WiPro III

Installation manual

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Revision 1.6

THITRONIK

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1.1 Functional description

The WiPro III alarm system has been developed especially for recreational vehicles. This system does not use motion sensors, which have to be deactivated when the vehicle is staying somewhere and are often the cause of false alarms. The result is a thoroughly user-friendly alarm system which is operated at the touch of a button and is practically immune to false alarms.

The interior is secured via wireless magnetic contacts on the doors, windows and hatches. All doors, sliding doors, rear doors and, if necessary, the front lid monitored by the CAN bus are secured by the CAN bus connection.
The cab doors on vehicles without a CAN bus are secured by the interior lighting.

The system is operated via the original remote key fob or the Thitronik wireless remote control, depending on the vehicle concerned. If a secured opening is opened while the alarm system is armed, WiPro (if properly connected) will indicate this by switching on the integrated siren, sounding the horn (not with all vehicle types) and activating the hazard indicators. The alarm is active for the legally permissible period of 30 seconds for the horn and siren and 120 seconds for the hazard indicators. After expiration of the legally stipulated maximum duration, WiPro III is automatically armed again.

1.2 Installation instructions

When working on the vehicle electrical system and there is a risk of a short circuit, the minus pole of the battery must be disconnected. The minus pole of additional supply batteries must also be disconnected.

Note! When the vehicle battery is disconnected, some of the data from the vehicle electronic system will be lost. Make sure that you have the radio code because this will have to be re-entered. Data such as the time are volatile and must also be re-entered.

Parts which are mounted on the vehicle must be fastened down so they do not come adrift due to vibrations, sudden braking or other conditions and block vehicle functions such as the steering system and pedals etc.

Cables must be protected from wearing through or other mechanical stress by using appropriate fasteners to secure them.

Whenever working on the vehicle, always follow the safety and working instructions stipulated by the vehicle manufacturer and vehicle trade.

Please read this installation manual carefully to avoid problems during installation. Incorrect installation can damage both the alarm system and the vehicle. If problems occur during installation, we will be glad to assist you.
However, assistance is possible only if you have read and understood this manual completely and if you are sufficiently qualified to install the system.

Specialist dealers can obtain vehicle-specific installation documents with precise specifications for connecting the CAN bus, smart indicators, horn and central locking system evaluation and much more on request. These contain the pin assignments on the vehicle connectors and the position of the components.

1.3 Special features specific to the vehicle

General: All vehicle doors which are monitored by the vehicle computer require no wireless magnetic contact, since these doors are automatically secured via the CAN bus when the WiPro unit is properly connected to the vehicle system. This is also the case with fully integrated vehicles in which the body manufacturer has connected the door contacts of the basic vehicle.
This is the case if an opened door is displayed on the multi-purpose display.

For some vehicle types (e.g., Sprinter, T5, T6), the horn will only operate when the ignition is on. The vehicle horn is not triggered by WiPro III in this case. It is recommended to mount a siren in the engine compartment or to use a back-up siren.

Further information:

http://www.thitronik-automotive.de/en/support/faqs/faq-wipro-iii.html

1.4 Accessories

Also available as accessories are additional wireless magnetic contacts, wireless remote controls, radio cable loops, wireless gas alarms and a GSM telemetry module (Pro-finder) for vehicle tracking.

By using other **wireless magnetic contacts** (Item no: 100757 black, 100758 white), it is possible to secure baffle plates, windows, doors, roof hatches and even roof boxes.

Wireless remote controls (Item: 100756) enable other family members etc. to control the system and gain access to the vehicle.
By using the **radio cable loop** (Item no: 100761), you can secure mobile goods (such as bicycles, motor scooters, surfboards and camping furniture etc.) against theft outside the vehicle.

By using one or more **wireless gas alarms** (Item no: 100759), you can protect your gas supply from the threat of gas leaks and attacks with narcotic gases. The gas alarm immediately signals the presence of dangerous gases in the room air to the WiPro, which, in turn, gives out an alarm.

Pro-finder (Item no: 100699) sends an SMS to up to 10 programmable telephone numbers in the event of an alarm. Another safety function is that when the supply battery reaches a critical state, an SMS is dispatched with the latest battery voltage. The air-conditioning system or heater etc. can also be switched on or off via an SMS. The alarm system can also be switched on or off via an SMS. Status enquiries requesting information on the status of the WiPro and the battery state etc. can be sent at any time by calling the **Pro-finder.**
The integrated GPS receiver makes it possible to locate a stolen vehicle.
If the vehicle is stolen, an alarm SMS with information on the vehicle location and speed is dispatched automatically.
By calling the Pro-finder, the status enquiry which likewise contains the position, speed and battery state etc. can also be activated at any time.

1.5 Special functions

Reducing the volume of the internal siren:

To reduce the volume, set switch 8 of the DIP switch (A) to the ON position as shown in Diagram 2 on Page 6.

Disabling the anti-jamming alarm:

If you frequently use your vehicle in areas where the WiPro III is exposed to illegal traffic on its transmission frequency, this may result in undesired alarms.

To disable the anti-jamming alarm function, set switch 7 of the DIP switch (A) to the ON position as shown in Diagram 2 on Page 6.

Protection against "replay attacks"
(possible from serial no: 0823-014 or firmware version 5.8)
To prevent the control of the WiPro III via the car key, set switch 5 of the DIP switch (A) in sketch 2 on page 6 to position ON.
The evaluation of the vehicle doors nevertheless takes place.

