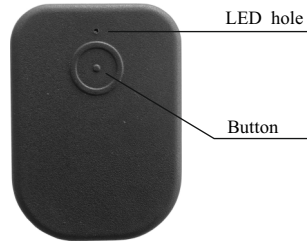




Pic. 1. The System Unit.



Pic. 2. The ID card.

IMMOBILIZER PURPOSE

The purpose of the immobilizer 'KODINIS' is the car theft prevention. The driver identified, when the ID card present inside the communication area. If no ID card present, device prevent engine start or shut down the running engine.

SAFETY WARNINGS

The immobilizer includes the System Unit (see pic. 1) that must be installed on the secret location inside the passenger compartment, and two ID cards (see pic. 2.). The ID card and the System unit provide the 2-way encrypted RF communication. Up to 5 ID cards and one radio relay (IMB6) can be paired with the System unit. The vehicle immobilizer manufacturer recommends the following:

1. Choose a qualified vehicle alarm system installer to install the immobilizer.
2. Device location shall be free from moisture and other corrosive substances, as far possible from heating elements inside the passenger compartment and sources of electromagnetic interference (e.g., a vehicle computer, fans, relay blocks) provide reliable two-way radio communication.
3. Do not install the System Unit directly onto metal parts of the vehicle to prevent the condensation accumulation inside.
4. Install the System Unit in such a way that the wiring connectors come from below.
5. Do not locate the System wires next to moving or heavily heated parts of the vehicle.
6. For EU countries use the settings compatible with EU Directives only.
7. Power supply circuit and additional circuits must be fused.

