

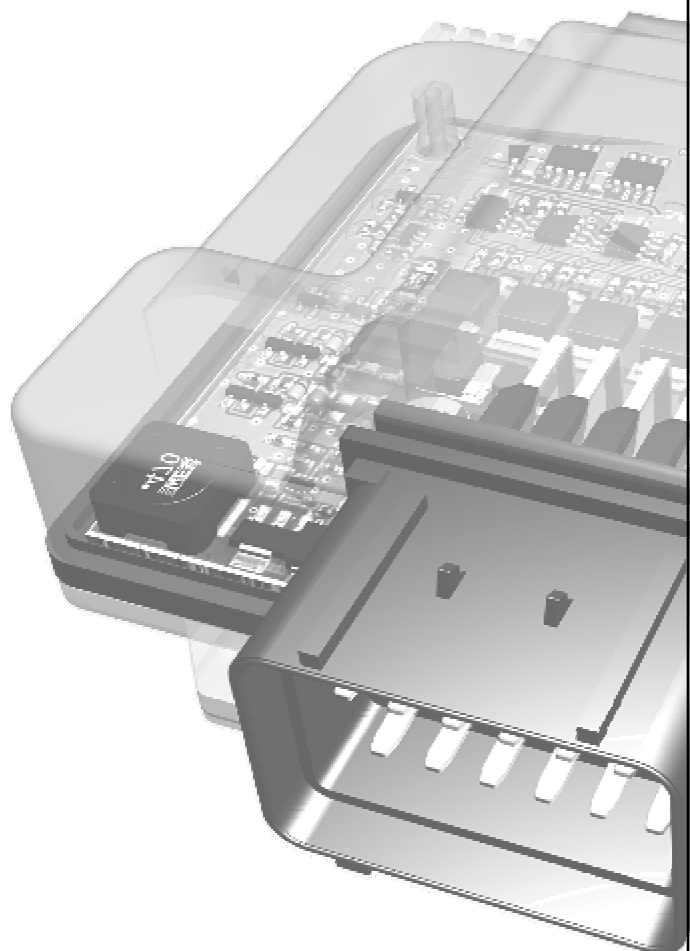
Installation guide for cars

 BMW

320i, 3er GT,
520i,
X1,
X3,
Z4

1997 ccm, 135 kW, 270 Nm

System No. 1047-3532



Installation guide for cars

General instructions

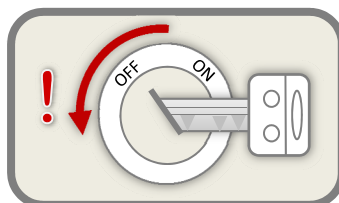
Read this installation guide carefully before starting the installation so that you will be able to use all the technical advantages of the systems and do not start with the installation before you have read and understood the instructions.

Your tuning system was designed and manufactured with great care and therefore should be also handled with care. If you comply with the advice given below you will avoid an early termination of the product guarantee and you will be enjoying your product for years to come.

Never install the system if the ignition is on. Pull the ignition key. After switching off the ignition, wait for 5 minutes until all electric devices are turned off.



Please absolutely consider these references.



Ignition switch off .



Wait after switching the ignition off 5 min.

If possible, install the module in a dry area in the engine compartment. Humidity and wetness contain minerals which cause corrosion to the electronic circuits. Fix the harness and protect it from humidity. Before every engine wash, remove the entire tuning system.



Install splash-proof



Attention with engine washing.



No installation on hot engine parts.

Do not fix tuning systems to engine parts that could heat up. Never fix the module directly or close to the engine (engine block). High temperatures can reduce the lifespan of electronic devices and can deform or melt specific plastics materials.

Take care that the harness does not touch the parts in motion and the metal parts to avoid friction. Do not make any changes to the harness (do not make it any longer or shorter).

In case of the malfunctioning of the system due to any non-compliance with the instructions during the installation of the tuning modules, the product guarantee will be terminated.

