



**WARNING:** Carefully read following instructions and technical specifications in this manual before installation. The system must be installed and used only according to this manual. The system is designed for vehicles with 12V power supply. It has to be connected to 12V output and to the ground. Neither producer or seller of the system is responsible for damages caused by incorrect installation, using or operating of this product. Unprofessional operation or modification of the system can damage the system alone, or the electric system of the vehicle and leads to warranty loss. For proper working of the system we recommend the installation to be made by authorized service.

**SYSTEM DESCRIPTION**

KEETEC TS 13 a car alarm for vehicles with 12V power supply. It is used for sensing over doors, trunk and hood. Part of the system is a shock sensor, which triggers an alarm after detection of shocks caused by, for example breaking of the window. System breach is signalized with optical (direction lights) and acoustic (siren) signalization. Immobilizer is armed when the alarm is turned on, which interrupts the ignition circuit and therefore prohibits unauthorized starting of the vehicle. Car alarm is controlled by remote control, which also controls central locking.

**I.SYSTEM INSTALLATION**

Remove plastic covers of car dashboard. Find cables for car alarm connection. Use a digital multimeter to test the function of cables in vehicle, even if you're sure which function specific cable does have. After choosing the right cables, disconnect the car battery and connect the cable harness of car alarm to those cables according to the attached wiring schemes. Solder and isolate all connections. After finishing the installation of car alarm, 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, direction lights). Mount the plastic covers back on to the dashboard.

**CONTROL UNIT AND LED LOCATION**

Place the control unit from the inner side of protection plastics of the car dashboard. Place the antenna of the control unit that way, so it doesn't touch metallic parts of the car. Place the LED diode on a well visible place.

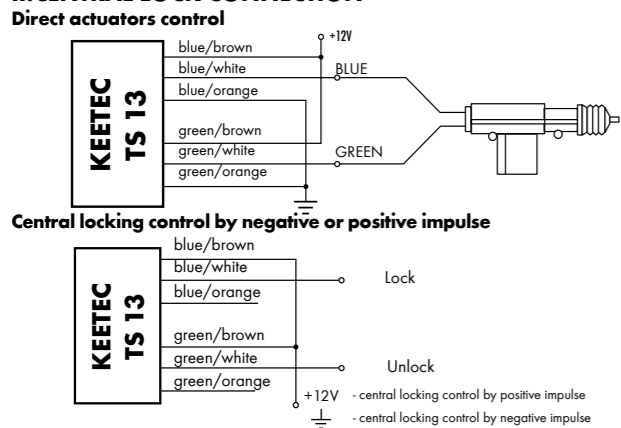
**Attention:** Outputs of the control unit have (except output for direction lights) maximal current load of 300 mA. To control bigger current load, please use additional device (R1215, IMO 15). Maximal current load for direction lights is 2 x 5 A.

**CONNECTOR CN1 (18-PIN) – INPUTS AND OUTPUTS CONNECTOR**

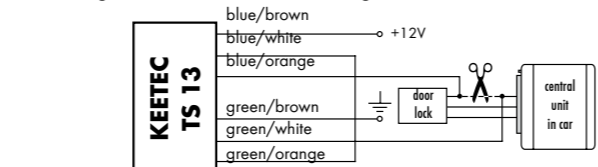
- White (+/-) - Factory setting** - sensing door contacts(F21)  
**Adjustable** - directional control switch on lights (F21)
- Brown / white (-)** - canning luggage compartment (input wire)
- Wires connect the central locking system** according to the type used in the vehicle and in connection diagram central locking in Part II. Central lock connection.
- Brown / yellow (-)** - hood sensing (input wire)
- White / red (+1A) - factory setting** - siren output (F17)  
**adjustable** - output to horn (F17)
- White / blue (+/-)** sequential output for optical signalization (output wire)
- Purple (-300mA) - factory setting** - trunk open ( output wire)  
**adjustable** - output to pager
- Orange (+10A)** trunk open (output wire)
- Yellow (+)** ignition ( input wire)
- Grey (-300mA)** immobilizing output to start of the engine (output wire)
- Black (-)** ground (input wire)
- Red (+)** power supply (input wire)

- CONNECTOR CN2 (2-PIN) - immobilization circuit**  
 immobilization relay output. Contact rating 30A
- CONNECTOR CN3 (2-PIN) - ultrasonic transducer connection (red)**  
 connector for an ultrasonic sensor indicated in red
- CONNECTOR CN4 (2-PIN) - ultrasonic transducer connection (white)**  
 connector for an ultrasonic sensor indicated in white
- CONNECTOR CN5 (3-PIN) – Valet button with LED diode connection**  
 Connector is used to connect the valet button with LED diode. Place the LED diode on a well visible place near the valet button for easy access.
- CONNECTOR CN6 (3 – PIN) – Additional sensor connection**  
 Connector for connecting the additional sensor (LSK2 , MWS 2).

