

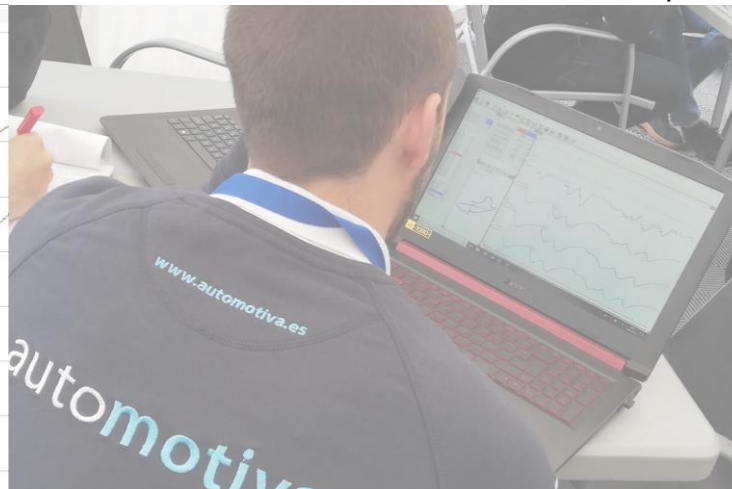
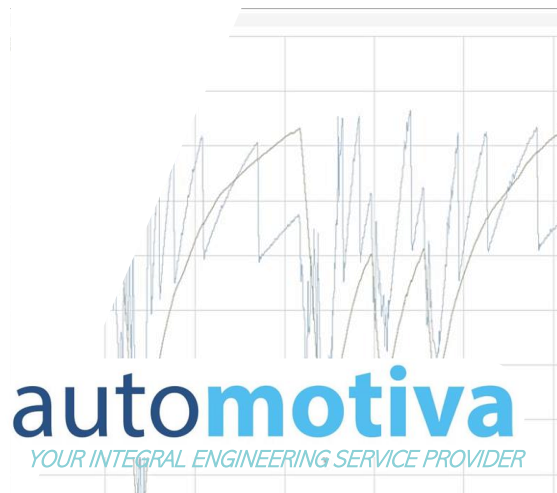


