

H P S 8 4 1

CanBusLine2



CANBUSLINE 2 car-alarm

This car alarm fits **universally** in almost all car models with **CAN BUS** electronics (*Controller Area Network*), provided that network also contains the remote controlled central locking system, and the alarm will be operated by the original remote control of the car.

Besides utmost security for the system the CANBUS-technology also is basis for easy and fast installation.

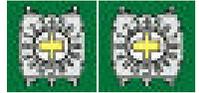
fitting instructions and user manual

CANBUS Alarm fits **UNIVERSALLY** in car models with **CANBUS-electronics**



Select the single car model simply by positioning the 2 selector screws.

A separate application list specifies the selectors' positions related to the car models.



... and is operated by the ORIGINAL REMOTE CONTROL of the car

Press the **closing button** of the remote control to **ARM** the system. The arming will be confirmed by...:

- 1 beep (if acoustic confirmation is selected)
- LED lights for 20 sec., then it flashes
- engine immobilizer (if fitted) activated
- additional moduls activated (ground by brown wire)



Press the **opening button** of the remote control to **DISARM** the system. Disarming is confirmed by...:

- 2 beeps (if acoustic confirmation is selected)
- LED switches off
- engine immobilizer is deactivated
- additional moduls are switched off

NEUTRAL TIME , ALERT STATUS, *DISARMING ADDITIONAL SENSORS

After signalling its arming, the alarm stays **20 seconds** in 'neutral time' conditions, signalled by the fixed light of the LED. Then flashing of the LED indicates that the system is ready to signal alarm.

If within these 20 seconds closing button is pressed once more, all **additional modules and sensors**, which are connected to the brown wires, **are switched off selectively**.

ALARM SIGNALS

When alarm is triggered, it is signalled for **30 seconds optically** by the blinkers (indicator lights) and **acoustically** by the horn or the siren (if fitted).

In order to stop the alarm signals without disarming the system, press the closing button of the remote control, while pressing the opening button will disarm the alarm and open the central locking.

The first triggering of the shock sensor will be signalled by a **pre-alarm** for 5 seconds.

If the same sensor triggers alarm more than 3 times consecutively, the system will exclude the acoustic alarm signals (horn, siren), when further alarms are triggered by this sensor.

In order to (select) **signal alarm only by blinkers** (that is to exclude signals by horn or siren), switch on and off ignition 3 times, when alarm is disarmed (central locking is opened), and within the next 30 seconds close the central locking by the car's remote control.

PANIC-ALARM, OPENING THE TRUNK SEPARATELY*

If the CanBusLine2 is armed (after at least 20 seconds), pressing closing button will trigger at soon a complete (30 seconds) cycle of alarm signals. Pressing it once more switches off the alarm signals. Unlocking separately the trunk by the 3rd button of the oem-remote control keeps the alarm being armed, but the trunk can be opened withing 30 seconds, and shock sensor (integrated) and indoor sensor (small wiring) stay deactivated, until the trunk is closed.

ALARM-MEMORY

If the CanBusLine2 has triggered alarm, after disarming of the alarm (that is after opening the central locking) the source of this triggering will be indicated by the sequence of LED-flashes.

sequence of LED-flashes	SOURCE OF ALARM-TRIGGERING
1	a door has been opened (signalized by CANBUS)
2	the central locking has been activated (signalized by CANBUS)
3	the bonnet has been opened (signalized by CANBUS)
4	trunk / rear flap has been opened (signalized by CANBUS)
5	attempt to switch on ignition
6	shock-sensor has triggered
7	the (ultrasonic) sensor of connector D has triggered
8	alarm-input 1 (blue wire) has triggered by feeding ground
9	alarm-input 2 (blue-red wire) has triggered by feeding +12V

STATUS MEMORY

If the alimantation of the armed CanBusLine2 is disconnected (wiring or car battery) and restored later on, the CanBusLine2 will restore its armed state, too, in order to prevent any tampering attempt.

