

GENERIC · NETWORK

U0427

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

U0427

Invalid Data Received From Vehicle Security Control Module

U0427 is a communication fault indicating that a control module received invalid or corrupted data from the vehicle security control module over the controller area network (CAN) bus. The receiving module detected that the security module's data frame was missing expected parameters, out of range, or failed its checksum, so it flagged the message as untrustworthy rather than acting on it.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Network	Generic (all makes)	Medium	Professional	Invalid data received from a module

Symptoms you may notice

- The security or immobilizer warning light stays on or flashes after the engine is started
- The engine cranks but will not start because the immobilizer refuses to release the fuel or ignition circuit
- The vehicle starts intermittently, often failing after sitting overnight or in cold weather
- Remote keyless entry or push-button start functions become erratic or stop responding
- Other unrelated warning lights appear because multiple modules share the same CAN bus
- Often no symptoms besides the warning light, with the vehicle driving normally

Common causes, most likely first

- 1 A failing or internally faulted vehicle security control module that transmits corrupted data frames
- 2 Corroded, loose, or pushed-back pins in the security module's electrical connector
- 3 Damaged or chafed CAN bus wiring between the security module and the module that set the code
- 4 Low battery voltage or a weak ground causing the security module to boot improperly and send invalid data
- 5 A software or calibration mismatch in the security module after a replacement or reprogramming event
- 6 Water intrusion into the security module or its harness, common when the module is mounted low in the cabin
- 7 A faulty ignition switch or transponder antenna that feeds the security module bad input, which it then relays as invalid data



How to diagnose and fix it

- 1 Scan all modules for stored and pending codes, and record which module reported U0427 and whether the security module is online
- 2 Perform a battery and charging system test, including a load test and voltage-drop check on the security module's power and ground circuits
- 3 Inspect the security module connector for corrosion, bent pins, and loose terminals, then clean and reseal it
- 4 Check CAN bus continuity and resistance between the security module and the reporting module, looking for opens, shorts, or excessive resistance
- 5 Verify the security module's part number and calibration match the vehicle, and reprogram or relearn keys if a replacement or update is suspected
- 6 Substitute a known-good security module only after wiring and power checks pass, then perform the required immobilizer relearn procedure
- 7 Clear codes and road test through several key cycles to confirm the invalid data message does not return

Why the security module sends bad data

- A weak battery is the most overlooked cause: the security module may power up before the rest of the network stabilizes and transmit a malformed frame that sets U0427 without any hard failure.
- U0427 does not always mean the security module is bad; a chafed CAN wire or a poor ground shared with another module can corrupt the data before it ever leaves the security module.
- After a security module replacement, failing to complete the immobilizer relearn or mismatching the calibration can set U0427 immediately, which is often misread as a defective new part.
- Water intrusion into footwell or kick-panel mounted security modules causes intermittent invalid data that only appears in damp weather, so a dry-weather scan may show nothing.
- A failing transponder antenna or ignition switch can feed the security module bad input, and the module then relays that as invalid data, sending technicians after the wrong component.

Can I keep driving with U0427?

The vehicle may drive normally, but because the security module can prevent starting or interrupt the immobilizer, avoid shutting the engine off in an unsafe location until the fault is diagnosed. Do not rely on the vehicle for long trips or leave it parked where a no-start condition would be dangerous.

Tools that help

- OBD-II scan tool with full module access and live data capability
- Digital multimeter with CAN bus resistance and voltage measurement
- Battery load tester and charging system analyzer
- Wiring diagram and connector pinout for the security module circuit
- Terminal pick and contact cleaner for connector repair
- Oscilloscope for CAN bus waveform analysis



Reading U0427

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

Often seen with

U0100 Lost Communication With ECM/PCM A · **U0140** Lost Communication With Instrument Panel Cluster · **U0164** Lost Communication With HVAC Control Module · **U0422** Invalid Data Received From Body Control Module · **U0423** Invalid Data Received From Instrument Panel Control Module

See it working

Watch the animated explainer [Helicopter Simulator: Take Off, Hover and Land](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/u0427/>