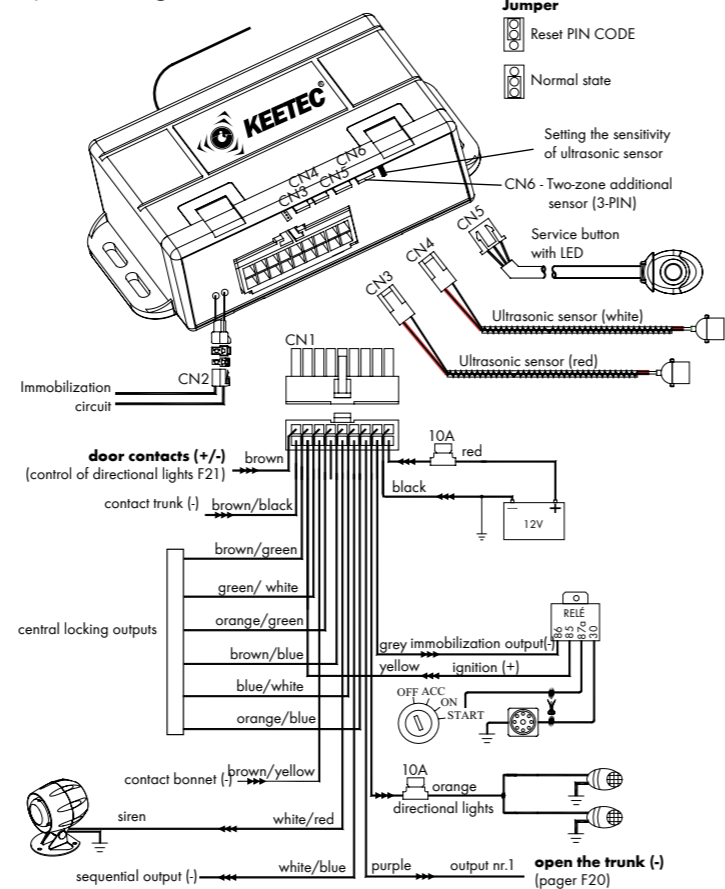
**II.CENTRAL LOCK CONNECTION**



**Connecting the pneumatic central locking**



**III. WIRE DIAGRAM**



**IV. ENTER THE SECURITY SYSTEM**

You will enter security mode by entering the 4 digit PIN code. If the security mode is active (function F16), LED will start to flash slowly when programming.  
 - if the LED will flash so many times which is the value of first PIN number, push the service button one time. LED will start to flash again.  
 - repeat this process for the second, third and fourth PIN number..

**V. SERVICE MODE**

1. Turn the ignition on and push the service button 2 times within 8 seconds.
2. Turn the ignition off. If the security mode is not active, siren will sound 2 times and LED diode will glow permanently. Valet mode is now active. If security mode is active (function F18), LED will start to flash slowly. Enter the security mode. If you've entered correct PIN code, siren will sound 2 times and LED will glow permanently. Valet mode is now active.

**To deactivate the service mode**

- turn on the ignition and press the service button 2 to 8 seconds.
- turn off the ignition. 2 siren sounds and the LED stops lighting. The service mode is deactivated.

**VI. PROGRAMMING SYSTEM FUNCTIONS**

**Follow this when programming functions:**

1. Activate the valet mode and turn on the ignition.
2. Push the valet button 7 times within 10 seconds. Turn off the ignition, LED will start to flash.
3. Push the valet button within 20 seconds so many times, that corresponds to the number of the function you want to set up. Siren will sound after each push of the valet button. If the number is greater than 10, hold the valet button for over 3 seconds and then continue pushing the button each time above ten. For example if you want to set up function 13, hold the valet button for over 3 seconds, release the button (siren will sound 2 times) and then push the valet button 3 more times (siren will sound 1 time after each push). After turning the ignition on, siren will sound 1 or 2 times, depending on which setting was set. If you want to set up function No. 25, hold the valet button for over 3 seconds. After releasing, the siren will sound 2 times. Push the valet button again for over 3 seconds. After releasing the siren will again sound for 2 times. Push the valet button 5 times (siren will sound after each push).
4. Turn the ignition on. Siren will sound 1 or 2 times, depending on which setting was set.
5. You can finish programming by turning the ignition on and pushing the valet button one time. System is now in valet mode.