Installation guide for cars

BMW N20B20

Installation

Localise boost pressure sensor I (A), boost pressure sensor II (B), and camshaft sensor (C). Open each of the connectors and connect the cable adapter with the sensors. Connect the red +12V wire to the positive (+) pole and the black ground wire to the vehicle body mass (-) in the engine compartment.

Advice! You can't find the sensors? The 4-pin boost pressure sensor I (A) is located on the right side from the engine, under the engine control unit, after throttle valve. The boost pressure sensor II (B) is located also on the right side from the engine, directly at the intake hose, before the throttle valve. The 3-pin camshaft sensor (C) is located on the left side in front of the engine. Note that you don't connect the adapter cable on other plugs. On the following pages you will find an illustrated guide.

Move the adapter cable not in parallel with injection pipelines or ABS-control device connecting leads. Keep to very big distances. Fix the cable harness with cable binders. Connect the module with the adapter cable.

The module should be obstructed possibly against warmth and splash water protected.

Settings

The module is preset on the vehicle and needs no other change of the settings. Now the vehicle is ready for a test run.

The Performance tuning can obtain a different result throughout the series. It's possible that the engine power turns out to be too high or too low.

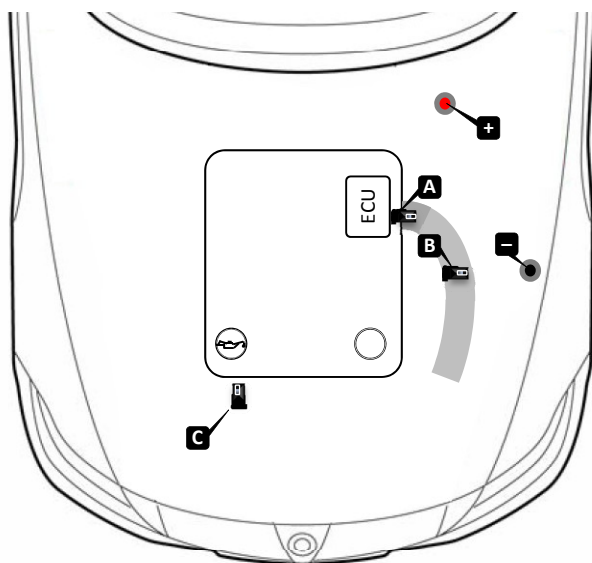
If the power should be too high, it is shown by a strong soot generation, disturbed engine run, engine misfire or the initiation of the engine emergency program.

See the attached sheet module fine settings.

If you still have questions or you are not quite sure?

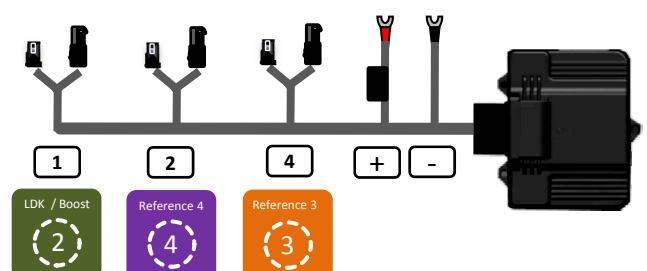
Contact us, a technician will gladly help you!

Installation principle



- A** Boost Pressure Sensor 1 (4 pin)
- B** Boost Pressure Sensor 2 (4 pin)
- C** Camshaft Sensor (3 pin)
- +** **-** Power Supply

harness sticker:



