



P0BC2

Hybrid/EV Battery Temperature Sensor E Circuit

P0BC2 indicates that the hybrid or electric vehicle battery pack's temperature sensor circuit, specifically the one designated 'E', is reporting a voltage or signal that falls outside the expected range to the battery energy control module. The computer has detected an abnormal condition in the sensor's electrical circuit, which may be an open circuit, a short to ground or power, or a sensor that is not responding correctly.

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

Symptoms you may notice

- Illumination of the check engine light or a dedicated hybrid system warning light.
- Often no symptoms besides the warning light, especially if the fault is intermittent.
- Reduced electric-only driving range or the vehicle refusing to enter EV mode.
- A message on the dash indicating a hybrid system fault or limited power output.
- In rare cases, the vehicle may enter a fail-safe mode with reduced acceleration.
- Possible slight decrease in fuel economy if the battery management system limits charging or discharging.

Common causes, most likely first

- 1 A faulty temperature sensor E itself, due to internal failure or age-related degradation.
- 2 Damaged or corroded wiring in the sensor circuit, often from chafing, rodent damage, or moisture intrusion.
- 3 Loose or corroded electrical connector at the sensor or at the battery energy control module.
- 4 A short to ground or short to voltage in the sensor signal or return circuit.
- 5 An open circuit in the sensor wiring, possibly from a broken wire or a poor terminal crimp.
- 6 A malfunctioning battery energy control module, though this is less common and should be diagnosed last.
- 7 Extreme temperatures or a battery pack overheating event that caused the sensor to fail.



How to diagnose and fix it

- 1 Perform a visual inspection of the sensor and its wiring harness for obvious damage, corrosion, or loose connections.
- 2 Use a scan tool to read the live data for sensor E and compare it with other battery temperature sensors to see if the reading is plausible.
- 3 Check the sensor's resistance or voltage output according to the manufacturer's specifications, if available, to determine if the sensor itself is faulty.
- 4 Test the continuity and resistance of the wiring between the sensor and the battery energy control module to rule out open or short circuits.
- 5 Inspect and clean the connector terminals, applying dielectric grease if recommended, and clear the code to see if it returns.
- 6 If the sensor is faulty, replace it following the manufacturer's procedure, which may involve accessing the battery pack.
- 7 If all else checks out, diagnose the battery energy control module for internal faults, but only after confirming the sensor and wiring are good.

Common misdiagnosis traps for P0BC2

- A common mistake is to replace the temperature sensor immediately, but wiring and connector issues are actually more frequent causes of this code.
- The code can be set by a temporary condition such as extreme cold or heat affecting the sensor's resistance, so clearing it and seeing if it returns is a valid first step.
- Some vehicles use a single sensor for multiple cells, and a fault in one sensor can affect the readings of others, leading to confusion about which sensor is bad.
- The battery energy control module may set this code if it detects an implausible signal, not just a complete failure, so the sensor might still work but be out of calibration.
- Always check for technical service bulletins (TSBs) for the specific vehicle, as some models have known issues with sensor wiring routing or connector seals.

Can I keep driving with P0BC2?

It is generally safe to drive with this code as long as the vehicle does not enter a reduced power mode, but avoid aggressive driving or heavy loads that could stress the battery pack. Have the fault diagnosed soon, because a faulty temperature sensor can prevent the battery management system from properly protecting the battery from overheating or overcharging.



Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Socket set and trim removal tools
- Insulation resistance tester (megohmmeter) for high-voltage circuit checks

Reading P0BC2

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
B	Hybrid propulsion.
C2	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 · **P0BC1** Hybrid/EV Battery Pack Cooling Fan Supply Voltage Circuit Hi · **P0BC3** Hybrid/EV Battery Temperature Sensor E Circuit Range/Perform · **P0BC4** Hybrid/EV Battery Temperature Sensor E Circuit Low

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/p0bc2/>

