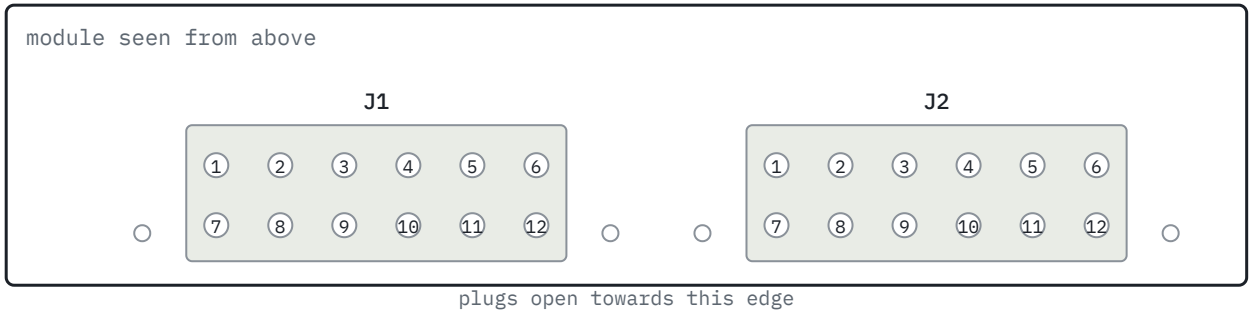
VAN SENSOR MODULE

Connector wiring guide

The module has two sealed 12-way Molex plugs, J1 and J2. J1 carries power, battery sensing, the temperature sensors and the data link to the display. J2 carries the pressure sensors, exhaust temperature probes and the four switched outputs.

Pin numbering

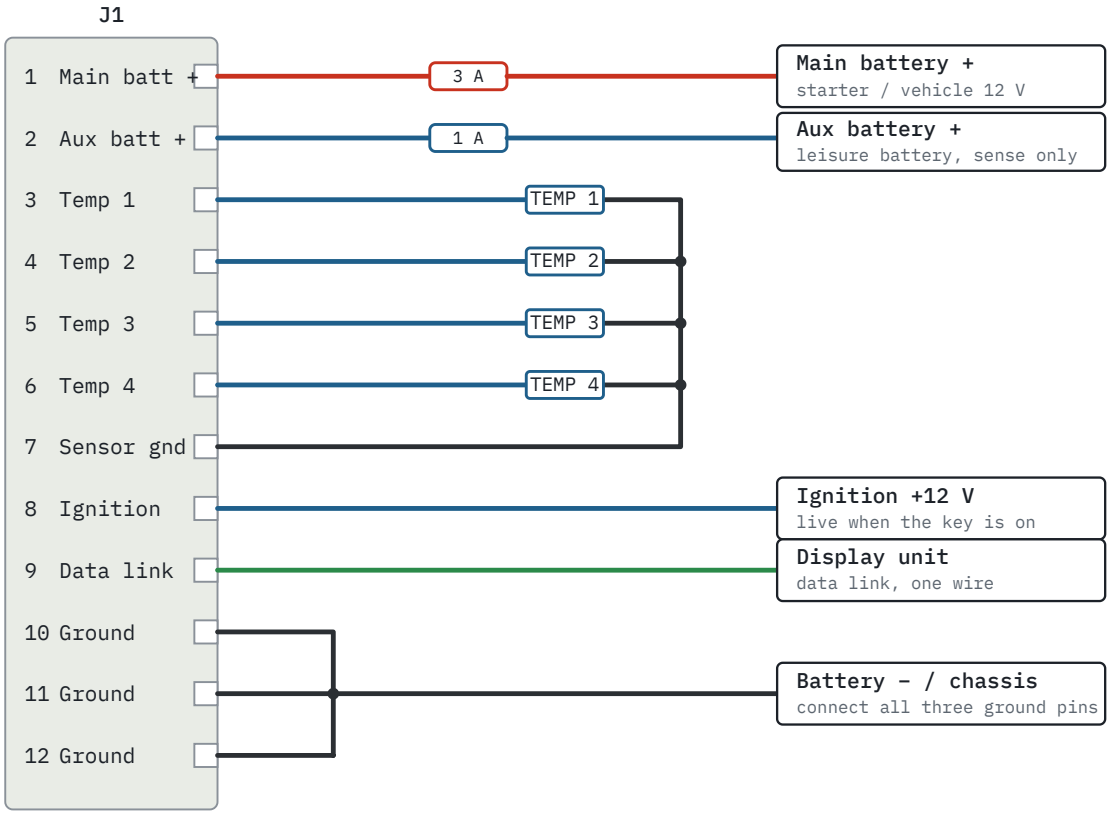


Pin numbers as seen on the module. The cable plug is the mirror image, so match the numbers moulded into the plug itself before crimping.