1.6 Preparing for installation

Make sure you have the tools and materials listed below:

- Cross-head screwdriver
- Voltmeter
- 8mm drill bit
- Insulating tape
- Ring terminals
- Shrink sleeve if necessary
- Cleaning agent or degreaser
- Crimping pliers
- Cordless screwdriver
- Socket set
- Butt connectors
- Cable ties
- Cleaning cloth for degreasing

Choose a suitable place for installing the central unit, the wireless magnetic contact(s) and other accessories.

Accessories such as the wireless magnetic contacts, wireless gas alarm and radio cable loop should be assigned prior to installation. (see 1.8)

1.7 Adjusting WiPro to the vehicle type

Open the casing of the central unit (A) by gently levering up the casing cover as shown in Diagram 1 on Page 6.

Set the DIP switch (A) in Diagram 2, Page 6 according to Table 1. If your vehicle is not on the list or older, connect it in the usual way (see universal connection diagram, Page 11) and make sure that switches 1 – 4 are in the **off** position

The settings must be made with the circuit de-energised. Make sure that neither the 20-pin plug nor the plug for the Pro-finder are plugged in.

Table 1

Other types of vehicles can be found at www.thitronik-automotive.de/en/support/faqs/faq-wipro-iii.html					
Vehicles from 2006 and later	**Years of manu-facture**	**Switch 1**	**Switch 2**	**Switch 3**	**Switch 4**
Fiat Ducato Citroen Jumper Peugeot Boxer Iveco Daily	2006 and later	off	on	off	off
Ford Transit	2006 and later	on	on	off	off
Mercedes Sprinter VW Crafter	2006 and later	on	off	off	off
Renault Master Opel Movano Nissan Interstar	2006 to 2011	on	on	on	off
New Renault Master	2011 and later	off	on	on	off
VW T5	2006 to 2009	on	off	on	off
VW T5 Facelift	2010 and later	on	off	off	on

1.8 Storing wireless magnetic contacts, wireless remote controls, etc.
!! As supplied, no wireless magnetic contacts, etc. are stored !!

If the instructions in this chapter are not carried out, the alarm system cannot interpret the signals transmitted by the wireless components, and the wireless components cannot trigger an alarm.

☞ Plug in the 20-pin plug "A" (Diagram 1, Page 6).

☞ Now, hold down the button "B" on the front of the casing (Diagram 1, Page 6) until the central unit gives a long beep and the status LED comes on.

Another option is to activate Assign mode as described in the operating instructions.

☞ Now activate each **wireless magnetic contact** to be stored as shown in Diagram 4 (keeping both parts away from each other until the LED ("C") lights up briefly). Or press one of the buttons on the **wireless remote control** as shown in Diagram 5. The **wireless gas alarms** must be switched on to store them and **radio cable loops** must be removed from the holder.

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☞ After each storing procedure has been successfully carried out, a short beep will sound, and the status LED will go out briefly.

☞ To terminate Assign mode, briefly press the button "B" on the front of the casing again. The central unit will sound a double beep, and the status LED will go out.

1.9 Deleting wireless components

Transmitters can only be deleted by erasing the memory.

☞ Hold down the button "B" on the front of the casing (Diagram 1 on Page 6) while unplugging the 20-pin plug until the central unit gives a long beep. All the transmitters are now erased.

Important!

The procedure for subsequently adding wireless components, without access to the main unit, is described in Chapter 2 of the Operating Instructions.

