BMS-watch description

General

BMS-watch is an Android app for monitoring the BMS123 battery management system in a vehicle. The app is to be run in a smartphone or a tablet connected to BMS via Bluetooth.
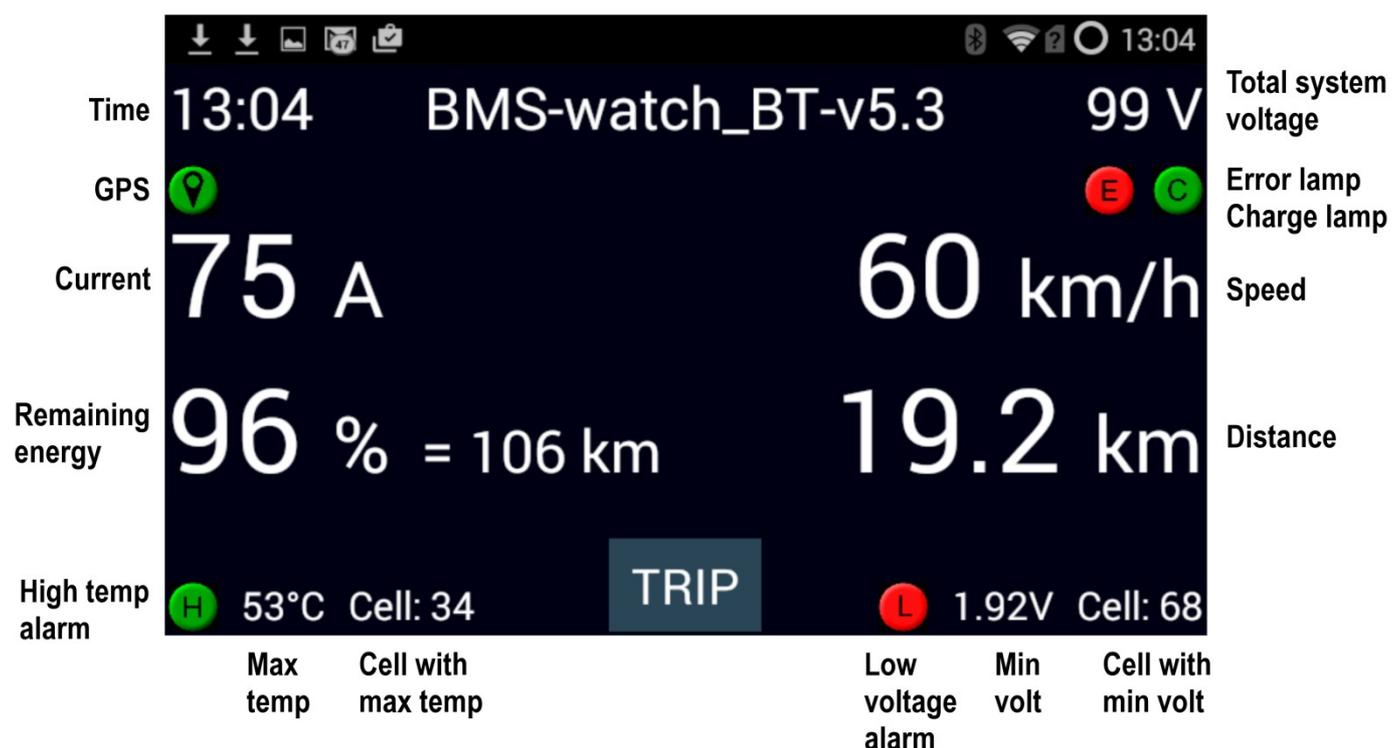
Logging

If the smartphone has an external SD card, some logging is done in the file BMSLog.txt on the SD card with time and date:
1. If the voltage of a cell goes below a certain limit, cell number, voltage and system current are logged.
2. If the temperature of a cell goes above a certain limit, cell number, temperature and system current are logged.

Currently, the limits are 65°C and 2.8V.

The user interface

Error lamp: On when the app receives error signal from BMS.

Charge lamp: When on, indicates that the battery is charging.

GPS lamp: When on, indicates that the app is receiving updates from GPS satellites.

Current: The current running to or from the battery (negative when charging).

Remaining energy: The charge level of the battery. Also shows the maximum driving distance before recharging is needed.

High temp alarm: This lamp goes red when the temperature of a cell exceeds the limit.

Cell with highest temp: Always shows the highest cell temperature in the battery, and the number of that cell.
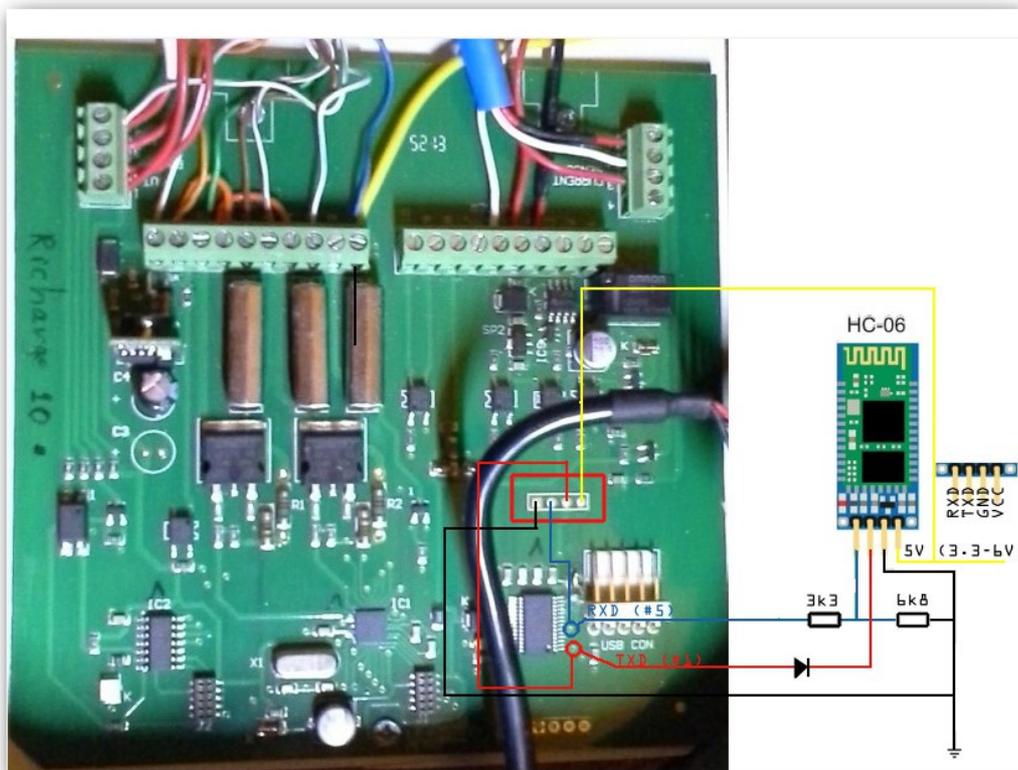
Speed: Current vehicle speed.

Distance: The distance travelled since the last time the **Trip button** was pressed.

Low voltage alarm: Goes red when the voltage of some cell goes below the limit.

Cell with lowest voltage: Always shows the lowest cell voltage in the battery, and the number of that cell

Bluetooth

Bluetooth communication is added to the BMS123 through the connection of a HC-06 unit according to the following picture:

Before connection the HC-06, change its baud rate to 2400. The app requires that the HC-06 unit is named "HC-06".

The android smartphone or pad must be paired with the HC-06 before the BMS-watch app can be used.