**PROGRAMMING TABLE**

| Prog. menu | Function  | Factory settings<br>1 tone of siren | Adjustable<br>2 tones of siren |
|------------|---|-------------------------------------|--------------------------------|
| F1         | silent / acoustic arming                                | silent                              | acoustic                       |
| F2         | lock the central locking when turning the ignition on   | off                                 | on                             |
| F3         | input arming delay                                      | 5 sec                               | 30 sec                         |
| F4         | system arming reminder                                  | off                                 | on                             |
| F5         | door contacts input polarity                            | "-" input                           | "+" input                      |
| F6         | double locking impulse                                  | off                                 | on                             |
| F7         | double unlocking impulse                                | off                                 | on                             |
| F8         | sequential output polarity                              | "-" output                          | "+" output                     |
| F9         | sequential output type                                  | sequential                          | normal                         |
| F10        | burst mode output                                       | default                             | learning                       |
| F11        | anti car-hijacking mode                                 | on                                  | off                            |
| F12        | automatic activation of immobilization area (5 minutes) | on                                  | on                             |
| F13        | unlocking time  | 0,5 sec                             | 3,5 sec                        |
| F14        | locking time  | as unlocking                        | 20 sec                         |
| F15        | automatic arming after closing the last door            | off                                 | on                             |
| F16        | locking the central locking after automatic arming      | off                                 | on                             |
| F17        | siren output  | siren                               | horn                           |
| F18        | security mode   | off                                 | on                             |
| F19        | automatic rearming                                      | on                                  | off                            |
| F20        | output nr. 1  | open trunk                          | pager                          |
| F21        | output settings door contacts                           | doors contacts                      | directional control lights     |
| F25        | system reset  | reset                               |                                |

**VII.FUNCTIONS DESCRIPTION**

- F1.SILENT / LOUD ACTIVATION**  
 PRE -SET: to activate / deactivate the siren sounds  
 ADJUSTABLE: to activate / deactivate the siren is heard
- F2.DOORS LOCK WHEN IGNITION TURNED ON**  
 PRE -SET: after ignition, the central locking does not lock  
 ADJUSTABLE: after the ignition is switched on after 20 seconds locked central locking
- F3.INPUTS ACTIVATION DELAY**  
 PRE -SET: inputs are activated after activation of the system after 5 seconds  
 ADJUSTABLE: inputs are activated after activation of the system after 30 seconds
- F4.SYSTEM ARMED REMINDER**  
 PRE-SET: reminder is turned off  
 ADJUSTABLE: after closing last door when the ignition is turned off, after 10 sec. siren beeps 2x
- F5.DOOR CONTACTS INPUT POLARITY**  
 PRE -SET: door contacts input reacts on negative impulse (-)  
 ADJUSTABLE: door contacts input reacts on positive impulse (+)
- F6.DOUBLE LOCK IMPULSE**  
 PRE -SET: double lock impulse is turned off  
 ADJUSTABLE: double lock impulse is turned on
- F7.DOUBLE UNLOCK IMPULSE**  
 PRE -SET: double unlock impulse is turned off  
 ADJUSTABLE : double unlock impulse is turned on
- F8.SEQUENTIAL OUTPUT OF POLARITY**  
 PRE -SET: sequential output has negative polarity (- 300mA)  
 ADJUSTABLE: sequential output has positive polarity (+ 300mA)
- F9.SEQUENTIAL OUTPUT TYPE**  
 PRE -SET: sequential output  
 ADJUSTABLE: power output for direction lights
- F10. SEQUENTIAL OUTPUT MODE**  
 PRE-SET: default - a sequence of flashing lights, the direction set by the factory  
 ADJUSTABLE: learning - in this mode, the output sequence can learn a sequence of flashing lights in the direction of the vehicle. learning process is described in other parts of the manual.
- F11.ANTI CAR-HIJACKING MODE**  
 PRE -SET: function is allowed  
 ADJUSTABLE: function is forbidden
- F12. AUTOMATIC ACTIVATION OF IMMOBILISATION RELAYS**  
 PRE-SET: automatic activation is off  
 ADJUSTABLE: after the ignition is switched off after 5 minutes of immobilization activates the output. To off it by pressing the 2 button on the remote to deactivate.
- F13.UNLOCK TIME**  
 PRE -SET: unlock impulse is 0,5 sec.  
 ADJUSTABLE: unlock impulse is 3,5 sec (it's not possible to set up double unlock impulse)
- F14.LOCK TIME**  
 PRE-SET: same as unlock time  
 ADJUSTABLE: 20 sec
- F15.AUTOMATIC ARMING AFTER CLOSING LAST DOOR**  
 PRE -SET: after turning the ignition off and closing last door system will be automatically armed after 30 sec.  
 ADJUSTABLE: function is forbidden
- F16.CENTRAL LOCKING ACTIVATION AFTER AUTOMATIC ARMING**  
 PRE -SET: after turning the ignition off and closing last door system, will be automatically armed after 30 sec and central locking will activate  
 ADJUSTABLE : function is forbidden
- F17.SIREN OUTPUT**  
 PRE -SET: siren output is permanent (siren)  
 ADJUSTABLE: siren output is sequential (car horn)

