AiM InfoTech

Aprilia – RS660
From 2020

Release 1.00

ECU

1
Models and years

This document explains how to connect AiM devices to the vehicle Engine Control Unit (ECU) data stream. Supported models and years are:

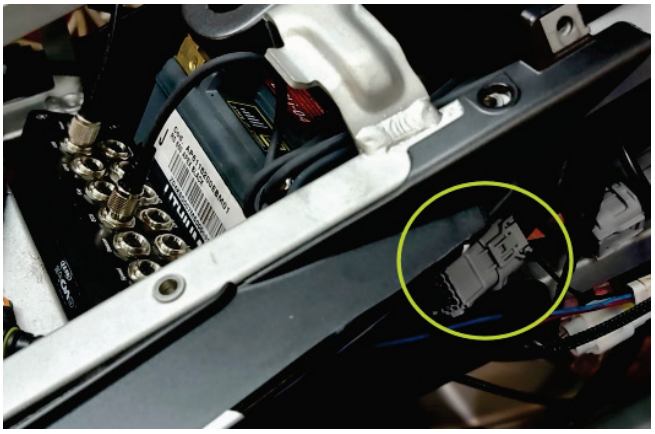
Aprilia – RS660	from 2020

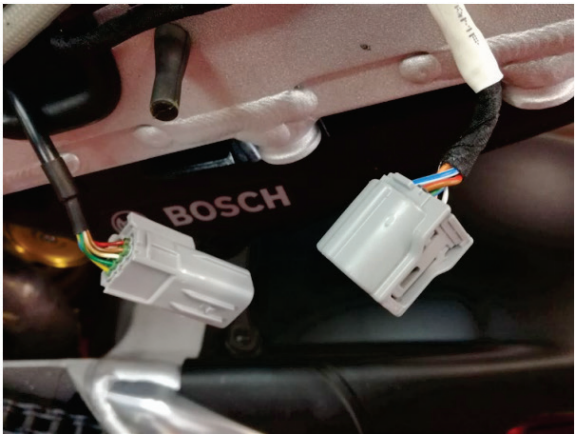
Warning: for this model/year AiM recommends not to remove the stock dash. Doing so will disable some of the bikes functions or safety controls. AiM Tech srl will not be held responsible for any consequence that may result from the replacement of the original instrumentation cluster.

2
Wiring connection

These models feature a diagnostic CAN bus accessible through the grey Aprilia MP/diagnostic female connector, located on the right-hand side of the bike.

For this installation refer to the following pinout of the "Aprilia MP/diagnostic" female connector and connection table.





"Aprilia MP/diagnstic" pin	Function	AiM Cable	AiM color Cable
1	Switched V Batt	V Battery	Red
2	Ground	GND	Black
3	CAN High	White	White
4	CAN Low	Blue	Blue

AiM supplies a dedicated cable for SOLO 2DL and EVO4S with part number: V02589090

3
Race Studio configuration

Before connecting the AiM device to the ECU, set all functions using AiM software Race Studio. The parameters to set in the device configuration are:

- ECU manufacturer: **APRILIA**
- ECU Model: **RS660 Trofeo** (RS3 Only)

4
"APRILIA – RS660 Trofeo" protocol

Channels received by AiM devices configured with "APRILIA – RS660 Trofeo" protocol are:

CHANNEL NAME		FUNCTION
RPM		Engine RPM
Throttle		Throttle percent
Gear		Selected gear
Speed Rear		Rear wheel speed
Speed Front		Front wheel speed
TC Slip Lp		Traction control slip percent
Air Temp		Intake air temperature
Oil Temp		Oil temperature (if installed)
Engine Temp		Engine coolant temperature
Lean Angle		Lean angle
Lean Angle Sts		Lean angle status (see following values)
	=1	Sensor Not Available
	=2	Signal fault
	=3	Init running
	=4	reserved
Sensor Sts		Lean angle sensor status (see following values)
	=1	Undervoltage detected
	=2	Overvoltage detected
	=3	Sync underflow detected
	=4	Sync fault detected
LatAcc		Lateral accelerometer
LongAcc		Inline accelerometer
VertAcc		Vertical accelerometer
RollRate		Roll Rate
YawRate		Yaw Rate

PitchRate		Pitch Rate
LatAcc Status		Lateral accelerometer status (see following values)
	=1	Sensor not available
	=2	Signal fault
	=3	Init running
	=4	Reserved
LongAcc Status		Longitudinal accelerometer status (see following values)
	=1	Sensor not available
	=2	Signal fault
	=3	Init running
	=4	Reserved
VerticalAcc Status		Vertical accelerometer status (see following values)
	=1	Sensor not available
	=2	Signal fault
	=3	Init running
	=4	Reserved
RollRate Status		Roll Rate status (see following values)
	=1	Sensor not available
	=2	Signal fault
	=3	Init running
	=4	Reserved
YawRate Status		Yaw Rate status (see following values)
	=1	Sensor not available
	=2	Signal fault
	=3	Init running
	=4	Reserved
PitchRate Status		Pitch Rate status (see following values)
	=1	Sensor not available
	=2	Signal fault
	=3	Init running
	=4	Reserved
Roll Angle		Roll angle

TInj Prog1		Injection time advance
Battery Volt		Battery voltage
ECU Alarm		ECU alarm flags (see following values)
	=1	Alarm ON
	=2	Alarm Urgent ON
	=3	Reserved
Oil Press High		Oil pressure (low 0; high 1)
Clutch Sw		Clutch switch
Engine Map		Engine map (1-3)
Engine Brake		Engine brake map (1-5)
ALC Enabled		ALC enabled
ALC Level		ALC Level (1 – 3)
AWC Level		AWC Level (1 – 3)
ATC Level		ATC Level (1 – 8)
Pit Enabled		Pit enabled
Pit Speed		Pit speed set
TracDiag		Traction diagnostic
RollRateStat		Roll rate status (see following values)
	=1	IMU not available
	=2	Signal failure
	=3	Init running

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