1.9.1 Diagrams

Diagram 1

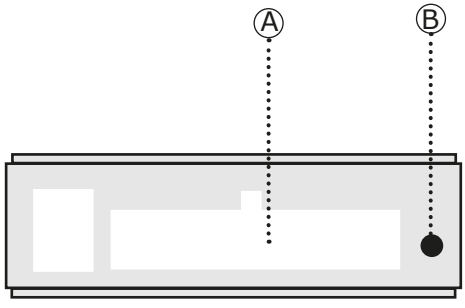

Diagram 2

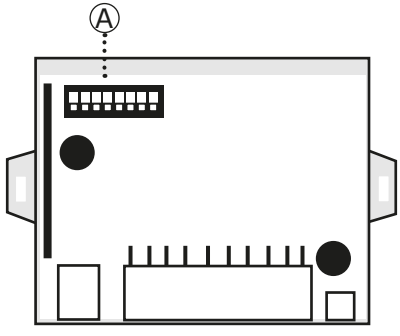

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Diagram 3

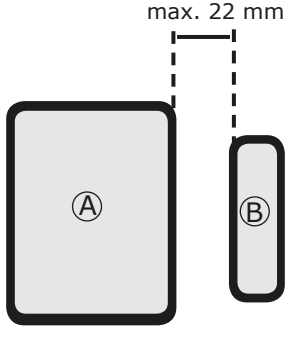


Diagram 4

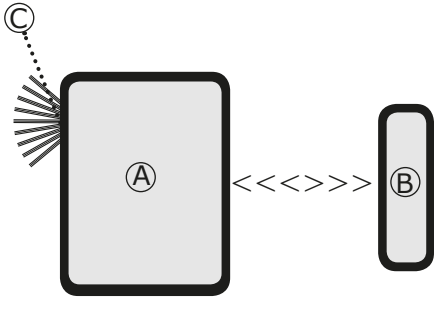


Diagram 5

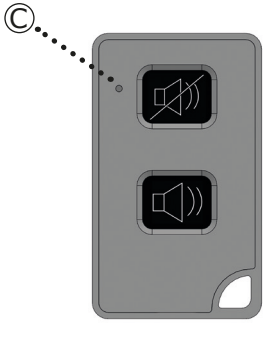
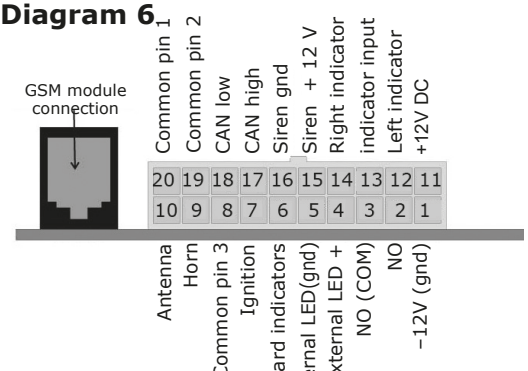


Diagram 6



1.9.2 Installing the wireless magnetic contacts

Choose the places where you want to install the wireless magnetic contacts. The transmitters can be installed both on the window and the frame (see diagrams on Page 8). The distance between the transmitter (Diagram 3, Part A, Page 6) and magnet (Diagram 3, Part B, Page 6) can be around 22 mm. A larger distance activates the transmission process (LED lights up briefly. Diagram 4, C) and triggers the alarm when the system is activated.

Before installing the wireless magnetic contacts, carry out a range test using the adhesive pads.

In order to do so, fix the transmitter which is already assigned and the magnets to the places you have chosen using adhesive tape and follow the instructions under 1.9.3.

The contact surface must be clean, dry and free of grease. Treat with suitable cleaning agent beforehand.

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Do not use on surfaces at temperature below 15 °C.
The adhesive pads reach their final strength after approx. 24 hours.

If installed on the rear storage locker, use the mounting adapter (Item no. 100428 black or 100729 white) to optimize the transmission and bridge larger gaps.

1.9.3 Range test / Diagnostics mode

Briefly press the button "B" on the central unit (Diagram 1 Page 6). The status LED on the cable assembly starts to flash. WiPro III is now in Diagnostic mode.

The central unit acknowledges every transmission process received from an assigned transmitter with an acoustic signal.

If there is no acoustic acknowledgement tone, the transmitter is not assigned (repeat 1.8) or shielded by metal parts. In this case, choose another place to mount the transmitter or use the mounting adapter (Item no. 100428 or 100729).

To terminate Diagnostics mode, briefly press the button "A" again.
The LED goes out.

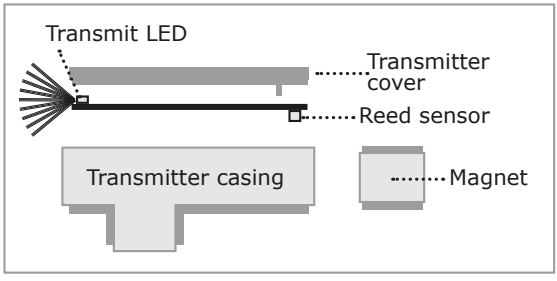
1.9.4 Installing the wireless gas alarm (accessory)

Choose a suitable place to mount the wireless gas alarm.
The place where it is mounted should not be in the direct vicinity of the heater outlets or where there are lead-acid batteries. Mounting it in the direct vicinity of strong cleaning agents, petrol and other fuels should also be avoided.

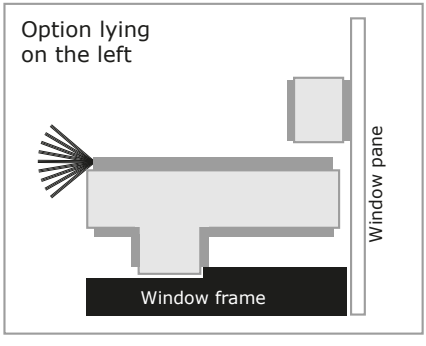
The ideal height of installation is at the lowest point of the vehicle just above the floor (approx. 10 – 20 cm).

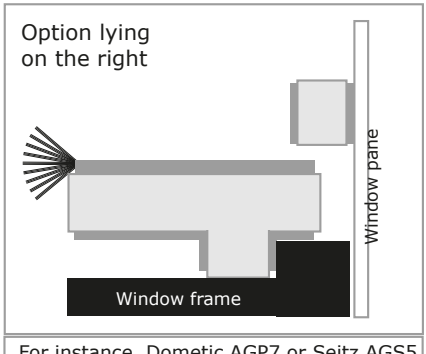
Now carry out a range test with the wireless gas alarm, as described under 1.9.3. Mount the wireless gas alarm using the template in the wireless gas alarm manual and connect the supply voltage. (brown = +12 V / white = earth)