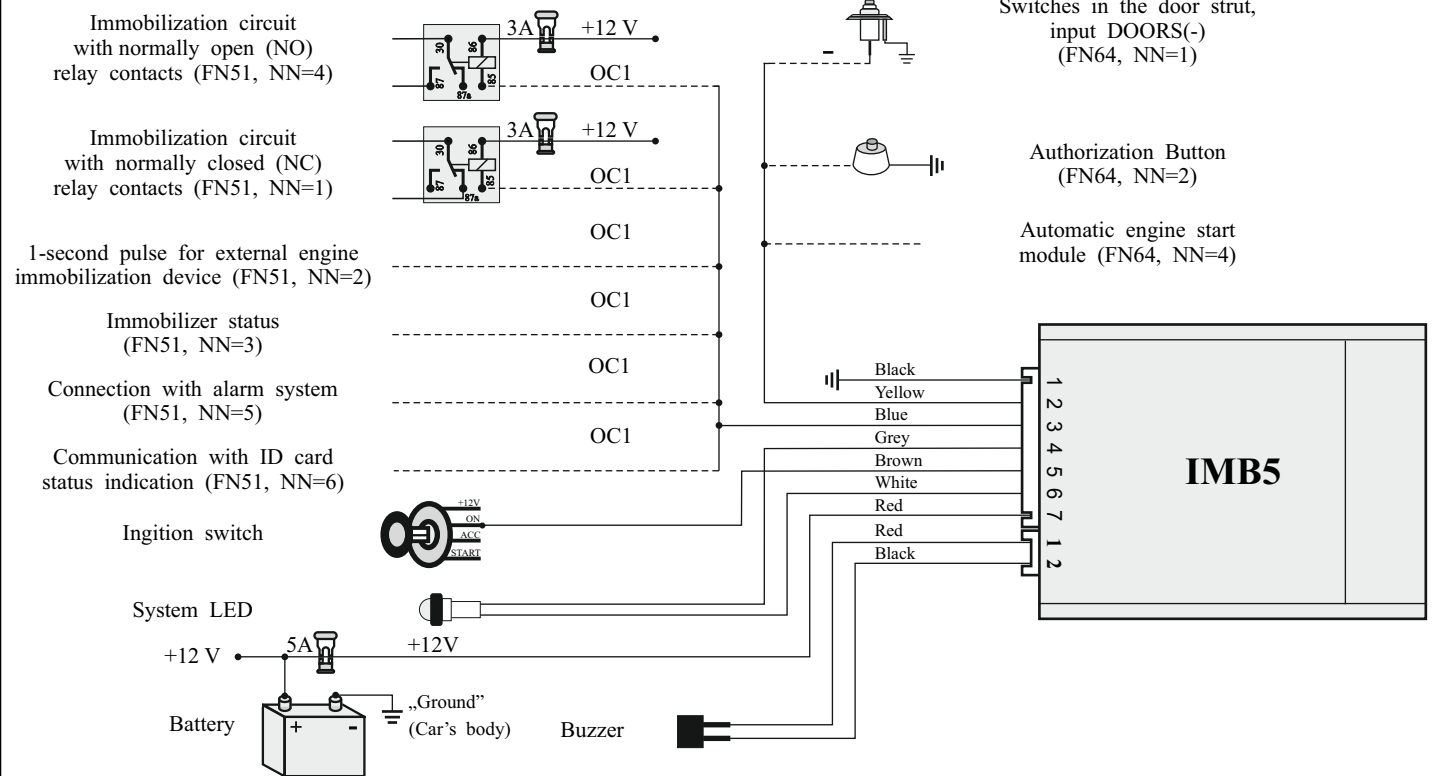
SPECIFICATIONS

- | | |
|--|-----------------------|
| 1. Operating temperature range | -40°C – +85°C. |
| 2. Supply voltage | 9–15 VDC. |
| 3. Average consumption current (except Optional Control No.1) | up to 10 mA (U=12 V). |
| 4. Average control distance (depends on electromagnetic environment) | 2–4 m. |
| 5. Communication frequency range | 2.4 GHz. |
| 6. Pulse radiated power | up to 1mW. |
| 7. Optional Control No.1 (OC1) maximum load current | 300mA |

INSTALLATION SEQUENCE

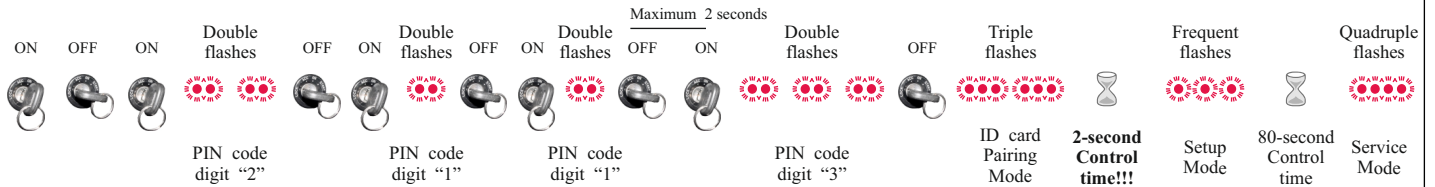
1. Select the purpose of the Optional Control No.1 (see FN51).
2. Select the purpose of the DOORS(-) input (see FN64).
3. Install the immobilizer in accordance with the wiring diagram, paying attention to the selected OC1 and DOORS(-) purposes.
4. Customize default immobilizer settings if necessary.
5. Fill in the installation certificate.

