AIM Infotech

# MV Agusta F4 2010
# ECU connection

## Release 1.02

ECU

# 1 Bike models and compatibility with AIM devices

This tutorial describes how to connect AIM devices to an MV Agusta F4 2010 ECU.

The bike can be connected to AIM SoloDL, EVO4 and ECU Bridge. No compatibility is allowed with AIM MXL because this logger installation would imply MV Agusta stock dash removal.

# 2 CAN and K line wiring connection

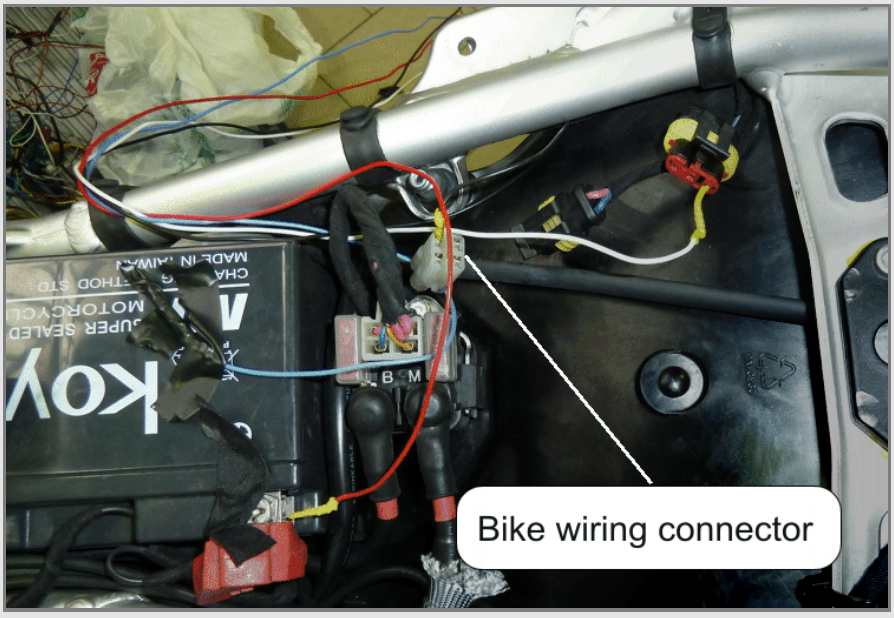
MV Agusta is equipped with both the CAN bus and the K line. Channels received by these two communication lines are different. The CAN line exports 8 channels while K line exports other four channels.

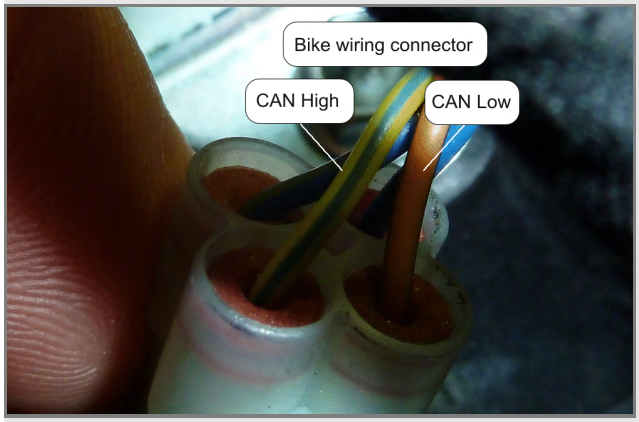
AIM devices can manage both protocols; it is thereby recommended to connect both lines.

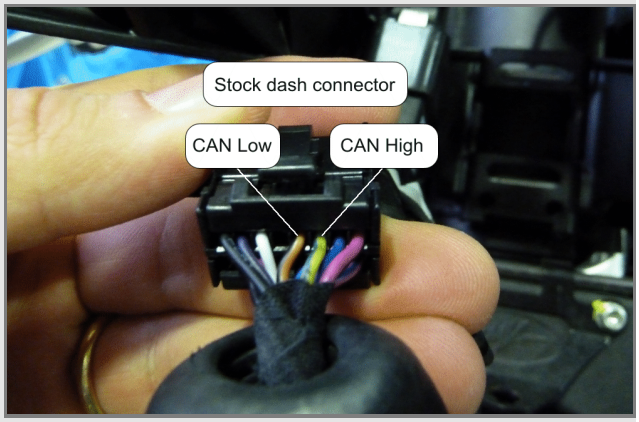
# 2.1
# CAN line wiring connection

The bike CAN bus can be reached through two gateways: the stock Dash connector behind the OEM stock dash and the bike wiring connector under the bike seat.

Here below the CAN bus gateway position under the bike seat is shown while the two images below show the cables to be used for the connection.