1.9.5 Diagrams

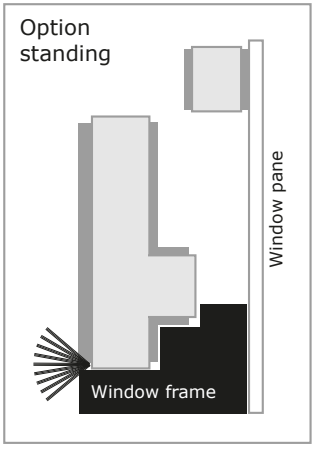


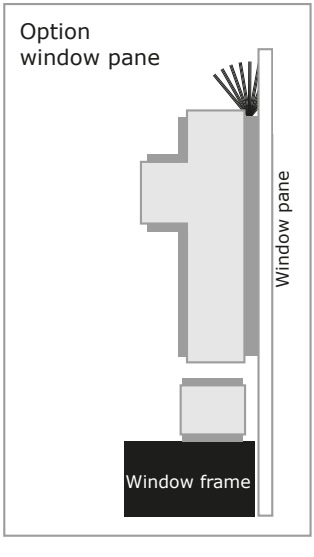
It is possible to mount the transmitter casing in a lying position (on the left or, rotated 180°, on the right) or standing on the side – depending on the frame and the available space/the distances to the pane. When the transmitter casing is rotated, the circuit board with the transmit LED, the reed sensor and the transmitter cover will keep their orientation to the magnet.





For instance, Dometic AGP7 or Seitz AGS5 and similar products





If the available space does not allow for the transmitter to be installed on the window frame, the transmitter can also be mounted on the window pane as shown on the right.

If installation is not possible using the included adhesive pads, you can also use screws to fix the transmitter housing in place. You will find screw position marks underneath the circuit board.

Please scan the QR code for additional information and video instructions.

www.thitronik-automotive.de/support.html

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1.9.6 Installing the radio cable loop (accessory)

Choose a suitable place for installation at the back of the vehicle or on one of the sides. You can also obtain further holders as accessories (Item no: 100649) to use the cable loop for other areas of the vehicle.

☞ Now carry out a range test with the radio cable loop, as described under 1.9.3. Removing the cable loop from the holder triggers a transmission process.

☞ Using the screws provided, fasten the holder of the cable loop to where you want to place it. If you drill through the outer skin of the vehicle, seal the drilled holes with Sikaflex to prevent the penetration of moisture.

1.9.7 Installing and connecting external sirens (accessories)

Choose a suitable place for mounting in the vehicle interior or in the engine compartment. When laying the cable, make sure that it does not lie within the range of movement of any moving parts of the vehicle, that it leaves sufficient distance from hot engine components and cannot be exposed to wear damage due to sharp edges. The siren must not be detached through vibration, braking suddenly or other conditions and thereby impede the roadworthiness of the vehicle. As with the cables, the siren must be sufficiently far away from hot engine components.

Siren without rechargeable battery
Connect the red and the black cable of the siren to the white (Pin 15/siren +12V) and the white/black cable of the cable assembly, respectively.

Back-up siren with rechargeable battery
The back-up siren has an integrated rechargeable battery which is constantly charged via the red (+12 V) and black (earth) conductors. These conductors must be connected to the on-board power supply. The back-up siren sounds if there is a power failure (only when it is activated via the key switch).

The white wire of the back-up siren must be connected to the white wire of the central unit (Pin 15/siren +12V). The blue wire (negative trigger) of the back-up siren is not used (please insulate it). The back-up siren sounds when there is a positive voltage on the white wire (only when it is activated via the key switch).

1.9.8 Installing the central unit

Choose a suitable place in the vehicle interior to mount the central unit where the unit is protected against quick access. Ideally, choose a place for installing it near to the central electronic unit of the vehicle in order to keep the cable lengths as short as possible. You can use both the provided adhesive pads or the plastic parts, which are also included, to mount the unit. You need to apply some adhesive to the plastic flanges before you can fix them to the casing. When laying the cables, make sure that they are not within the range of movement of moving parts of the vehicle or pedals etc.

1.9.9 CAN bus diagnostics

To find out whether the WiPro CAN bus is receiving data, activate Diagnostics mode.

☞ Briefly press the button "B" on the central unit (Diagram 1 Page 6). The status LED on the cable assembly starts to flash. WiPro is now in Diagnostic mode.

☞ While WiPro is in Diagnostics mode, operate the remote key fob of the vehicle or activate the warning lights. Both lead to data traffic on the CAN bus, which can be evaluated.

↳ If CAN bus data are being received, the status LED flashes or flickers depending on the data transfer rate of the BUS system.

⚠ If the status LED shows no response, the connection is faulty or CAN H and CAN L have been swapped over.

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1.9.10 Performing an alarm test

After the central unit has been installed and connected to the vehicle systems (Chapter 2) a test alarm should be carried out with each assigned transmitter (wireless magnetic contact, radio cable loop and wireless gas alarm).

☞ Activate WiPro and open one of the assigned wireless magnetic contacts.

↳ The siren sounds, the vehicle indicators flash and the horn sounds, depending on the type of vehicle.

☞ Repeat the process with each of the installed and assigned transmitters.
To test the alarm for a cable loop, remove it from the holder with the system activated.

☞ To carry out an alarm test with a wireless gas alarm, switch it on and wait until the preheating phase is over (power lamp flashes green). Flood the wireless gas alarm with lighter gas. The power lamp flashes quickly, and WiPro III gives an alarm as described in the user manual.

☞ To test the alarm with the cab doors, open one of the doors from the inside when the WiPro is activated.

!!A test alarm with the driver's cab doors (if connected to the input for the interior lighting) is not possible until at least 60 seconds after arming the system!!

