Congratulations with your purchase of our newly developed E-bike activation dongle

This dongle enables you to use any 36V (26V-42V range) battery on your Bosch ebike.
Including the price of the dongle, it's often cheaper to use a 3rd party battery instead of an original.

The dongle enables the Bosch charger to charge the 3rd party battery, logs the amount of charge current for the range estimate on the bike and gives the correct CANbus messages to fool the bike into thinking there is a genuine original battery attached.

Apart from standard 36V Li-ion NMC batteries, you could also use 36V 12S LiFePO4 batteries with a range of 43,8V-30V and a cycle life of 3000+ or even 3 lead acid batteries in series if that's what you desire.
Even new emerging battery tech can be used, like Sodium ion. As long as the operating range of the battery is between 26V and 42V it will work.

This system also allows for extra small or extra large range extenders, especially for mtb or bike-tours. A small 100Wh bottle cage battery or a huge 2000Wh LFP are all possible. You can even use this dongle for places where you can't ship your Bosch battery to, yet have an alternative battery on location available. You can always contact us for questions about compatibility with your battery, regarding voltage, current, charge point,...

Do make sure the battery is of good quality, has thermal protection and has been tested for electrical and mechanical failures. Always charge and store with a smoke alarm in the room. Charge both batteries with separate chargers for maximum charging speed. You can add a luggage rack or a Hailong style frame bottlemount battery. The dongle is then placed in a saddle bag (minimum 50mmx100mmx90mm) provided by the user. It is best to pick one that is removable with a clip.

Enjoy the use and derestriction of the before locked bike system!

Necessary tools/items: Side cutters, wire strippers, saddle bag/bike box

Before you get started you will have to check some things first:

Which discharge connector does your 3rd party battery holder have? We use XT60M male on our dongle, so ideally the holder has a XT60F attached. You can always solder one, we'll include it in the set.

Does your bike have dual battery compatibility? If not and you want to use 2 batteries without complicated switching, you will have to add a Single pole double throw switch, and switch the green wire from the motor connector between the 2 green wires from their respective batteries.

Does your 3rd party battery have a separate charge port or is it charged through the same connector with which it connects to the bike? If it has a separate charge port, the battery ***MUST BE REMOVED*** from the bike and charged through its charge connector, never through the discharge/bike connector.

If the battery charges and discharges through the same connector then you can leave the battery in the bike, but only if it doesn't have a separate charge point.

Your 3rd party battery must have a simple charge port with only positive and negative wires necessary. Some have more wires but aren't used. Please verify by looking on the charger backside. If the charge connector only has 2 contacts, like the typical 5.5mm barrel jack, it will function. If there are extra temperature sensor or data signals needed, no charging will be able to happen and the dongle won't work. Note: some 3 or 4pin charging contacts only use 3 pins. You can

either contact the manufacturer, open the battery or strip the charger cable to see how many wires are used.

Check the polarity of your 3rd party battery charge point/charge cable connector: it must be the same as our supplied charge adapter. If this is not the case you can damage your battery and the dongle. This can be done with a voltmeter. Red must be positive, black negative.

The dongle activates the Bosch system, so you **need the dongle for both charging and biking.**

If you use the original battery and a 3rd party battery in a dual battery setup, only the original Bosch battery may be charged on the bike. The 3rd party battery ***MUST be removed from the bike and charged separately with the Bosch charger***, **not connected to the bike**, with the dongle attached.

Manual

Make sure you have a clean area nearby the bike where you can charge your 3rd party battery and place the dongle without chance of being tugged/dropped. Hang a smoke detector in the area. Make sure the battery doesn't charge on exit-routes.

6A charging is not allowed and won't work. 4A is the limit due to restrictions on most 3rd party battery charge connectors and fuses. Use the same max current Bosch charger as the max allowed charge current on your 3rd party battery. 2A is always ok, 4A needs to be verified (some batteries only allow 2A).

IP53,58V 30A FUSE (non servicable), Short circuit protection, 40mmx82mmx90mm

Charging the 3rd party battery through the bike's own built in charging connectors can instantly damage the battery, cause short circuits or overheating and give the wrong range estimates.

INSTALLATION

Mount the dongle in a waterproof saddle-bag, tuck the attached Bosch charge connector away. Connect the XT60 from the dongle to the 3rd party battery discharge-connector coming from it's battery tray/slide.

Remove the motor cover to gain access to the wiring

Connect the XLR4 connector and its 4 wires with Wago connectors parallel to the wires of the same colours on the big oval motor connector (there is a small connector too, do not use that), this way all of the wires are spliced into the existing battery wires coming from the original battery. This activates the dual battery system. You will have to strip back the black insulation from the cable to get better access to the 4 wires. A normal set of wire strippers won't work, you'll have to carefully cut away bits of the insulation with sharp sidecutters.

Connect the XLR4 from the dongle to the motor XLR4. The dongle is now ready to use.

RIDING 1st time

The first ride everything needs to be calibrated. You will have to empty the battery completely (SoC/battery % will be very inaccurate as the system is learning the capacity of your new battery).

You may experience low power due to the system thinking the battery is empty. In dual battery situations, the original battery may be depleted first before the 3rd party battery is used, again because of wrong % reasons.

After the first ride/charge all these issues will disappear.

CHARGING
Remove the dongle from the bike. This is absolutely necessary to prevent accidental charging through the wrong connectors.
Connect the dongle XT60 to the 3rd party battery charge cable. Connect the other end of the charge cable to the 3rd party battery charging point.
Now connect the original Bosch charger to the Dongle Bosch charge connector. Some LED's on the dongle should light up and 1 should start flashing. If 1-3-5 light up then it's too cold or too hot. If 2-4 light up then the dongle is defective.
During the charging process, more LED's will light up. The dongle is now also calibrating on the capacity of your 3rd party battery.
After the charging process is complete (LED's turn off) you can disconnect the Bosch charger first, then the dongle.
RIDING
Install the now charged 3rd party battery back on its holder, plug the battery holder discharge connector back into the XT60 of the dongle and plug the dongle into the XLR4 from the motor.
You can now ride with accurate range estimates and full power during dual battery operation.
After riding, charge again using the Bosch charger via the dongle though the charge cable into the battery charge point.
Keep the dongle dry. Don't drop the product. If the case breaks, make sure to repair it properly to prevent dust and water ingress. 3D print files are available on request.
There is a 2 year warranty, shipping expenses covered up to €20.
Don't expose the dongle to short circuit, water, solvents, extreme heat, cold, shock, high voltage, microwaves
No liability for damage due to incorrect installation No liability for third-party battery defects No liability for fire caused by external batteries Keep away from Children