

Connecting the Wires — Connector & Wiring Guide

“ How to tell the connectors apart, the wiggle test, and how to read heat damage before it strands you.

Applies to: D-series and eBikes

<https://www.youtube.com/embed/kvBzZ3hTNbM?rel=0>

Would You Know How to Connect These Wires? — if the player does not load, [open the video on YouTube](#).

The connectors you will meet

Connector	Where	Watch for
Three phase wires	Motor to controller	Chafing at the swingarm; color order matters
Hall sensor plug	Motor to controller	Small multi-pin; seats only halfway very easily
Main battery connector	Pack to harness	High current — look for heat discoloration
Charge port	Pack / frame	Water ingress and bent pins
Display cable	Display to controller	Causes E10 when loose
Brake switch leads	Levers to controller	Triggers E02 when pinched
Throttle lead	Grip to controller	Triggers E08 when chafed

The wiggle test

The single most useful diagnostic on an electric bike.

1. Power the bike on.
2. Gently flex one cable run at a time — at the connector, and where it passes a frame edge.
3. Watch the display while you do it.

If the fault appears, changes or disappears as you flex, you have found an **intermittent connection**. That beats any amount of meter work.

Reading connector damage

Sign	Meaning
Green or white deposit	Corrosion — usually water ingress
Brown or black discoloration	Heat from resistance — the connector is a bottleneck
Melted or deformed housing	Serious heat; replace the connector, do not re-use it
Backed-out pin	Push it home; if it will not stay, replace the terminal
Stretched or split seal	No longer water-resistant — replace

Good practice

- **Pull connector bodies, never wires.**
- **Reseat every connector in a faulty circuit** before ordering parts. Most reported faults are a loose connector.
- **Use dielectric grease** on connectors exposed to water.
- **Replace cable ties you cut** — a loose cable chafes through quickly on a dirt bike.
- **Never tape over a broken conductor.** It fails again, usually far from home.

Related

- [Motor Error E07](#) · [Throttle Error E08](#)
- [Brake Error E02](#)
- [Motor & Controller Faults](#)
- [Display & Error Codes](#)

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