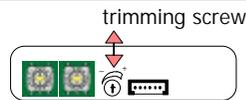
adjustment of SHOCK SENSOR sensitivity

The shock sensor is factory-tuned to minimize fals alarms.

If necessary, its sensitivity can be adjusted using the trimming screw:

Rotate the trimmer clockwise in order to increase the sensitivity.

Rotate it anti-clockwise in order to decrease the sensitivity.



* These features are not possible with any kind of OEM remote control.*

PIN-CODE-function (disarms the alarm device)

The pin-code consists of 3 ciphers (set ex-factory to 1-2-3), and its input by the ignition key of the car (for example after loss of the remote control or before leaving the car without its remote control in a service center) puts the alarm-device into a stand-by mode:-

- 1.1 Turn ON and OFF ignition as many times as given by the 1st pin-code cipher (ex-factory: 1).
Note: During this input the LED is illuminated (and alarm, if triggered, is signaled...).
- 1.2 Wait, until the LED extinguishes. - Input of the 1st pin-cipher (ex-factory: "1") is finished.
- 2.1 Turn ON and OFF ignition as many times as given by the 2nd pin-code cipher (ex-factory: 2).
- 2.2 Wait, until the LED extinguishes. - Input of the 2nd pin-cipher (ex-factory: "2") is finished.
3. Turn ON and OFF ignition as many times as given by the 3rd pin-code cipher (ex-factory: 3).
The LED (which was illuminated during the input) goes out after input of the 3rd pin-cipher (ex-factory: "3"), and indicates then by flashing twice that the the **pin-code function is activated**.

In case of **activated pin-code-function** (if the 3 pin-code ciphers have been composed correctly) ...

- (a) ... the LED flashes twice each time ignition is switched on,
- (b) ... the alarm-signals are switched off, and the alarm-device is put into stand-by mode
- (c) ... the alarm device cannot be switched on / off any more by the remote control of the car,
- (d) ... anti-hijack-funktion and taxi-alarm cannot be activated or triggered any more.

In order to deactivate the pin-code-funktion, the pin-code must be composed once more, that is the steps 1 to 3 have to be performed again.

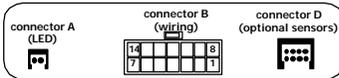
input of an INDIVIDUAL PIN-CODE

An own pin-code can be programmed, **as shown here in case of example "5-1-8"**:

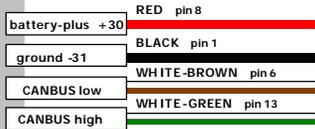
- 1.-3. If alarm-device is disarmed, compose the input of the valid pin-code, as shown in the previous chapter in case of the ex-factory example "1-2-3" - After the LED has confirmed by its rapid flashings the correct input of the old pin-code, now:-
 - 4.1 Turn ON / OFF ignition as often as demanded by the 1st cipher of the new pin-code (example here: 5 times). **Note:** The LED is illuminated while this input is performed.
 - 4.2 Wait, until the LED extinguishes. - Input of the 1st new pin-cipher (example here: "5") is finished.
 - 5.1 Turn ON / OFF ignition as often as demanded by the 2nd cipher of the new pin-code (here: 1 time).
 - 5.2 Wait, until the LED extinguishes. - Input of the 2nd new pin-cipher (example here: "1") is finished.
 6. Turn ON / OFF ignition as often as demanded by the 3rd cipher of the new pin-code (here: 8 times).
The LED (which was illuminated during the input of the 3rd pin-cipher) goes out, in order to confirm then by rapid flashing twice that the input of the **NEW pin-code function is finished**.

By rapid flashing the LED now confirms that the new pin-code has replaced the old one.

