

GENERIC · NETWORK

**U0627**

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

**U0627**

## Lost Communication With A/C Refrigerant Temperature Sensor A

U0627 is a network communication code indicating that a control module on the vehicle's Controller Area Network (CAN) bus has lost contact with the A/C refrigerant temperature sensor 'A' circuit or the module that reports its data. The computer detected that expected temperature messages from that sensor stopped arriving within the required time window, so it flagged the missing data as a communication fault rather than a direct sensor circuit failure.

SYSTEM

**Network**

CODE TYPE

**Generic (all makes)**

SEVERITY

**Medium**

FIX DIFFICULTY

**Intermediate**

AREA

**Network communication**

### Symptoms you may notice

- The air conditioning may blow warm or fail to engage the compressor clutch at all.
- The climate control panel may show erratic vent temperatures or default to a fixed setting.
- A yellow or red warning light on the dashboard, often accompanied by a chime on startup.
- The A/C system may run continuously without cycling because the module cannot read refrigerant temperature.
- Often no symptoms besides the warning light, especially if the vehicle uses a default value for the sensor.
- Other unrelated modules may log communication codes if the fault lies on a shared bus segment.

### Common causes, most likely first

- 1 A failed A/C refrigerant temperature sensor or its internal electronics.
- 2 Damaged, corroded, or disconnected wiring between the sensor and the module that reports it.
- 3 A faulty control module that hosts the sensor interface, such as the climate control or body control module.
- 4 A CAN bus communication fault on the network segment shared by the sensor-reporting module.
- 5 Low or contaminated refrigerant affecting sensor readings and causing the module to reject the data.
- 6 Water intrusion or heat damage at the sensor connector, common in the engine bay or evaporator area.
- 7 A blown fuse or poor ground that removes power from the sensor-reporting module.



## How to diagnose and fix it

- 1 Scan all modules for stored codes and record any U-codes alongside U0627 to map the affected network segment.
- 2 Inspect the A/C refrigerant temperature sensor connector and wiring for corrosion, chafing, or loose pins.
- 3 Check the sensor's reference voltage and ground at the connector with a multimeter to confirm power and ground integrity.
- 4 Verify refrigerant charge and system pressures, since low charge can make sensor data implausible and trigger communication faults.
- 5 Perform a wiggle test on the harness while watching live sensor data to catch intermittent opens.
- 6 If wiring and power are good, substitute a known-good sensor and clear codes to see whether U0627 returns.
- 7 If the sensor and wiring check out, diagnose the reporting module's CAN bus communication and replace the module only after confirming bus integrity.

## What the A/C temperature sensor code hides

- U0627 is a communication code, not a direct sensor circuit code, so replacing the sensor without checking the network and module power often fails to fix it.
- A weak battery or poor ground can cause multiple modules to drop off the bus and set U0627 along with other U-codes that disappear after a proper charge.
- Some vehicles use the refrigerant temperature sensor to protect the compressor, so a missing signal may disable A/C entirely even though the sensor itself is fine.
- Aftermarket remote starters and alarm wiring tapped into the CAN bus are a frequent hidden cause of lost communication with climate-related modules.
- Clearing U0627 without repairing the underlying communication fault usually results in the code returning within a few drive cycles.

## Can I keep driving with U0627?

You can usually drive the vehicle with U0627 stored, but the air conditioning may not work and the compressor could be disabled for protection. Avoid long trips in hot weather and have the fault diagnosed soon, especially if other communication codes appear.

## Tools that help

- OBD-II scan tool with CAN bus and live data capability
- Digital multimeter
- Wiring diagram for the A/C refrigerant temperature sensor circuit
- Refrigerant pressure gauge set
- Terminal pick and contact cleaner



## Reading U0627

- U** Network: communication between the vehicle's control modules.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 6** Network communication.
- 27** The exact fault within that area.

## Often seen with

**P0532** A/C Refrigerant Pressure Sensor 'A' Circuit Low · **U0100** Lost Communication With ECM/PCM A · **U0140** Lost Communication With Instrument Panel Cluster · **U0626** Lost Communication With A/C Refrigerant Pressure Sensor A · **U0628** Lost Communication With A/C Refrigerant Pressure Sensor B

## See it working

Watch the animated explainer [Car Relay Test Bench: Test 4-Pin and 5-Pin Relays](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/u0627/>

