

ADVANCED TECHNOLOGY SOLUTIONS

by **STANDARD**

WHAT IS A DIS CONTROL MODULE?

Standard employs technology improvements in their DIS modules to enhance performance and increase durability. Additionally, Standard's DIS modules undergo extensive testing to ensure premium quality and increased confidence demanded by today's technicians.

STANDARD'S ATS DIS CONTROL MODULES

Standard's modules undergo extensive testing ensuring better quality, increased confidence, enhanced performance, and improved durability.

ADVANCED TECHNOLOGY SOLUTIONS (ATS)

- The OE chip is assembled to a specially matched ceramic substrate preventing premature failure due to broken connections caused by thermal expansion and contraction.
- Double wire bonding creates more durable connections within the module, thus preventing premature failure due to loose or broken connections.
- Multiple front-end grounding increases the module's resistance to a broader spectrum of RFI and has been independently tested to be superior to OE.
- The electrostatic discharge (ESD) diode protects the module's delicate circuitry from damage due to the discharge of energy from triboelectrification or electrostatic induction.

STANDARD'S COMPLETE COVERAGE



Standard's Advanced Technology Solutions DIS modules line provides the perfect form, fit and function demanded by today's technicians. This is a comprehensive line that offers factory fit modules for import and domestic vehicles.

“When OE fails...trust Standard.”

STANDARD'S DIS MODULES ARE BETTER FROM THE INSIDE OUT

THE BODY/CASE

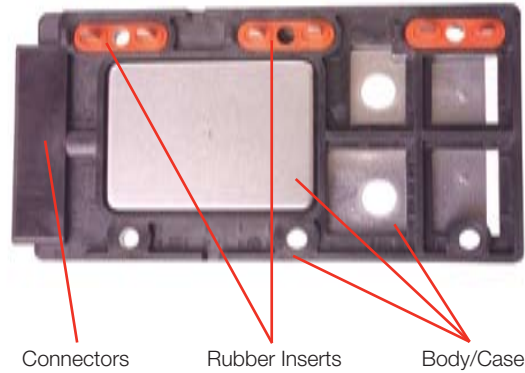
The body protects the internal circuitry from damage while providing an electrical connection to the coil. Standard manufactures the body from advanced thermoplastics and anti-corrosive metals that resist thermal cycling, moisture, and corrosion, leading to improved durability.

CONNECTORS

The connectors provide a connection point between the module and the vehicle wiring harness. With a design that matches original equipment, Standard uses advanced thermoplastics to insure proper connection and resistance to fracture.

RUBBER INSERTS (GM)

The inserts are manufactured of silicone rubber which is designed to withstand high voltages and create a waterproof seal to prevent moisture intrusion between the coil terminals.

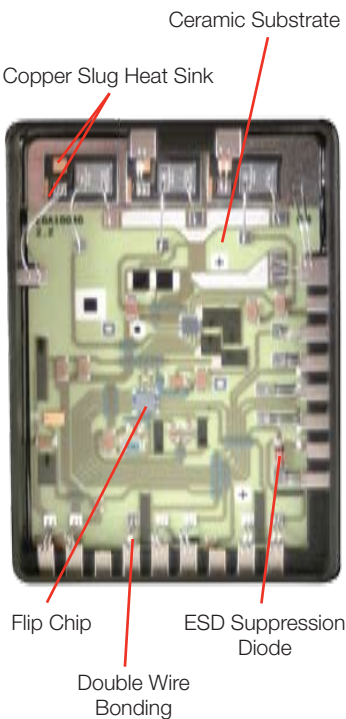


THICK FILM HYBRID CIRCUIT BOARD

The circuit board provides current distribution within the module. Standard manufactures the circuit board with precious metal conductor materials and an over-glazed ceramic substrate. This provides improved thermal performance over printed circuit board electronics.

OE FLIP CHIP (GM)

The flip chip processes the voltage inputs and outputs of the control module. Standard utilizes the GM flip chip enabling their module's performance to perfectly match original equipment. These original equipment microprocessors are specifically matched to the thermal expansion properties of our ceramic substrate thus eliminating failure due to broken connections between the chip and the board.



FRONT END GROUNDING

The front end grounding provides effective circuitry grounding and shielding. Multiple circuit grounds are ultrasonically bonded to the module's back-plate which enables the module to have greater resistance to RFI (Radio Frequency Interference) over a wide range of operating conditions. This allows the module to have perfect performance in a difficult underhood environment that has the potential to produce a considerable amount of RFI.

DOUBLE WIRE BONDS

Double wire bonds attach the substrate to the case circuitry with two ultrasonically bonded 12-mil wires. The bonding is a welding process that uses ultrasonic sound to clean the surfaces before making a cold compression weld which then enables welding in small places without damaging sensitive components. The double wire bonding design assures reliability and durability under extreme operating conditions.

ELECTROSTATIC DISCHARGE (ESD) SUPPRESSION DIODE

The ESD protects the unit from electrostatic discharge. Designed with a premium quality containment circuitry that suppresses voltage spikes, the ESD diode prevents premature failure.

COPPER SLUG HEAT SINKS

The copper slug heat sinks dissipate the heat created within the unit by the power transistors. The heat sinks absorb excess heat and the copper is used for its thermal absorption capabilities. This allows the power components within the module to keep cool and provide peak performance while extending the module's life cycle and reliability.