

AiM user guide

EVO4 and SoloDL kit
for Yamaha YZF-R1/R1M
from 2015 and YZF-R6
from 2017

Release 1.05



KIT





1

Supported models and years

This user guide explains how to connect AiM EVO4 and SoloDL to the Yamaha YZF ECU. Supported models and years are:

- Yamaha YZF-R1 (YEC included) from 2015
- Yamaha YZF-R1M (YEC included) from 2015
- Yamaha YZF-R6 from 2017

Warning: for this models/years AiM recommends not to remove the stock dash. Doing so will disable some of the bike functions or safety controls. AiM Tech srl will not be held responsible for any consequence that may result from the replacement of the original instrumentation cluster.

2

Kit content and part number

An installation kit with bracket and ECU interface cable is available for Solo/SoloDL while a connection cable is available for EVO4.

2.1

Kit for SoloDL and bracket for Solo

SoloDL installation kit is shown here below; part number is: **V0256934CS**.



The kit includes:

- 1 bracket (1)
- 1 rubber rawl nut (2)
- 1 M6 screw (3)
- 1 rubber washer (4)
- 2 M4x10 screws (5)
- 1 AiM interface cable for Yamaha YZF-R1 and YZF-R1M (6)

AiM interface cable (6) and bracket kit (1-5) can be also bought separately as spare parts:

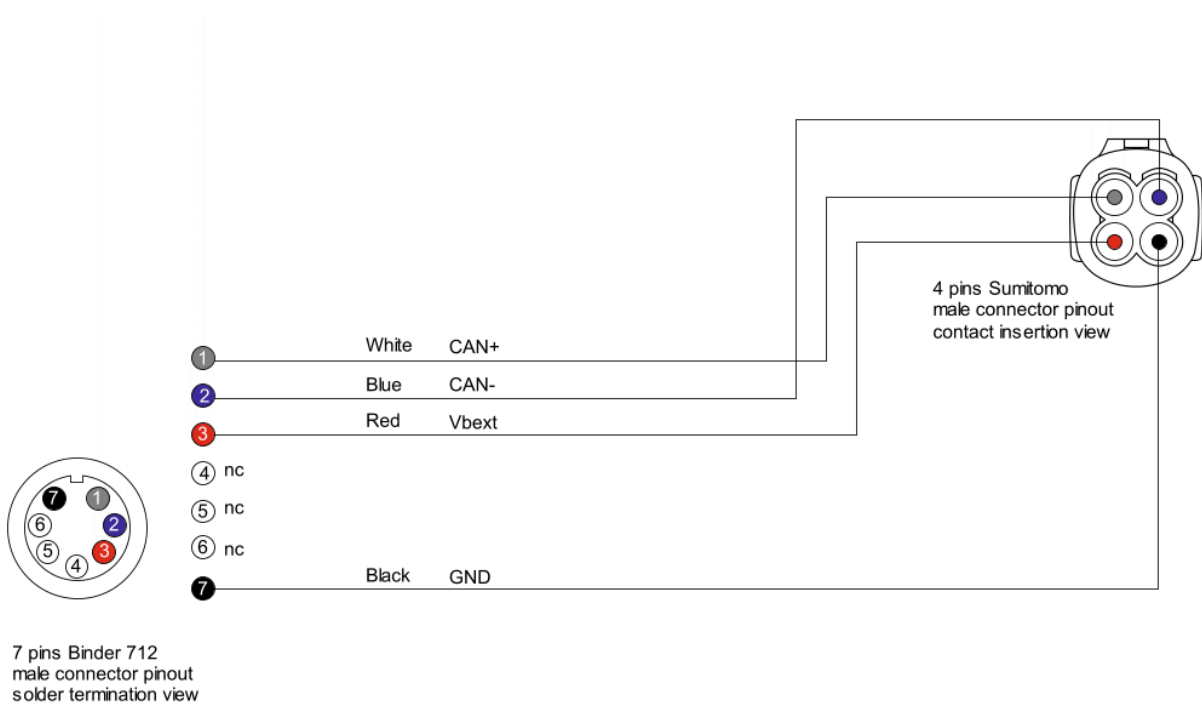
- SoloDL cable for Yamaha YZF-R1/R1M from 2015 and YZF-R6 from 2017: **V02569340**
- Solo/SoloDL bracket for Yamaha YZF-R1/R1M from 2015 and YZF-R6 from 2017: **X46KSYR115**.

