

# KVANT 231

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OPERATING MANUAL



**AUTHOR**  
ALARM

## Dear car owner!

Please note that the AUTHOR Alarm's anti-theft devices are not intended for self-installation.

We strongly recommend to install and configure the purchased equipment only in certified installation centers.

**ATTENTION!** This operating manual contains the secret authorization code intended for an emergency unlocking of the engine. Save this manual after installing the system.

**ATTENTION!** Do not leave this operating manual with the secret code in the car! Otherwise, the protective functions of the system will be disabled.

Emergency code

Bluetooth pairing code

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## **General information**

Immobilizer KVANT 231 is aimed to provide active protection of the car by means of blocking (breaking) electrical chains critical for the engine work. Its special feature is the technology of blocking the engine with the built-in normally closed circuit relay. The security system can be deactivated using the key fob or smartphone with the application Author ID installed.

KVANT does not show its presence in the car till engine locking actuation. Moreover, due to its compact size the device can be installed almost anywhere in the car.

KVANT is a new smart way to protect your car!

## **Advantages of the system**

- Small size of the device allows its hidden installation in the passenger compartment or under hood space of the car.
- The device does not show itself till engine locking actuation.
- The security will be disarmed by signal from key fob or smartphone with the application installed.
- Engine blocking occurs in following events: Car starts moving, ignition switched ON, automatic gearbox position is changed.
- The hood locks will be locked when the security system activated.
- Service mode.

## OPERATION CONCEPT

### Engine locking

KVANT immobilizer prevents the car hijacking by cutting off the engine or by disabling the engine start. Engine locking occurs in the following cases:

- the accelerometer records the car motion and the ignition is switched ON
- the signal from «Ignition» is present (this option is switched OFF by default)
- the signal from «Automatic gearbox change» is present (this option is switched ON by default)

### Security deactivation

Before driving the car you should have with you the key fob or smartphone with the app Author ID installed.

If the key fob or smartphone with the app installed present the system gives 2 indication signals after that you can start driving (the engine will not be locked). If the key fob or smartphone is not present, KVANT locks the engine when you start driving or there is signal from “Ignition”/ “Automatic gearbox change”.

The security system will be automatically activated in 10 seconds after the ignition is OFF. 3 short indication signals confirm that the security is activated.

When security activated KVANT immobilizer will automatically close the electromechanical hood locks. The device controls hood status (open/closed) if the

corresponding option is enabled and the hood pin switch is connected. The locks will be closed not earlier than in 10 seconds after the hood is closed. Opening of the hood locks occurs after authorization in the system using key fob or smartphone with app installed.

## **Authorization with the key fob or with smartphone**

**ATTENTION!** Do not leave the key fob (smartphone) inside the car when the ride is over. Otherwise the anti-theft functions will be deactivated.

In order to authorize in the system it is enough to have the key fob or smartphone with the app installed. You can register 2 key fobs and 2 smartphones in the KVANT system memory. For authorization in the system you need to have with you at least one registered device.

Get into the car and switch ON the ignition. When the key fob/smartphone is detected, the system will give out two LED or sound signals confirming the successful authorization. After that you can start driving the car.

If the key fob/smartphone is not detected, there will be no LED or sound signals and if one attempts to start driving or start the engine, the engine will be blocked.

## **Emergency authorization**

In case you have forgotten or lost your key fobs you may apply the emergency authorization procedure to start the engine.

The emergency authorization code is indicated on the first page of this operating manual and consists of 3 digits.

To apply the emergency code switch the ignition ON and immediately OFF as many times as indicated by the appropriate digit of the code. The ignition switch ON/OFF time and the pause should not exceed 5 seconds. Before you enter the next digit you should make a pause at least for 5 seconds (but not more than 15 seconds) while the ignition is OFF.

The successful authorization will be confirmed by the signals of LED or buzzer in 5 seconds after entering the emergency code.

## Service mode

The service mode is used for temporary deactivation of the anti-theft system when you give your car for the maintenance (without saying about the device).

**The service mode activation** can be done when the ignition is switched ON or OFF. After the authorization via key fob or smartphone press the service button 10 times. Press button not later than 2 minutes after entering the PIN-code. The interval between the pressing of the buttons shall not exceed 2 seconds. The service mode activation will be confirmed by 10 LED or buzzer signals.

**The service mode deactivation** is performed by pressing the service button 10 times while the key fob or smartphone present in the car. The 2 times indication signal will confirm that the service mode is deactivated.

**ATTENTION!** Service mode will not be deactivated when the power is cut off or the ignition is switched ON/OFF. Use the emergency authorization code for the service mode deactivation in case you do not have key fob or smartphone with you (see page 6).

