



Introduction

Device is designed to be a direct replacement for MoTeC GPSSL10 GPS receiver and works with all MoTeC devices with RS-232 connection, M1 ECU's, Dash displays etc... Device can be fitted with up to 100Hz GPS receiver.

Wiring changes: No changes are needed

2 models are now available, construction is the same:

- **SA, Standard Accuracy.** The accuracy of this device is about 2m and supports GPS L1 band only.
- **HA, High Accuracy.** This device is more accurate due to the added GPS L5 band. This device requires an antenna that works with both L1/L5 bands. HA devices do not have GLONASS support.

Note: You can distinguish the devices from the color of the led. LED in SA device is yellow, HA device is blue.

LED:

The device is equipped with a status led. It blinks once at startup and starts flashing 1/s after there is a 3D GPS fix.

Dash or ECU settings:

There is no need to change any settings if the device is set to 38.4kBaud setting.

All devices higher than 20Hz output rate are set to 230kBaud port speed and the setting must be changed in the ECU or dash.

Setup

To setup the device for any MoTeC device with Serial connection:

- In the communications setup: Select "GPS - Standard RMC GGA" template.
- Connect the GPS.
- **You can increase the logging rate to take advantage of the higher output rate.**

Specification

| | |
|--------------------------|--|
| | |
| Product | GPSL20,GPSL25, GPSL40/GPSL50 or GPSL100 |
| Accuracy | Standard accuracy (SA): 2m. GPS+GLONASS+BEIDOU+GALILEO |
| Product Type | High Accuracy (HA): < 1m. GPS+BEIDOU+GALILEO 20/25Hz GPS+GLONASS+BEIDOU+GALILEO+QZSS or 40/50/100Hz GPS |
| Interface | Serial RS-232 NMEA. RMC, GGA messages |
| Baud rate | =<20Hz devices: 38400 ➤ 20Hz devices: 230400 |
| Operating Voltage | 5-32V |
| Pin 1 | 0V Ground. Black |
| Pin 2 | RS-232 TX Output (Connect to RS-232 RX Pin in your dash or ECU) Blue |
| Pin 3 | |
| Pin 4 | 5-32V. Red |

Mounting of the device

Mount the device to a suitable surface with supplied 3M Dual Lock. If possible, install the device as far as possible from any devices causing interference like ECU's, ignition modules, GoPro cameras etc...

Before installing the device to the final location, install it temporarily and let the GPS find the satellites. Note the number.

Now, start the vehicle and see if number of the satellites changes. Change the location if the number drops.

Antenna Mounting (The most important thing...)

Mount the antenna to a location with a clear view of the sky and more than 30cm from other antennas to avoid interference.

IMPORTANT

**The ground plane is mandatory for the antenna and should be at minimum, round 7cm piece of conductive material, directly under the antenna.
Aluminum tape below the fairings works well.**

Carbon fiber is also ok but in this case, use silicone to keep the antenna from moving.

Feel free to contact us for setting up the antenna.

Repair

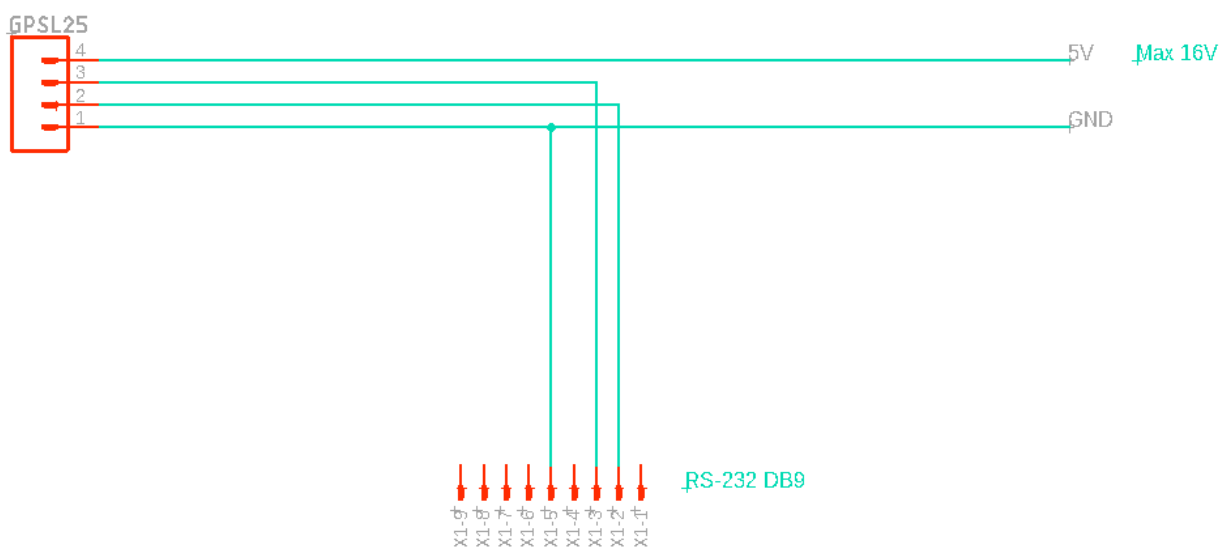
The device is potted and does not have any serviceable parts inside.

Firmware Upgrade

Devices needed:

- Serial RS-232 adapter. Make sure the adapter supports speeds above 115k if your device is set to 230k.
- Upgrade harness

Harness:



Harness, upgrade by powering from MoTeC display :

Upgrade harness thru MoTeC display setup