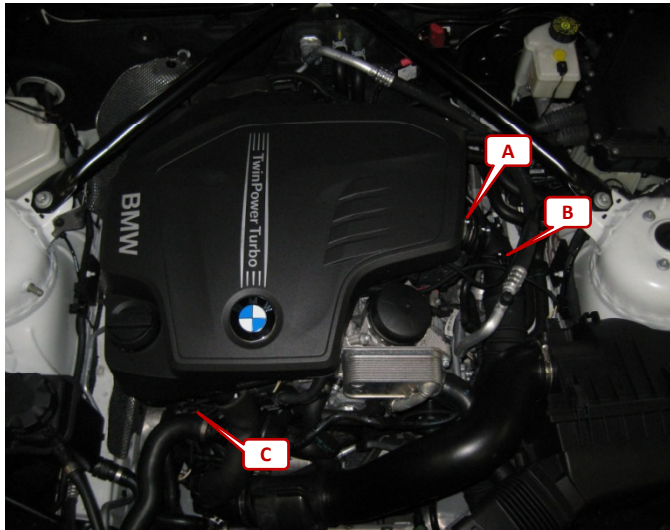
Installation guide for cars

BMW N20B20

Installation example BMW Z4 sDrive 20i



Open the engine hood.



Connect the system to these three sensors. Boost pressure sensor I (**A**) after throttle valve, boost pressure sensor II (**B**) before throttle valve, and camshaft sensor (**C**) on the left side in front of the engine.



Connection boost pressure sensor (**A**):



Localise the right area from the engine compartment. The 4-pin boost pressure sensor (**1**) is located under the engine control unit, after the throttle valve.

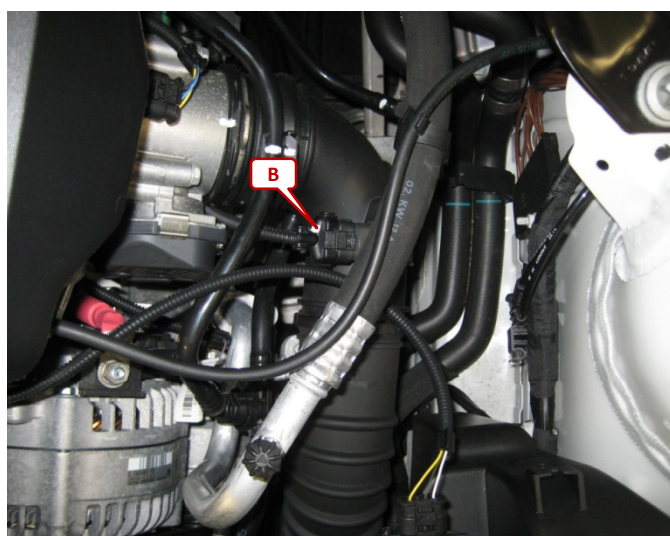
Installation guide for cars

BMW N20B20

Installation example BMW Z4 sDrive 20i



Disconnect the plug by open the locking lever and connect the correct boost pressure adapter in between.



Connection boost pressure sensor II (B):



Localise the right area next to the engine. The 4-pin boost pressure sensor I (B) is located at the suction tube before the throttle valve.



Disconnect the plug by open the locking lever and connect the correct boost pressure adapter in between.

Installation guide for cars

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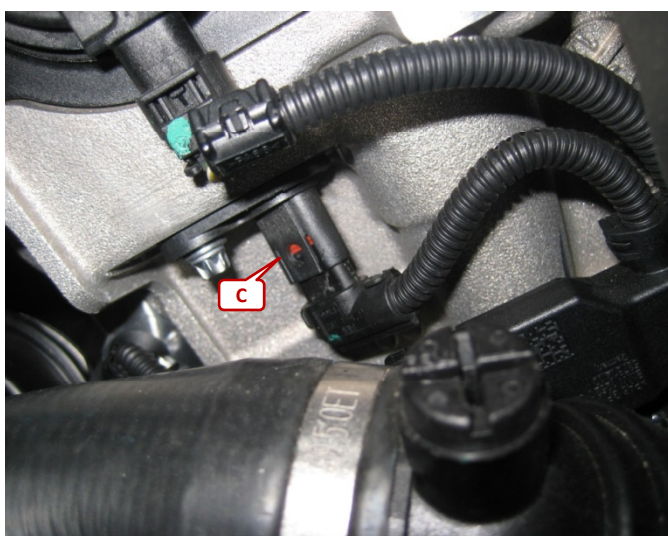
Installation example BMW Z4 sDrive 20i



Connection camshaft sensor (C):



The 3-pin camshaft sensor (C) is located in the front left area from the engine. It is located below the oil filler.



