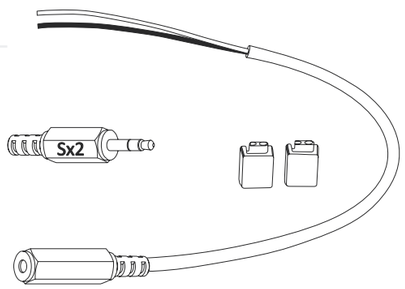
maintronic

Sx2 Tuning-Dongle

with Bosch Classic cablekit Sx2KB-Classic

Installation manual



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Document:
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Creation date: 01 / 2014

Please read this instruction carefully before using and keep them for later use.

Important!

Pedelec drivers, which want to test the drive efficiency with a plugged Sx2 Tuning-Dongle outside the scope of Road Traffic Licensing Regulation e.g. private land, cordoned racetracks, abroad or with an insurance license plate get with the Sx2 Tuning-Dongle a technical way.
Unplug the Sx2 Tuning-Dongle to set your pedelec back to the original state.

Instruction to the road traffic regulations and disclaimer

We expressly point out that the Sx2 Tuning-Dongle may only be used on private closed areas or designated routes.Using of the Sx2 Tuning-Dongle manipulates the speed of your pedelec, this is not allowed on public roads.

No liability is assumed for any current and future resulting damage to objects and / or persons from any improper installation and / or improper use. Use at your own risk!

Your eBike warranty can be limited or expire by the using and installation of the SX2 Tuning-Dongle. Because an installed SX2 Tuning-Dongle is a modification or a manipulation of your eBike.

This notice is generated automatically and is valid without signature.
Created version: November 2012

Features description

- Starting between 12 and 25 km/h, the speed is divided by / 2, and the display shows exactly the half speed. This provides to keep the BOSCH driving modes
- Pluggable and compact, this design allows driving in the public by simply pulling the Sx2 Tuning-Dongle out of the socket jack.
- For protection the SX2 Tuning-Dongle its molded, maintenance free and no battery is required.
- Enhancements like turning off during driving or cable extensions are possible with trading goods.

Before installation

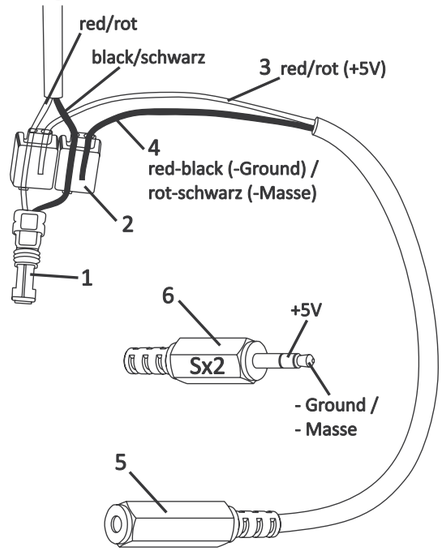
At the end of the cablekit is a 3,5 mm stereo jack socket for plug-in of the Sx2 Tuning-Dongle (6). The Sx2 cablekit for Bosch Classic Line is connected parallel to the speedsensor (1) and crimped with gel insulated blade connectors (2).

The protective cover of the engine terminal box has to be removed to get to the terminal.
If you don´t have right tool, it should be installed by a good eBike dealer.

Scope of delivery

- 1x cablekit Bosch Classic Line with 3,5mm stereo jack socket (5)
- 2x gel insulated blade connectors (2)
- 1x Sx2 Tuning-Dongle (6),
- 1x user manual Sx2 Tuning-Dongle with Bosch Classic Line cablekit

Image label Sx2KB-Classic Bosch Classic Cablekit

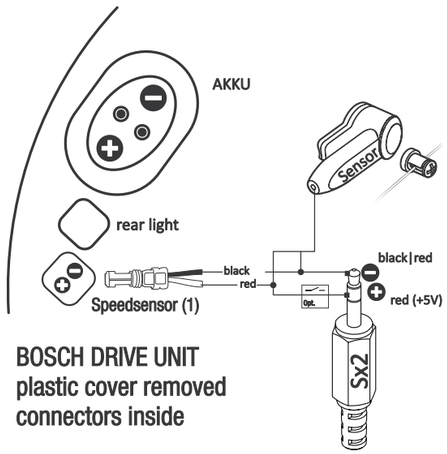


Installation Bosch

There are several ways of installation. Without special tools it is only possible to connect the cablekit outside of the engine protective cover at the speedsensor cable. For this installation you have to remove the cable isolation carefully around 4cm to get access to the wires and press the gel insulated blade connectors.

