

## 13650-50G01/365050G00

# Generic Engine Coolant Temperature Sensor (ECTS)

Model: 13650-50G01/365050G00

Brand: Generic

[Introduction](#)   [Setup & Installation](#)   [Operation](#)   [Maintenance](#)   [Troubleshooting](#)   [Specifications](#)  
[Warranty](#)   [Support](#)

## 1. INTRODUCTION

This manual provides essential information for the installation, operation, and maintenance of your Generic Engine Coolant Temperature Sensor (ECTS) Model 13650-50G01/365050G00. This sensor is designed to accurately monitor your engine's coolant temperature, ensuring optimal performance and preventing potential damage from overheating.

The sensor is constructed from high-quality brass and plastic materials, offering excellent resistance to rust, corrosion, and aging. Its robust design ensures long-lasting and stable performance even under demanding conditions.

## 2. SETUP & INSTALLATION

Installing the Engine Coolant Temperature Sensor is a straightforward process. However, it is recommended that installation be performed by a qualified technician if you are unfamiliar with automotive repairs. Always ensure the engine is cool before beginning any work.

### 2.1 Safety Precautions

- Ensure the vehicle's engine is completely cool to prevent burns from hot coolant or engine components.
- Disconnect the vehicle's battery to prevent electrical hazards.
- Wear appropriate personal protective equipment, including gloves and eye protection.
- Have a container ready to catch any coolant that may spill during removal.

### 2.2 Installation Steps

1. **Locate the Old Sensor:** Identify the existing engine coolant temperature sensor. Its location varies by vehicle model, but it is typically found near the thermostat housing or on the engine block.
2. **Drain Coolant (Optional but Recommended):** To minimize coolant loss, you may partially drain the cooling system below the level of the sensor.
3. **Disconnect Electrical Connector:** Carefully disconnect the electrical connector from the old sensor.

4. **Remove Old Sensor:** Use an appropriate wrench to unscrew and remove the old sensor. Be prepared for some coolant to leak out.
5. **Prepare New Sensor:** Ensure the new sensor's threads are clean. Apply a small amount of thread sealant (if not pre-applied) to prevent leaks.
6. **Install New Sensor:** Carefully thread the new sensor into its port by hand to avoid cross-threading. Tighten it with a wrench to the manufacturer's specified torque (refer to your vehicle's service manual for exact specifications). Do not overtighten.
7. **Reconnect Electrical Connector:** Reattach the electrical connector to the new sensor, ensuring it clicks securely into place.
8. **Refill Coolant (if drained):** If coolant was drained, refill the system to the appropriate level with the correct type of coolant for your vehicle.
9. **Bleed Air from System:** Start the engine and allow it to reach operating temperature. Monitor the coolant level and add more as needed. Ensure all air is bled from the cooling system.
10. **Check for Leaks:** Visually inspect the sensor area for any coolant leaks after installation and during the first few drives.

*Note: When removing the old sensor, coolant will escape. Have the new sensor ready for immediate installation to minimize fluid loss.*

## 3. OPERATION

---

The Engine Coolant Temperature Sensor (ECTS) plays a critical role in your vehicle's engine management system. It continuously monitors the temperature of the engine's coolant and sends this data to the Engine Control Module (ECM) or Engine Control Unit (ECU).

### 3.1 How it Works

- The sensor contains a thermistor, a type of resistor whose resistance changes significantly with temperature.
- As the coolant temperature changes, the resistance of the thermistor changes.
- The ECM/ECU measures this resistance change and converts it into a temperature reading.
- Based on this temperature data, the ECM/ECU makes crucial adjustments to various engine parameters, including:
  - Fuel injection timing and quantity
  - Ignition timing
  - Idle speed
  - Operation of the cooling fan

Accurate temperature monitoring ensures the engine operates within its optimal temperature range, preventing overheating and improving fuel efficiency, emissions, and overall engine longevity.

## 4. MAINTENANCE

---

The Engine Coolant Temperature Sensor is designed for long-term reliability and typically requires minimal maintenance. However, regular checks of your vehicle's cooling system are recommended to ensure the sensor's optimal performance and lifespan.

- **Coolant Level and Quality:** Regularly check your engine's coolant level and ensure it is clean and free of contaminants. Dirty or low coolant can affect sensor readings and overall cooling system

efficiency.

- **Leak Inspection:** Periodically inspect the sensor and surrounding hoses for any signs of coolant leaks. Address any leaks promptly.
- **Electrical Connections:** Ensure the electrical connector to the sensor is clean, secure, and free from corrosion.
- **System Flushing:** Follow your vehicle manufacturer's recommendations for cooling system flushes and coolant replacement. This helps prevent buildup that could affect sensor accuracy.

While the sensor itself is robust, maintaining a healthy cooling system is key to its accurate and reliable operation.

## 5. TROUBLESHOOTING

---

A faulty Engine Coolant Temperature Sensor can lead to various engine performance issues. If you experience any of the following symptoms, consider inspecting or replacing your ECTS:

- **Engine Overheating:** The engine temperature gauge reads high, or the engine overheats, but the cooling fan does not activate.
- **Engine Running Cold:** The engine takes a long time to warm up, or the temperature gauge reads consistently low.
- **Poor Fuel Economy:** The ECM may receive incorrect temperature readings, leading to an overly rich or lean fuel mixture.
- **Black Smoke from Exhaust:** An overly rich fuel mixture can cause black smoke.
- **Difficulty Starting:** Especially in cold weather, an incorrect temperature reading can affect the cold-start fuel enrichment.
- **Rough Idle:** Incorrect fuel/air mixture due to faulty temperature data can cause an unstable idle.
- **Check Engine Light (CEL):** The CEL illuminates, often accompanied by a diagnostic trouble code (DTC) related to the coolant temperature sensor circuit.
- **Cooling Fan Malfunction:** The electric cooling fan may run constantly or not at all, regardless of engine temperature.

If you suspect a sensor malfunction, it is recommended to have the vehicle diagnosed by a professional using an OBD-II scanner to confirm the issue before replacement.

## 6. SPECIFICATIONS

---

Feature	Detail
Model Number	13650-50G01/365050G00
Material	Brass, Plastics
Function	Monitors engine coolant temperature for ECM/ECU adjustments
Manufacturer	yiduoduo li
ASIN	B0G19H3NF9

## 7. WARRANTY INFORMATION

---

Specific warranty details for this product are not provided in the available information. Please refer to the retailer or manufacturer's website for current warranty terms and conditions. Typically, automotive replacement parts come with a limited warranty against manufacturing defects.

## 8. CUSTOMER SUPPORT

---

For technical assistance, installation questions, or warranty claims, please contact the retailer where you purchased this product. You may also visit the manufacturer's official website for additional resources or contact information.

Always provide your product model number (13650-50G01/365050G00) and purchase details when seeking support.

## 9. PRODUCT MEDIA

---

**Product Images:** No relevant product images of the Engine Coolant Temperature Sensor were provided in the input data. The images supplied were of unrelated items (shopping bags).

**Product Videos:** No official product videos were provided in the input data.

© 2023 Generic. All rights reserved.

This manual is for informational purposes only. Always consult a qualified professional for automotive repairs.