

Concept

Bluetooth wireless contact sensors are positioned on the seats and belts to be secured.

This information is fed back to a touchscreen on the dashboard, giving the driver a visual and audible warning of a possible unbelted passenger.

Two temperatures and two openings can also be displayed. They are stored in the device's memory with a time and date stamp in the event of an inspection by the health authorities.



The system allows the management of a 3-seat bench, 1 to 2 temperatures and 1 to 2 openings.

Kit contents

- A stand-alone touchscreen
- USB/USB-C power cable
- A display stand
- 3 belt contact sensors (P DI)
- Assembly instructions

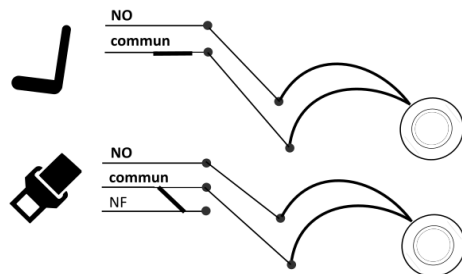
Wiring of sensors

The belt clip shall be equipped with a mechanical contact with NC (normally closed) status. The seat presence sensor shall have a NO contact (normally open).

- Activated when the belt is opened and closed.
- Activated when the seat is pressed down.

The following 2 mounting possibilities are available depending on the number of sensors used.

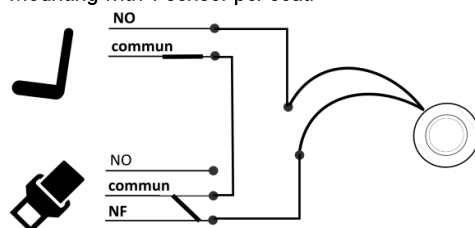
Mounting with 2 sensors per seat:



3 states detected:

- Empty seat (grey),
- Seat occupied with seat belt not fastened (red),
- Seat occupied with seat belt fastened (green).

Mounting with 1 sensor per seat:

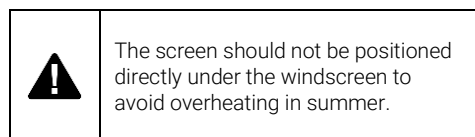


2 states detected:

- Empty seat or Seat occupied with seat belt fastened (green),
- Seat occupied with seat belt not fastened (red).

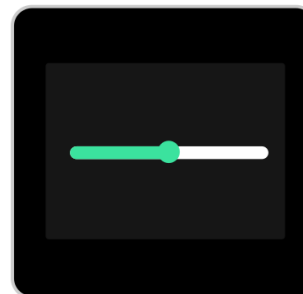
Wiring of the screen

The display will simply be positioned on the dashboard towards the driver and connected to a 5V USB port **after contact**.



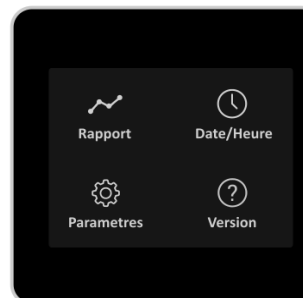
Access to the device settings

The brightness setting can be accessed at any time by the user by swiping up and down on the touch screen.



Perform the reverse operation (from bottom to top) to return to the main menu.

Other functions can be accessed at any time by the user by sliding your finger from right to left on the screen.



Sensors setting

Go to the "Settings" section.

Click on the area for which you want to add a sensor.



Each of the fields correspond respectively to the elements represented graphically according to the available space:

T Temperature sensor (P T...)

Mag Magnetic opening sensor (P MAG...)

Sensor positioned on the belt (P DI...)

Sensor positioned on the seat (P DI...)

Option 1

Click on the corresponding text field to directly enter the complete number of the installed sensor using the touch keyboard.

Option n°2

Click on the button to access the search for sensors in range for this field within a radius of 50m.

It is advisable to wait for the end of the search for about 10 seconds, until the "Scan in progress" indication disappears. The list of sensors is then automatically reordered in alphabetical order.

If you are not within range of the sensor, you must use Possibility 1.

If only one sensor is used for the belt and seat, please enter the same sensor number in both fields.

The return to the previous menus is done by clicking on the back button .

The information entered is automatically saved in the device's memory.

The system is immediately functional according to the entered parameters when returning to the main menu.

Note: The display will depend on the number of sensors set.

Power management

The display will start automatically as soon as its 5V USB input is powered. Therefore, when the vehicle is started.

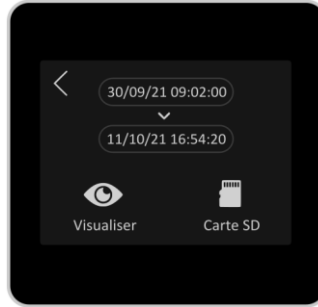
The start-up time is about 5s before processing the information from the sensors.

It will automatically shut down 8s after this power is removed.

Therefore, when the vehicle is turned off.

Depending on the operation of the USB port(s) available on the vehicle, the display may continue to operate with the vehicle switched off if the USB power supply continues for a few minutes after the engine is switched off.

To view stored measurements, go to the "Report" section.



- Select the appropriate measurement range,
- Click on "View" to directly display a graph corresponding to the measurements on the indicated page,
- Click on "SD Card" to write a CSV file to the memory card in the device, e.g. for the competent authorities.

This system is not designed for continuous use.
In the case of a permanent USB power supply, a 5V converter positioned after the contact should be added to power the display.

Battery level management

The lifetime of wireless sensors is estimated to be between 6 and 9 years at 23°C.

When the autonomy of a sensor is detected to be less than 15%, a warning light and the corresponding sensor are announced in orange for replacement of the sensor(s).



Accessories

Description	Reference
Bluetooth contact sensor	E8188
Bluetooth temperature sensor	E6767
Bluetooth opening sensor (magnetic)	E6818

Technical features

Screen
 Power supply voltage5V VDC
 Max. operating temperature+60°C
 Dimensions.....54 x 54 x 16mm

Sensors
 Frequency...2.4 Ghz - Bluetooth Low Energy 4.0/4.2
 Autonomy.....Up to 9 years
 Transmission time2 seconds
 IP Index.....IP68
 Dimensions
 P DIØ 57mm / Height 18mm
 Cable.....1m

Homologations
 CE (Europe)
 RED Directive 2014/53/EU,
 EMC Directive 2014/30/EU,
 RoHS Directive 2011/65/EU

Time setting

The system requires a time setting. If necessary, this will be requested automatically when the device is used for the first time.

It is also possible to set the time directly in the "Date/Time" section (e.g. for summer/winter time changes).

Measurement record

The system has a memory size that allows the storage of the last 3 months of measurements.