After the deactivation of the service mode when you try to switch the ignition ON or start the engine you should have key fob or smartphone with you.

Authorization after the deactivation of the service mode is not required if the ignition was switched ON then switched OFF for less than 10 seconds, and after that switched ON again (the device will remain in operating mode).

### **Hood lock activator control**

When the hood lock activator is connected the hood lock closes in 10 seconds after the security is activated. The hood lock will be opened when the security is disarmed. In service mode the hood lock is always in open position.

If a yellow-green wire (pin switch) is connected, the lock will not be closed when the hood is opened, including cases when the system is in security. When the hood is closed in security mode, the lock closes within 10 seconds after the hood is closed.



## SYSTEM SETTINGS

### Motion sensor sensitivity adjustment

The motion sensor of the immobilizer provides 5 sensitivity levels (sensitivity increases from 1 to 5, by default level 5 is activated). To change the sensitivity level, follow these instructions:

1. Switch the ignition ON without starting the engine.
2. Enter the current PIN-code to authorize. There will be 2 indication signals.
3. Enter the immobilizer Setup menu (Setup menu is available within 2 minutes after the PIN-code entering). For this purpose press service button and hold it pressed during 10 seconds. The LED or buzzer will start providing indication signals once in a second.
4. Press service button twice to enter the sensitivity control sub-menu. The indication LED or buzzer will provide a number of signals, which corresponds to the value of the current sensitivity level (from 1 to 5). After that the immobilizer will start providing series of double indication signals.
5. Set new sensitivity level by pressing the button the required number of times from 1 to 5. The value «1» corresponds to the switched off sensor, the value of «2» – to the lowest sensitivity level (response only to a strong speedup), the value of «5» – to the highest sensitivity level (response to a slight acceleration). Each button press will be confirmed by a single indication signal of LED or buzzer. New saved value of sensitivity level will be confirmed in 3

seconds after the end of the setting procedure with the corresponding quantity of indication signals of LED or buzzer (from 1 to 5). If the saving was not successful, the LED or buzzer will provide single indication signals with duration of 2 seconds. Switch OFF the ignition and repeat the steps 1-4.

6. Switch OFF the ignition.

### **Reset to factory settings**

To reset the KVANT to factory settings follow the steps:

1. Switch ON the ignition without starting the engine.
2. Authorize via key fob or smartphone. There will be 2 indication signals.
3. Enter the immobilizer Setup menu. For this purpose press service button and hold it pressed during 10 seconds. The LED or buzzer will start providing indication signals once in a second.
4. To reset to factory settings press service button 9 times. The indication signal of LED or buzzer will be provided 9 times. Press the service button 9 times to confirm the reset. The LED or buzzer will confirm the reset by the indication signal repeated 9 times. If the reset is not performed, the LED or buzzer will start providing single indication signals with the duration of 2 seconds. To reset the settings switch OFF the ignition and repeat the steps 1-3.
5. Switch OFF the ignition.

## CONNECTION AND DELETING OF KEY FOBBS AND SMARTPHONES

### Deleting of key fobs

If you lost key fob erase it from the device memory to prevent the car theft.

**ATTENTION!** During this procedure all saved in the memory key fobs and smartphones will be erased!

**To delete** key fobs and smartphones from the system memory do the following:

1. Switch ON the ignition without starting the engine.
2. Authorize via key fob or smartphone. There will be 2 indication signals.
3. Enter the immobilizer Setup menu. For this purpose press service button and hold it pressed during 10 seconds. The LED or buzzer will start providing indication signals once in a second.
4. To choose the sub menu №5 press the Service button 5 times. The LED or buzzer indication will confirm the action with 5 signals.
5. To delete Key fobs from device memory press the Service button 8 times. The LED or buzzer indication will confirm the action with 8 signals.
6. To confirm Key fobs deleting press the Service button 8 times again. The LED or buzzer indication will confirm the action with 8 signals. All Key fobs and Smartphones will be deleted from the device memory. If the deleting was not successful, the LED or buzzer will provide single indication signals with duration of 2 seconds. Switch OFF the ignition and repeat the steps 1-6.
7. Switch OFF the ignition.