# 2023

## Data Logging Systems



Sporting Regulations - Appendix 2



# CONTENTS

1. Introduction

---

2. Valid Data Scrutineering Systems

---

3. Data Logging System Install Procedures

---

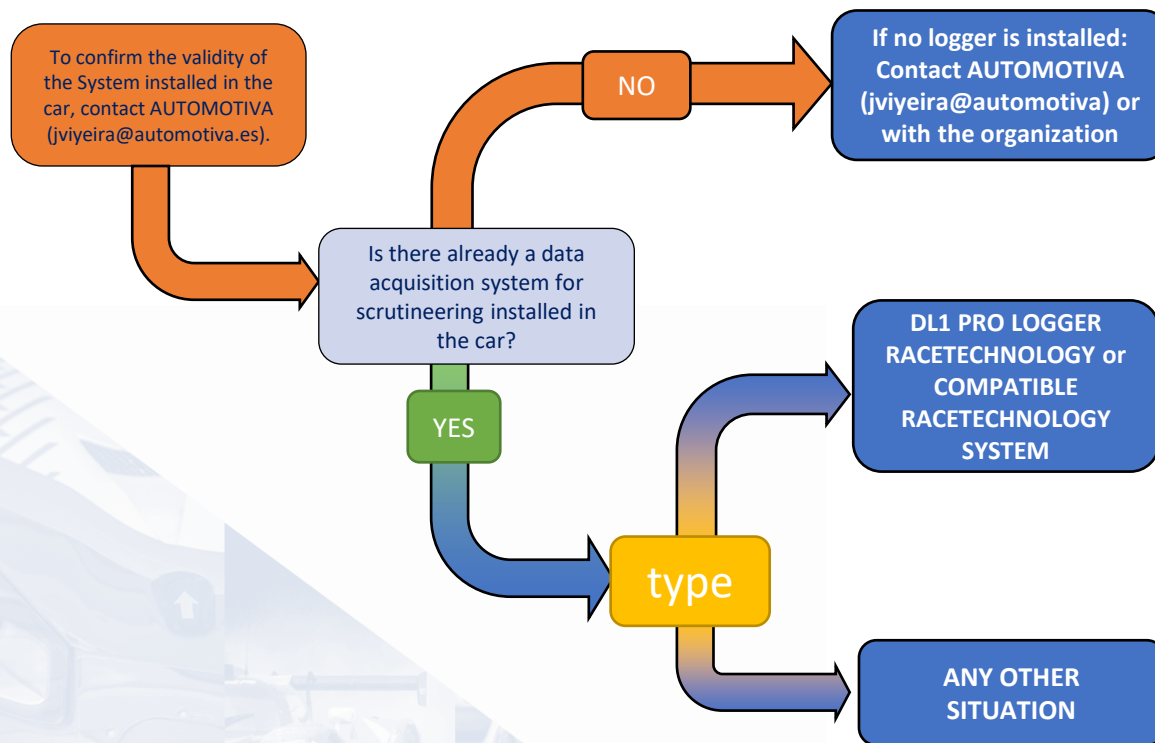
# 1. Introduction

- ▶ To ensure the optimal balance in the BELCAR Championship (GT3A), it is crucial to have a well-implemented control system for car performance. With a constant focus on obtaining the best value for money, BELCAR, in collaboration with our data scrutineering provider AUTOMOTIVA, has carefully chosen the data acquisition manager described later in this document.
- ▶ In order to facilitate team operations, we are also offering a logger rental system, which will provide teams with the necessary equipment. However, it is important to note that all teams/cars using other loggers for data scrutiny purposes must be validated by the AUTOMOTIVA team to be considered eligible for the championship.

# Data Logging System Validity: Decision Tree

## Data Scrutineering Systems for Belcar Championship

Follow the branches of the decision tree to select the option that works for you. Always contact the Automotiva team (jviyeira@automotiva.es) to check the validity of your system.



The most suitable Data Acquisition System will be offered to be able to participate in the test.

After validation with the Automotiva team (jviyeira@automotiva.es), this System is valid to participate in the championship. If the vehicle is turbocharged, a pressure sensor must be placed in the intake manifold after the butterfly.



To facilitate the entry of teams as much as possible, other possibilities will be considered. In any case, contact us (jviyeira@automotiva.es).

# Valid Data Scrutineering Systems for BELCAR Championship

## BELCAR – AUTOMOTIVA Data Scrutineering Systems for Performance Control RENTAL PRICES

- BELCAR and Automotiva seeks for the best budget possible and, despite the increase in customs fees and inflation, prices have been adjusted as much as possible.

|   | Rental / Event  | Rental / Season  |
|---|-----------------|------------------|
| <b>Rental KIT Data Scrutineering System Belcar - Automotiva</b> | <b>459.00 €</b> | <b>1845.00 €</b> |

\*For Season rentals, complete kit will be removed from the car until next event

- Those teams that rent a kit for a turbo vehicle will have to install pressure sensors in the intake manifold (provided).
- Based on trust built over the years, BELCAR and Automotiva will not require a deposit from teams, but rental fees must be paid prior to the event.
- If your situation is not among those indicated, contact Automotiva ([jviyeira@automotiva.es](mailto:jviyeira@automotiva.es)) as ad hoc solutions can be found.

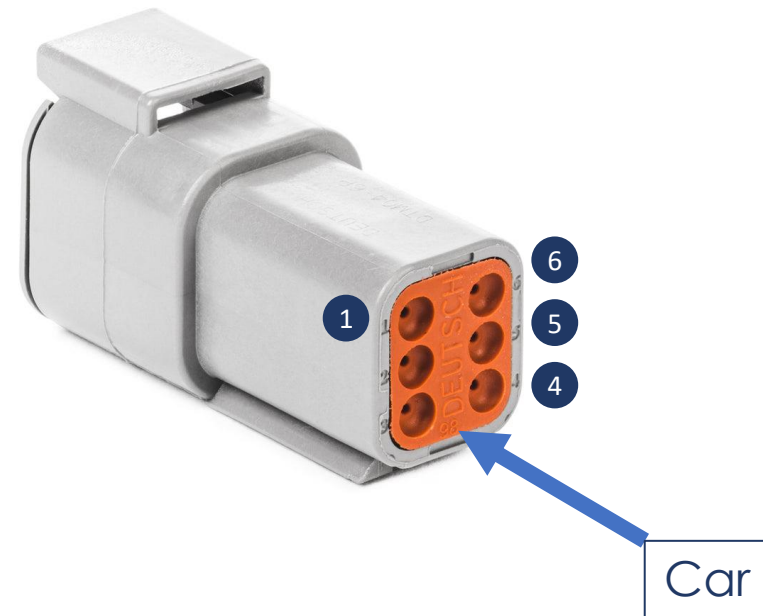
# DATA LOGGING SYSTEM: INSTALL PROCEDURES

