XBB Lightswitch, ver 4.

Instructions manual

Read the entire manual before starting the installation! If you are unsure if the product is suitable for your vehicle please read the FAQ.
The XBB Lightswitch sensor requires a minimum constant current of 400mA through the signal wire, while the high beam is activated.
On the back of this papper there are four examples of how you can connect the XBB to your vehicle.

Installation tools required:

- A small flat head screwdriver for the push-in terminals.
- Wire cutter, for cutting cables to length.
- Crimping tool, for crimping ring terminals.
- Wire stripper, or equivalent.

Installation procedure.

1. Connect the sensor cable to the white connector on the XBB, the connector is keyed and fits only in the correct position.
2. Place the XBB Lightswitch in an area where it is protected from heat and moisture. Make sure that the sensor cable reaches the headlight cable.
3. Connect the XBB to the battery with the supplied fuse holder (**without the fuse inserted!**) or equivalent. Use fine stranded 4 mm² wire . Use the flat head screwdriver to release the terminal tension.
4. Attach the sensor to the wire you suspect is the correct one. (**Warning! Be careful of sharp edges on the sensor!**)
5. Attach the auxiliary lights/LED-bars or similar to the outputs on the XBB. Use fine stranded copper wire without bootlace ferrules/sleeves.
6. **Attention!** Start the engine and leave it running on idle. **Warning!** Be careful not to touch any moving or rotating parts in the engine bay!
7. Insert the fuse into the fuse holder. (The LED will flash green 4 times at initialization and once every three seconds at normal operation).
8. Activate the high beam a few times and make sure that your auxiliary lights or LED-bar is active at the same times as the high beam. If the function is inverted please read the note at the bottom of this page.
9. To make sure you have found the correct wire, activate the turn signals. The XBB should not react.
10. If everything is working correctly you may now complete the installation by attaching a piece of Mu metal around the sensor, put a cable tie around it to secure it to the sensor. See the pictures at the bottom of the page.
11. If you didn't find the correct wire, remove the fuse and move the sensor to another wire. Start over from Step 6 and continue with the installation. If you still haven't found the correct signal wire, repeat the process until you find the correct one.

Things to consider.

- The XBB is to be installed in the engine bay, at a location that is secured from heat and moisture.
- If possible, do not place the sensor close to the alternator, starter motor or their cables. (Due to interfering magnetic fields.)
- The power supply fuse is a REQUIREMENT, maximum 30A. **DO NOT SKIP THE FUSE!**
- The fuse holder is to be located as close to the battery as possible, with the shortest wire possible. Use 4 mm² wire.
- When connecting and disconnecting wires from the XBB terminals, push a 2-3 mm flat head screwdriver in the rectangular slot. The wires should be stripped 10 mm at the end.
- Ensure that all wires in the engine bay are attached and secured from mechanical wear.
- **Attention!** Don't use bootlace ferrules or similar when connecting the wires to the terminal of the XBB.
- Use at least 2,5 mm² wire for auxiliary lights. LED-modules may require 4 mm².
- Start the engine and install the fuse. This will initialize the system. Please do a system check by activating the high beam lights.
- The fuse should **no**t be inserted in the fuse holder while installing the XBB. The fuse should ONLY be inserted when the installation is complete and the engine is running on idle.

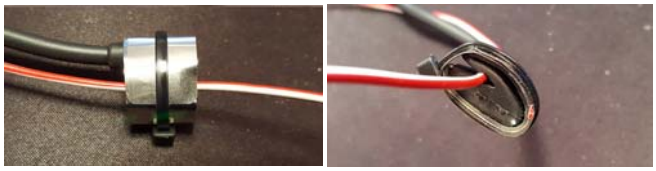
LED status.
Any errors is represented by the LED blinking red in any of the following sequences.

- 1 blinks = Output current overload (Maximum 10A or 120W at 12V & 240W at 24V)
- 2 blinks = Sensor detected too low signal. (Likely caused by another nearby magnetic field.)
- 3 blinks = Sensor detected too high signal. (Likely caused by another nearby magnetic field.)
- 4 blinks = Supply voltage too low.
- Constant lit = Supply voltage too high.
- Flickering = Sensor is picking up magnetic noise from a nearby magnetic field during installation. (Try to rotate the sensor and re-initialize the XBB by removing and reinserting the fuse).
- Green light with a blink every third second = Normal operation, outputs are activated.
- Green blink every third second = Normal operation, outputs are deactivated.

Still having problems during installation or operation?

- Was the engine running on idle during the installation/initialization? If not go back to Step 6.
- Ensure that the sensor is correctly attached to the signal wire.
- Try to rotate the sensor so that the Mu metal shield is facing another direction.
- Ensure that the sensor is attached to the correct wire, there may be wires nearby that has a function that almost replicates the high beam function.
- Move the XBB to the opposite side of the engine bay and try installing the XBB on the other high beam cable.
- In some circumstances an extra piece of Mu metal may be required. Contact your supplier or send an email to support@xbb.nu
- The current through the high beam cable may be too low for the sensor to dectect. The signal needs to be a constant current of at least 400mA while the high beam is activated. The XBB can not detect signals from electric actuators.
- Ensure that all wires are correctly fitted in the terminals and that there is no loose connections, especially the ground wire.

Note.
If the function is inverted – Constant lit when high beam is deactivated and vice versa, the sensor is connected backwards, remove the fuse and disconnect the sensor from the wire and turn it 180 degrees and refit it to the wire. Start over from Step 6.



Picture: Mounted Mu metal after correct installation.