WIRING DIAGRAM

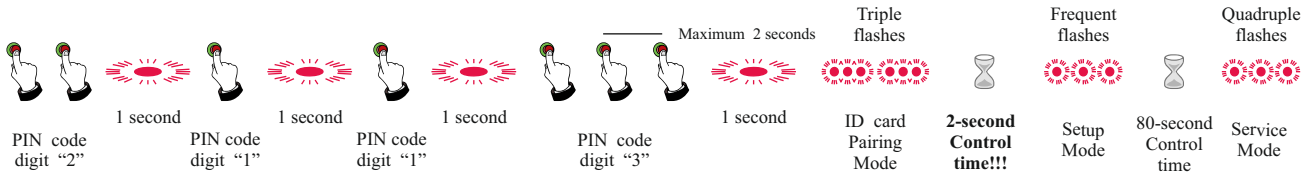


ENTERING SERVICE MODE

The Service Mode can be activated in the following scenarios: the ID card is lost, the ID card battery is fully discharged, the car is being repaired (ID card remains with owner). The Service Mode is activated by the the PIN code entering. The factory preset PIN is printed on the immobilizer sticker. The installer must give you the PIN. **For example, the PIN code 2113 entering by turning ON and OFF the ignition and counting flashes of the system LED (not ID card LED!):**



For example, the PIN code 2113 entering by the authorization button:



The 2-second control time is extended up to 12 seconds after ignition turning ON. The 80-second control time is extended up to 8 minutes after Function setting check or change.

LEAVING SERVICE MODE

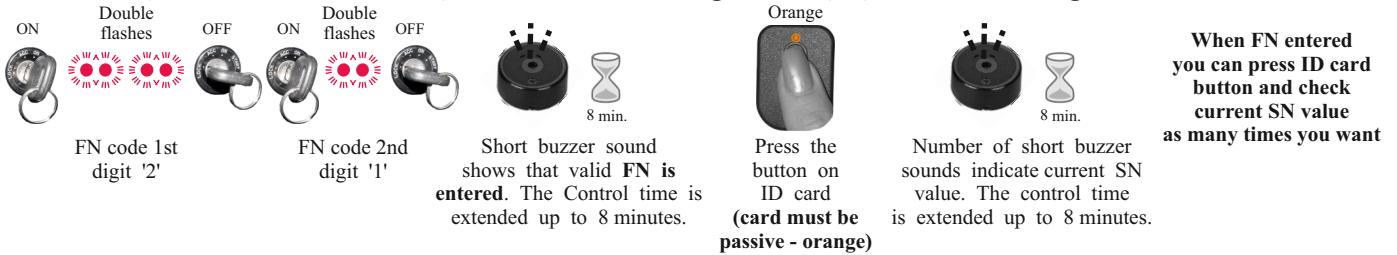
Enter the PIN code (see ENTERING SERVICE MODE). Wait for 3 seconds. While the System is in Setup Mode mode (the system LED blinks frequently), enter the code 11 by the same way as PIN code.

CHANGING SETTINGS

The 'IMB5' can be adjusted to a particular vehicle or relevant customer's requirements by the change of System settings. The immobilizer comes with the factory preset default settings listed in the table. Settings are changed by entering function number FN and changing it's setting number SN (check table below for FN and SN values). To customize the settings make the following actions:

1. Switch ID card to passive (orange) mode (see user manual for details).
2. Enter the PIN code (see ENTERING SERVICE MODE).
3. Wait for 3 seconds with ignition is turned OFF, till the system LED will finish to blink in tripple flashes and will start to blink in frequent flashes. The System is in the Setup Mode—you have 80 seconds to start the FN code entering.

OPTION 1 (USING IGNITION KEY) Function FN21 setting number (SN) check and change to SN=2



To change setting number (SN) turn ignition ON

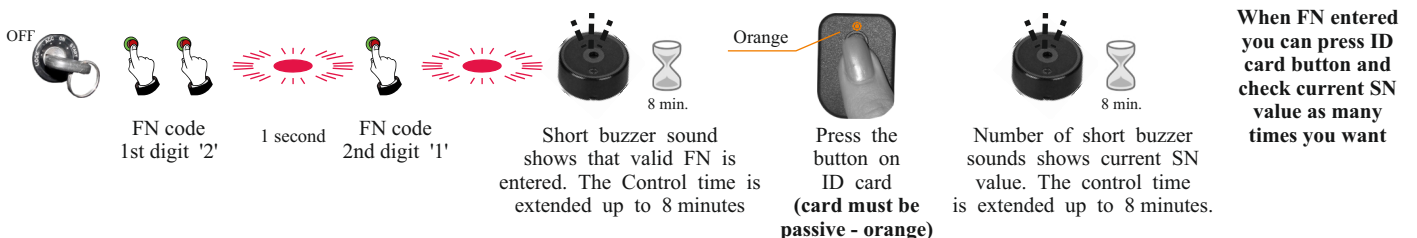


For SN=2 press ID card button twice

Long buzzer sound shows that valid SN is entered successfully. The Control time is extended up to 8 minutes.

