



P1120 · BMW

Pedal Position Sensor Circuit

P1120 on BMW vehicles indicates that the engine control module (ECM) has detected an implausible or missing signal from the pedal position sensor circuit, which typically involves the accelerator pedal module and its two redundant sensors. The ECM compares these signals to each other and to expected values; when they disagree or fall out of range, it sets this code and may restrict engine power.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	BMW specific	Medium	Intermediate	Fuel and air metering

Symptoms you may notice

- Illuminated check engine light, often accompanied by the electronic throttle control (ETC) warning light.
- Reduced engine power or limp mode, where the vehicle may not rev beyond idle or a low threshold.
- Poor or delayed throttle response when pressing the accelerator pedal.
- Unexpected engine speed fluctuations or surging while driving.
- Often no symptoms besides the warning light, especially if the fault is intermittent.

Common causes, most likely first

- 1 Faulty accelerator pedal position sensor (integrated in the pedal module).
- 2 Worn or corroded electrical connector at the pedal sensor or throttle body.
- 3 Damaged wiring harness between the pedal sensor and the ECM.
- 4 Contamination or mechanical binding in the accelerator pedal assembly.
- 5 Failed throttle body or dirty throttle plate causing correlation errors.
- 6 Software glitch in the ECM requiring reprogramming.
- 7 Poor ground connection for the pedal sensor circuit.

How to diagnose and fix it

- 1 Read fault memory with a BMW-capable scan tool and record freeze-frame data to understand when the code set.
- 2 Visually inspect the accelerator pedal module, connector, and wiring for damage, corrosion, or loose pins.
- 3 Check live data for both pedal position sensor signals and compare their voltages for plausibility.
- 4 Perform a resistance and continuity test on the sensor circuit wiring between the pedal and ECM.
- 5 Clean the throttle body and perform a throttle adaptation reset if contamination is found.
- 6 Replace the accelerator pedal module if sensor signals are erratic or out of specification.
- 7 After repair, clear fault memory and verify the code does not return during a test drive.



Pedal Sensor Diagnostics Beyond the Pedal

- A common misdiagnosis is replacing the accelerator pedal when the real fault is a chafed wire in the harness near the pedal assembly or a corroded connector pin.
- The throttle body and pedal sensor signals are cross-checked by the ECM; a dirty or failing throttle body can set P1120 even when the pedal sensor itself is fine.
- Intermittent P1120 codes often appear after battery replacement or voltage drops, so always check battery health and ground connections before condemning parts.
- On some BMW models, the pedal sensor is part of a matched pair with the throttle body, and replacing only one may require a software adaptation or coding.
- The code can be stored without illuminating the check engine light if the fault is brief, so a full scan of all modules is essential for accurate diagnosis.

Can I keep driving with P1120?

If the vehicle is in limp mode or the throttle response is severely reduced, avoid driving at high speeds or in heavy traffic and seek repair promptly. If only the warning light is on and the car drives normally, you can drive cautiously to a workshop, but monitor for any change in performance.

Tools that help

- BMW-capable OBD-II scan tool with live data
- Digital multimeter
- Wiring diagram for the accelerator pedal circuit
- Socket set and Torx bits for pedal module removal
- Contact cleaner and dielectric grease

Reading P1120

P	Powertrain: engine, transmission and emissions.
1	Manufacturer-specific code (BMW): its meaning depends on the make.
1	Fuel and air metering.
20	The exact fault within that area.

Often seen with

P0121 Throttle Position Sensor A Circuit Range/Performance · **P0122** Throttle Position Sensor A Circuit Low Input · **P0123** Throttle Position Sensor A Circuit High Input · **P0222** Throttle Position Sensor B Circuit Low Input · **P2135** Throttle/Pedal Position Sensor A/B Voltage Correlation



See it working

Watch the animated explainer [EV Powertrain Trainer: How an Electric Car Drives](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/bmw-p1120/>