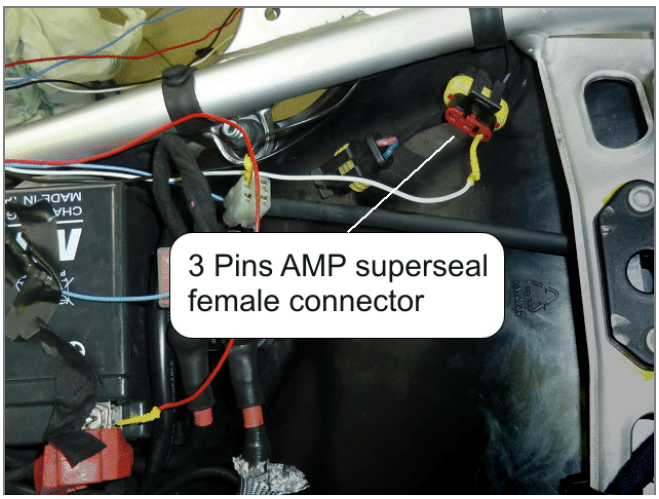



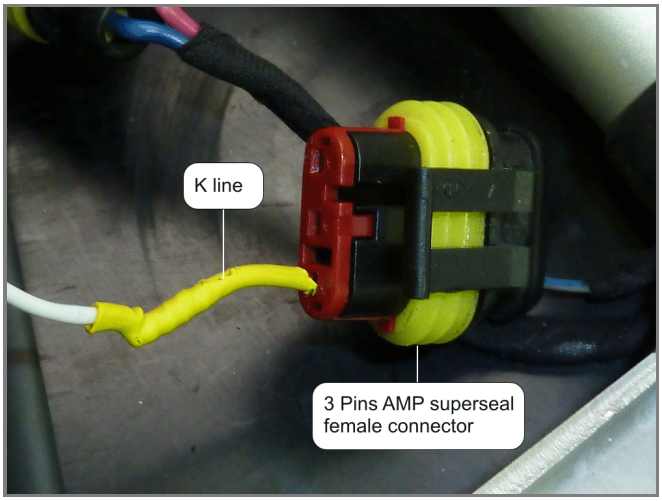



# 2.2
# K line wiring connection

The bike K line can be reached through a connector under the bike seat.

Here below K line gateway position under the bike seat and connection cable to be used are shown



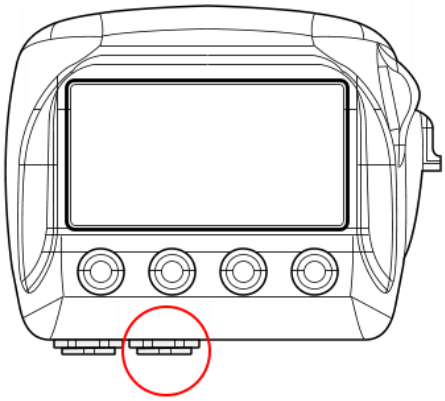



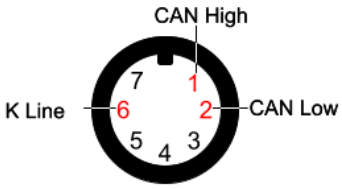
# 3
# Connection with AIM devices

Here below you find instructions on how to connect MV Agusta F4 2010 to AIM SoloDL, EVO4 and ECU Bridge:

## 3.1
## SoloDL

To connect SoloDL to MV Agusta use the seven pins right female connector placed under the logger. Below you see the connection table.

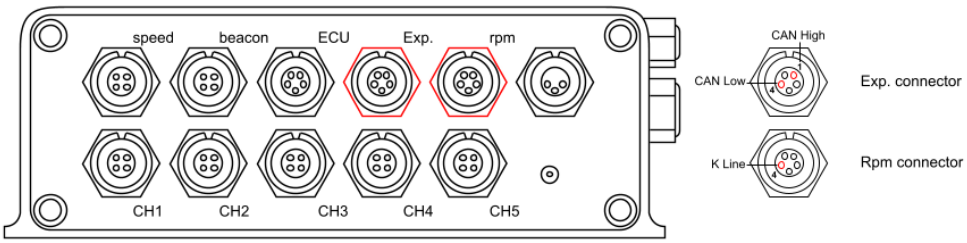


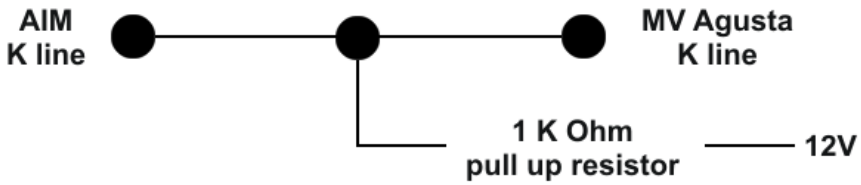



| Function | SoloDL connector pin | MV Agusta cable colour |
|---|---|---|
| CAN High | Pin 1 | Yellow with blue stripe |
| CAN Low | Pin 2 | Orange with black stripe |
| K line | Pin 6 | Superseal connector |

# 3.2
# EVO4

EVO4 has the CAN Bus and the K line on two different connectors (red circled here below). Furthermore it is necessary to install a 1K Ohm resistor between AIM logger and MV Agusta ECU as shown in the drawing that follows.