Disconnect the plug by open the locking lever.



Connect the correct boost pressure adapter in between.

Installation guide for cars

BMW N20B20

Installation example BMW Z4 sDrive 20i



Connection power supply:

Open the cover from the +12 voltage connection.





Connect the red + 12 V wire to the + 12 V connection (+).



Connect the ground wire to the car body mass (-). Move the adapter cable not in parallel with injection pipelines or ABS-control device connecting leads. Keep to very big distances. Fix the adapter cable with cable binders. Connect the module with the adapter cable.

Check all connections again and reassemble the vehicle in reverse order.



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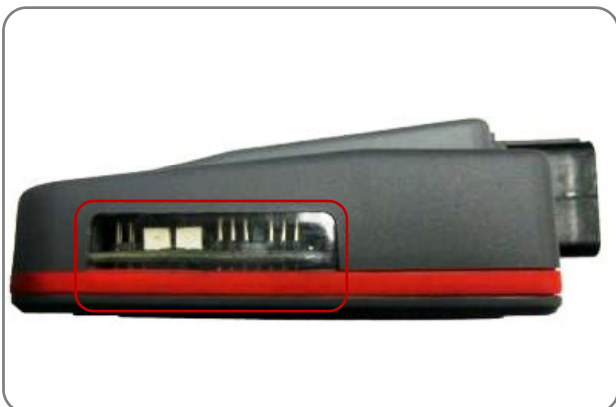
BMW N20B20

Trouble shooting

Error descriptions	Problem solution
The car doesn't start.	<ul style="list-style-type: none">• Check all connected components.• Are the adapter plugs in the right position?• Do the LED's work properly (see module fine settings)?• Are the Jumpers positioned correctly (see module fine settings)?• Is the adapter cable the right one?
The car doesn't run smoothly. The engine is bucking.	<ul style="list-style-type: none">• Are the adapter plugs in the right position?• Have you changed the jumper position (increase in performance / diminishing in performance)?
The emergency program runs immediately. The Malfunction Indication Light (MIL) flashes in the Instrument Cluster.	<ul style="list-style-type: none">• Lower the performance by setting the jumper on a negative value (one or two positions → lower).• Contact the support.
The emergency program (fail-save) runs in higher rpm.	<ul style="list-style-type: none">• Lower the performance by setting the jumper on a negative value (one or two positions → lower).
The car shows no extra performance.	<ul style="list-style-type: none">• To get the maximum benefit it is necessary to refuel Super Plus (98 ROZ) or better.• Raise the power by setting the jumper on a positive value (one or two positions → higher).
The car produces too much soot.	<ul style="list-style-type: none">• Lower the performance by setting the jumper on a negative value (one or two positions → lower).
How can I get back to the original state of the car?	<ol style="list-style-type: none">1. Turn the ignition off.2. Wait, until all electric power consumers are switched off.3. Disconnect the module and the adapter from all connected components or use the supplied 18-pin Jumper plug instead of the module.4. The car is now back in the series performance.

Installation guide for cars

Module fine settings



The Performance tuning can obtain a different result throughout the series. It's possible that the engine power turns out to be too high or too low. If the power should be too high, it is shown by a strong soot generation, disturbed engine run, engine misfire or the initiation of the engine emergency program. In the emergency program the vehicle drives with a strongly decreased performance. In some vehicle models Malfunction Indication Light (MIL) flashes. The emergency program is a protective function of the engine and can be deactivated at any time.



With fine tuning these problems can be resolved. A fine tuning is normally not necessary, since the module was balanced and programmed for the respective vehicle. Before a change is made, you should contact your salesman or the manufacturer of the system. A technician will gladly help you. If you want to change the settings solve the four screws (Torx 10) to get to the board.