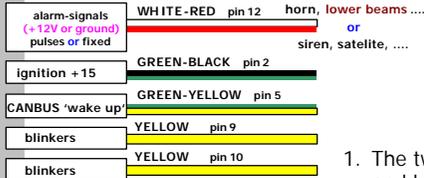
electrical connections



connector B



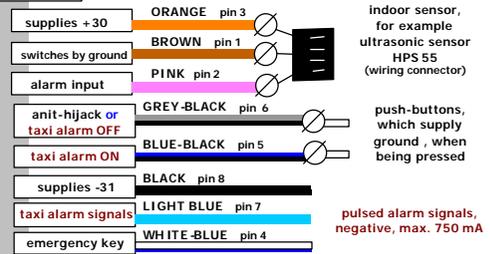
eventually required connections



optional connections



connector D



- The alarm-output (white-red wire) supplies pulsed or permanent alarm signals, ground or +12V, according to the position of its jumpers.
- The yellow wires supply +12V alarm-pulses only, if the triggering of blinkers by CANBUS is suppressed by means of jumper J1.
- The comfort-output (brown wire) supplies ground either few seconds only after closing of central locking or until it is opened. It is configured by PC-program. eingestellt.

- The two CANBUS-wires (Can-B = lowspeed comfort-CANBUS) and battery (+12V and ground) must **always** be connected.
- Acc. to car model** the connection to ignition and/or a wire to "wake up" the CANBUS, and/or to the horn can be required. **Never cut a CANBUS-wire**, but remove a little bit of its insulation in order to solder there the cable to be connected.
- The **optional connections** are not required for the alarm functions, but can be connected according to the car model and/or the demands of its owner.
- Taxi-alarm** requires furthermore the push-button to switch on the taxi-alarm signals (in easy reach for the driver), and a 2nd one to switch them off (outside of the cabin), and lower beam must be connected in order to signal alarm. - Note: As long as central locking is opened by its remote control, taxi-alarm can be triggered, whereas normal alarm-function is activated as long as central locking is closed by remote.
NOTE: It can be necessary to arrange for taxi-alarm features by means of the PC-program.

<i>wire connector B</i>		<i>to be connected to ...</i>	<i>designed function</i>
red	pin B-8 +	positive = battery-plus (+30)	power alimentation of the car alarm
black	pin B-1 -	negative = ground (-31)	
white-brown	pin B-6	CAN Low of the CANBUS-wires (pair)	CANBUS-communication between alarm device - car
white-green	pin B-13	CAN High of the CANBUS-wires (pair)	
white-red	pin B-12 + or -	horn (lower beams) or siren (satelite dev.) Note: Jumper 3 (pulsed or permanent signal)	relay output (max. 8 5) for alarm signals and jumper 4 (pos. or neg. signals)
green-black	pin B-2 +	ignition plus (connection almost never required)	input ignition (+15)
green-yellow	pin B-5 - (i.e. hazard) "wakes up" the CANBUS	output for a negative signal
yellow	pin B-9 +	1 st blinker wire (1 st side)	relay-outputs (max. 8 A each) for +12V-pulses (.... only, if the blinkers are not controlled by CANBUS)
yellow	pin B-10 +	2 nd blinker wire (2 nd side)	
green	pin B-11	1 st end of the of engine-electrics wire	immobilizing the engine by disconnecting an electrical supply
green	pin B-14	2 nd end of the of engine-electrics wire	
brown	Pin B-7 -	to switch on/off additional sensors or comfort-closing	output feeding "switched" ground (max. 100 mA)
blue	Pin B-3 -	ground-push-buttons or ground-alarm-outputs of sensors	input for signales (blue: ground - blue-red: +12V)
blue-red	Pin B-4 +	+12V-alarm-outputs of sensors ...	to trigger alarm

<i>wire connector D</i>		<i>to be connected to ...</i>	<i>designed function</i>
orange	Pin D-3 +	ultrasonic module (by its own connector)	provides +12V-supply (+30)
brown	Pin D-1 -		feeds ground when alarm is activated
pink	Pin D-2 -		input for alarm-signals of the sensor
grey-black	Pin D-6 -	switches ON anti-hijack and taxi-alarm	inputs for special alarm-signals (feeding ground)
blue-black	Pin D-5 -	switches OFF taxi-alarm	
black	Pin D-8 -	ground-push-buttons- (e.g. taxi-alarm)...	provides ground-supply (-31)
light blue	Pin D-7 -	taxi-alarm signals, pulsed and negative	taxi-alarm output (max. 0,75 A)
white-blue	pin D-4	to the electronic emergency key	input for coded signals