Now you can press ID card button to check if you have entered correct SN. In case everything is correct enter another FN you want to change or enter FN11 to leave service mode

OPTION 2 (USING AUTHORIZATION BUTTON) Function FN21 setting number (SN) check and change to SN=2



When FN entered you can press ID card button and check current SN value as many times you want

To change setting number (SN) press and hold authorization button

Orange
For SN=2 press ID card button twice

8 min.

Now you can press ID card button to check if you have entered correct SN. In case everything is correct enter another FN you want to change or enter FN11 to leave service mode

Long buzzer sound shows that valid SN authorization is entered successfully. The Control time is extended up to 8 minutes.

Release the button.

PAIRING ID CARDS AND/OR WIRELESS CUT-OFF RELAY IMB6

The user can pair to the System up to **5 ID cards** and **one Wireless Cut-off Relay (IMB6)**. The ID card under pairing shall be **passive - orange** (see User Manual–ID CARD DEACTIVATION). The **all previously paired ID cards are deleted** from the System unit as the first **new one** is paired (not applied to IMB6 - it's remain paired). It is highly useful, if the ID card is stolen or lost.

1. Enter the PIN code for IMB5 (see ENTERING SERVICE MODE in IMB5 documentation).
2. The System unit (IMB5) LED blinks by **triple flashes** for **2 seconds**. Within this interval **turn ON and OFF the ignition**.
3. Pair the ID cards and/or IMB6

Triple flashes
2 seconds

ON

12 sec.

The Control time is extended up to 12 seconds.

OFF

Orange

Press the button on the 1st ID card and hold pressed down.

1 sec.

1 second flash, release the button, ID card is paired.

12 sec.

The Control time is extended up to 12 sec.

Triple flashes

Orange

Press the button on the 2nd ID card and hold pressed down.

1 sec.

1 second flash, release the button, ID card is paired.

12 sec.

The Control time is extended up to 12 sec.

Triple flashes

Press and hold the button on the IMB6 or connect blue wire (pairing input) to +12V and power up IMB6

1 sec.

1 second flash, release the button, Wireless Cut-OFF Relay IMB6 is paired.

12 sec.

The Control time is extended up to 12 sec.

Triple flashes

AVAILABLE IMMOBILIZER SETTINGS

In the column named "EU" the settings which comply with the requirements of EU Directives are indicated with a tick mark ✓. Selection of settings not complying with the EU requirements is allowed if the vehicle is operated outside the EU states. In the column "IMB5" the settings which present with the immobilizer software version are indicated by a tick mark ✓. The factory default (pre-set) settings are indicated with the tick mark ⊙ in the "IMB5" column.

