

Σ^n trol 05 Engine Control Module

The Entrol 05 is an engine control module (ECM) for small engines that enables instantaneous measurement of multiple parameters, and real time adjustments of fuel, air, and spark to help the engine operate efficiently, reliably, and economically. The Entrol 05 offers a low cost solution for 1 and 2 cylinder engine control. Its up-integrated design reduces weight and wiring, and its small package size enables mounting flexibility.



Features

- Low cost controller with 16-bit microprocessor technology
- Compact, lightweight, waterproof, design allows packaging flexibility
- Electronic fuel control for 1 cylinder and 2 cylinder sequential fuel injection applications
- Electronic spark control for 1 cylinder or 2 cylinder sequential spark applications with or without high current coil drivers in the ECM
- Up to two integrated ignition coil drivers available
- Optimized connection system with 36-way (18 + 18) dual connectors
- Advanced functions include:
 - » Closed loop Idle Air Control (IAC) or Electronic Throttle Control (ETC)
 - » Electronic governor capability with ETC configuration
 - » Heated oxygen sensor option for closed loop fuel control
 - » Flex fuel capability with oxygen sensor feedback
 - » Independent VE tables for each cylinder
 - » Charcol Canister Purge (CCP)
- Serial communication flexibility: Controller Area Network (CAN) or KW2000

Σⁿtrol 05

INPUTS

RPM/Crank Position Signal

Compatible with 1 and 2 cylinder engines. Crank sensor is essential to ensure proper engine position detection for correct fuel and spark delivery. This sensor is continually monitored and diagnosed to ensure proper engine operation

Pressure Sensor

Manifold Absolute Pressure (MAP) sensor allows for altitude compensation, barometric pressure sensing, and load correction

Engine Temperature Sensor

Operating temperature fuel/spark adjustments and engine over-temp protection

Inlet Air Temperature Sensor

Modifies fuel and spark delivery for changes in Inlet Air Temperature (IAT)

Heated Oxygen Sensor

Provides closed-loop control to desired A/F ratio

Electronic Throttle Control (ETC) Interface

Eliminates problematic throttle cables and allows governor control

Throttle Sensor

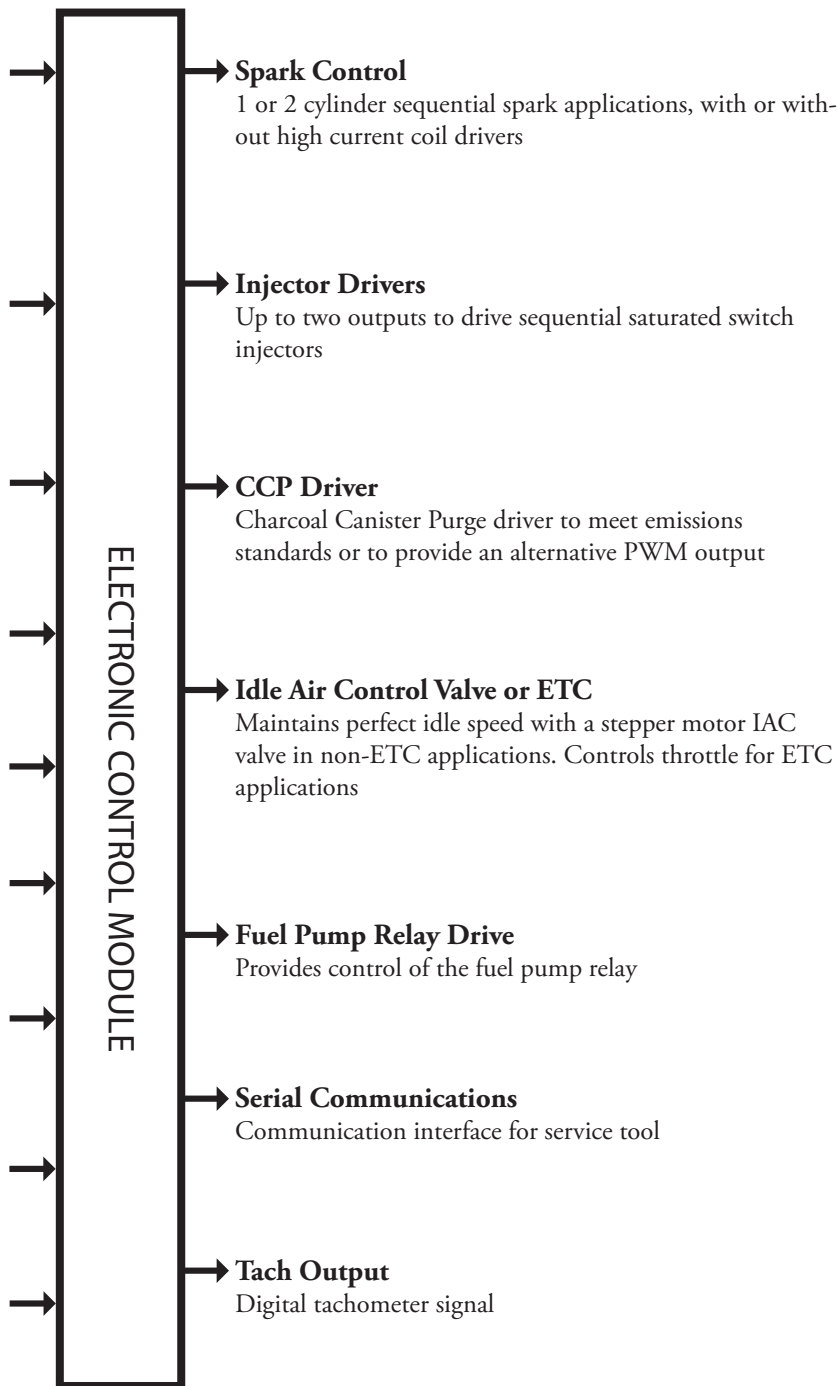
Provides feedback for fuel control, closed throttle idle determination, and acceleration/deceleration control

Governor Target Engine Speed Sensor

Provides input for commanded governed RPM and closed throttle idle determination

Neutral / Clutch Switch

Senses transmission neutral or clutch state



OUTPUTS

Spark Control

1 or 2 cylinder sequential spark applications, with or without high current coil drivers

Injector Drivers

Up to two outputs to drive sequential saturated switch injectors

CCP Driver

Charcoal Canister Purge driver to meet emissions standards or to provide an alternative PWM output

Idle Air Control Valve or ETC

Maintains perfect idle speed with a stepper motor IAC valve in non-ETC applications. Controls throttle for ETC applications

Fuel Pump Relay Drive

Provides control of the fuel pump relay

Serial Communications

Communication interface for service tool

Tach Output

Digital tachometer signal