manual configurations by means of jumpers

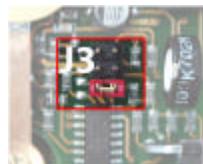
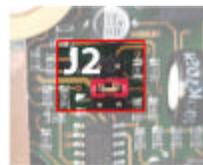
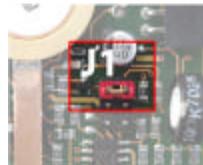
Open the alarm unit (remove screws and face wall) and carefully pull out the PCB. Now the jumpers figured below become visible and accessible.

By means of the 3 jumpers, which are placed between the shock-sensor and its sensitivity-trimmer the following selections can be performed:-

- **J1 triggering of blinkers and horn** by the car alarm
 - (a: J1 present) either exclusively **analog** by relays on the PCB
 - (b: J1 removed) or **according to the ex-works software-parameters (digitally by CanBus)**, if blinkers and horn are driven by CanBus)

Recommendation: Do not change the ex-works adjustment (= jumper J1 not present), which enables the CANBUS-communication between car alarm and car. Insert jumper J1 only, if a problem has to be solved, for example if the blinkers are not triggered, although the fitting instructions of that car model do not require any wire-connections of the blinkers.

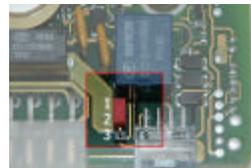
- **J2 confirmation of switching ON/OFF the alarm**
 - (a: J2 present) **acoustically with beeps** or
 - (b: J2 removed) **without beeps**
- **J3 kind of alarm signals (output)** (of the red-white wire):
 - (a: J2 present) **pulsed alarm-signals** (for example for horn, light...) or
 - (b: J3 removed) **permanent alarm-signal** (for siren or satellite-module or...)



Case (a) is selected, if a jumper (Jx) is present and connects the relevant pins, whereas case (b) is selected, if the relevant pins remain free and disconnected.

A 4th jumper, which is placed at the edge of the PCB between connector B and connector D, provides the possibility to select the:-

- **J4 polarity of the alarm-signal output** (red-white wire):
 - pin 1-2 positive (= +12V)**
 - pin 2-3 negative (= ground)**that is, whether the alarm signals shall be positive or negative



adjustments by COMPUTER (programmation by PC)

If connected by means of an adapter (BNC006), which must be inserted into the PRODAM-connector, to a serial port (COM) of a PC, Laptop or Notebook, the alarm-device can be configured by the PC-program **UNI-PRODAM** in a lot of functions, for example:-



- beeps confirm the arming and disarming of the alarm-device - yes or no
- Confining the time (amount of seconds) for the comfort output. Thereafter the brown wire does not supply ground any more, thus additional sensors cannot be activated together with the alarm-device
- „anti-hijack“ or „anti-aggression“ functions to immobilize in certain situations the engine electrics (as far as connected), either at soon after having been triggered or in adjustable intervals or principally only after the ignition has been turned off.

Besides this PC-program enables to UPDATE the eeprom-memory of the alarm, that is to configure the alarm device with the most recent software, which contains the most recent car models, too.

MAINTENANCE and HANDLING of the alarm device

In order to obtain optimum operations, functions and life-time of this sophisticated device of highest quality and reliability, we recommend to handle it with care and to observe the following precautions:

POSITION OF ALARM: The device must be installed in a position far away from all sources of water or other liquids, and heat, as well as far away from mechanical moving parts and high voltage coils.

CAR WASH: Before you clean the vehicle with high-pressure beams (hydro beam or...), you must protect the alarm device against intrusion of water. - Water inside the device will cancel the warranty.

MAINTENANCE: All repair works must be carried out by the producer or it authorized assistance centres. Tampering and manipulating the device by non-authorized personnel may invalidate the alarm feasibility, its reliability and its warranty, as well as the safety when the vehicle driving.



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