Example of different ways to connect your lights to XBB Lightswitch

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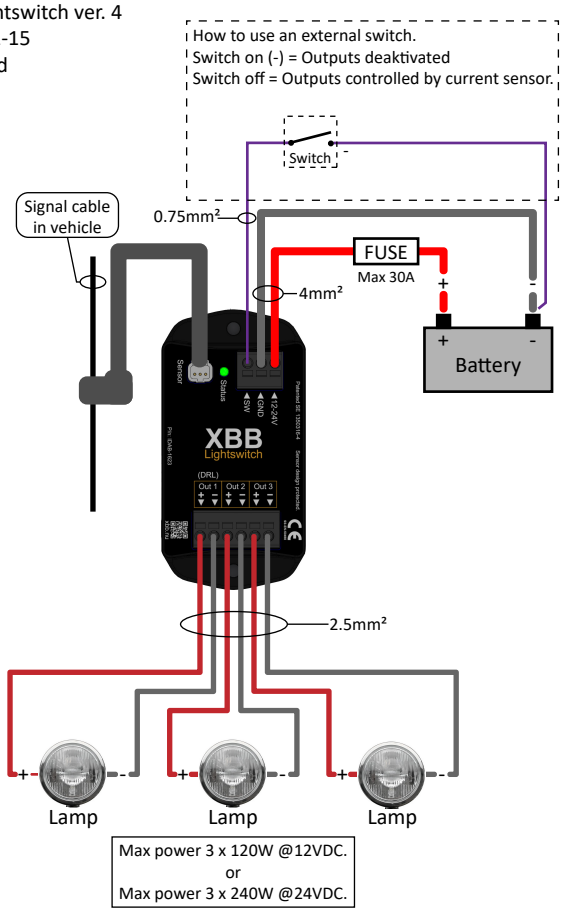
Standard



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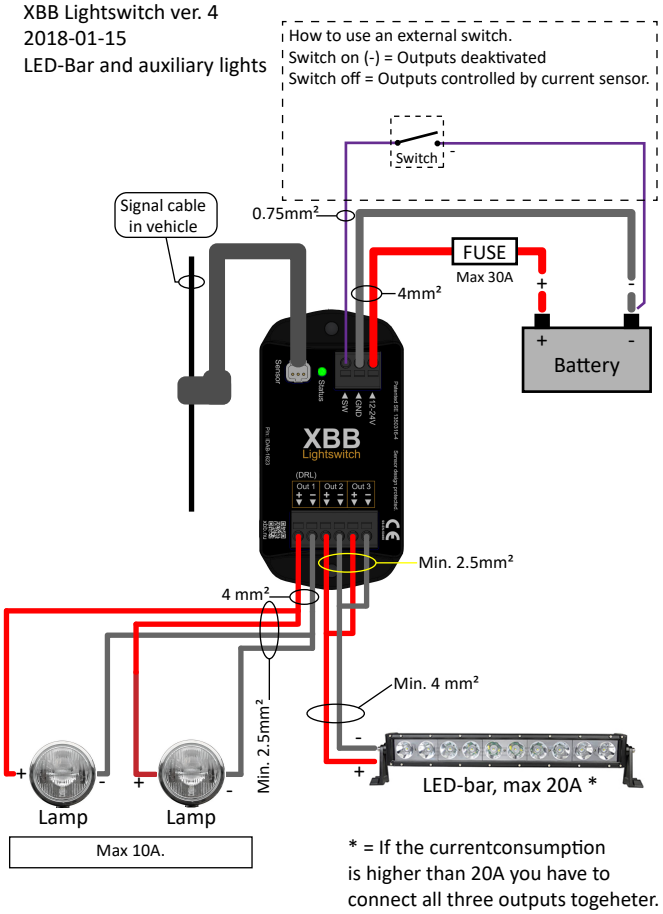
LED-Bar and auxiliary lights



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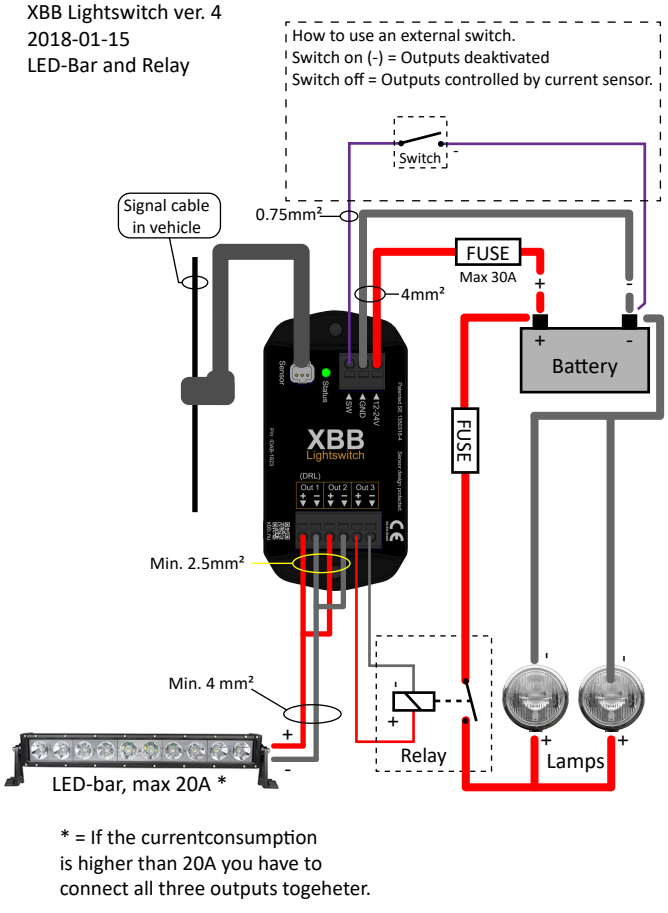
LED-Bar and Relay



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Aux. lights with DRL.