2 Connecting the central unit to the vehicle systems

Connect the WiPro III cable according to the plug assignment diagram on Page 11 and using the connection diagrams on Pages 12 to 15.
All connections must be made with the circuits de-energised.
To avoid short circuits or malfunctions, insulate the ends of the wires which are not used.

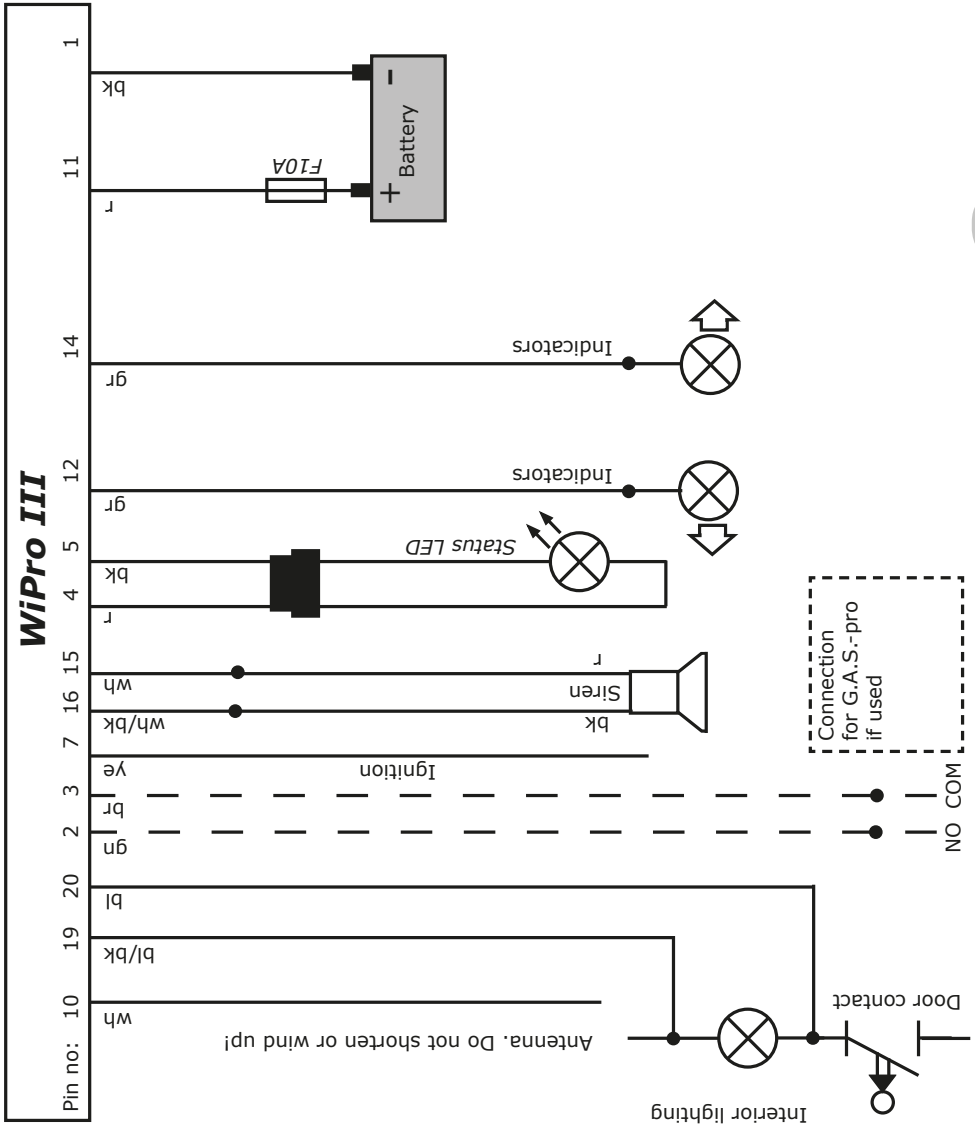
Pin	Colour	Abbre-viation	Function	Special features
1	black	bk	Earth (Terminal 31)	
2	brown	br	Alarm input NO	Activated when the system is armed and disarmed. Input for conventional gas alarm (G.A.S.-pro). NO contact. Insulate in green when not in use!
3	green	gn	Alarm input COM	
4	red	r	Status LED	White plug connector is to connect to the counterpart of the status LED.
5	black	bk	Status LED	
6	red/pink	r/p	Smart indicator	Wattless indicator controller (see vehicle-specific connection diagrams)
7	yellow	ye	Ignition (Terminal 15)	
8	beige	be	Common pin 3	See connection diagram for Renault Master and similar models
9	pink	p	Horn signal	Wattless horn controller (see vehicle-specific connection diagrams)
10	white	wh	Antenna	Do not shorten or wind up!!!
11	red	r	+12/24 V (Terminal 30)	
12	grey	gr	Left indicator	
13	grey/black	gr/bk	Common pin 4	Not used (please insulate!)
14	grey	gr	Right indicator	
15	white	wh	Siren +12 V	Connect to red siren cable or to white cable of the back-up siren.
16	white/black	wh/bk	Siren earth	Connect to black siren cable.
17	white/orange	wh/or	CAN high	Must only be connected by qualified personnel!!!
18	violet/orange	vt/or	CAN low	
19	blue/black	bl/bk	Common pin 2	Input for interior lighting. See Universal connection diagram. On Ford Transits, for evaluating the central locking system signals (Controlling the WiPro with remote key fob). See connection diagram for Ford Transit
20	blue	bl	Common pin 1	

Specialist dealers can obtain vehicle-specific installation documents with precise specifications for connecting the CAN bus, smart indicators, horn and central locking system evaluation and much more on request. These contain the pin assignments on the vehicle connectors and the position of the components.

