



P0A9C

Hybrid/EV Battery Temperature Sensor A Circuit Range/Performance

P0A9C indicates that the hybrid or electric vehicle battery temperature sensor circuit designated as Sensor A is reporting a temperature reading that is outside the expected range or is not behaving in a plausible manner compared to other sensors. The battery energy control module monitors this circuit and sets the code when the signal voltage or calculated temperature falls outside programmed limits for a calibrated time, indicating a range or performance fault rather than a simple open or short circuit.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Professional	Hybrid propulsion

Symptoms you may notice

- Illumination of the hybrid system warning light or service vehicle soon message on the dashboard
- Reduced electric-only driving range or the vehicle refusing to enter EV mode
- A noticeable drop in hybrid battery charging or discharging performance, especially in extreme temperatures
- The gasoline engine may run more frequently or stay on continuously to compensate for reduced battery capability
- Often no symptoms besides the warning light, with the vehicle driving normally in most conditions
- In some cases, the vehicle may enter a reduced power limp mode if the battery temperature reading is implausible

Common causes, most likely first

- 1 Faulty battery temperature sensor A itself, due to internal failure or drift from age and thermal cycling
- 2 Damaged or corroded wiring harness or connector at the sensor, often from vibration, moisture intrusion, or rodent damage
- 3 Poor electrical connection at the battery energy control module or intermediate connectors, causing intermittent signal
- 4 Failed or degraded battery pack cooling system component, such as a fan or duct, causing actual overtemperature that triggers the range fault
- 5 Software calibration issue in the battery energy control module that misinterprets a valid sensor signal
- 6 A failing hybrid battery pack that is generating excessive heat and pushing the sensor reading beyond its expected range
- 7 Water or debris intrusion into the battery pack enclosure affecting sensor operation or wiring integrity



How to diagnose and fix it

- 1 Connect a scan tool and record all hybrid battery temperature sensor readings cold and after a test drive to compare sensor A against the others for plausibility
- 2 Visually inspect the sensor A wiring, connector, and harness routing for chafing, corrosion, or loose pins, repairing any damage found
- 3 Perform a resistance or voltage check on the sensor A circuit at the sensor and at the control module connector to isolate an open, short, or high-resistance fault
- 4 Check the hybrid battery cooling system operation, including fans and ducts, to rule out a real overtemperature condition that is causing the range fault
- 5 If the sensor is accessible and its resistance does not match the manufacturer's temperature-resistance table, replace the sensor and clear the code
- 6 Verify the battery energy control module has the latest software calibration and reprogram if a known update addresses false temperature range faults
- 7 After repairs, clear the code and perform a road test with live data monitoring to confirm sensor A tracks the other sensors and the code does not return

What the battery temperature sensor range code hides

- A P0A9C is frequently set by a sensor that is still reading but has drifted out of calibration, so a simple resistance check at room temperature may pass while the fault only appears hot or cold.
- Technicians often replace the sensor first, but a corroded connector pin or chafed harness section is just as common and far cheaper to fix once found with a voltage drop test.
- This code can be triggered by a real battery overheating problem caused by a failed cooling fan or blocked duct, so ignoring it risks permanent damage to the high-voltage pack.
- On many vehicles, the battery temperature sensors are wired in a series or multiplexed string, so one faulty sensor or a wiring fault can affect the readings of multiple sensors and set companion codes.
- A weak 12-volt auxiliary battery or poor ground can cause erratic module behavior and false temperature range codes, so always verify system voltage and grounds before condemning the sensor.

Can I keep driving with P0A9C?

You can generally continue driving with P0A9C if the vehicle runs normally and no other warning lights are present, but avoid aggressive driving, heavy loads, and extreme temperatures until the fault is diagnosed. If the hybrid system warning light is accompanied by reduced power or a message to stop safely, pull over and have the vehicle towed to prevent damage to the high-voltage battery.



Tools that help

- Hybrid-capable OBD-II scan tool with live data and graphing capability
- Digital multimeter with temperature probe or resistance measurement
- Manufacturer service information for wiring diagrams and sensor resistance tables
- Insulation piercing probes or back-probe kit for circuit testing without damage
- Infrared thermometer to verify actual battery pack temperature against sensor readings

Reading P0A9C

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
A	Hybrid propulsion.
9C	The exact fault within that area.

Often seen with

P0A9D Hybrid/EV Battery Temperature Sensor A Circuit Low · **P0A9E** Hybrid/EV Battery Temperature Sensor A Circuit High · **P0A9F** Hybrid/EV Battery Temperature Sensor A Circuit Intermittent/ · **P0AA0** Hybrid/EV Battery Positive Contactor Circuit · **P0AA1** Hybrid/EV Battery Positive Contactor Circuit Stuck Closed

See it working

Watch the animated explainer [How Regenerative Braking Works in Electric Cars](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0a9c/>