2.2 AiM cable for SoloDL

SoloDL cable for Yamaha YZF-R1/R1M from 2015 and YZF-R6 from 2017–below – is: **V02569340**



The image below shows the cable construction scheme.

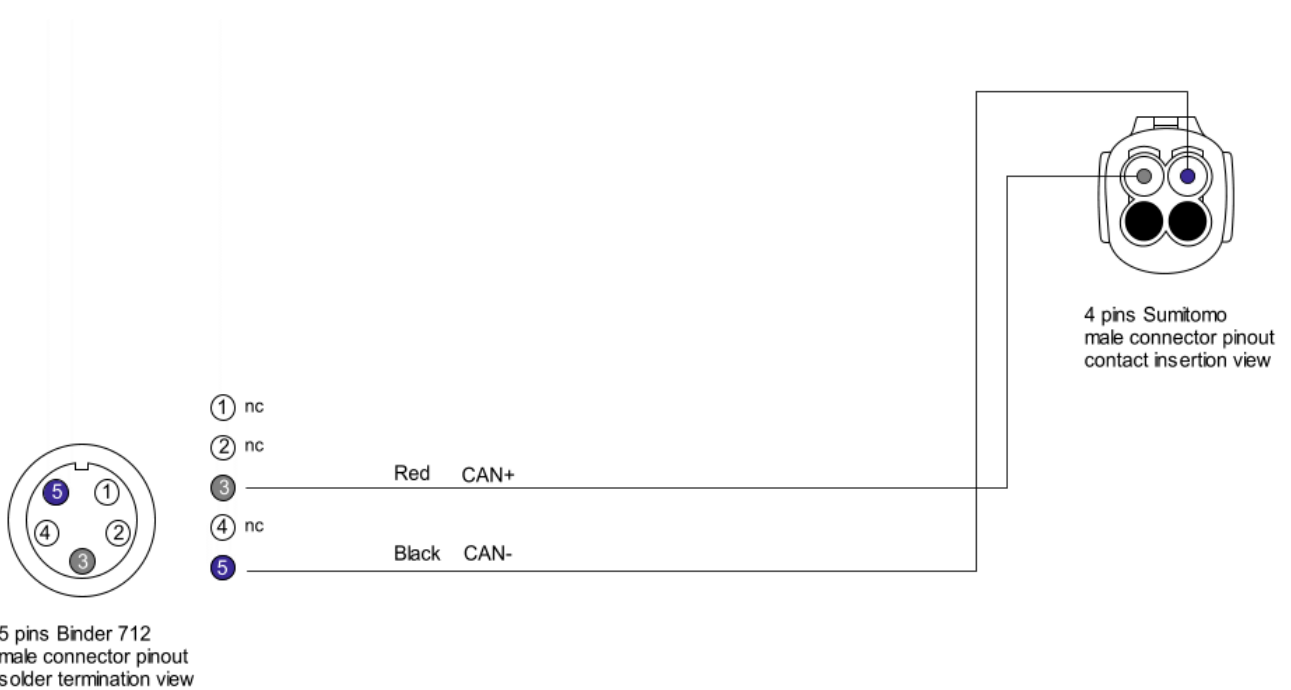


2.3 AiM cable for EVO4

EVO4 cable for Yamaha YZF-R1/R1M from 2015 and YZF-R6 from 2017 – shown below – is: **V02563310**



The image below shows the cable construction scheme.



3 Installation and connection

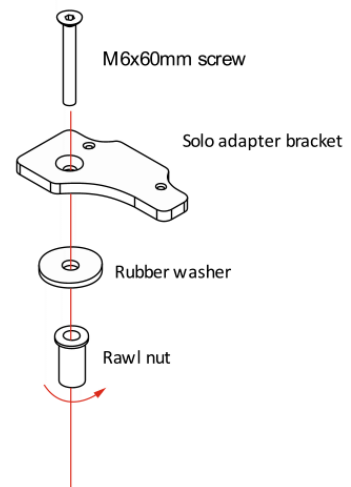
Here you find the instructions to install Solo and SoloDL and to connect EVO4 and SoloDL to your Yamaha bike ECU. EVO4 cable is long enough to allow installation of the logger under the bike seat.