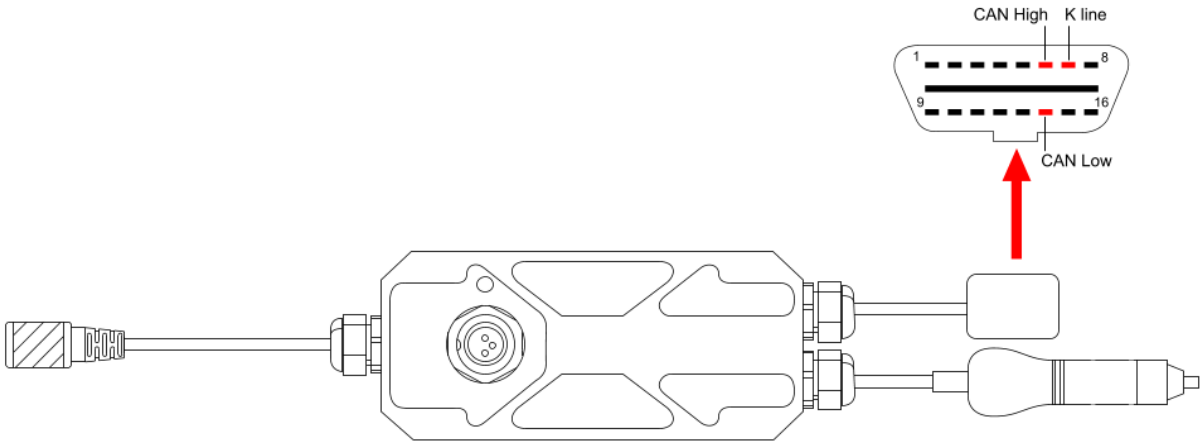



| Function | EVO4 connector pin | MV Agusta cable |
|---|---|---|
| CAN High | Exp connector pin 1 | Yellow with blue stripe |
| CAN Low | Exp connector pin 4 | Orange with black stripe |
| K line | RPM connector pin 4 | Superseal connector |

# 3.3 ECU Bridge

ECU Bridge is available in two versions: CAN/RS232 and K/CAN line with OBDII connector. The latter is the only one equipped with both the CAN Bus and the K line, that are available on the OBDII connector as shown here below. The part number of this ECU Bridge is **X90BGCK12MA**.




| Function | ECU Bridge connector pin | MV Agusta cable colour |
|---|---|---|
| CAN+ | OBDII connector pin 6 | Yellow with blue stripe |
| CAN- | OBDII connector pin 14 | Orange with black stripe |
| K line | OBDII connector pin 7 | Superseal connector |

# 4 AiM Logger configuration

Before connecting the device to the ECU set it up as follows:

Run Race Studio 2 software and follow this path:

- Device Configuration –> Select the device you are using;
- select the configuration or press “New” to create a new one;
- select ECU manufacturer “MV Agusta” and ECU Model "F4"
- transmit the configuration to the device pressing “Transmit”.

# 5
# Available channels

Channels received by AIM devices connected to "MV Agusta" "F4" protocol are shown in the table below; channels from 1 to 8 come from the CAN Bus while channels from 9 to 12 come from the K line.

| ID | CHANNEL NAME | FUNCTION | PROTOCOL |
|---|---|---|---|
| ECU_1 | F4_RPM | RPM | The CAN bus |
| ECU_2 | F4_SPEED | Vehicle speed | The CAN bus |
| ECU_3 | F4_TPS | Throttle position sensor | The CAN bus |
| ECU_4 | F4_GEAR | Engaged Gear | The CAN bus |
| ECU_5 | F4_ECT | Engine coolant temperature | The CAN bus |
| ECU_6 | F4_INTK_AIRT | Intake air temperature | The CAN bus |
| ECU_7 | F4_VBATT | V Battery | The CAN bus |
| ECU_8 | F4_TC | Traction control enabled | The CAN bus |
| ECU_9 | F4_MAP | Manifold air pressure | The K line |
| ECU_10 | F4_IGN_ADV1 | Ignition advance 1 | The K line |
| ECU_11 | F4_IGN_ADV2 | Ignition advance 2 | The K line |
| ECU_12 | F4_INJ_TIME | Injection time | The K line |

**Technical note**: not all data channels outlined in the ECU template are validated for each manufacturer model or variant; some of the outlined channels are model and year specific, and therefore may not be applicable.