AVAILABLE SETTINGS

		FUNCTION	EU	IMB5
FN=11	Function: END OF FN SETTINGS		✓	✓
FN=21	Function: IMMOBILIZATION SIGNAL			
SN=1	The immobilization signal is turned ON when the 20-second time after the ignition is turned OFF is elapsed, if there is no paired ID card signal inside communication area. The signal is turned OFF when paired ID card signal appears and authorization button is pressed (depending on FN64 setting).		✓	⊙
SN=2	Immobilization signal is turned OFF.		✓	✓
FN=22	Function: 'ANTI-CARJACK'			
SN=1	'Anti-carjack' is turned OFF.		✓	⊙
SN=2	'Anti-carjack' procedure is triggered by ignition turning ON with no active paired ID card inside communication area or by ID card signal loss with ignition is turned ON. The immobilizer waits for paired ID card signal within 120-second countdown and follows 'anti-carjack' operation settings (FN23). From the 25th last 25 second to 11th last second the immobilizer warns by short buzzer signals with increasing frequency. Within the last 10 seconds the buzzer sounds continuously. 'Anti-carjack' operation cancelling or trigger prevention available at any time by paired active ID card signal. If is selected (SN=2 for FN64) and immobilization signal is turned OFF (SN=2 for FN21), the authorization button shall be pressed every time when the ignition is turned ON.			✓
SN=3	'Anti-carjack' procedure is triggered by ignition turning ON with no active paired ID card inside communication area. The immobilizer waits for paired ID card signal within 60-second countdown and follows 'anti-carjack' operation settings (FN23). From the 25th last second to 11th last second the immobilizer warns by short buzzer signals with increasing frequency. Within the last 10 seconds buzzer sounds continuously. 'Anti-carjack' operation cancelling or trigger prevention available at any time by paired ID card signal. If is selected (SN=2 for FN64) and immobilization signal is turned OFF (SN=2 for FN21), the authorization button shall be pressed every time when the ignition is turned ON.			✓
SN=4	'Anti-carjack' procedure is triggered by ignition turning ON with no active paired ID card inside communication area or by opening the door with ignition turned ON and the ID card signal loss afterwards. The immobilizer waits for paired ID card signal within 60-second countdown and follows 'anti-carjack' operation settings (FN23). From the last 25 second to 11th last second the immobilizer warns by short buzzer signals with increasing frequency. Within the last 10 seconds buzzer sounds continuously. 'Anti-carjack' operation cancelling or trigger prevention is available at any time by paired ID card signal. If is selected (SN=2 for FN64) and immobilization signal is turned OFF (SN=2 for FN21), the authorization button shall be pressed every time when the ignition is turned ON.			✓

