

AiM User Guide

Kit EVO4S, SOLO 2/SOLO 2 DL
for Aprilia RSV4
(MY 2017-2019)

Release 1.01





1

Models and years

This manual explains how to connect EVO4S and SOLO 2 DL to the bike engine control unit (ECU).

Compatible models are:

- Aprilia RSV4 RR/RF from 2017
- Aprilia RSV4 1100 from 2019
- Aprilia Tuono V4 RR/Factory from 2017

Warning: for these 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 consequences that may result from the replacement of the original instrumentation cluster.

2

Kit content and part numbers

AiM developed a specific installation bracket for SOLO 2/SOLO 2 DL and a connection cable to the ECU for EVO4S/SOLO 2 DL.

2.1

Bracket for SOLO 2/SOLO 2 DL

Part number for **SOLO 2/SOLO 2 DL** installation bracket for **Aprilia RSV4** – shown below – is: **X46KSARSV40**.

Installation kit contains:

- 1 bracket (1)
- 1 allen screw with rounded head M8x45mm (2)
- 2 allen screws with flat head M4x10mm (3)
- 1 toothed washer (4)
- 1 rubber dowel (5)

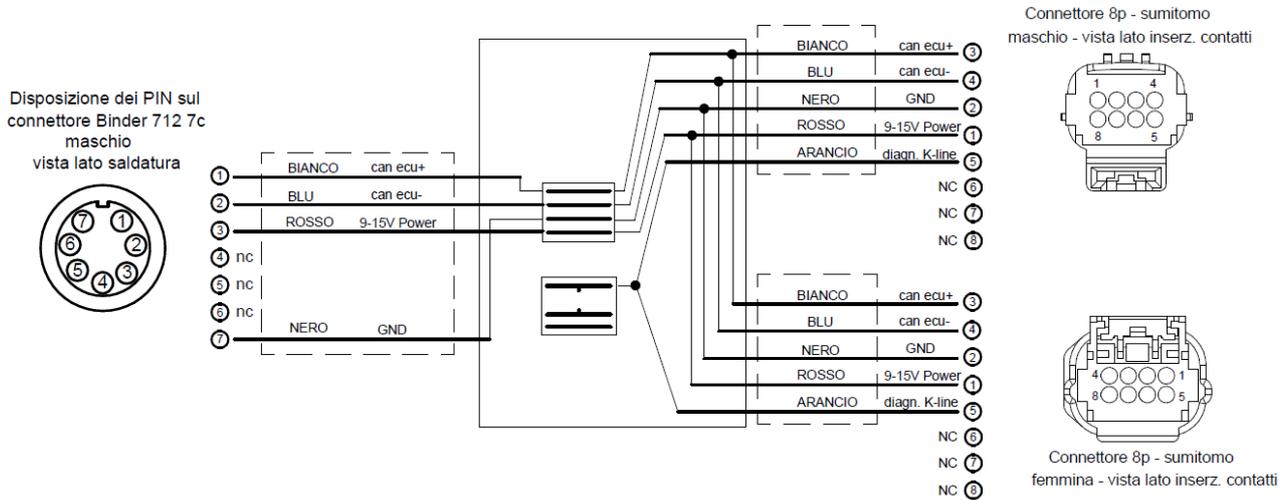


2.2 AiM cable for EVO4S/SOLO 2 DL

Part number for **EVO4S/SOLO 2 DL** connection cable for **Aprilia RSV4** – shown below – is: **V02589090**.



Following image shows the cable constructive scheme:



Installation bracket and connection cable for SOLO 2 DL for BMW Aprilia RSV4 can be bought together. Part number: **V0258909CS**.

3

EVO4S/SOLO 2 DL connection

Aprilia RSV4 communication line is based on CAN protocol that can be reached through the dedicated connector for V4-MP module connection, placed on the bike left side.