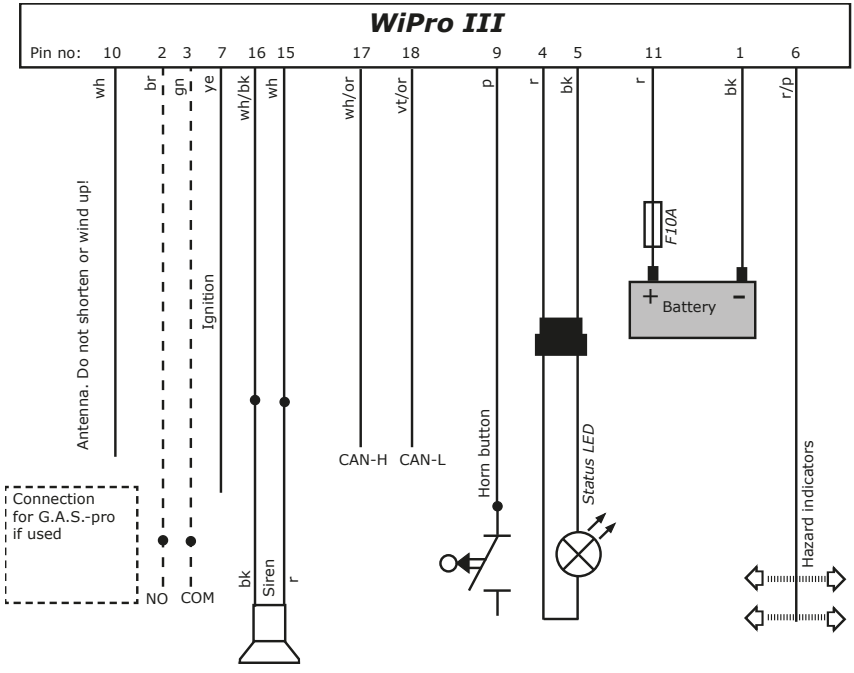
Universal connection diagram

This connection diagram shows the available connections for WiPro on vehicles without CAN bus technology.

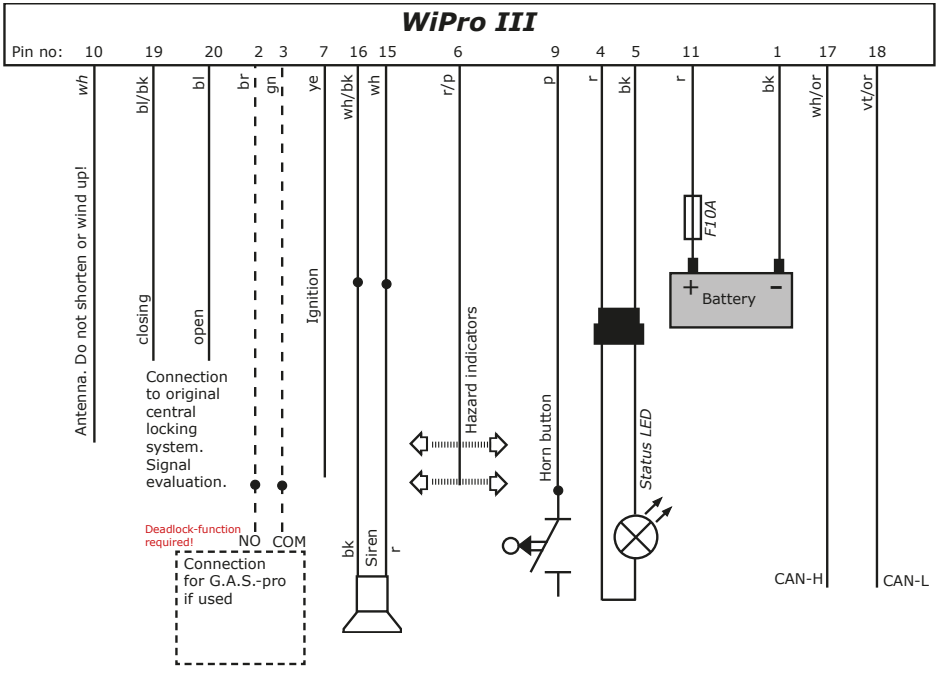
Specialist dealers can obtain vehicle-specific installation documents with precise specifications for connecting the CAN bus, smart indicators, horn and central locking system evaluation and much more on request. These contain the pin assignments on the vehicle connectors and the position of the components.