The best solution is to connect the cablekit directly behind the speedsensor plug inside of the engine terminal. It is located behind the stone chip cover of the engine which is screwed on with 3 Torx screws. Two screws can be removed easily. For the third screw the chain wheel has to be removed.

For this reason the following special tools are required: 8mm 5-hex key to unlock the right crank screw, Isis crank puller for the right crank and a spidertool to release the lock ring of the spider(note left-hand thread!). Once the protective cover is removed you get access to the speedsensor plug(1).



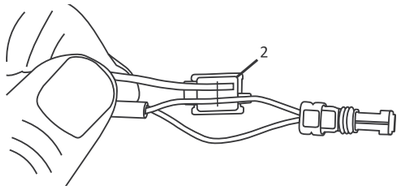
BOSCH DRIVE UNIT
plastic cover removed
connectors inside

Illiustration - Bosch Classic Line engine terminal box

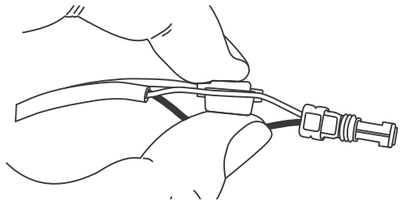
The next step is to unplug the speed sensor plug (1) from the engine carefully. An illustrated installation instruction can be found on our website.

The Sx2 Tuning-Dongle is connected parallel to the speed sensor. Please take care of the polarity. Red to red (3) and red/black to black (4).

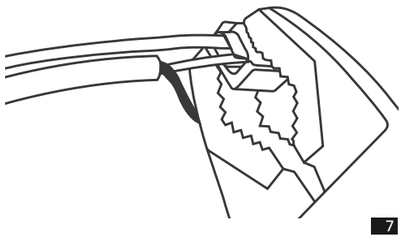
Insert the 2 wires (without stripping) of the Sx2 tuning dongle cable into the one-sided openings of the blade connectors (2).



Insert each the red+ with the red wire and the black-with the red / black wire between the sheath and the connectors (1) and press down with your hand the blade connectors (2) firmly.



Compress with a pliers as possible parallel.



Once the terminals are crimped, the plug (1) should be reconnected to the engine and chain applied to the chain wheel.

Now the pedal has to be turned up slowly by hand and the speedometer should be checked for function. If the speed is shown on the display repeat the procedure with a plugged Sx2 Tuning-Dongle in the stereo jack socket (5). Until the switch point is reached, the shown speed jumps to the half speed.

After that, assemble the hood and the e-bike together. The cablekit should be mounted in a way to protect the connectors from splashing water and mechanical damage.

FAQ (further Help you can find at support.maintronic.de)

I have done the installation exactly like shown, but the switchoverpoint is not perceptible?
ANTWORT:
Distance and Position of the magnet affecting the switching time of the speed sensor. The shorter the switching time, the sooner is the switchoverpoint and conversely. Try to turn up the pedal by hand while the engine is turned off till 50km/h and watch the speedometer.
If the switchoverpoint is below 12km/h or over 28km/h or not at all please contact your specialist dealer or the Sx2 Support >>> sx2@maintronic.com

How can I influence the switchoverpoint?
ANSWER:
If the speed sensor with the magnet is moved into the axis direction, the switching speed increase.
Conversely the speed sensor with the magnet is moved outside to the tire direction, the switching time is shorter and the switching speed is lower.

Picture manual >>> support.maintronic.de.

Is the cablekit connected correctly?
ANSWER:
Poor contacts may arise fail pulses with the Sx2 Tuning-Dongle which causing the error 102. Check the tightness of the Sx2 Tuning-Dongle and its contacts.
(Picture with stereo jack socket and measurement device)
For a further diagnose a bare 3,5mm stereo jack instead of the Sx2 Tuning-Dongle are plugged. The measurements must be +5V stable between ground(peak) to ring, the magnet may not stay over the speedsensor.

Picture manual >>> support.maintronic.de

Is an extension of the connection cable possible?
ANSWER:
Yes, with a commercial standard headphone extension cord, the Sx2 Tuning-Dongle can be placed anywhere on the eBike.

Return consignment

The return form has to be filled out step by step with an exact error description. A purchase receipt has to be included. You need to send our product back in a passed envelope.

Waste disposal

In accordance with European Directive 2002/96/EC (it`s) not longer usable electronic devices and defective or used batteries (European Directive 2006/66EG) must collected separately and disposed by an environmentally sound recycling.

