

# CONTOUR

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## OPERATING MANUAL



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ALARM

version 802.1

## TABLE OF CONTENTS

General information .....	4
Engine locking .....	5
Locking algorithm .....	5
Locking procedure .....	5
Wiring scheme .....	6
Connection between IGLA and CONTOUR .....	8
Siren .....	9
Specifications .....	10
Contents of the set .....	10

## General information

CONTOUR – is designed for control of additionally installed electromechanical hood lock. The module is supplied as an addition to the IGLA anti-theft system and considerably expands security functions of the system. Devices are connected via standard CAN bus by encrypted dialogue mode. This excludes unauthorized access to hood lock control.

CONTOUR controls status of open hood, in other words, the hood lock cannot be locked if the hood is opened.

Apart from the hood lock control there is an option for the control of the additional engine locking relay connected via normally closed scheme.

The hood lock is closed in the following cases:

- Car security is activated (the central lock is closed)
- In 10 seconds after the ignition is off
- Anti Hi-Jack mode is activated (right after the car starts moving)

The hood lock does not close if the hood is opened or IGLA has service mode activated.

The hood lock unlocks after the authorization in the IGLA system.

## **Engine locking**

To ensure the highest level of theft protection, CONTOUR and IGLA provide additional locking circuit. It is used in case the connection with the engine control unit via CAN bus is disrupted or hindered. Locking allows to activate the Running engine shut-off mode and Anti Hi-Jack option for cars without digital locking of the running engine.

## **Locking algorithm**

CONTOUR locking activates at attempt of driving without authorization (or in Anti-Hi-Jack mode) when the CAN bus lacks data required for CONTOUR operation or the IGLA system digital locking has failed. In other cases the activation of the additional circuit is impossible.

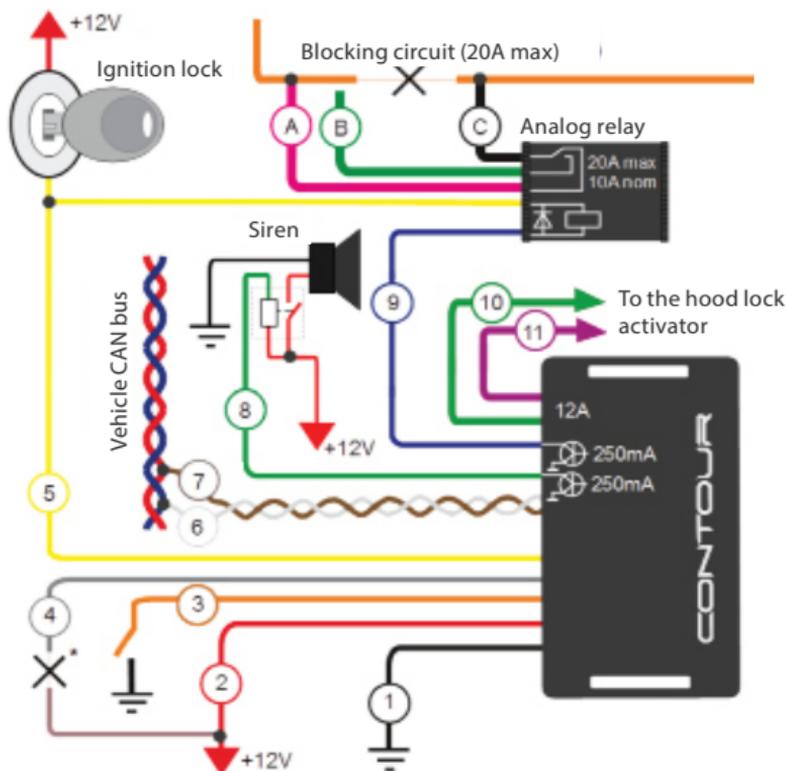
Locking is disabled by entering the PIN-code of IGLA system or by switching the ignition off (status on yellow wire).

## **Locking procedure**

Locking is made via normally closed circuit. This is an emergency locking type (in case digital locking is supported), therefore it can be used for different purposes. In the event of emergency the engine will be blocked even if it leads to temporary errors (for instance, in the crankshaft or injector power supply sensor circuit).

Locking is activated after sending the negative potential to the blue wire **while the ignition is on or the engine is running** (can be tracked via analogue “ignition” input, yellow wire).

## Wiring scheme



**ATTENTION!** Grey and red wires should be simultaneously connected to power supply «+» to connect with the IGLA anti-theft device when it is in the PIN-code change mode.

1. **Black.** To power supply «-» (ground/earth).
  2. **Red.** To power supply «+» (12 V).
  3. **Orange.** Hood pin switch.
  4. **Grey.** To power supply «+» while connecting with IGLA.
  5. **Yellow.** Ignition (required for connection of locking relay).
  6. **White.** CAN-L.
  7. **Brown.** CAN-H.
  8. **Green** with 0.2 mm<sup>2</sup> section. Negative output to the siren (250mA max).
  9. **Blue.** Negative output to the locking relay (250mA max).
  10. **Green** with 0.75 mm<sup>2</sup> section. To the hood lock activator (12A max). Power supply «+» to open the lock.
  11. **Purple.** To the hood lock activator (12A max). Power supply «+» to close the lock.
- A. Purple.** Normally closed contact.  
**B. Green.** Normally opened contact.  
**C. Black.** Common wire.

## Connection between IGLA and CONTOUR

Follow these steps to connect the devices:

1. Switch IGLA to the PIN-code change mode by one of the following ways:
  - connect the Grey wire from IGLA to Power supply «+» and switch on the ignition;
  - if the device is already connected, after the authorization is successful enter the current PIN-code once again while pressing the accelerator pedal as far as it can go\*.

**ATTENTION!** If you need to connect 2 and more CONTOUR modules **only** PIN-code change mode can be used (enter the PIN-code once again with the accelerator pressed\*). If the grey wire is used while connecting to CONTOUR module all previously connected to IGLA devices will stop functioning!

**ATTENTION!** For the connection of the second and subsequent devices all previously connected devices shall be disconnected from CAN-bus or power supply.

2. Connect the hood lock control module as described above.
3. Apply power supply «+» to Grey and Red wires at the same time.
4. The hood lock will open, close, and open again within 5 seconds.

\* For some car models other controls are used instead of an accelerator pedal (see the annex to the IGLA operating manual).

After that you can switch off the ignition and disconnect the grey wire from power supply «+». Modules are connected.

## **Siren**

The siren switches on:

1. 15 seconds after the first locking activation.
2. If locking takes place the second time.
3. Anti-Hi-Jack mode is active.
4. When the hood is opened while the lock is closed
5. In case of CAN bus short circuit.
6. When new keys are attempted to be registered
7. When the CONTOUR analogue locking activates.

The Siren can be deactivated by entering the PIN-code. The Siren operating time is limited to 45 seconds with the turned off ignition.

## Specifications

Operating voltage .....	6-15 V
Current consumption in the standby mode .....	5 mA
Maximum current to the lock activator .....	12 A
Maximum current to locking relay control .....	250 mA

## Contents of the set

CONTOUR module .....	1 pcs.
Operating manual .....	1 pcs.
Packing .....	1 pcs.

Locking relay is supplied separately.



Made in Russia

Manufacturer: LLC «DMA Group»

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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>



## 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



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