



OEM/OES anti-theft systems

7870 – product platform

Vodafone
Power to you

The 7870 range is designed for OEM/OES applications on vehicles with an original remote door locking/unlocking system and dedicated serial communication line (LIN, K-Line).

A small alarm control unit (ACU) with integrated backup battery siren provides basic anti-theft protection by monitoring the vehicle perimeter and/or ignition lock. The extent of protection is determined by the data available for processing from the serial line and can be enhanced by means of add-on modules, such as volumetric sensors (ultrasound or microwave) or level monitors.

This results in a versatile platform that can be easily tailored to meet each customer's specific security needs and/or the local standards set by the insurance industry.

A team of experienced application engineers is available to assist installers evaluate the configuration that best suits these requirements, as well as to support the analysis of the most appropriate siting and connections.

Description

An anti-theft alarm control unit with integrated backup battery siren. It suits all vehicles equipped with an original remote door locking/unlocking system and a dedicated serial communication line (LIN, K-Line).



Key features

- The piezo backup battery siren is integrated within the ACU ensuring a compact design.
- Basic security functions (based upon the data available from the vehicle's LIN or K-Line) including: protection of vehicle perimeter (doors, boot) and ignition lock-tamper protection.
- Compatible upgrade add-ons are available, including ultrasonic or microwave volumetric sensor and level monitor, with connection via proprietary communication protocol; one wire Vodafone Automotive bus.
- Control output for status LED.
- Analogic trigger input for bonnet protection via contact switch.

Benefits

- Full compatibility with LIN bus or K-Line systems. Easy customisation for the destination vehicle, due to LIN hardware layer compatibility.
- Easy and quick installation with a maximum of six wire connections required.
- Low current consumption, small size and light weight.
- Long-life Lithium primary backup battery.
- Lead-free technology.
- Tested and approved by OEMs.
- Full technical support from a team of professionals operating with the latest tools (e.g. CATIA CAD).

Additional vehicle-specific kit components

(Development on request)

- Mounting bracket(s).
- Wiring harness.
- Fitting accessories.
- Packaging.
- User and installation manuals (OES).

System arming and disarming

This is accomplished via the vehicle's original door control system. The system arms itself when the doors are locked and disarms itself when they are unlocked.

Protection functions

(Configurable)

- **Perimeter protection:** Opening a door, the boot, or the bonnet triggers the alarm. This function is defined by the information provided to the control unit via the serial communication bus. An analogic trigger input is available for the protection of the bonnet via a contact switch.
- **Ignition lock protection:** The alarm is triggered if the ignition is turned on while the system is armed. This function is based on the information provided to the control unit via the serial communication bus.
- **Volumetric protection:** The vehicle interior is monitored by means of an ultrasonic or a microwave sensor. The detection of unauthorised access triggers the alarm. The expertise of Vodafone Automotive is at the customer's disposal to ensure proper coverage and the most appropriate siting and orientation. To implement this function, it is necessary to connect an additional module via the Vodafone Automotive communication line (one wire).
- **Tow-away protection:** The inclination of the vehicle is monitored by means of a tilt sensor. The alarm is triggered if the vehicle is lifted up or towed away. To implement this function it is necessary to connect an additional module via the Vodafone Automotive communication line (one wire).
- **Battery backup:** In the event that the vehicle's power supply to the ACU is cut, the integrated Lithium backup battery allows the system to operate and sound.
- **Audible alarm:** Provided by a high power piezo siren (>115dBA@1m).
- **Visual alarm:** The turn indicators flash while the siren sounds. This function is conditioned on the information provided to the control unit via the serial communication bus.

Comfort and diagnostic functions

- **Visual alarm:** The turn indicators flash while the siren sounds. This function is based on the information provided to the control unit via the serial communication bus.
- **Function check:** Allows drivers to easily test the protection functions during the inhibition time after arming, without generating a full alarm cycle.
- **Door closure check:** Warns the driver during the inhibition time after arming if any of the protected vehicle doors, boot or bonnet are not closed properly. This function is based on the information provided to the control unit via the serial communication bus.
- **Temporary deactivation of additional sensors:** A simple procedure allows drivers to temporarily disable volumetric and tow-away protection if required (e.g. volumetric protection can be disabled when the user needs to leave a pet in the parked vehicle).

Product data*

| | |
|--|---------------|
| Nominal operating voltage (VDC): | 12 |
| Operating voltage range (VDC): | 8 to 16 |
| Control unit operating temperature (°C): | -40 to +85 |
| Siren sound pressure level (dBA at 2 m): | > 108 |
| ACU/siren current consumption rate (mA): | |
| • Armed | > 1.5mA |
| Dimensions (mm): | |
| • ACU/siren | 114 x 79 x 39 |
| Weight (g): | |
| • ACU/siren | 158 |

* Some of the data may vary slightly depending on the technical features of the vehicle

Homologations

Automotive EMC Directive 2006/28/EC, ECE-R-10.

Vehicle Security Directive 95/56/EC, ECE-R-116.

Vodafone Automotive engineers are available to support homologation to local insurance industry standards (such as Thatcham, SRA/CNPP, SCM/TNO).