3.1 Installing Solo and SoloDL

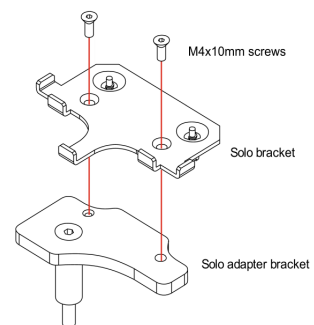
To install Solo/SoloDL on your Yamaha bike:

Insert the screw in the bracket and in the rubber washer.

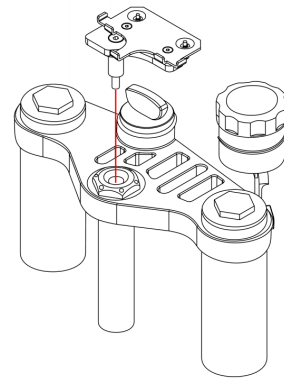
Screw the rawl nut on the screw.



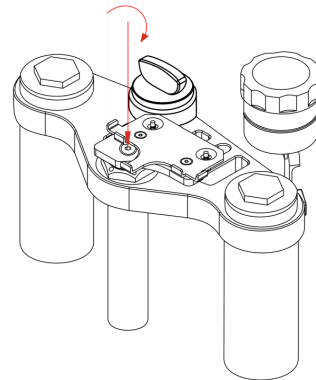
Fix Solo and Solo bracket on the kit bracket using M4x10 screws.



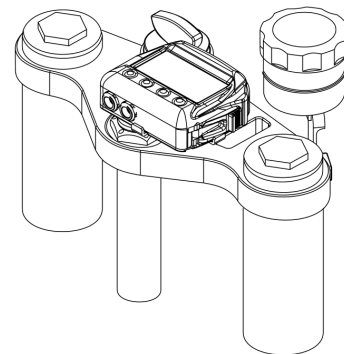
Insert the rawl nut in the handle bar hinge.



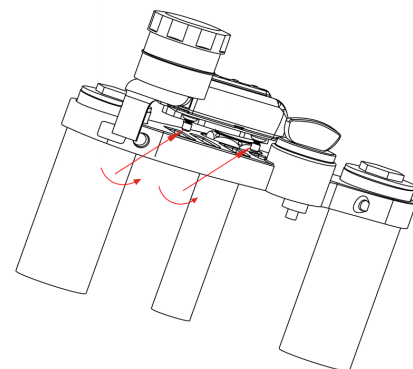
Screw the central screw on the hinge so that this last grips.



Hook Solo/SoloDL to its bracket.



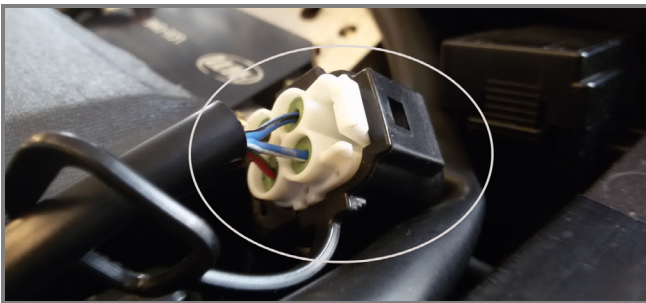
Fix Solo screwing the kit bracket screws.



3.2

Connecting SoloDL and EVO4 to the bike ECU

Yamaha bikes are equipped with a bus communication protocol based on CAN on the Sumitomo connector placed under the bike seat and shown here below.



The table below shows colours of the cables of Sumitomo connector and their function.

