Carel PJEZ Controller Replacement: Complete Wiring Guide

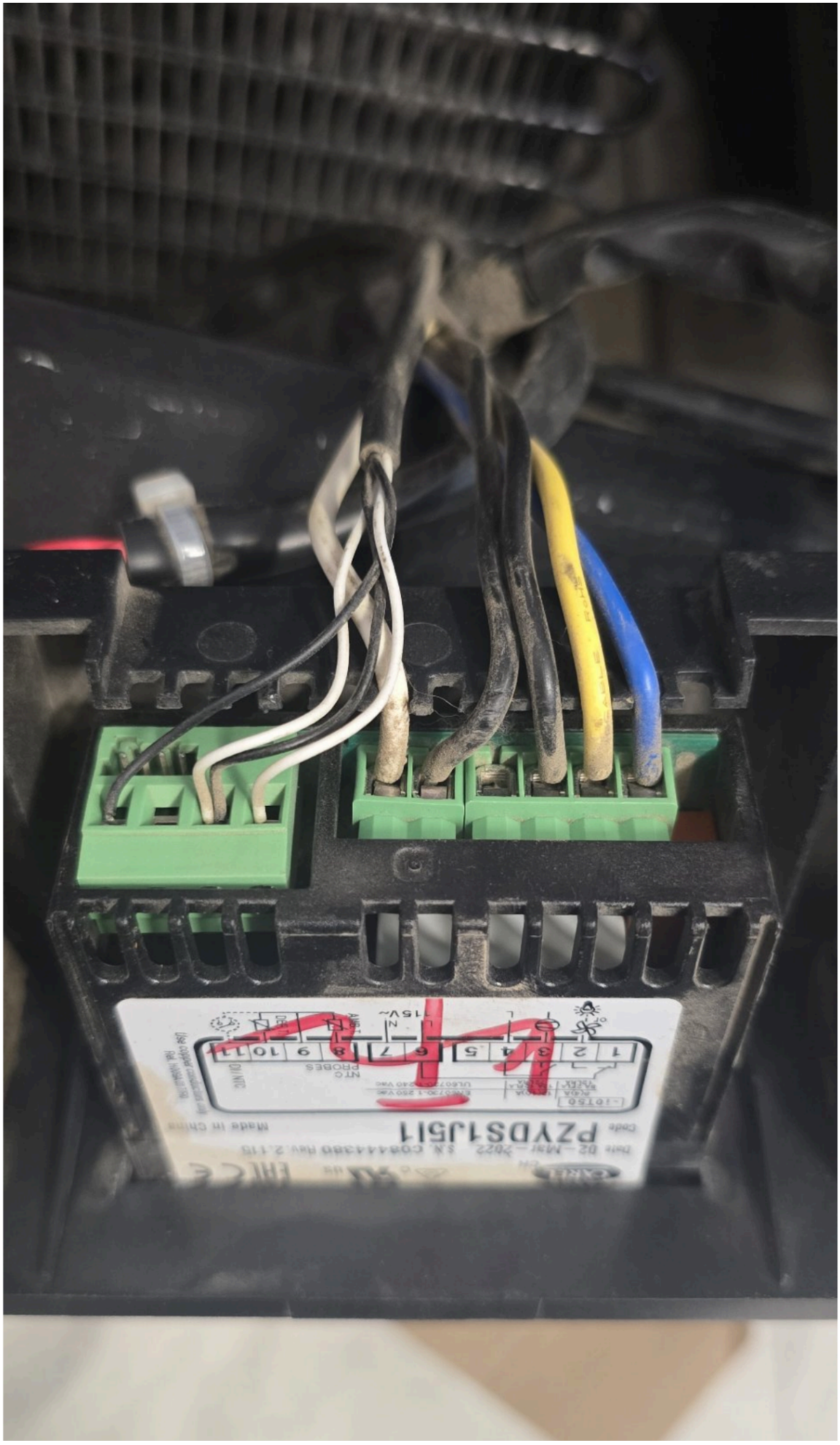
Controller code **PZYDS1J5I1** (Carel easy PJEZ series, 115 V) — which wire goes to which terminal, with photos from a real service call.

