

UN Regulation No. 116 and innovative vehicle alarm systems / anti-theft systems

With informal document GRSG-106-38 the Commission addressed the question if it is possible to grant a type-approval in accordance with Regulation No. 116 for parts of a private car sharing system which enable opening of cars via smartphone and if a silent alarm to a security service, which receives alarms around the clock, via the internet may be a feature of a type-approved system.

Germany wants to provide the following information:

An application for a type-approval according to Regulation No. 116 was submitted to the German type-approval authority end of 2013. The application aimed at the realization of a car sharing system including only cars owned by private individuals. The idea of the system was to give a customer who wants to use a car access to that car and to enable that customer to operate systems described in Regulation No. 116 without handing over the car-manufacturer provided key.

Access to the car and deactivation of systems according Regulation No. 116 should be realized using a smartphone device. To provide more security against manipulation of the system and unauthorized use of the cars offered via the car sharing system a silent alarm to a security service was planned to be a security feature of the car sharing system.

Granting of that type-approval was refused by the German type-approval authority after consideration of the following two aspects:

- 1.) Section 6.2.1 of Regulation No. 116 allows a radio alarm only as an addition to an audible alarm that would not be generated by the device.
- 2.) The signal via smartphone was deemed to be a kind of additional “key” which would allow to open the doors and to use the car without having a standard key provided by the car-manufacturer. As can be taken from the quotations below Regulation No. 116 links all devices to be activated/deactivated (unauthorized use, alarm system and immobilizer) to the key operating them. Providing an additional possibility to operate those devices without using the key provided by the car-manufacturer was deemed to be not in line with Regulation No. 116.

In addition to these two aspects and with regard to unlocking and locking of the car doors it should be considered, that a smartphone used as an unlocking device could interfere with a manufacturer-installed vehicle system that locks the doors automatically above a certain vehicle speed. An automatic locking system activated

above a certain vehicle speed may be installed by the car-manufacturer to improve passenger safety in case of frontal and side impact.

For better convenience some relevant sections of Regulation 116 are quoted below:

APPROVAL OF A VEHICLE OF CATEGORY M1 AND N1 WITH REGARD TO ITS DEVICES TO PREVENT UNAUTHORISED USE

5.1.5. 'Key' means any device designed and constructed to provide a method of operating a locking system which is designed and constructed to be operated only by that device.

APPROVAL OF VEHICLE ALARM SYSTEMS

6.1.8. 'Key' means any device designed and constructed to provide a method of operating a locking system which is designed and constructed to be operated only by that device.

6.2.1. VAS shall, in the event of intrusion into or interference with a vehicle, provide a warning signal. The warning signal shall be audible and in addition may include optical warning devices, or be a radio alarm or any combination of the above.

APPROVAL OF IMMOBILISERS AND APPROVAL OF A VEHICLE WITH REGARD TO ITS IMMOBILISER

8.1.6. 'Key' means any device designed and constructed to provide a method of operating a locking system, which is designed and constructed to be operated only by that device.
