

GENERIC · POWERTRAIN

P0CB4

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0CB4

Hybrid/EV Battery Temperature Sensor O Circuit Low

P0CB4 means the hybrid or electric vehicle battery pack's temperature sensor on circuit O is reporting a voltage below the normal range, so the battery control module cannot trust that sensor's reading. The computer has detected a low-voltage condition on the sensor signal circuit, which usually points to a short to ground, a wiring fault, or a failed sensor rather than an actual overheating event.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Professional

AREA

Hybrid propulsion

Symptoms you may notice

- Illumination of the hybrid system warning light or service vehicle soon message
- Often no symptoms besides the warning light, with the vehicle driving normally
- Reduced electric-only range or the engine running more often than usual
- A message that hybrid or EV battery cooling is unavailable or limited
- Possible refusal to enter ready mode or a no-start condition in severe cases
- Charging may be blocked or slowed on plug-in models

Common causes, most likely first

- 1 Battery temperature sensor O internally shorted or failed
- 2 Chafed or pinched sensor signal wire shorted to ground
- 3 Corroded or loose connector pins at the sensor or battery control module
- 4 Water intrusion into the battery pack or sensor connector causing a short
- 5 Faulty battery control module or hybrid control module interpreting the signal incorrectly
- 6 Damaged sensor harness inside the pack from prior service or impact



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data for P0CB4 and any companion codes before clearing anything
- 2 Inspect the sensor O connector and harness for corrosion, water intrusion, chafing, and loose pins
- 3 Measure sensor resistance and compare it to the manufacturer's temperature-resistance chart
- 4 Back-probe the signal circuit at the module and check for a short to ground with the sensor disconnected
- 5 Repair or replace the damaged section of harness and re-test the circuit
- 6 Replace the battery temperature sensor if the circuit tests good but the reading stays low
- 7 Clear codes, verify the sensor reads correctly across a temperature sweep, and confirm the code does not return

Why sensor O codes are often wiring faults

- A low-voltage signal on a temperature sensor circuit almost always means a short to ground, so the sensor itself is frequently innocent and the harness is the real culprit.
- Technicians who replace the sensor without checking the circuit often see the code return because the chafed wire or corroded pin was never repaired.
- Water intrusion into the battery pack or a sensor connector can create an intermittent short that only appears in damp weather or after a car wash.
- A failed sensor can cause the battery control module to substitute a default temperature, which may limit fast charging or electric-only operation without any obvious driver complaint.
- Companion codes for other battery temperature sensors or pack voltage faults should be reviewed, because a shared ground or reference circuit can set several codes at once.

Can I keep driving with P0CB4?

The vehicle is usually safe to drive to a workshop because the fault is a sensor circuit issue rather than a confirmed overheating condition, but avoid aggressive driving, fast charging, and long trips until it is diagnosed. If the hybrid system warning is accompanied by a reduced power message or the vehicle will not enter ready mode, have it towed instead of driving.

Tools that help

- OBD-II scan tool with hybrid module access and live data
- Digital multimeter with back-probe pins
- Manufacturer service information with sensor resistance charts
- Insulated hand tools and terminal pick set
- Battery pack service plug removal tools where required



Reading P0CB4

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- C** Hybrid propulsion.
- B4** The exact fault within that area.

Often seen with

P0A9C Hybrid/EV Battery Temperature Sensor A Circuit Range/Perform · **P0AFA** Hybrid/EV Battery System Voltage Low · **P0CB3** Hybrid/EV Battery Temperature Sensor O Range/Performance · **P0CB5** Hybrid/EV Battery Temperature Sensor O Circuit High · **P0CB6** Hybrid/EV Battery Temperature Sensor O Circuit Intermittent/

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/p0cb4/>