Battery +12 V · Ground · +5 V sensor supply · Sensor / sense input · Data link (LIN) · Switched output

J1 — power, batteries, temperature sensors, data link

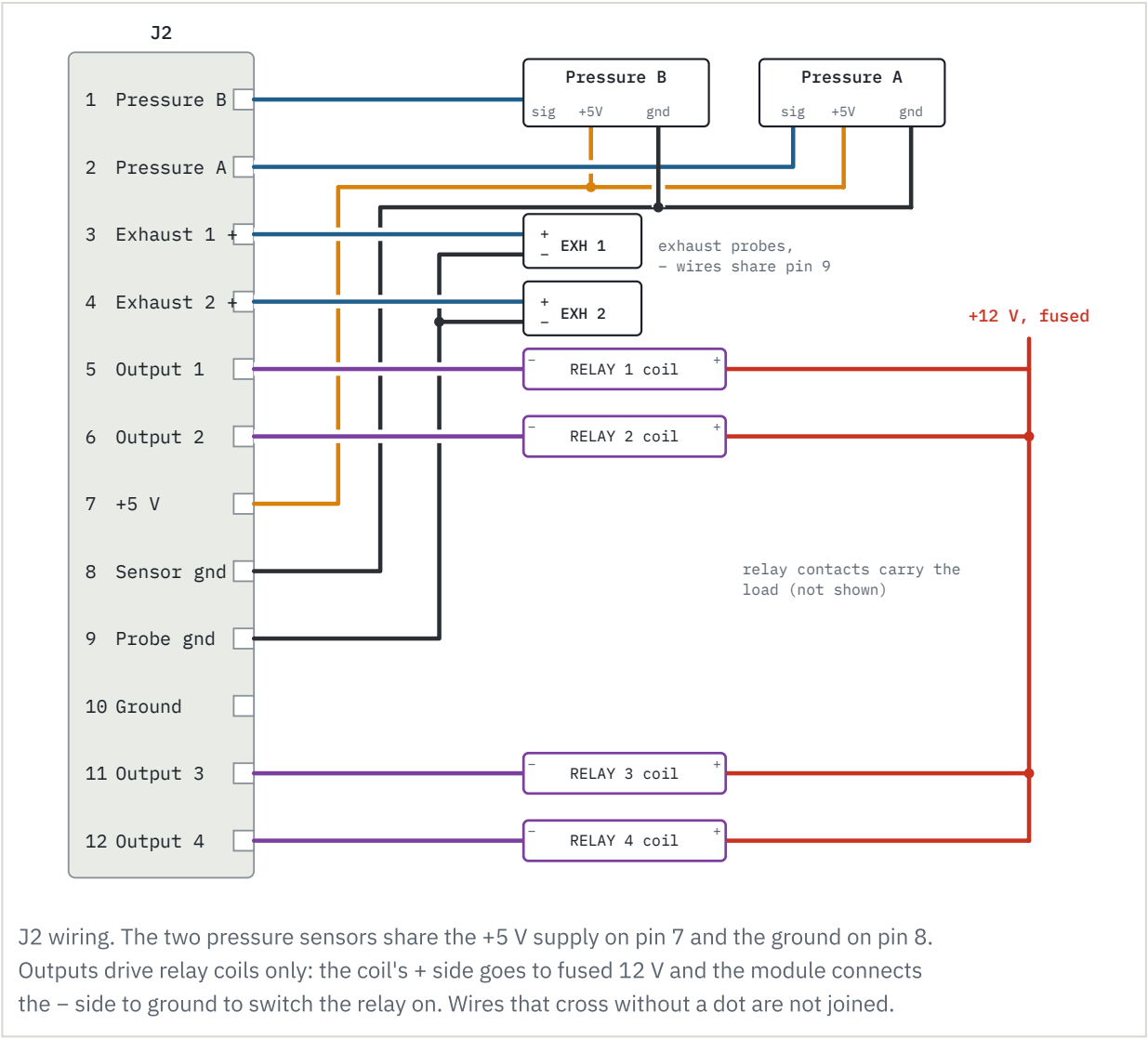
PIN	FUNCTION	CONNECT TO
1	**Main battery +** +12V-RAW	Vehicle battery positive through a 3 A fuse. Powers the module and gives the main battery reading.
2	**Aux battery +** BRV_AUX	Leisure battery positive. Sense wire only, thin wire with a 1 A fuse at the battery.
3	**Temp sensor 1** SENSOR0	Two-wire temperature sensor, other wire to pin 7.
4	**Temp sensor 2** SENSOR1	Two-wire temperature sensor, other wire to pin 7.
5	**Temp sensor 3** SENSOR2	Two-wire temperature sensor, other wire to pin 7.
6	**Temp sensor 4** SENSOR3	Two-wire temperature sensor, other wire to pin 7.
7	**Sensor ground** GND	Return wire for the four temperature sensors.
8	**Ignition** ACC	Ignition or accessory +12 V. Tells the module the vehicle is on.
9	**Data link** LBUS	Single wire to the display unit.
10	**Ground** GND	Battery negative or chassis.
11	**Ground** GND	Battery negative or chassis.
12	**Ground** GND	Battery negative or chassis.