## Connection of key fobs

In order to connect a new key fob do the following:

1. Make sure the key fob can be used for connection with the device:
  - insert the battery in the key fob;
  - make sure the LED is flashing with green.
2. Take out the batteries from all key fobs including those connected to the system and log out from Author ID app on all smartphones.
3. Authorize in the system via smartphone or Emergency code
4. Switch on key fob connection mode:
  - Switch on the ignition without starting the engine.
  - Authorize in the system via key fob or smartphone
  - Enter the immobilizer Setup menu. For this purpose press service button and hold it pressed during 10 seconds. The LED or buzzer will start providing indication signals once in a second.
  - To choose the sub menu №5 press the Service button 5 times. The LED or buzzer indication will confirm the action with 5 signals.
  - To connect new Key fobs press the Service button 3 times. The LED or buzzer indication will confirm the action with 3 signals.
5. Connect the Key fobs in Automatic or Manual mode:

**ATTENTION!** During the pairing procedure it is recommended to put key fob as close to the KVANT system as possible. The interaction radius in pairing mode is limited (distance should be less than 1 meter).

## Automatic connection

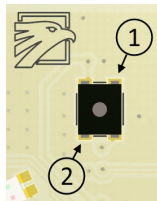
**ATTENTION!** This method of connection is suitable only for new key fobs bought from the manufacturer.

Insert the battery into the new key fob. The LED on key fob will start flashing continuously with green light. It is recommended to put the key fob closer to the immobilizer during the procedure of connection. (The interaction radius during connection procedure is limited). After the successful connection the LED will blink once with red light.

## Manual connection

**ATTENTION!** This method of key fobs connection is suitable only for new key fobs that were included in the immobilizer set.

Close the key fob contacts (with a piece of aluminum foil or a piece of metal) as shown on the right drawing and insert the battery. The LED indication will start flashing green every second and when the key fob is connected it will flash red once.



If the connection did not happen, the green blinking stops in 30 seconds after inserting the battery.

Be sure to check the key fob operation after connection it to the device.

6. Switch OFF the ignition.
7. Disconnect and connect again the battery terminals in your car to reset the power connection of KVANT immobilizer.

## Use your smartphone as a key fob

It is possible to use smartphone as a key fob for authorization in the system.

In order to do that the car-owner must have smartphone connected to the system and application **Author ID** running in the background mode (even when your smartphone screen is off). KVANT immobilizer supports connection of two smartphones that can be used as a key fob.

This function is available for the following smartphones with different operation systems:

iOS	Android
Smartphones supporting: iOS 8.0 and higher	Smartphones supporting: <ul style="list-style-type: none"><li>• Android 5.0 and higher</li><li>• Bluetooth 4.0+ (LE)</li></ul>

For authorization via smartphone download and install **Author ID** app from App Store or Google Play (or scan QR-code):

<https://itunes.apple.com/ru/app/author-id/id1144594689?mt=8>

<https://play.google.com/store/apps/details?id=com.dma.author.authorid>



**ATTENTION!** Maximum 2 smartphones can be used as key fobs. During connection procedure only one smartphone can be added at a time.

In order to connect your smartphone to the system it is necessary to do the following:

1. Switch on Bluetooth in your smartphone.
2. Start **Author ID** app.
3. Switch on the ignition without starting the engine.
4. Authorize in the system via the key fob or emergency authorization procedure.
5. Activate smartphone pairing mode:
  - Switch ON the ignition without starting the engine.
  - Authorize via key fob or smartphone. There will be 2 indication signals.
  - Enter the immobilizer Setup menu. For this purpose press service button and hold it pressed during 10 seconds. The LED or buzzer will start providing indication signals once in a second.
  - Choose the №5 menu item by pressing service button 5 times. The indication signal of LED or buzzer will be provided 5 times.
  - To activate smartphone pairing mode pressing service button 2 times. The indication signal of LED or buzzer will be provided 2 times.
6. Press «+» button to add new device.

**ATTENTION!** During the pairing procedure it is recommended to put your smartphone as close to the KVANT system as possible. The interaction radius in pairing mode is limited (distance should be less than 1 meter).



7. In a pop-up window enter the Bluetooth pairing code indicated on the first page of this manual. After this your smartphone will be connected to KVANT system.
8. Press the «Key» button in the center of the screen in order to activate the key fob mode (the button lightning will change from grey to orange color).
9. Switch OFF the ignition.

Now your smartphone will be functioning as a key fob. The connection to the KVANT system is done via the encrypted channel.

**ATTENTION!** Your smartphone work as a key fob only when Bluetooth is on and the Author ID app is launched.

The Smartphone as key fob is activated at distance up to 10 meters from the car depending on the installation place of KVANT system.

### **Deleting of smartphone**

If the connection of smartphone to KVANT system was not successful or there is a need to unpair the smartphone, do the following.



**ATTENTION!** In case the smartphone is lost delete it from the memory of the KVANT system immediately for security reasons.