4

Configuration with Race Studio 3

Before connecting EVO4S/SOLO 2 DL to the bike ECU, set all functions using the AiM software Race Studio 3. The parameters to set in the AiM device configuration section are ("ECU Stream" tab):

- ECU Manufacturer: **Aprilia**
- ECU Model: **RSV4_APRC_V4MP** (RS3 only)

After this first selection, enable/disable the 120Ohm resistor and the "Silent" mode on CAN Bus as follows, according to the used device:

| | |
|-------------------------------------|-------------------------------------|
| <input type="checkbox"/> | Enable the CAN Bus 120 Ohm Resistor |
| <input checked="" type="checkbox"/> | Silent on CAN Bus |

5

"Aprilia – RSV4_APRC_V4MP" protocol

Received channels by EVO4S/SOLO 2 DL configured with "Aprilia – RSV4_APRC_V4MP" protocol are:

| CHANNEL NAME | FUNCTION |
|---------------------|--------------------------------|
| RSV4 RPM | RPM |
| RSV4 GEAR | Active gear |
| RSV4 BK SPEED | Vehicle speed |
| RSV4 WH SPD F | Front wheel speed |
| RSV4 WH SPD R | Rear wheel speed Warning led |
| RSV4 ACC LONG | Longitudinal acceleration |
| RSV4 ACC LAT | Lateral acceleration |
| RSV4 ROLL RATE | Roll rate |
| RSV4 YAW RATE | Yaw rate Low fuel level |
| RSV4 ENG TEMP | Engine coolant temperature |
| RSV4 Brake press | Brake pressure |
| RSV4 Baro | Barometric pressure |
| RSV4 MAP2 Target | Manifold air pressure 2 target |
| RSV4 MAP1 Target | Manifold air pressure 1 target |
| RSV4 MAP2 | Manifold air pressure 2 |
| RSV4 MAP1 | Manifold air pressure 1 |
| RSV4 Advance | Ignition advance |
| V4MP Lean angle | Lean angle |
| RSV4 Pitch angle | Pitch angle |
| RSV4 Roll angle | Roll angle |
| RSV4 PFANGCOR 1 | - |
| RSV4 PFANGCOR 2 | - |
| V4MP Throttle | Throttle position |
| RSV4 THRT HAND | Hand throttle position |



| | |
|------------------|---|
| RSV4 TPS1 | Throttle position sensor 1 |
| RSV4 TPS2 | Throttle position sensor 2 |
| V4MP Torque end | Torque reduction |
| V4MP Inj Time | Injection time |
| RSV4 Odometer | Odometer |
| RSV4 V BATT | Battery voltage |
| RSV4 Pit speed | Pit limiter speed |
| RSV4 ATC | ATC – Aprilia traction control |
| RSV4 AWC | AWC – Aprilia wheel control |
| RSV4 ALC | ALC – Aprilia launch control |
| RSV4 AQS On | AQS on – Aprilia quick shift |
| RSV4 Pit on | Pit limiter on |
| RSV4 Pit active | Pit limiter activated |
| V4MP ATC level | ATC level – Aprilia traction control |
| V4MP Speed | Speed |
| V4MP ABS int | ABS intervention |
| V4MP Slip | Tyre slip |
| RSV4 Sistfas | - |
| RSV4 Cntlostsync | Lost syncs counter |
| Cruise selector | Cruise selector |
| RSV4 ALC INT | ALC intervention – Aprilia launch control |
| RSV4 SEL MAP | Map selector |
| RSV4 WARNING | Warning light |
| RSV4 Urg serv | Urgent service lamp |
| RSV4 MIL | Malfunctioning indicator lamp |
| RSV4 TC INT | Traction control intervention |
| RSV4 FUEL LOW | Low fuel level |
| Set confirm | Selection key |
| RSV4 Tipover | Tip over sensor |
| TC menu set butt | Set key |
| RSV4 SIDE STAND | Side stand led |



RSV4 ABS

ABS

Please note: throttle position may or may not come across in the CAN data stream due to an update by the manufacturer.

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.