ELING 1/4"-18NPT

ELING Water Temperature Sensor Sender (1/4"-18NPT) Instruction Manual

Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of your ELING Water Temperature Sensor Sender, specifically the 1/4"-18NPT model. This sensor is designed to accurately measure and transmit engine coolant temperature data to a compatible gauge, ensuring optimal engine performance monitoring.

Safety Information

Please read and understand all safety warnings and instructions before installing or operating this product. Failure to do so may result in property damage, injury, or death.

- Always disconnect the vehicle's battery before performing any electrical work.
- Ensure the engine is cool before working on the cooling system to avoid burns from hot coolant or steam.
- Use appropriate tools and personal protective equipment (PPE) such as gloves and eye protection.
- If you are unsure about any installation steps, consult a qualified automotive technician.
- Do not exceed the rated voltage of 6V-24V.

Product Overview

The ELING Water Temperature Sensor Sender is a robust brass component designed for reliable temperature measurement. It features a 1/4"-18NPT thread for secure installation.



Image: ELING Water Temperature Sensor Sender with 1/4"-18NPT thread. This image shows the main body of the sensor, typically made of brass, with the threaded end for installation into the engine block or coolant passage.

Key Features:

- **Rated Voltage:** 6V-24V
- **Signal Output:** 301-22ohm
- **Rated Power for Alarm Switch:** 1.2W-3W
- **Temperature Alarm Tolerance:** ±3°C
- **Temperature Response Time:** Minimum 3 minutes after power supply electrified
- **Material:** Brass main body
- **Protection Rank:** IP67

Specifications

Specification	Value
Brand	ELING
Model	1/4"-18NPT
Material	Brass
Rated Voltage	6V-24V
Rated Power for Alarm Switch	1.2W-3W
Temperature Alarm Tolerance	±3°C
Temperature Response Time	Minimum 3 minutes
Protection Rank	IP67

Specification	Value
Thread Type	1/4"-18NPT
Item Weight	0.1 Kilograms
Upper Temperature Rating	105 Degrees Celsius

Setup and Installation

Proper installation is crucial for accurate readings and sensor longevity. It is recommended that installation be performed by a qualified professional.

Required Tools and Materials:

- Wrench (appropriate size for 1/4"-18NPT)
- Thread sealant (e.g., PTFE tape or liquid sealant)
- Wire strippers/crimpers
- Electrical connectors (as needed)
- Multimeter (for testing)
- Coolant (to top off system after installation)

Installation Steps:

1. **Prepare the Vehicle:** Ensure the engine is completely cool. Disconnect the negative terminal of the vehicle's battery.
2. **Locate Installation Point:** Identify the appropriate port for the water temperature sensor in your engine block or coolant passage. This is typically where the existing sensor is located or a dedicated port for auxiliary sensors.
3. **Drain Coolant (if necessary):** If installing in a new port or replacing an existing sensor, you may need to drain some coolant to prevent spillage.
4. **Apply Thread Sealant:** Apply a suitable thread sealant (e.g., PTFE tape or liquid pipe sealant) to the threads of the 1/4"-18NPT sensor. Ensure the sealant does not block the sensor tip.
5. **Install Sensor:** Carefully thread the sensor into the designated port by hand to avoid cross-threading. Once hand-tight, use a wrench to tighten it securely. Do not overtighten, as this can damage the sensor or the engine block.
6. **Wiring Connections:** Connect the sensor's wire(s) to your compatible water temperature gauge or monitoring system. Refer to your gauge's instruction manual for specific wiring diagrams. The sensor typically has one signal wire and uses the sensor body for ground, or it may have a dedicated ground wire. Ensure connections are secure and insulated. The signal output is 301-22ohm.
7. **Refill Coolant:** If coolant was drained, refill the system to the appropriate level and bleed any air from the cooling system as per your vehicle's service manual.
8. **Reconnect Battery:** Reconnect the negative terminal of the vehicle's battery.
9. **Test System:** Start the engine and carefully monitor the temperature gauge for proper operation and check for any coolant leaks around the sensor.

Operating Instructions

Once installed and wired correctly, the ELING Water Temperature Sensor Sender operates automatically by continuously measuring the coolant temperature and sending a corresponding electrical signal to your connected temperature gauge.

The gauge will then display the current engine coolant temperature.

- **Temperature Monitoring:** Observe your temperature gauge regularly during vehicle operation to ensure the engine temperature remains within normal operating limits.
- **Alarm Function:** If your sensor model includes an alarm switch (rated power 1.2W-3W) and is connected to a compatible alarm system, it will trigger an alert if the temperature exceeds its preset alarm point (e.g., 103°C for some 1/4"-18NPT models, with a tolerance of ±3°C).
- **Response Time:** The sensor requires a minimum of 3 minutes after power supply is electrified to provide an accurate temperature reading.

Maintenance

The ELING Water Temperature Sensor Sender is designed for durability and requires minimal maintenance. However, periodic inspection can help ensure its continued accuracy and performance.

- **Visual Inspection:** Periodically check the sensor and its wiring for any signs of damage, corrosion, or loose connections.
- **Coolant Leaks:** Inspect the area around the sensor for any coolant leaks. Address any leaks promptly.
- **Cleaning:** If the sensor tip becomes coated with deposits from the coolant, it may affect accuracy. If accessible, carefully clean the tip with a soft brush and appropriate coolant system cleaner, ensuring no damage to the sensor element.
- **System Flush:** Regular cooling system flushes as per your vehicle's maintenance schedule can help prevent buildup on the sensor.

Troubleshooting

If you experience issues with your water temperature sensor, consider the following troubleshooting steps:

- **No Reading or Incorrect Reading:**
  - Check all wiring connections for looseness or corrosion.
  - Verify the sensor is properly grounded (if applicable).
  - Ensure the gauge is receiving power and is functioning correctly.
  - Test the sensor's resistance with a multimeter (refer to sensor specifications or a known good sensor for expected values at different temperatures).
  - Confirm the sensor is fully submerged in coolant.
- **Temperature Reading Too High/Low:**
  - Compare the reading with another known accurate temperature source if possible.
  - Check for air pockets in the cooling system, which can cause inaccurate readings.
  - Ensure the sensor is the correct type and resistance range for your gauge.
- **Coolant Leak at Sensor:**
  - Ensure the sensor is tightened correctly (do not overtighten).
  - Verify that adequate thread sealant was used during installation.
  - Inspect the threads on both the sensor and the engine port for damage.
- If issues persist after troubleshooting, contact ELING customer support or a qualified technician.

Warranty and Support

For warranty information and technical support regarding your ELING Water Temperature Sensor Sender, please refer to the documentation provided with your purchase or visit the official ELING website. You may also contact ELING customer service directly for assistance.

ELING Store Link: Visit the ELING Store on Amazon

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