KEETEC®

⚠ ATTENTION: BEFORE THE INSTALLATION, MAKE SURE YOU READ ALL INSTRUCTIONS AND RECOMMENDATIONS OBTAINED IN THIS MANUAL CAREFULLY. THE DEVICE MUST BE INSTALLED AND USE ACCORDINGLY TO THIS MANUAL. YOU CAN INSTALL THIS DEVICE EITHER TO 12 OR 24-VOLT ELECTRICAL SYSTEMS. THE EARTH CONNECTION OF THIS DEVICE MUST BE ON A NEGATIVE POLE OF THE BATTERY. MANUFACTURE AND DISTRIBUTOR ARE NOT RESPONSIBLE FOR DAMAGE WHICH COULD BE CAUSED BY INCORRECT INSTALLATION OR PROGRAMMING OF THIS DEVICE OR BY USING NOT ACCORDINGLY TO THIS MANUAL. FOR THESE REASONS WE RECOMMEND TO RELY ON A PROFESSIONAL SERVICE IN CASE OF INSTALLATION. THE DEVICE OR VEHICLE CAN POSSIBLY GET DAMAGED BY UNPROFESSIONAL MODIFICATIONS AND INSTALLATION.

I. SYSTEM DESCRIPTION

The Keetec BLADE car alarm is designed for vehicles with 12/24V power supply. It is used to monitor doors, trunk and hood. After disruption the system indicates alert by optical signaling (hazard lights) and sound signaling (siren). System is operated by using the original remote control. Alarm can be connected to vehicle by analogue connection or CAN Bus connection. Can bus provides the information about doors, trunk or hood opening, locking/unlocking the vehicle by remote control.

II. SYSTEM INSTALLATION

Remove plastic covers from the car dashboard. Find cables for car alarm connection. Use a digital multimeter to test the function of cables in vehicle, even if you are sure which function the specific cable does have. After choosing the right cables, disconnect the car battery and connect the car alarm cable harness to cables according to the wiring diagrams attached. Solder and isolate all connections. After finishing the car alarm installation, connect the car battery and plug in a fuse to the fuse cover of the car alarm. Test correct functionality of the car alarm and the electrical installation of the car (ignition, hazard lights,...). Mount the plastic covers back on to the dashboard.

CAUTION: Type of the siren used with this system depends on input voltage of the system (12/24V), and maximum current load of the siren output (do not use siren over limits).

CONTROL UNIT AND SERVICE BUTTON LOCATION

The control unit should be hidden at the very hard reachable place, for example from the inside of the dashboard. Place service button on a visible place to have access to it.

• WIRES DESCRIPTION

Connector CN 1 (3 PIN)
The connector is used to connect a service button
Connector CN 2 (3 PIN)
The connector is used to connect additional sensor. (only for vehicles with 12V electrical system)
Connector CN 3 (10 PIN)
(2) BLACK wire - Ground
(4) RED wire - Power supply (+12/24 V)
(6) RED/BLACK wire - Universal IN/OUT 5 (+/-), max150mA
(8) BROWN wire - Output siren (+1A)/(-150mA)
(10) ORANGE/BROWN wire - CAN - L
(9) ORANGE/GREEN wire - CAN - H
(7) WHITE/BLACK wire - Universal IN/OUT 4 (+/-), max150mA
(5) PINK wire - Universal IN/OUT 3 (+/-), max150mA
(3) GREEN wire - Universal IN/OUT 2 (+/-), max150mA
(1) YELLOW wire - Universal IN/OUT 1 (+/-), max150mA
Connector CN 4 (4 PIN)
Serial port, currently not in use
Connector CN 5 (4 PIN)
Serial port, currently not in use
Connector CN 6 (Micro-USB)
Update and configuration of the system using a PC software Keetec BLADE

CAUTION: Observe the maximum permissible current load of the outputs. The sum of currents flowing through the universal analogue outputs must not exceed 400mA. Use additional devices to control higher current loads!

• Universal analogue inputs and outputs (IN/OUT)