J1 wiring. Each temperature sensor has two wires: one to its own pin (3 to 6) and one to the shared sensor ground on pin 7. Fuses go at the battery end of the wire.

J2 — pressure sensors, exhaust temperature, switched outputs

PIN	FUNCTION	CONNECT TO
1	**Pressure sensor B** SENSOR5	Signal wire of a 3-wire 0–5 V sensor.
2	**Pressure sensor A** SENSOR4	Signal wire of a 3-wire 0–5 V sensor.
3	**Exhaust temp 1 +** EGT0+	Thermocouple probe 1, + wire.
4	**Exhaust temp 2 +** EGT1+	Thermocouple probe 2, + wire.
5	**Output 1** OUT0	Relay coil, – side. Max 500 mA.
6	**Output 2** OUT1	Relay coil, – side. Max 500 mA.
7	**+5 V supply** +5V	Supply wire for both pressure sensors.
8	**Sensor ground** GND	Ground wire for both pressure sensors.
9	**Probe ground** GND	– wires of both thermocouple probes.
10	**Ground** GND	Spare ground.
11	**Output 3** OUT2	Relay coil, – side. Max 500 mA.
12	**Output 4** OUT3	Relay coil, – side. Max 500 mA.



J2 wiring. The two pressure sensors share the +5 V supply on pin 7 and the ground on pin 8. Outputs drive relay coils only: the coil's + side goes to fused 12 V and the module connects the – side to ground to switch the relay on. Wires that cross without a dot are not joined.

> **Outputs: 500 mA max each, relays only.** Do not wire lamps, pumps, fans or heaters directly to pins 5, 6, 11 or 12. Use an automotive relay with a built-in suppression diode (or fit a diode across the coil) and let the relay contacts carry the load.

Installation notes

- **Power.** Feed J1 pin 1 from the main battery through a 3 A fuse. The module protects itself against reversed polarity and voltage spikes, but the fuse protects the wiring.
- **Temperature sensors (J1 pins 3–6).** Two-wire resistive sensors, no polarity. One wire to the pin, one to pin 7. Keep sensor wiring away from the relay and ignition wires.
- **Exhaust temperature probes (J2 pins 3–4).** Thermocouple probes have a + and – wire. + goes to pin 3 or 4, – goes to pin 9. Use the probe's own extension cable where possible and keep the pair together along its whole length.
- **Data link (J1 pin 9).** One wire to the display unit. The display and the module must also share a ground.
- **Battery sensing.** Pin 2 only measures the aux battery and draws almost no current. Use thin wire with a small fuse at the battery end. Both battery inputs read correctly up to 24 V.
- **Pressure sensors (J2 pins 1–2).** Three-wire 0–5 V sensors. Red to pin 7 (+5 V), black to pin 8 (ground), signal to pin 1 or 2. Total draw from pin 7 should stay under 100 mA.
- **Ignition (J1 pin 8).** Any +12 V that is live when the key is on. The module uses it to know when the vehicle is running.
- **Grounds.** Wire all three J1 ground pins (10, 11, 12) to battery negative or a clean chassis point. Keep sensor grounds (J1 pin 7, J2 pins 8 and 9) for sensors only so the relay current does not disturb the readings.