


Fig. 8 Maximum $\pm 2^\circ$ horizontal deviation. Bottom view

Make sure that there is some extra wire for the sensor so that maintenance of the sensor/base in the future is enabled. Also place the wire correctly to avoid damage to the cable isolation.



Additional conventional warranty

This product is provided with a ten-year warranty. For further information, please refer to the ***Additional conventional warranty - Performances and proper functioning.***



References

Further reading

Information	Document	Where to find it
Carpark installation	CP3 manual	http://www.productselection.net/MANUALS/UK/cp3_manual.pdf
UWP 3.0 installation guide	System manual	www.productselection.net/MANUALS/UK/system_manual.pdf
UWP 3.0 software manual	UWP 3.0 tool manual	www.productselection.net/MANUALS/UK/uwp3.0_tool.pdf
CP3 troubleshooting guide	Troubleshooting guide	www.productselection.net/MANUALS/UK/troubleshooting_guide.pdf
Installation manual	IM_SBPBASEA	www.productselection.net/MANUALS/UK/IM_SBPBASEA.pdf
Carpark conventional warranty	Additional conventional warranty - Performances and proper functioning	www.gavazziautomation.com

Order code

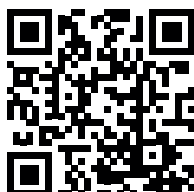


SBPBASEA

Note: The base is delivered without a sensor. Please order it separately.

CARLO GAVAZZI compatible components

Purpose	Component name/code	Notes
Controller	UWP30RSEXXX	
Bus generator	SBP2MCG324	
Lane sensor	SBPSUSL45	
Vertical sensor	SBPSUSL	
Counter	SBPSUSCNT	
LED indicator	SBPILED	



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