

Autronic SMC



Autronic

FUEL INJECTION — ADVANCED CONTROLS

SMC driver capacity are stamped on outside with serial number

SMC serial number on ECU.

T1 = 2,4 bar map sensor (2,4 bar boost)

T2 = 3,4 bar map sensor (3,4 bar boost)

A2 = Low current (high res) injector drivers.

A4 = High current (low res) injectors drivers.

So serial number L5472T2A4 then the ECU has 3 bar map sensor and high current injector drivers. SMC serial number 5387 or higher has a new injector driver that can use a jumper to select high current or low current drivers. There are three jumpers close to drivers to make them Low current, add the jumper to make them Low current, for high current remove the jumpers.

The Autronic SMC is a sequential 3D ECU available in two case styles, standard and water proof. The Autronic SMC includes harness, air and water temp sensor, internal map sensor, fuel pump relay, PC data cable, calibration and data logging software. The internal map sensor is available in 1bar absolute or 4.4 bar absolute (50 psi). Available with high current (low impedance) or low current (high impedance) injector drivers. Harness is a flying lead type and has a connector which plugs into the Ecu, and has a socket for fuel pump relay, and socket for data cable connection to a IBM compatible PC or Laptop serial port. The other end of the harness has to be connected as per the wiring diagram. The software is compatible with USB ports, when used with USB to serial adapter.

Dimensions:

L = 150mm (6 inches)

W = 120mm (4 3/4 inches)

H = 35mm (1 3/8 inches)

Features:

Sequential operation for 2 to 8 cylinder engines and non sequential operation for 10+ cylinders

Eight injector outputs

Four ignition outputs

3D fuel and ignition maps

User defined up to 32 RPM and 16 Load sites = 512 sites

Anti-lag

Flat Shift (ver 1.19)

Data Logging

Software selectable trigger angle

Support for multi-tooth or missing teeth triggers

Auxiliary outputs other than fuel pump control

8 cyl engine = 1 (1 PWM output)

6 cyl engine = 3 (1 PWM + 2 On/Off)

4 cyl engine = 5(1 PWM + 4 On/Off)

Auxiliary outputs can be defined for boost control, nitrous oxide, camshaft timing, AC, fan control, idle valve etc.

Available with high current drivers if required

AutoTune option available

User choice of manifold absolute pressure or throttle position as engine load input

Single coil distributor, twin coil distributor or multicoil distributor-less ignition configurations are possible on most engines

Exhaust oxygen sensor input for sensing air/fuel ratio

Diagnostic/Error indicator of sensor or ECU fault conditions with memory for detection of intermittent fault conditions. An external light may also be connected for remote indication of abnormal operation

Precise spark advance control strategy for both static and dynamic operating conditions

Unique calibration strategy allows accurate control of fuel delivery under both acceleration and deceleration

User selectable spark and fuel delivery strategy for abnormal engine operation conditions to minimize possibility of engine damage whilst still maintaining engine operation.. (eg:- over heated or over boosted)

Comprehensive limp-home functions with user selectable default settings that ensure engine operation can continue after sensor failure has occurred

Full compensation of engine control parameters for engine operation at any altitude (fuel delivery, ignition timing and boost pressure)

Adaptive learning (with memory) to minimize the number of user setups required and to provide optimal control of air/fuel ratio, boost pressure and idle stability

Rev limiter with soft characteristic that uses a combination of fuel delivery and spark control

Fuel pump safety shutoff. Pump stops 3 to 4 seconds after the engine stops

nit is ultra light weight/compact yet has sufficient drive capacity for high power continuous duty applications. (one unit OK for all applications from motor cycle to large capacity twin turbo engines)

Optional interface unit to allow sequential operation without the need for separate crank/camshaft sensors or special multi-sensor distributor

Optional Water Proof case for marine or harsh environments

A user friendly Windows software allows the user to select the degree of sophistication required for each application. This program, in combination with intelligence within the management system, allows the user to select the finest calibration detail required to match the application, in absolute minimum of time.

This program provides the means of interrogating the engine management system enabling speedy diagnosis and calibration.

These systems can cater for the requirements of virtually any spark ignition engine, including the following:

High output supercharged or turbocharged engines, with either multi point and/or center point injection Rotary (Wankel) and two stroke engines

Engines having uneven firing sequences such as 2 and 4 cylinder "V" configuration motor cycle engines and V6 motor vehicle engines

IMPORTANT:- Please note that this product is intended for high performance motor sport applications and compliance with statutory regulations when used on public roads cannot be guaranteed.

Auxiliary Output Function can be used for the following:

closed loop (feedback), boost control for turbocharged engines with rpm and temperature dependent calibration characteristic

Closed loop (feedback) idle speed control

Control of engine cooling fan

Programmable on/off control for solenoid or relay driving that operates according to engine speed and load (eg:- can be used for gear shift control or light, over rev indicator, inlet camshaft timing selection or control of a supplementary electric fuel pump that augments mechanical fuel pump delivery at low engine rpm only)

Fuel used pulse output to electric or electro-mechanical counter with resolution of 0.1 liter (or use with

trip computer)

Even more sophisticated control function such as servo control of auxiliary butterfly for turbocharged applications requiring precise throttle control and minimum turbo lag

Inputs:

Ignition input Hall effect, (Also available for direct connection to magnetic reductor type pick-ups)

No. 1 cylinder reference. (Also available for direct connection to magnetic reductor type pickups)

Barometric pressure (included)

Manifold pressure

Throttle position (TPS Sensor not included)

Intake air temperature (included)

Engine coolant temperature (included)

Exhaust oxygen (Sensor sold separately)

Idle mixture trim. (Internal to ECU and screwdriver adjustable from outside)

Outputs:

Open collector ignition output to any of the following:

Single coil high energy ignitions: Bosch 7 pin, Mitsubishi 3 pin

Autronic Capacitor Discharge Ignition (CDI)

MSD 6A etc.

Auxiliary Outputs:

Fuel pump/injector fuel shut off safety relay

Multifunction on/off or pulse width modulation output for either:

Engine cooling fan relay

Idle speed actuator. (Variable duty cycle single pole type, eg:- Bosch)

Turbocharger wastegate control valve. (SEM, most OEM types or Autronic low or high capacity)

Turbocharger auxiliary butterfly control motor

General purpose duty cycle output with user define characteristic

Fuel used pulse output. (for trip computer function)