First of all delete previously connected smartphones from the KVANT memory:

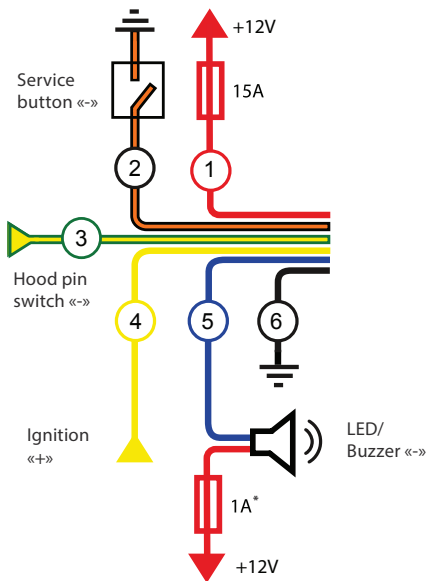
1. Switch ON the ignition without starting the engine.
2. Authorize via key fob or smartphone. There will be 2 indication signals.
3. Enter the immobilizer Setup menu. For this purpose press service button and hold it pressed during 10 seconds. The LED or buzzer will start providing indication signals once in a second.
4. Choose the №5 menu item by pressing service button 5 times. The indication signal of LED or buzzer will be provided 5 times.
5. To delete all smartphones press service button 7 times. The indication signal of LED or buzzer will be provided 7 times.
6. To confirm the smartphones deleting procedure press service button 7 times again. The indication signal of LED or buzzer will be provided 7 times. All smartphones will be deleted from the KVANT memory.

If the deleting procedure was not successful there will be single indication signals of LED or buzzer lasting for 2 sec. In that case switch OFF the ignition and repeat steps 1-6.

7. Switch OFF the ignition.

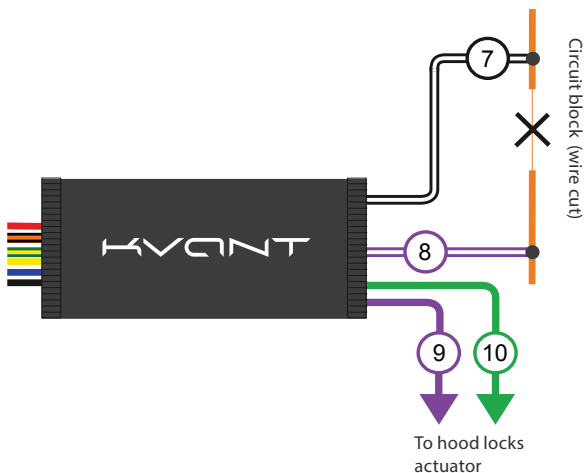
After that delete the link between the devices in your smartphone: Settings – Bluetooth – Devices – IGLA – Delete connection (Unpair).

## CONNECTION DIAGRAM



1. **Red.** +12V power supply connected via 15A fuse.
2. **Orange-Black.** Service button «-».
3. **Yellow-Green.** Hood pin switch «-».
4. **Yellow.** Ignition «+».
5. **Blue.** LED/ Buzzer «-».
6. **Black.** Ground/earth.

\* 1A fuse is not included in the set of KVANT 231.



**7. Black-White.** Common wire (for circuit block).

**8. White-Purple.** Normally Closed contact.

**9. Purple.** Hood locks actuator control.

**10. Green.** Hood locks actuator control.

**ATTENTION!** To prevent the drop in voltage in KVANT 231 when the LED/Buzzer circuit is closed, it is recommended to install a separate 1A fuse on the LED/Buzzer power wire.

## REFERENCE INFORMATION

### KVANT Immobilizer options

The state of option set in the system by default («Switch ON», «Switch OFF») is marked with grey color in the table. The figures in the table show how many times the service button shall be pressed to choose a particular option state.

Nº	Option	OFF	ON
2	Accelerometer sensor sensitivity	1	2...5
3	Ignition blocking	1	2
4	Hood pin switch		1
	AT shift blocking		2
5	Smartphone pairing		2
	Key fob pairing		3
	Smartphones deleting		7*
	Key fobs and Smartphones deleting		8*
6	Firmware change mode		
9	Factory Reset		9

\* To confirm the Key fob/Smartphone deleting procedure press the Service button again for 7 or 8 times respectively.

**In order to change the option state** do the following:

1. Switch ON the ignition without starting the engine.
2. Authorize in the system via the key fob or smartphone - there will be 2 indication signals.
3. Enter the immobilizer Setup menu. For this purpose press service button and hold it pressed during 10

seconds. The LED or buzzer will start providing indication signals once in a second.