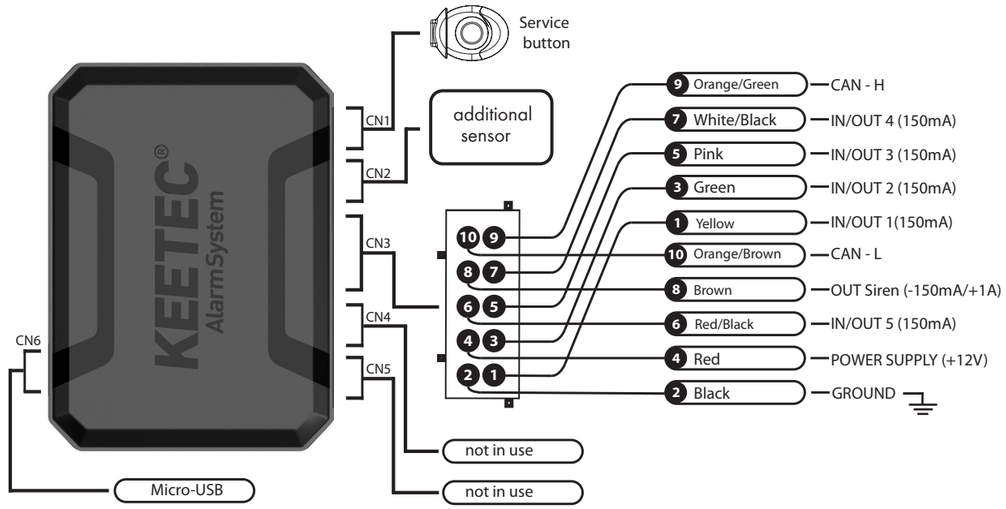
The Keetec BLADE has 5 configurable inputs / outputs. The system offers options of +/- polarity and NO / NC function logic. It is strictly forbidden to exceed the maximum value of the output current load.

• Universal analogue inputs:

Validator - Analogue input that system recognize incoming pulses of corresponding polarity as validator button presses
Ignition – Analogue ignition sensing
Doors - Analogue doors sensing
Hood – Analogue hood sensing
Trunk – Analogue trunk sensing
Trunk blocking- Analogue input that allows to unlock trunk using original remote control when is system armed
Alarm activation – Analogue input for external sensor connecting
Arm – Analogue input to arm the system
Disarm – Analogue input to disarm the system
Arm/Disarm blocking - Analogue input that system allows to ARM/DISARM only when use original remote control.
Interior light – Analogue doors sensing when door trigger is not reachable. Input works with implemented delay after arming (comfort dimming of interior light)

• Universal analogue outputs(max 150mA) :

System status - Output is active when the system is armed



Pager – Output is active when alarm is triggered
Beeper – Output is used for acoustic signaling of the system
Relay – Output for blocking relay connection
Hazard lights - Output to control light signalization
Authorization state – Output is active when authorization is successful

III. SYSTEM FUNCTIONS PROGRAMMING

System settings and parameters can be configured using the PC software Keetec BLADE
It is recommended to update firmware of the main unit before installing and programming the system

• Setting wizard

The setting wizard includes selection of the model year of manufacture and PIN code. Please write the new PIN code on the owner's card.

• Hazard lights

- Off
- Permanent–the setting is used for power connection or for connection to a two-position hazard lights switch
- Pulse–the setting is used when connected to the impulse button of the hazard lights. Possible to set the pulse duration and the duration of the break between "presses"

• Acoustic and optical confirmation of activation / deactivation

- Beep - ON/OFF
- Optical signalization ON/OFF

• IMO logic - blocking relay logic

- NO/NC

• Re-Arming

System will be armed automatically if was disarmed accidentally (doors were not opened, engine was not running)
- ON/OFF

• Siren OUT

- HORN – the setting is used when connecting the output to the original vehicle horn (pulse output).
- SIREN – the setting is used when connecting an external siren (permanent output)

CAUTION: When connecting the horn output, observe the maximum permissible current load of the optional output. We recommend the use of an additional relay.

• VALIDATION SEQUENCE

Configuration of the validation sequence can be made only through the PC application. Detailed information in the chapter "Validation sequence programming"
- Off
- Ignition
- Disarm
- Both

• Default settings

- Restore factory settings

• CONNECTING THE SYSTEM TO CAN BUS

When the system is connected to CAN bus, it reads all the information from this bus. Please check the list of supported vehicles if your vehicle is ready for CAN bus installation and is compatible with this system. If your vehicle is in the list, check what information is available from CAN bus (doors, trunk, hood open, locking/unlocking, turn on ignition, hazard lights, close windows, etc.). Connect by analogue where the information is not available. Some vehicles have the same information about locking/unlocking when using RC or key on CAN bus. In this case, set the inputs like the lock/unlock blocking and connect equally as connected by analogue so if you unlock the central locking system by key, the car alarm will not be deactivated.