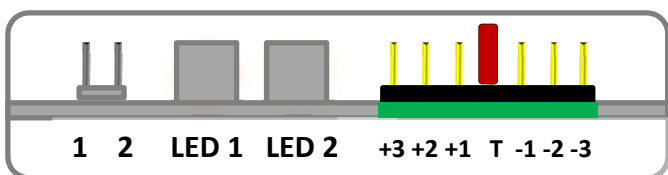
Module side view

On the side window of the unit you can see two LED's and some jumpers. The left set of jumpers is used for the program selection. The right set of jumpers is used for fine-tuning the Tuning box.

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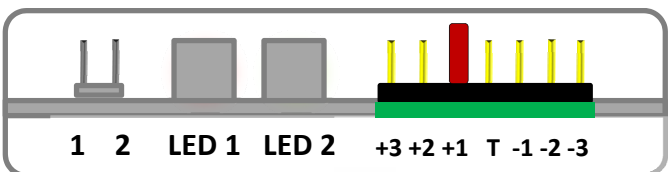
Module fine settings

Fine-tune jumper (right)



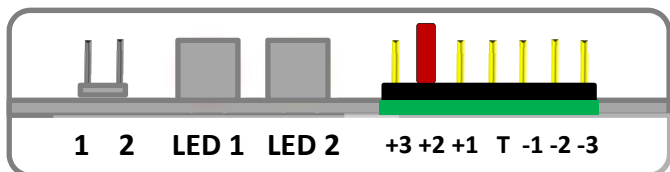
ill.1

Only one jumper must be present in this row. Jumper on T position gives settings as made in configuration program. Now you can raise or lower the power output by setting the jumper on a positive or negative value. (see ill.1)



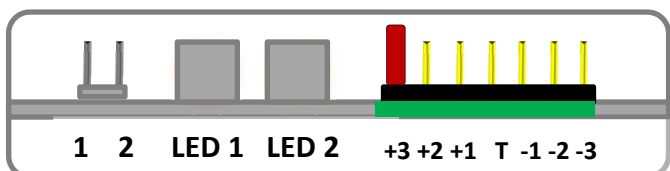
ill.2

Position +1
The performance is changed by the correction factor +1 (see ill.2)



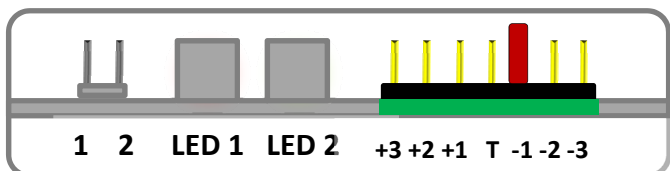
ill.3

Position +2
The performance is changed by the correction factor +2 (see ill.3)



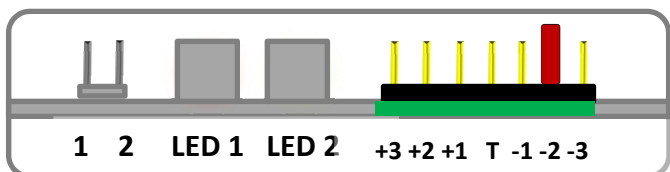
ill.4

Position +3
The performance is changed by the correction factor +3 (see ill.4)



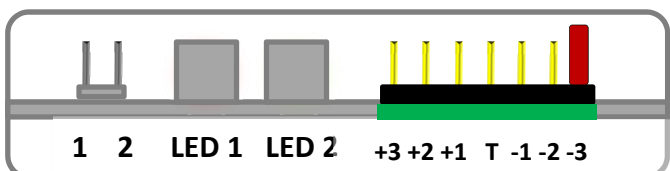
ill.5

Position -1
The performance is changed by the correction factor -1 (see ill.5)



ill.6

Position -2
The performance is changed by the correction factor -2 (see ill.6)



