

General description of the immobilizer

The described system is a transponder-based immobilizer for an automotive vehicle.

The immobilizer system consists of :

- up to 4 ignition keys with transponder integrated in the key head
- the antenna for energizing and communication with the transponder with its integrated electronic modulator/demodulator driver
- the external status indicator (LED) for displaying the immobilizer status

The purpose of the immobilizer system is to provide an additional anti-theft-system which is installed in the vehicle. Checking of user authorization is done by use of an ignition key whose head integrates a crypto-transponder.

In case of a blocked immobilizer system (unauthorized key), the ECM control unit locks the engine control by cutting off the ignition circuit and the injectors circuit.

The antenna is a coil allowing to create the electromagnetic field necessary for transponder operation. The antenna generates an electromagnetic field using a frequency of 134.2 kHz. This field induces energy into the transponder by way of its resonant circuit.

The external status indicator (LED) displays the immobilizer status, and has an additional deterrence function.

Variant:

Siemens type designation	frequency	
5WY 8301	134.2 kHz	Immobilizer antenna