FUNCTION		EU	IMB5
FN=23	Function: IMMOBILIZATION SIGNAL DURING 'ANTI-CARJACK' OPERATION		
SN=1	With the last 15 override time seconds the buzzer signal becomes continuous, after 15 seconds the buzzer signal is turned OFF and immobilization signal is turned ON. The immobilization signal can be transferred to OC1 (SN=1, SN=4 for FN51), to alarm system (SN=5 for FN51) or to external immobilization equipment (SN=2, SN=6 for FN51). For immobilization signal cancelling is necessary the turned ON programmed ID card inside communication area and the authorization button press (depending on FN61, FN64 settings).		✓
SN=2	With the last 15 override time seconds the buzzer signal becomes continuous, you can turn OFF it only by turning OFF the ignition, but not earlier as the override time elapses. The immobilization signal is turned ON only as the ignition is turned OFF , it can be transferred to OC1 (SN=1, SN=4 for FN51), to alarm system (SN=5 for FN51) or external immobilization equipment (SN=2, SN=6 for FN51). For immobilization signal cancelling is necessary the turned ON programmed ID card inside communication area and the authorization button press (depending on FN61, FN64 settings).	✓	✓
SN=3	With the last 15 override time seconds the buzzer signal becomes continuous and the immobilizer starts to transfer „a soft“ (gradual) immobilization signal to OC1 (SN=1, SN=4 for FN51). When the override time elapses the buzzer signal is turned OFF and the immobilization signal is turned ON. The immobilization can be transferred to OC1 (SN=1, SN=4 for FN51), to alarm system (SN=5 for FN51) or to external immobilization equipment (SN=2, SN=6 for FN51). For immobilization signal cancelling is necessary the turned ON programmed ID card inside communication area and the authorization button press (depending on FN61, FN64 settings).		✓
FN=43	Function: ID CARD SIGNAL LOST WARNING		
SN=1	Warning is ON. When 20 second time elapses after the ID card signal is lost the immobilizer warns every 5 seconds within 3 minute time by buzzer sounds.	✓	✓
SN=2	Warning is OFF.	✓	✓
FN=45	Function: LOW ID CARD BATTERY WARNING		
SN=1	Warning is ON. When the ignition is turned ON the immobilizer warns by the series of 4 double buzzer signals with interval of 1.7 second.	✓	✓
SN=2	Warning is OFF.	✓	✓
FN=51	Function: IMMOBILIZATION SIGNAL		
SN=1	The immobilization signal is transferred to optional control 1. The OC1 is used for control a relay with normally closed contacts.	✓	✓
SN=2	When the ignition is turned ON with immobilization signal ON, the negative polarity 1 second duration pulse, intended for an external immobilization equipment, is transferred to OC1.	✓	✓
SN=3	If the immobilization signal is ON, the negative polarity signal is transferred to OC1. If the immobilization signal is OFF on OC1 presents no signal.	✓	✓
SN=4	The immobilization signal is transferred to optional control 1. The OC1 is used for control a relay with normally closed contacts.		
SN=5	Communication with an alarm system. OC1 is intended with alarm system listed in compatible system list.	✓	✓
SN=6	The constant negative polarity signal is transferred to OC1, if communication with ID card is OK. If the communication fails the signal transfer is terminated with 5 second delay.	✓	✓
SN=7	The constant negative polarity signal is transferred to OC1, if communication with ID card is OK. If the communication fails, the signal transfer is terminated with 0.7 second delay.	✓	✓
FN=61	Function: AUTHORIZATION BUTTON PRESS		
SN=1	Single press. The authorization button must be pressed 1 time within 5 second time till ignition turning ON or after ignition turning ON .	✓	✓
SN=2	Double press. The authorization button must be pressed 2 times within 5 second time till ignition turning ON or after ignition turning ON .	✓	✓
FN=64	Function: INPUT 'DOORS (-)' PURPOSE		
SN=1	Doors (-).	✓	✓
SN=2	Authorization button (-).	✓	✓
SN=3	Not used.		
SN=4	AUTOSTART (-). When the input is connected to a low-level signal source (no more than +0.5 V) the immobilization signal is turned OFF. An automatic engine start module can to turn ON the ignition and starter . While the input is connected, PIN code entering is unavailable .		✓
FN=81	Function: CHANGE THE PIN	✓	✓
FN=82	Function: IMB6 PIN CODE INDICATION		
SN=1	Turn ON the indication to guide the PIN code entering for IMB6.	✓	✓
FN=91	Function: RESTORE FACTORY DEFAULT SETTINGS		
SN=1	Restore default factory settings and the default PIN code.	✓	✓
FN=92	Function: CONFIGURATION DATA UPLOAD		
SN=1	IMB5 uploads configuration data to Wireless Cut-off Relay IMB6.	✓	✓

SYSTEM PIN CODE

I, undersigned qualified installer, **SYSTEM PIN CODE IS** _____ **THE USER MUST CHANGE THE PIN CODE AFTER THE INSTALLATION AND DO NOT SAVE IT INSIDE THE CAR!**
 have been informed the customer that:


CERTIFICATE OF INSTALLATION

I, undersigned qualified installer _____ (Name, Surname) certify that installation of the below described vehicle alarm system has been carried out by myself pursuant to installation manual supplied by the manufacturer of the system.

Vehicle description:
 Manufacturer and model: _____
 Serial number: _____ Registration number: _____

Description of vehicle immobilizer:
 Type: 'IMB5'. Model: _____ Official approval number: _____
 Installation date: _____
 Installing company: _____

Installer: _____ (Position, signature)



After installation of the alarm system installer must fill in CERTIFICATE OF INSTALLATION!
 It is recommended to mark selected settings in the TABLE OF ALARM SYSTEM SETTINGS (underline SN).