• ANALOGUE CONNECTION TO CENTRAL LOCKING SYSTEM

If vehicle is not equipped with CAN bus or it is not in the list of supported vehicles, it is possible to connect it by analogue to the central locking system.
It is required to set analogue type of connection in software and connect 3 inputs for the proper functionality of arming/disarming. Input IN 1 with preset logic „IN Lock" connect to the wire with +/- 12/24V impulse when locking. Input IN 2 with preset logic „IN Unlock" connect to the wire with +/- 12/24V impulse when unlocking. Most of the vehicles have switches in actuators to control the central locking system. Connect the lock/unlock switch signal through rectifier diodes (IN4007 - not supplied with the alarm) to the „arm/disarm blocking" input to prevent the car alarm from arming/disarming when the car key is mechanically used in the lock. The lock/unlock switch polarity is adjustable +/- (default setting is "-"). Connecting the arm/disarm blocking input is important for the alarm arming/ disarming only when using remote control for central locking system.

IV. PROGRAMMING THE VALIDATION SEQUENCE

Maximum of 4 validators can be used to enter a validation sequence, i.e. 4 vehicle controls. The maximum number of validator presses is 10. The system can recognize validation elements using the analog inputs „Validator" or via the digital CAN bus protocol. Configuration of the validation sequence can be made only through the PC application.

Off

Alarm is controlled by the original remote control. The validation sequence is turned off.

IGNITION mode

Starting the vehicle conditioned by the user's authorization, ie by entering the validation sequence. Authorization is confirmed by 3 beeper beeps. The authorization is valid for 120 seconds or 60 seconds after the ignition is switched off (engine was started).

DISARM mode

Deactivation of the system conditioned by unlocking the vehicle with the original remote control and entering the validation sequence. Authorization is confirmed by 3 beeper beeps.
If the sequence is not entered within 15 seconds when doors were opened or the ignition was switched on, a short warning beep will sound.
An alarm is triggered if the sequence is not entered within 20 seconds when doors were opened or the ignition was switched on

BOTH mode(IGNITION+DISARM)

Deactivation of the system conditioned by unlocking the vehicle with the original remote control and entering the validation sequence. Authorization is confirmed by 3 beeper beeps. The authorization is valid for 120 seconds or 60 seconds after the ignition is switched off.
If the sequence is not entered within 15 seconds when doors were opened or the ignition was switched on, a short warning beep will sound.
An alarm is triggered if the sequence is not entered within 20 seconds when doors were opened or the ignition was switched on.

EXAMPLE: The validation sequence is as follows: press ESP button 4 times, press window heater button 2 times.
To enter the validation sequence, 2 validators (ESP button and window heater button) are connected by installer.

V.SERVICE MODE

We recommend to activate the service mode before leaving the vehicle in a workshop or parking service. In this mode, the system stops performing all blocking activities. It is not necessary to announce them your way of authorization.

ACTIVATION:
- Make sure the ignition is off.
- To activate the service mode, deactivate the system and enter the service PIN code using the service button
- Press and hold the service button for 5 seconds (until the LED indicator on the service button lights up). Release the button.
- Press the service button as many times as the value of the first digit of the PIN code, the LED indicator flashes 3 times
- Press the service button as many times as the value of the second digit of the PIN code, the LED indicator flashes 3 times
- Press the service button as many times as the value of the third digit of the PIN code, the LED indicator flashes 3 times
-Press the service button as many times as the value of the fourth digit of the PIN code, the LED indicator flashes 3 times

Activation of the service mode is announced by 5 beeps of beeper. Service mode is signaled by the LED indicator on the service button when the ignition is switched on. Default PIN code is (**4321**).

DEACTIVATION OF SERVICE MODE

Make sure the ignition is off. Enter the service PIN code using service button in the same way as when activating. Deactivation of the service mode is announced 5 beeper beeps. Default PIN code is (**4321**).

VI. EMERGENCY DEACTIVATION

- Press and hold the service button for 5 seconds (until the LED indicator on the service button lights up). Release the button.
- Press the service button as many times as the value of the first digit of the PIN code, the LED indicator flashes 3 times
- Press the service button as many times as the value of the second digit of the PIN code, the LED indicator flashes 3 times
- Press the service button as many times as the value of the third digit of the PIN code, the LED indicator flashes 3 times
-Press the service button as many times as the value of the fourth digit of the PIN code, the LED indicator flashes 3 times, beeper beeps 2 times, system is deactivated. Default PIN code is (**4321**).

VII. PIN CODE CHANGE

The service PIN code can be changed only by the KEETEC BLADE PC software. The default PIN code is (**4321**).
Write the new PIN code on the owner's card.

VIII. TECHNICAL PARAMETERS

Voltage	12/24V
Operating temperature of device	-40°C up to 80°C
Sleeping consuption*	2mA
Max current for universal output	(12V-150mA)/(24V-75mA)
Max current of output "siren"	**(+)** (12V-1A/24V-0.5A) **(-)** (12V-150mA/24V-75mA)

*without additional sensor