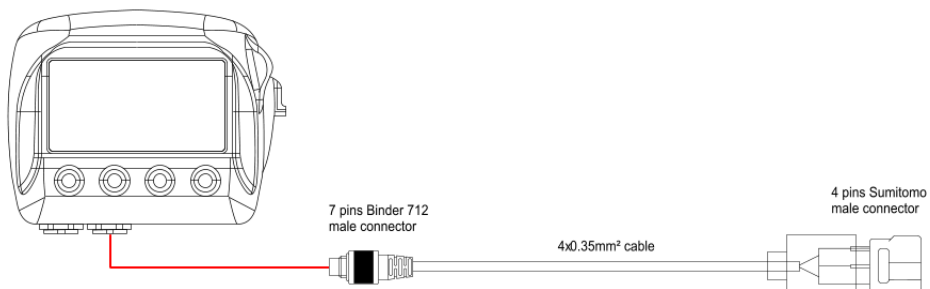
Cable colour

- Blue/White
- Blue/Black
- Red
- Black

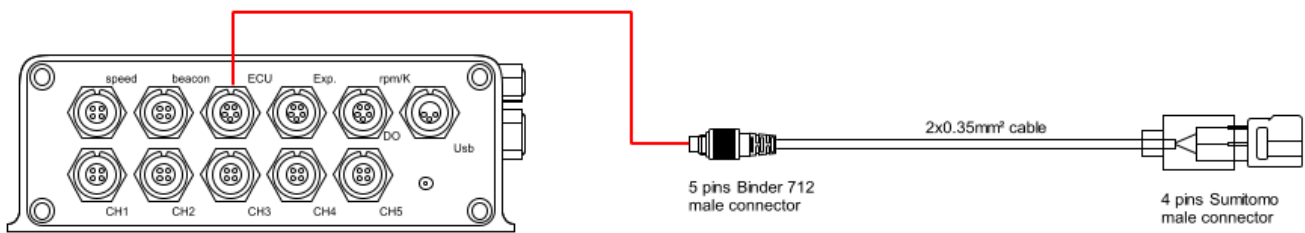
Cable function

- CAN High
- CAN Low
- +Vb (unswitched)
- GND

For SoloDL Connect the 7 pins Binder 712 female connector placed under the logger to 7 pins Binder 712 male connector of **V02569340** connection kit as shown here below.



For EVO4 connect 5 pins Binder 712 female connector of EVO4, labelled "ECU" – the third from the left of the top row – to 5 pins Binder 712 male connector of **V02563310** connection kit as shown here below.



4

Race Studio 2 configuration

Before connecting EVO4/SoloDL to the bike ECU set it up using AiM Race Studio 2 software. The parameters to select in the device configuration are:

- ECU Manufacturer: "Yamaha"
- ECU Model: "CAN_2015"

5

Available channels

Channels received by SoloDL and EVO4 connected to "Yamaha" "CAN_2015" protocol are:

| ID | CHANNEL NAME | FUNCTION |
|-----------|---------------------|-------------------------------|
| ECU_1 | ECU_RPM | RPM |
| ECU_2 | ECU_GEAR | Gear |
| ECU_3 | ECU_W_SPD_F | Wheel Speed Front |
| ECU_4 | ECU_W_SPD_R | Wheel Speed Rear |
| ECU_5 | ECU_THROTTLE | Throttle position sensor |
| ECU_6 | ECU_TPS_HAND | Throttle Handgrip |
| ECU_7 | ECU_ECT | Engine Coolant Temperature |
| ECU_8 | ECU_AAT | Ambient Air Temperature |
| ECU_9 | ECU_ACCX | Acceleration X |
| ECU_10 | ECU_ACCY | Acceleration Y |
| ECU_11 | ECU_GYRO | Gyroscope |
| ECU_12 | ECU_TCS_MODE | Traction Control Mode |
| ECU_13 | ECU_LIFT_SET | Lift Control Set |
| ECU_14 | ECU_LAUNCH_SET | Launch Control Set |
| ECU_15 | ECU_SCS_SET | Suspension Control Set |
| ECU_16 | ECU_QSS_SET | Quick Shift Set |
| ECU_17 | ECU_BRK_F_REQ | Brake Pressure Front Request |
| ECU_18 | ECU_BRK_R_REQ | Brake Pressure Rear Request |
| ECU_19 | ECU_BRKP_F | Brake Pressure Front Actuated |
| ECU_20 | ECU_BRKP_R | Brake Pressure Rear Actuated |
| ECU_21 | ECU_GEAR_RAW | Gear raw value |
| ECU_22 | ECU_POW_MODE | Power mode |
| ECU_23 | ECU_MAP_SEL | Map selection |
| ECU_24 | ECU_FR_COMP | Front dumper compression |



| | | |
|--------|---------------|--------------------------------------|
| ECU_25 | ECU_FR_REB | Front dumper rebound |
| ECU_26 | ECU_RR_COMP | Rear dumper compression |
| ECU_27 | ECU_RR_REB | Rear dumper rebound |
| ECU_28 | ECU_R_ABS_IN | Rear ABS intervention |
| ECU_29 | ECU_F_ABS_IN | Front ABS intervention |
| ECU_30 | ECU_LAUNCH_IN | Launch control intervention |
| ECU_31 | ECU_LIFT_IN | Lift control intervention |
| ECU_32 | ECU_SCS_IN | Slide control system intervention |
| ECU_33 | ECU_TCS_IN | Traction control system intervention |

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.