Please make sure not to dispose the Sx2 Tuning-Dongle in your household waste.

www.maintronic.de | Support: support@maintronic.de

CE

Cablekit for e-Bikes with Bosch Classic Line engine

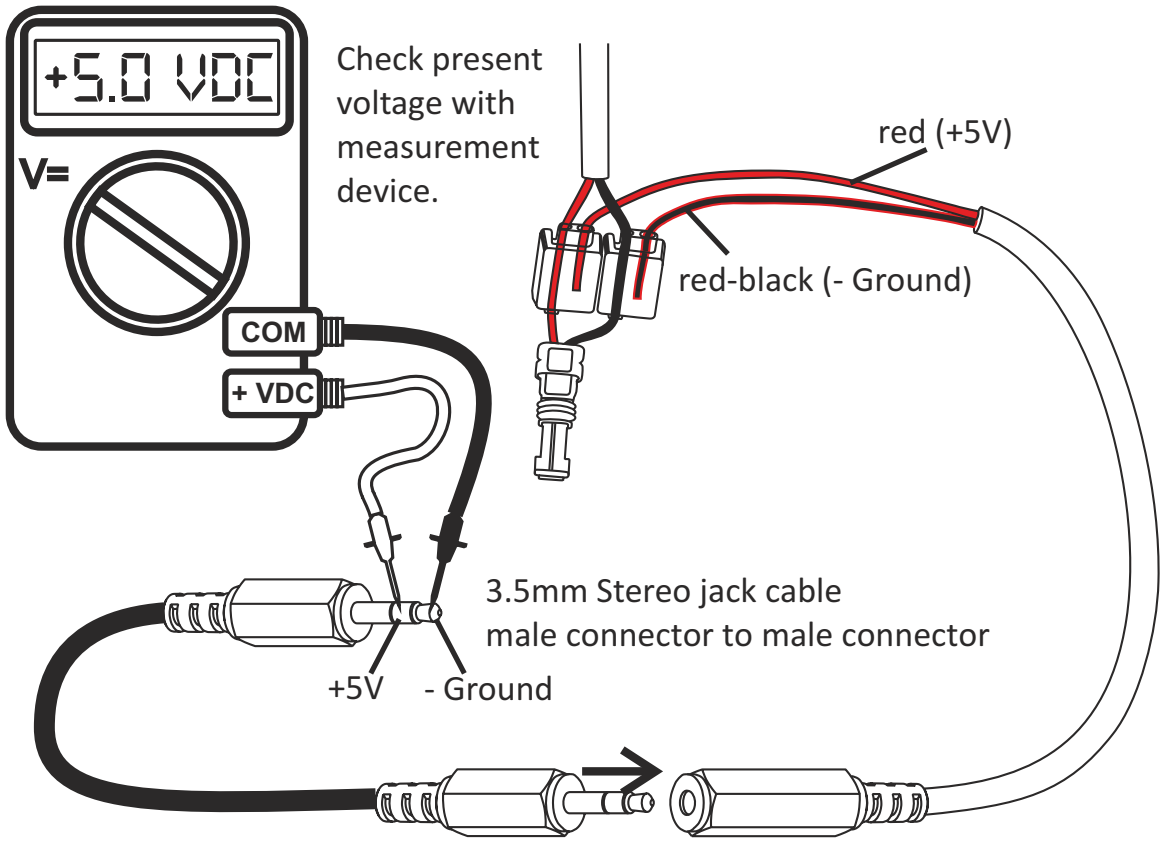
Manual to test the function of the cablekit.

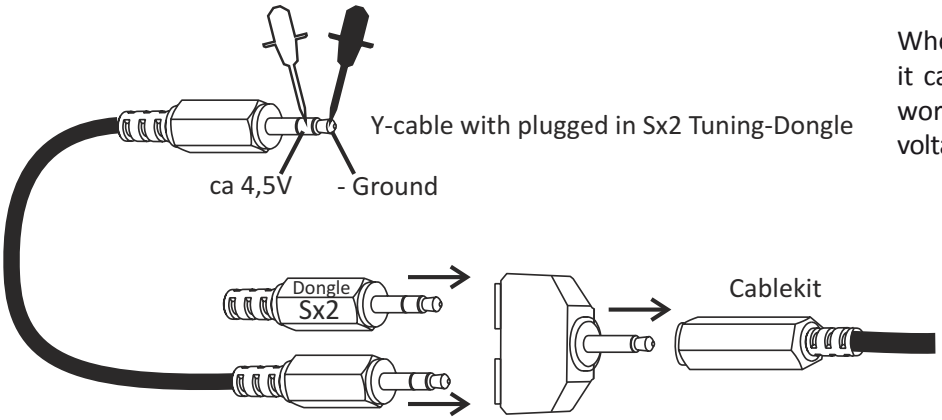
If the cablekit is connected but the dongle has no operation, it´s possible the cablekit does not have the right connection or the voltage is not enough.
To make sure the connection is ok, the present voltage and current can be checked with a measurement device.