4. To enter needed sub-menu press service button the number of times that corresponds to the option you need. The LED or buzzer will provide corresponding number of indication signals. And after that there will be a series of signals corresponding the sub-menu number.
5. To choose the needed option state (ON/OFF) press the service button the corresponding number of times (see the information in the table) For example:
  - Pressing service button 2 times to activate «AT shift blocking»;
  - Pressing service button 3 times to activate «Key fob pairing» mode;
  - Pressing service button 7 times to for «Smartphones deleting».

The indication signal of LED or buzzer will be provided the corresponding number of times equal to the number of option you choose.

**ATTENTION!** To confirm the Key fob/Smartphone deleting procedure press the Service button **again** for 7 or 8 times respectively.

If the deleting procedure was not successful there will be single indication signals of LED or buzzer lasting for 2 sec. In that case switch OFF the ignition and repeat steps 1-5.

6. Switch OFF the ignition.

## Key fob LED indication signals

After installing the battery element the key fob LED can provide the following signals:

Color	LED signal	Description
Green	1-flash	High battery charge level
Red	1-flash	Low battery charge level*
Orange (green+red)	1 flash lasting 5 sec.	Built-in accelerometer is out of order**
Green	Blinks during 30 sec.	«Key fob pairing» mode
Red	1 flash lasting 3 sec.	Key fob pairing was successful

If the key fob is motionless for more than 10 minutes, it goes into «Sleep mode» with low power consumption. The exit from the «Sleep mode» occurs automatically if you move or shake the key fob.

\* It is recommended to replace the battery element with a new one!

\*\* If the accelerometer is out of order the key fob will not go into «Sleep mode» but you can still use it for authorization in the system.

## Specifications

Operating voltage	9-15 V
Working temperatures range	from -40 to +85 °C
Current of consumption in the protection mode	not more than 10 mA
Current of the built-in safety relay	not more than 20 A
Current for LED/Buzzer control (blue wire)	not more than 250 mA

## Contents of the set

Immobilizer KVANT 231	1 pcs.
Key fob	2 pcs.
Buzzer	1 pcs.
Button	1 pcs.
15A fuse	1 pcs.
Operating manual	1 pcs.
Packing	1 pcs.



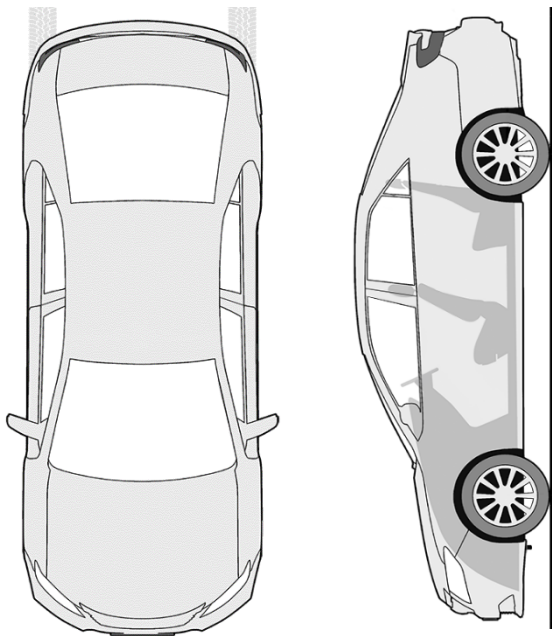
Made in Russia  
Manufacturer: LLC «DMA Group»  
C-RU.AЛ14.B.10097

The developer and the manufacturer retain the right to make technical updates not specified in this operating manual. To learn more visit our web-site:

<http://author-alarm.com>



## Immobilizer location



**ATTENTION!** Do not leave this operating manual inside the car!

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## WARRANTY CERTIFICATE

Warranty is 12 months from the date of the purchase. During this period technical support and maintenance are guaranteed for free.

The warranty does not apply to the items with:

- mechanical damage, burnt and char pieces, components, conductive tracks etc.;
- traces of an independent repair;
- damage caused by natural hazards, fire, social factors;
- violation of the tamper-evident seal, damage or absence of a factory/trade label.

Only items in complete set and with the original packing are taken for warranty repair.

Absence of packing is regarded as noncompliance with transportation rules. The warranty does not apply to the damage incurred to another equipment operating together with this device.

Item (model) \_\_\_\_\_

Sale date \_\_\_\_/\_\_\_\_/\_\_\_\_\_

The contents of delivery \_\_\_\_, functioning \_\_\_\_, absence of mechanic damage \_\_\_\_ are checked.

I am acquainted and agree with the condition of warranty service:

Buyer \_\_\_\_\_

Seller \_\_\_\_\_ seal







Supported Cars List App.