Connection diagram for: Fiat Ducato, Citroen Jumper and Peugeot Boxer from 2006 onwards and Iveco Daily from 2006 onwards



Connection diagram for: Ford Transit from 2006 onwards



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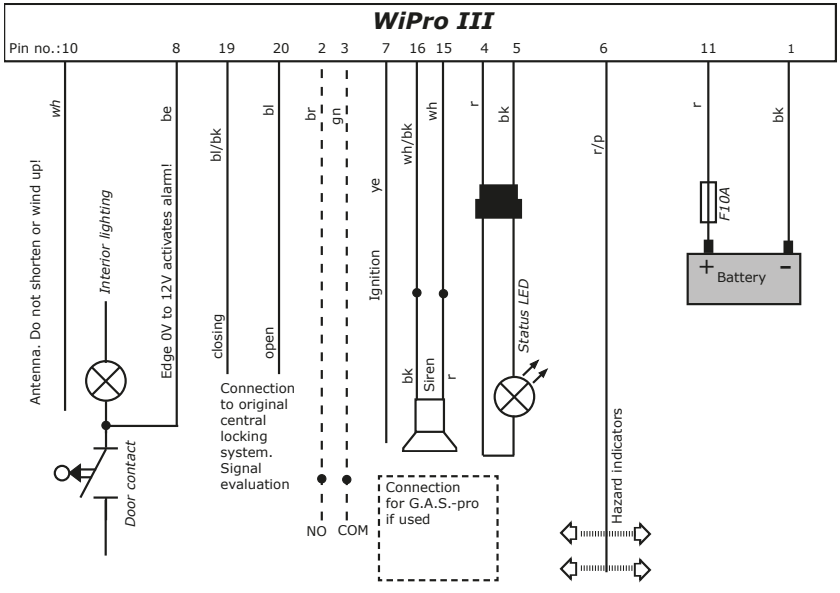
Connection diagram for: Renault Master, Nissan Interstar and Opel Movano from 2006 onwards



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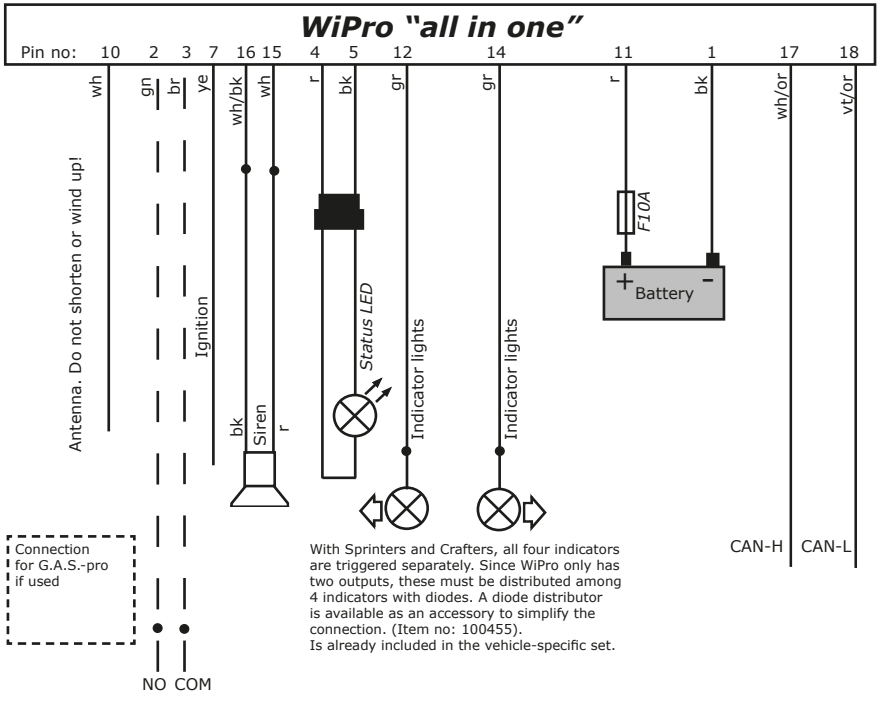
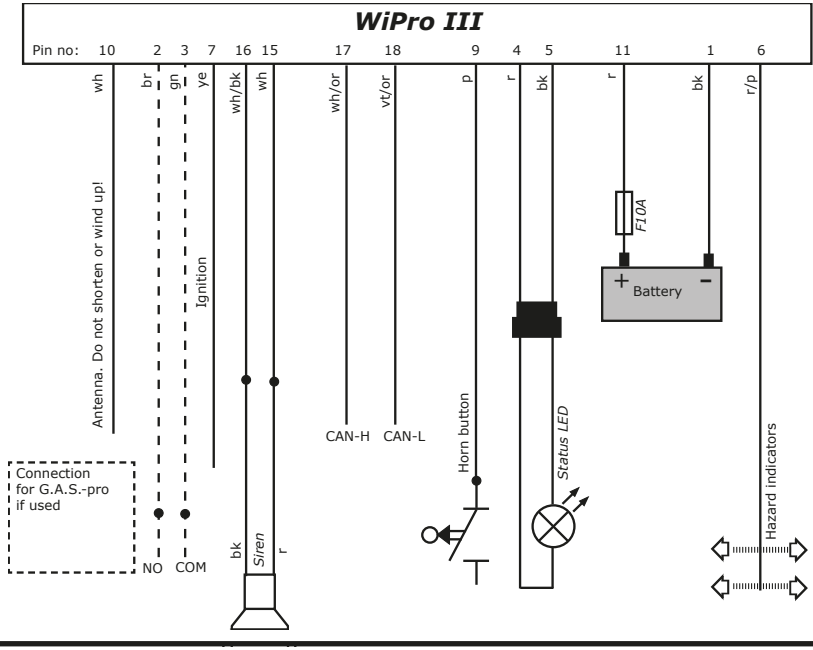
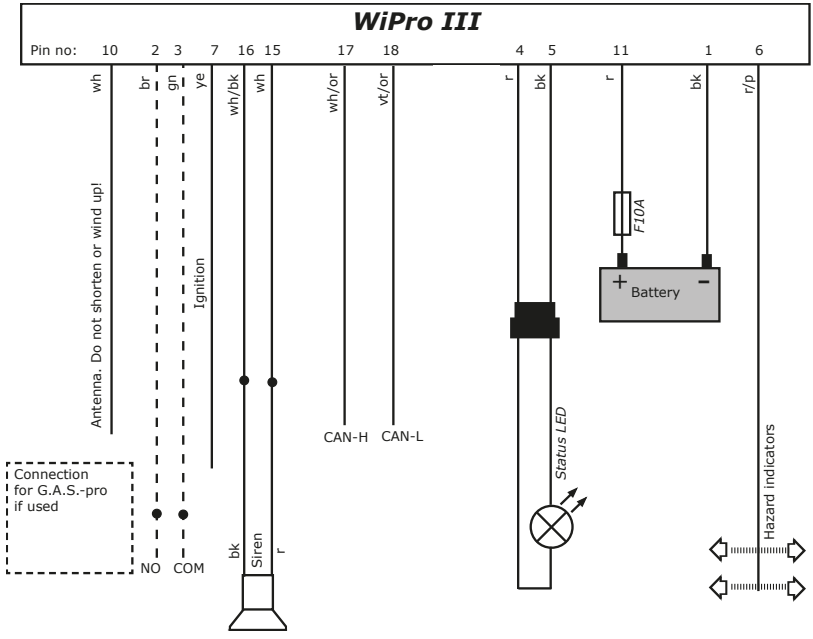
Connection diagram for: Mercedes Sprinter, VW Crafter from 2006 onwards



