

AIM Infotech

Autronic SM2  
V190, V191, V193, V195 ECU

Release 1.02

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ECU



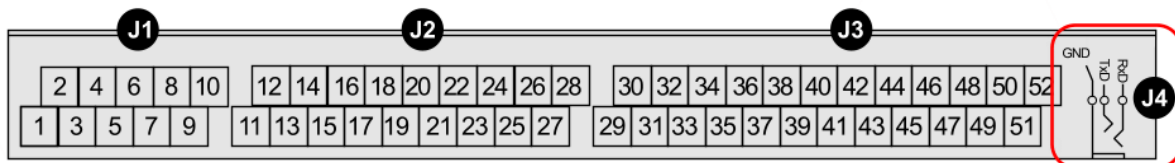
# 1 Supported models

This tutorial explains how to connect Autronic SM2 ECU to AiM devices. Supported models are:

- SM2 V190
- SM2 V 191
- SM2 V193
- SM2 V195

# 2 Wiring connection

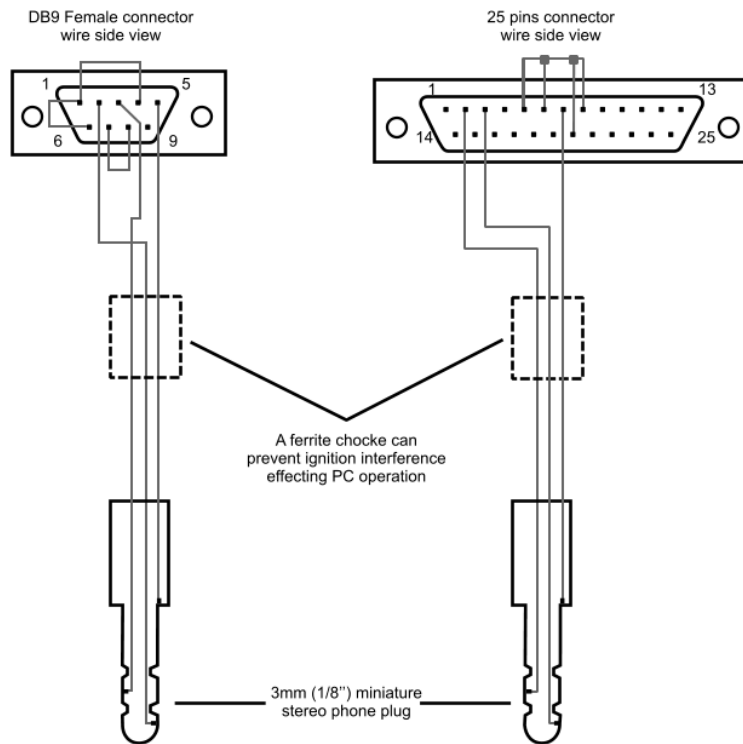
Autronic SM2 ECU feature a serial communication protocol on the J4 ECU front connector as shown here below.



The ECU comes with a spiral cable ending with a Jack on one side and alternatively a DB9 female or a DB25 female on the other side. The Jack input of the ECU to be used is shown here above. The spiral cable is used to program the ECU as well as to communicate with external devices, like AiM ones. Here below the spiral cable ending with a DB9 female connector is shown.



Here follow technical drawing of the two possible cables as well as connection tables.



DB9 connector pin	Pin function	AiM cable
5	GND	GND
2	RS232TX	RS232RX
DB25 connector pin	Pin function	AiM cable
7	GND	GND
3	RS232TX	RS232RX

**Please note:** ECU RS232RX is not to be connected.

## 3

# AiM device configuration

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Before connecting the ECU to AiM device set this up using AiM Race Studio software. The parameters to select in the device configuration are:

- ECU manufacturer "Autronic"
- ECU Model:
  - "SM2\_V190/1/SMC\_V191" for Autronic SM2 V190 or V191 ECU
  - "SM2\_V193/V195" for Autronic SM2 V193 or V195 ECU

## 4

# Available channels

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Channels received by AiM device connected to "Autronic" ECU changes according to the selected protocol

## 4.1

# "Autronic" "SM2\_V190/1/SMC\_V191" protocol

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Channels received by AiM device connected to "Autronic" "SM2\_V190/1/SMC\_V191" protocol are:

<b>ID</b>	<b>CHANNEL NAME</b>	<b>FUNCTION</b>
ECU_1	AUTR_RPM	RPM
ECU_2	AUTR_SPEED	Vehicle speed
ECU_3	AUTR_DRVWHEEL_SPD	Driving wheel speed
ECU_4	AUTR_WATER_TEMP	Engine coolant temperature
ECU_5	AUTR_CHARGE_TEMP	Air/Fuel mix temperature
ECU_6	AUTR_INTAKEAIR_TEMP	Intake air temperature
ECU_7	AUTR_EXHAUST_PRESS	Exhaust pressure
ECU_8	AUTR_MANIF_PRESS	Manifold air pressure



ECU_9	AUTR_THROTPOS	Throttle position
ECU_10	AUTR_INJECT_TIME	Injection time
ECU_11	AUTR_IGNIT_ANG	Ignition angle
ECU_12	AUTR_AF_RATIO	Air/Fuel ratio
ECU_13	AUTR_BATT_VOLT	Battery supply

## 4.1

### "Autronic" "SM2\_V193/V195" protocol

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Channels received by AiM device connected to "Autronic" "SM2\_V193/V195" protocol are:

<b>ID</b>	<b>CHANNEL NAME</b>	<b>FUNCTION</b>
ECU_1	AUTR2_RPM	RPM
ECU_2	AUTR2_SPEED	Vehicle speed
ECU_3	AUTR2_DRVWHEEL_SPD	Driving wheel speed
ECU_4	AUTR2_WATER_TEMP	Water temperature
ECU_5	AUTR2_CHARGE_TEMP	Air/fuel mix temperature
ECU_6	AUTR2_INTAKEAIR_TEMP	Intake air temperature
ECU_7	AUTR2_EXHAUST_PRESS	Exhaust gas pressure
ECU_8	AUTR2_MANIF_PRESS	Manifold air pressure
ECU_9	AUTR2_THROTPOS	Throttle position
ECU_10	AUTR2_INJECT_TIME	Injection time
ECU_11	AUTR2_IGNIT_ANG	Ignition angle
ECU_12	AUTR2_AF_RATIO	Air/Fuel ratio
ECU_13	AUTR2_BATT_VOLT	Battery supply
ECU_14	AUTR2_TEMPNTC1	Custom temperature 1
ECU_15	AUTR2_TEMPNTC2	Custom temperature 2
ECU_16	AUTR2_TEMPNTC3	Custom temperature 3
ECU_17	AUTR2_TEMPNTC4	Custom temperature 4