When the electronic controller on a commercial refrigerator or freezer fails, swapping in a new Carel PJEZ is a quick job — *if* every wire lands back on the right terminal. The load and power wires are hard to get wrong. The temperature probes are not: on this controller the two NTC sensors share one common terminal, and wiring them as two separate pairs is the most common mistake we see. This guide shows the exact layout.

Before you start

- **Safety first:** switch the unit off and unplug it (or open the breaker) before touching any terminal. The load terminals carry line voltage.
- **Photograph the old wiring** before you disconnect a single wire. That photo is your backup plan — it is exactly how the correct layout below was confirmed.
- Label each wire with tape if the colors are faded or several wires share a color.



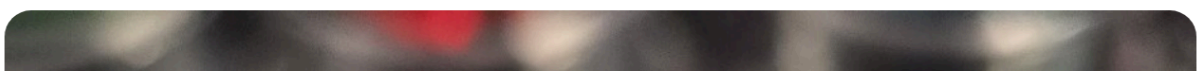

PZYDS1J5I1
15V~
PROBES
NTC



The original wiring on the unit, before the swap. Note the probe block on the left: both sensor pairs land on terminals 8, 9 and 11 — terminal 10 is empty.

Terminal map

Terminal(s)	What connects there
1 – 5	Relay (load) outputs — compressor, defrost and fan, exactly as shown in the diagram on the controller label. Move each wire from the old controller to the **same-numbered** terminal on the new one, one wire at a time.
6	**L** — Line, power supply
7	**N** — Neutral, power supply (115 V~ between 6 and 7)
8 & 9	**AMB probe** — the room / air temperature sensor (NTC)
9 & 11	**DEF probe** — the evaporator / defrost temperature sensor (NTC). Terminal 9 is shared with the AMB probe.
10	**Stays empty.** Nothing connects here in this setup.




c US
EAC CE
S.N. C25798171 Rev.2.115
NSF
COMPONENT
Made in China
EN60730-1 250 Vac
UL60730-1 240 Vac
NTC
PROBES
SERIAL
COMM
PROG
KEY
DI / NTC
6 7 8 9 10 11
L N
115V~
AMB.T.
DEF.T.
Use copper conductors only
Ref. H006A020/R0



The factory label diagram. Under “NTC PROBES” you can see the AMB T. and DEF T. sensor symbols, the 115 V~ supply on terminals 6 (L) and 7 (N), and terminal 11 marked DI/NTC.

> **The trap:** the two probes do **not** get one pair of terminals each. It looks natural to wire them 8–9 and 10–11 — and it is wrong on this controller. Terminal **9 is the common**: room probe on 8 & 9, defrost probe on 9 & 11, and terminal 10 stays empty. Wired the “natural” way, the controller reads the defrost sensor incorrectly and defrost cycles go wrong.

Step-by-step replacement

1. Power the unit down and confirm it is dead.
2. Take a clear photo of the old controller’s wiring (see ours above).
3. Move the load wires on terminals **1–5** to the new controller — same numbers, one at a time, so nothing can get crossed.
4. Move the power wires: **L to terminal 6, N to terminal 7**.
5. Connect the probes:
    - AMB (room) sensor: one wire to **8**, the other to **9**.
    - DEF (evaporator) sensor: one wire to **9**, the other to **11**.

    Terminal 9 ends up holding two wires — one from each sensor

Terminal 9 ends up holding two wires — one from each sensor. That is correct.

- Leave terminal **10 empty**.

6. Seat the green plug blocks firmly and tug-test each wire.

Good news: NTC probes have **no polarity** — within each sensor, the two wires can go either way around.

Power-up checks

- The display should show the cabinet temperature with no probe alarm (E0 / E1). A probe alarm almost always means a sensor landed on the wrong terminal — recheck 8, 9 and 11 first.
- Confirm the compressor starts and the temperature starts pulling down.
- Confirm the defrost sensor reads a sensible evaporator temperature (much colder than the cabinet air once the coil is cold).

> **Quick recap:** Power 6 (L) / 7 (N) · Loads 1–5 same-for-same · Room probe 8 & 9 · Defrost probe 9 & 11 · Terminal 9 is common · Terminal 10 empty.

Replacing the controller with the wiring in this order takes a few minutes and saves a return visit. When in doubt, trust the photo of the original wiring over any assumption — that is what it is there for.