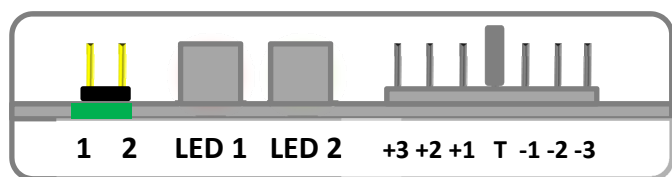
ill.7

Position -3
The performance is changed by the correction factor -3 (see ill.7)

Installation guide for cars

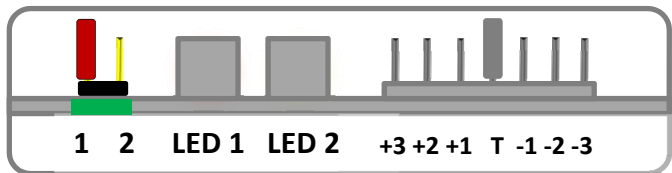
Module fine settings

Program jumper function (left)



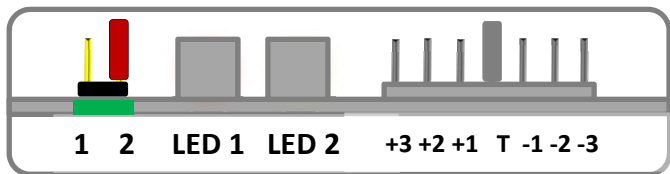
ill.1

Program 1 = no Jumper (ill. 1)
The power curve of the 1st Program is active.



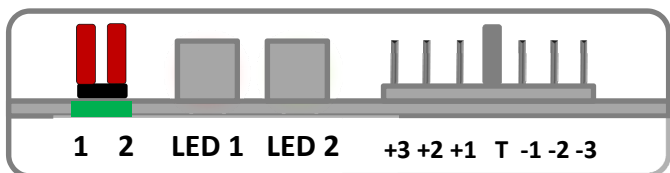
ill.2

Program 2 = Jumper on position 1 (ill. 2)
The power curve of the 2nd Program is active.



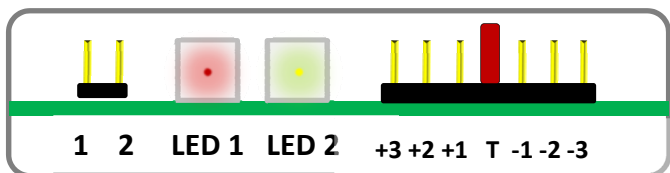
ill.3

Program 3 = Jumper on position 2 (ill. 3)
The power curve of the 3rd Program is active.



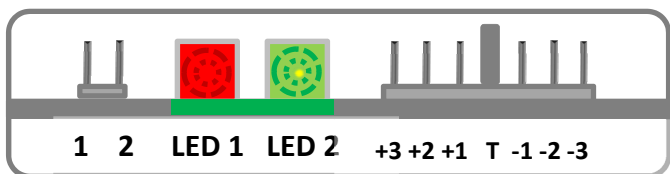
ill.4

Program 4 = both Jumper on position 1 and 2 (ill. 4)
The power curve of the 4th Program is active.



ill.5

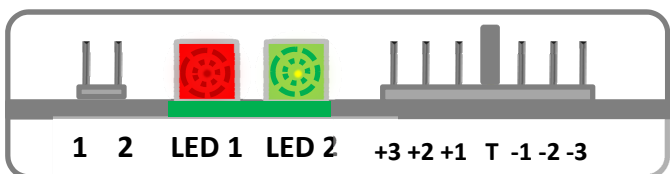
0, 1 or 2 jumpers can be applied in this row. Should a not configured program be selected, program 1 is automatically called.



ill.6

LED's

Both LED's flashes only while driving (ill.5). You can't check the LED's when you turn only the ignition on.



ill.7

Red LED → The device is ready for use (ill.6).
Yellow LED → The tuning is active (ill.7).