

Instruction of immobiliser's installation

type: T IMO

Characterization of immobiliser

Proposed T IMO is transponder immobiliser (without of contact) working on the frequency 125kHz, assuring basic functions from the range of protection before thefts. Immobiliser T IMO in spite the simple construction possesses all logical functions of service and auto-diagnosis. T IMO

possesses 2 internal transmitters of the electric blockade working on points of junction NC, to immobiliser operating serve transponder (2 pieces in the complete set), it possesses 8 -pins connector with installed buzzer and antenna, and 2 2-pins connectors of the electric blockade's circuit.

Functions of immobiliser

- 2 transponders in the complete set (shape of key ring, possibility of 4 transponders' installation).
- 2 electric blockade's circuits in NC configuration (standby-compact, 2 transmitters 10A).
- 1 input's line of grounded switches (immobiliser's removal from standby mode).
- 1 input's line of turning ignition on (immobiliser's removal from standby mode)
- Auto arming
- 6 programmable functions

Complementation of device:

- ✓ Immobiliser's switchboard
-1 piece.
- ✓ Main connector
-1 piece.
- ✓ Connector of ignition's blockade
-2 pieces
- ✓ Transponder
-2 pieces.



Photo of all system's elements.

Logical functions

Disarming of immobiliser

Transponder's application to reception antenna (during 2 min from opening door).

Signalling:

- x Buzzer - 2 short signals
(every transponder's application in disarmaments state signalled is ditto)
- x ATTENTION: Temporary line-up of the ignition or opening door causes immobiliser's removal from standby mode on 2 min, at that time we can disarm immobiliser. If during 3 minutes we will not apply transponder to immobiliser, then automatically will run into the standby mode (disconnections of antenna's feed system).
- x Line-up of ignition in armament's state causes separation of electric blockade's circuits (response of transmitters)

Auto arming of immobiliser.

Turning off the ignition in time 2 minutes.

Signalling:

- x Buzzer - 1 long (5 sec.) signals
- ATTENTION: Every reading transponder causes cancelling of auto armament's time

Service mode of immobiliser

The service mode is used in the situation when we must leave car in the repair-service.

It has on target an avoidance of difficulty in the service of the car by service staff. In this mode immobiliser is disarmed (lack auto arming) with maintenance of function "put to standby" of antenna's circuit.

Turning the service mode on (course of action):

- x Disarm of immobiliser.
- x Turn on the ignition.
- x Apply transponder to antenna in time 10 sec, to one 2 sec buzzer's signal ,remove the transponder from the antenna and during 5 sec to turn off ignition.
- x Immobiliser is introduced in service mode

Signalling of engaged service mode:

- x Every ignition's turning on/turning off is signalled 2 sec buzzer's signal.

Disconnection of service mode (course of action):

- x Conduct as for "Turning on the service mode".

Programmable functions

Entry to programming functions of immobiliser

Course of action:

- x Turn on immobilizer's service mode.
- x Turn off the ignition.
- x Apply transponder to antenna in time 10 sec, to long about 5 sec buzzer's signal, afterwards remove transponder from antenna
- x Buzzer will start signalling of programmable function's number by short signals with short distance among them.

Change of function's arrangement made is by application transponder to antenna after required function's number (quantities of buzzer's signals) on about 2 sec with the confirmation by 5 sec buzzer's signal.

Function's number:	Function's name	Function's arrangement
1	Auto arming	after 2 min(standard)
2	Auto disarming	after 30 sec
3	Blockade's response	immediate (standard)
4	Blockade's response	Behind schedule 5 sec
5	Transponders' installation	Possibility of max 4 transponders' installation

- x After programming of chosen function counting off of function's number is begun from F1 (1 function).
- x Exit from programming mode follows automatically if after signalling of last function during 5 sec will not applied transponder to antenna. The confirmation of programmable functions' abandonment is confirmed long 5 sec buzzer's signal
- x Turn off immobiliser's service mode

Description of programmable function:

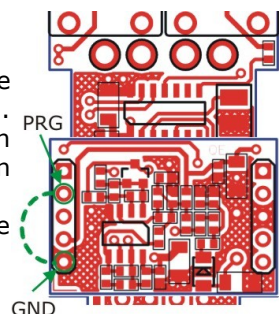
- F1. - Auto arming of immobiliser will succeed to 2 min after disconnection of ignition.
- F2. - Auto arming of immobiliser will succeed to 30 sec after turning off ignition.
- F3. - If ignition will be engaged when immobiliser is armed then separation of blockade's circuits will be immediate.
- F4. - If ignition will be engaged when immobiliser is armed then separation of blockade's circuits will be delayed about 5 sec.
- F5. - Transponders should be installed by single approaching to the antenna at intervals about 4 sec on the transponder. To the memory can be installed max 4 transponders. If during 5 sek immobilizer will read none transponder then will leave coding mode automatically. All transponders on which has to react immobiliser should be installed.

This mode of transponder's installation does not cause the change of programmable functions.

The productive transponders' programming.

Line-up of power supply on compact point PRG to GROUND, entry into service mode of transponders' installation, is confirmed by 1 short buzzer's signal. Installation consists in the following adhibition transponders to the antenna with confirmation by 1 short buzzer's signal. After filling of 4 memory cells installation mode is left automatically with the signalization by long 5 sec buzzer's signal.

This mode of transponders' installation causes changes of programmable functions on settings "Standard".



Where and how install immobiliser.

Immobiliser's switchboard should be installed inside cabins of the car, best under the dashboard. One ought to avoid subject places on the moisture, as for example regions air-conditioning installation. The switchboard is fasten down by bands pulling down to stable elements of the vehicle.

Installation of receiving antenna

For the danger of the considerable shortening of the transponders' receptions' range, reception antenna should be installed under the upholstery far from metal-parts of the vehicle. Inadmissible is the abbreviation and/or lengthening of the antenna.

Installation buzzer

Buzzer should be installed in place of assuring good circumstances of emitted sound signals' dispersal.

Input's connecting of door's grounded switches

Connection one ought to perform to grounded switch of driver's door. Such connecting will assure that, immobiliser will be led out of the standby mode only in situation when driver is getting into car.

Installation of ignition's input

Connecting one ought to perform to wire whereon appears constants +12V after switch of ignition into position - THE IGNITION.

Description of immobiliser's inputs and outputs

Inputs.

- ✓ Antenna's input - connector of reception antenna emitting the electromagnetic field low-power about the frequency 125kHz.
- ✓ Door's on-switch - input of door's connectors ,activated by providing ground
- ✓ Ignition - input of ignition's enclosing identification, activated by providing +12V,
- ✓ +12V - input of main power supply +12V,
- ✓ GROUND - input of ground's connection

Control outputs .

- ✓ Buzzer - control output of buzzer by providing ground (max. 20mA),
 - ✓ 2 blockade's circuits - 2 independent circuits NC (standby-compact), the load-carrying capacity of every from circuits 10A continuous current
-

Scheme of immobiliser's installation