## DEUTSCH DTM04-6P

The teams must provide the connector showed in the picture at left side (DEUTSCH DTM04-6P) with the indicated pinout in order to connect the CAR (CAN H, CAN L, Power and GND) to the logger.

**This connector must be ready** (all connections and pins put together) when the car arrives at the meeting (even more if the system is rented).

It is **the responsibility of the team that the connector is all ready** to plug to the logger.



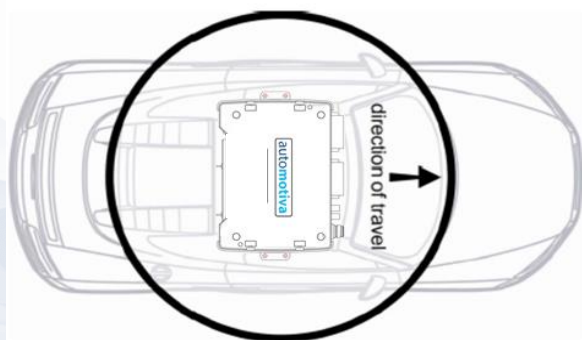
|                                       | TO    | PIN |
|---------------------------------------|-------|-----|
| Ground                                | GND   | 1   |
| BATT via Master Switch and 2 AMP Fuse | POWER | 4   |
| CAN P (CAN HIGH)                      | CAN + | 5   |
| CAN N (CAN LOW)                       | CAN - | 6   |
| Not connected                         | -     | 2   |
| Not connected                         | -     | 3   |

## Module mounting instructions

The logger module should be mounted in the vehicle on a flat horizontal surface.

The unit must be mounted with the connectors pointing towards the front of the vehicle, and the lights and SD card pointing towards the rear.

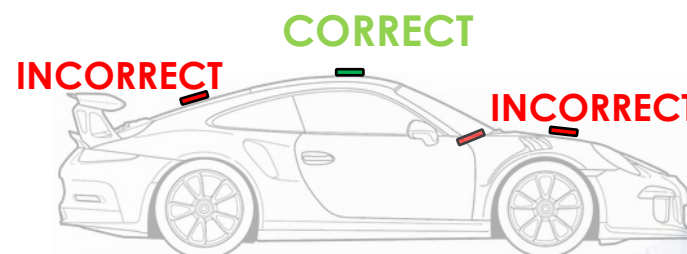
- When fixing the system, please leave enough space to allow the connection and disconnection of the connectors.
- If a mounting bracket is supplied to mechanically isolate the unit from the main chassis using anti vibration mounts, please use it. Velcro is also valid if the mounting bracket is not supplied.



## GPS antenna mounting instructions

Place the GPS antenna on the roof top (outside) of the car top (see picture below) and screw the antenna connector onto the gold connector on the back of the logger module.

- "WARNING": To avoid any possible damage to the car paintwork, please take care when mounting magnetic GPS antennas
- The antenna must not be covered in tape, (in particular, dark colored tape).
- The antenna must be physically remote from sources of electrical noise.
- Avoid trapping, pinching or kinking the antenna cable.
- The antenna must have a clear view of the sky in all directions. Note that it is NOT enough that the antenna can see vertically upwards towards the sky, it must also be able to see all the horizons as well: it gets far more information from satellites on or near the horizon.




# automotiva

C/ Villanueva, 28

28001 Madrid

Project Leader Jose F. Viyeira

 + 34 636 82 00 83



[jviyeira@automotiva.es](mailto:jviyeira@automotiva.es)

[info@automotiva.es](mailto:info@automotiva.es)

[www.automotiva.es](http://www.automotiva.es)