Therefor is the best way to take a 3.5mm stereo jack with two male connectors and measure according to the below connection diagram.

Between the tip and the front ring has to be +5VDC. The tip of the jack is Ground.

Please note:
The magnet of the speedsensor may not exceed over the Sensor during the measure.





When it is plugged in with a Y-adaptor it can also be checked if the dongle is working. With an inserted dongle, the voltage is reduced to approximately 4.5 V.

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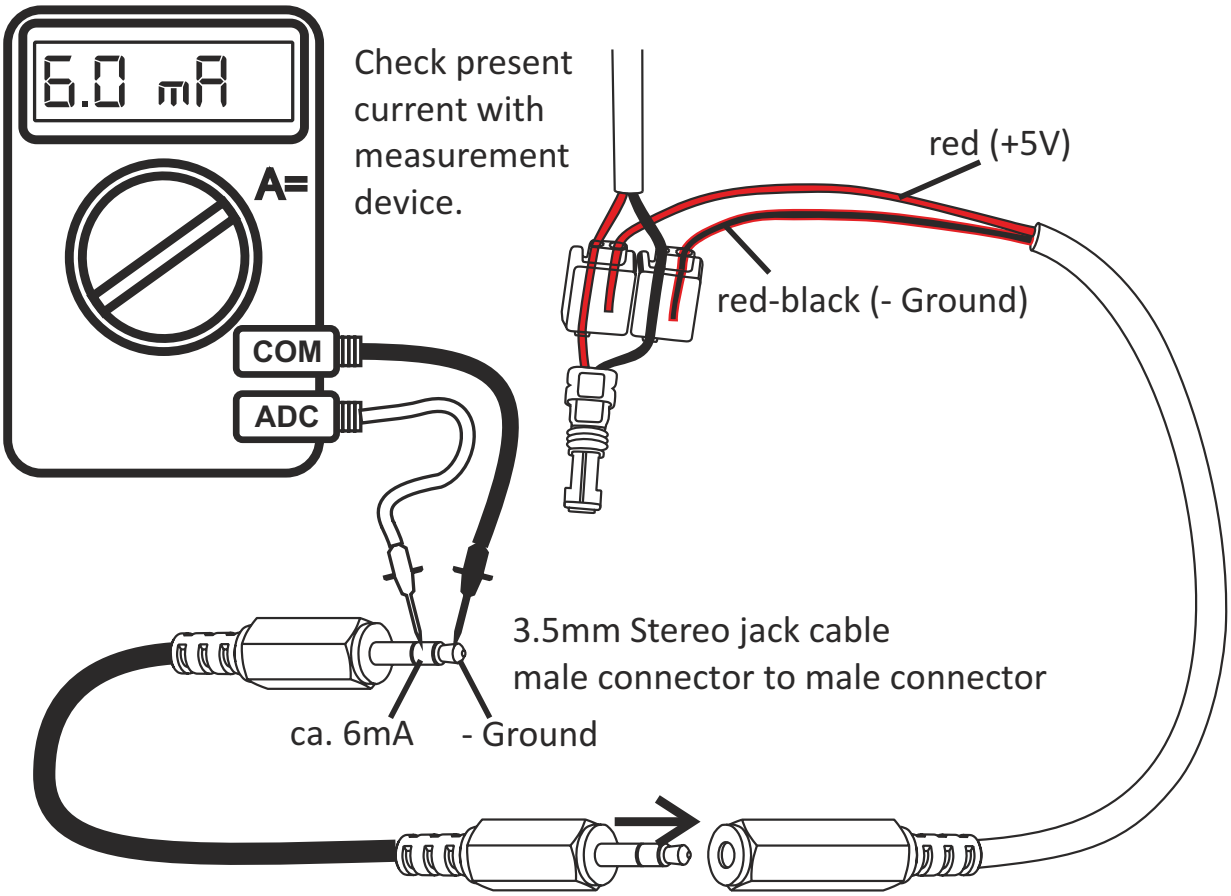
Cablekit for e-Bikes with Bosch Classic Line engine

A current between 5mA and 10mA are necessary. The currrent is measured also between tip and front ring. The tip of the 3.5mm jack is ground.

Important: The measument device has to set on the function current and the + measurement line plugged into the provided socket.



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