**F18.SECURITY MODE**

- PRE-SET: security mode is deactivated
- ADJUSTABLE: security mode is deactivated
- F19.AUTOMATIC RE-ACTIVATION**  
 PRE -SET: function is allowed. If no doors are opened after disarming, system will be armed again IN 30 SECONDS.  
 ADJUSTABLE: function is forbidden
- F20.OUTPUT NR.1**  
 PRE-SET: out on the open trunk with the remote control  
 ADJUSTABLE: output pager is active during the period caused the alarm
- F21. SETTING THE ENTRY DOOR CONTACTS**  
 PRE-SET: input is set as the entry door contacts  
 ADJUSTABLE: input is set as the control of directional light output using a sequence of directional light
- F25.SYSTEM RESET**  
 System will be reset to factory settings

**VIII. PROGRAMMING SEQUENTIAL OUTPUT**

To program the output sequence is necessary to set the function F10 to F21 function and learning to control the directional lights. Then connect the entrance door contacts (set as a control light direction) to the directional light.

1. Turn on the ignition and press the service button 4 to 8 seconds.
2. Turn off the ignition. If the safety is off, the siren sounds 4 times, the LED starts to blink and you are in sequential programming output. If security mode is activated (feature F18), the LED blinks slowly. Enter the security regime. If you entered the correct PIN code, 4 siren sounds and the LED blinks rapidly. You are in sequential programming output.
3. within 10 seconds press the directional warning lights. Directional lights blink
4. when the indicator lights will flash 8, siren sounds and the 1 confirming successful programming. Disabling warning directional lights stop Sequence programming output.

**IX. CHANGE PIN CODE**

1. Turn the ignition on.
2. Push the valet button 10 times within 10 seconds. Turn the ignition off. If the security mode is turned off, siren will sound 1 time and will be in PIN programming mode. If the valet mode is active (function F16), LED will start to flash slowly. Enter the security mode. If you entered the correct PIN code, siren will sound one time and LED will stop glowing. You are now in PIN programming mode.
3. Push the valet button. LED will start to flash slowly and you can enter new PIN code.  
 - when the LED flashes so many times, which is the new value of first PIN code number, push the valet button one time. First code number is saved and LED will start to flash again.  
 - repeat this step for the second, third and fourth PIN code number.  
 - 5 seconds after entering the fourth code number LED diode will show the new PIN code with the number of flashes with 2 seconds pause between every code number.
4. Turn the ignition on or wait for 10 seconds after showing the new PIN code and system will automatically end the PIN code programming mode.

**RESET PIN CODE**

Disconnect the system from power supply. Disjoint the jumper in control unit and connect the system to the power supply. Within 3 seconds connect the jumper to the control unit. PIN code will be set to factory default number 4321.

**X. REMOTE CONTROLL LEARNING**

1. Turn the ignition on and push the valet button 5 times within 8 seconds. Turn the ignition off. If security mode is inactive, siren will sound 5 times and the system will switch to programming mode. LED will start to flash rapidly. If security mode is active, LED will flash slowly. Enter the security mode. If you entered the correct PIN code, siren will sound 5 times and you have successfully entered the programming mode. LED will start to flash rapidly.
2. Push any button on the remote control within 5 seconds. If you don't push any button or if you turn off the ignition, system will automatically finish the programming.
3. Siren will confirm programming the remote with a short sound. Depending on which remote was programmed, so many times will the siren sound. Programming the first remote will be confirmed with one beep, second remote with two beeps and third remote with three beeps.
4. If you want to program new remote, you have to program also any other remotes, which are already programmed in system.
5. System allows to program a maximum of 3 remotes. When programming new remotes, older ones will be automatically erased from system..

**XI. EMERGENCY REACTIVATION**

1. Open the doors and turn the ignition on.
2. Push the valet button so many times, which is the value of the first number in PIN code within 8 seconds and then turn of the ignition. If the security mode is turned of, siren will sound 2 times, direction lights will flash 2 times and system will be disarmed. If the security mode is armed (function F18), LED will start to flash slowly. Enter the security mode. If you have entered correct IN code, siren will sound 2 times and direction lights will flash 2 times. System will be disarmed.