Connection diagram for: Renault Master from 2011 onwards



Connection diagram for: VW T5 from 2006 onwards



3.1 Technical specifications

Main unit

Power supply (Uin):	9 – 30V
Siren output:	9-30V (Uin)/1 A
Indicator output:	60W
Current consumption:	approx. 11 mA
Assignable transmitters max:	100
Receiving frequency:	868.35 Mhz
Number of codes:	>4 billion. (>4,000,000,000)
Temperature range:	–10 °C to +80 °C
Interfaces:	RJ11 (output for Pro-finder for alarm forwarding) CAN bus interface

Remote control 868, magnetic contact 868

Transmission power:	<10 mW
Range max:	75 m in the open
Battery type (transmitter):	CR2032 (button cell/3 V)
Battery life (transmitter):	approx. 2 years
Transmitting frequency:	868.35 Mhz
Number of codes:	>4 billion. (>4,000,000,000)
Temperature range:	–10 °C to +60 °C

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Caution!
Risk of explosion if battery is incorrectly replaced!
Dispose of used batteries according to the instructions.

3.2 Approvals

E1 This alarm system for recreational vehicles is tested and approved according to ECE regulation no. 10, revision 03.

3.3 Scope of delivery

WiPro III central unit, connection cable, wireless remote control 868, wireless magnetic contact 868 with adhesive pads, fuse holder with fuse, status LED with connection cable, 1x warning sticker, installation manual and operating instructions

The scope of delivery varies for vehicle-specific sets. Depending on the vehicle type the cable assembly is equipped with other cables, and wireless remote control and wireless magnetic contact may not be included.

3.4 Troubleshooting

If the following section does not resolve or describe the problem, please contact our Technical Support Department: +49(0)431-66 66 811

Problem
WiPro does not respond to the command from the remote key fob but the central locking system is working.

Possible causes
The vehicle is not listed in Table 1 under 1.7.

The DIP switch is not coded as described in Table 1.

CAN high and CAN low have been swapped over.

The CAN connection is not correctly assigned.

Problem
When arming the system, an open wireless magnetic contact is signalled although all the contacts are closed.

Possible causes
WiPro has been isolated from the operating voltage and no longer "knows" the state of one or more contacts.

Solution: open and close all the contacts several times.

Problem
A contact is not being received, despite the fact that the distance to the central unit is short.

Possible causes
The contact is not assigned.

Solution: Assign contact.

The receiver antenna is located behind shielding metal or is in contact with the metal structure which is impeding reception.

Solution: Change the position of the central unit or the antenna.

There is shielding metal between the transmitter and the unit, such as a gas box etc.

Solution: Change the position of the transmitter.

Problem
Reception from contacts on rear storage lockers is not reliable.

Possible causes
The contact is mounted on a metal material, which has a negative effect on the antenna properties.

Solution: Use mounting adapter (art. no.: 100428).

3.4 Disposal instructions

When the unit is no longer in use, please do not dispose of it with household waste. Municipal recycling centres have suitable containers for the disposal of electronic equipment.

Take the packaging materials to the recycling centre.

Installation details

To make servicing the system easier later on, you can make a few notes below which you may find helpful.

Number of wireless magnetic contacts:

Number of handheld transmitters:

Number of wireless gas alarms:

Number of wireless cable loops:

Position of the central unit:

Position of the GSM module:

Position of the GPS antenna:

Separate fuse installed: No Yes Rating (A)

Position of the fuse:

Vehicle fuse used: No Yes Rating (A)

Fuse no: Position of the fuse:

Serial number of the unit:

Other matters:

GB

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