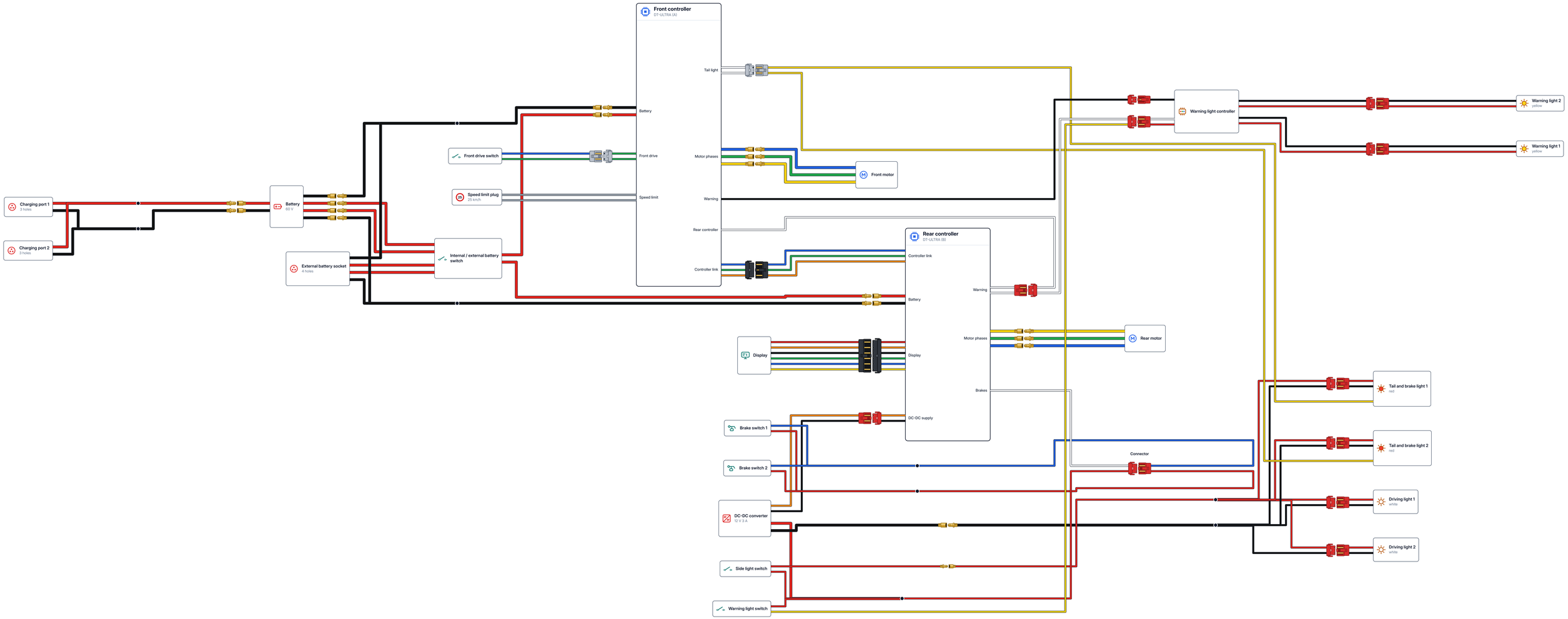
WIRING DIAGRAM

Dualtron Ultra | 60 V

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WIRE COLOURS

- Black BK
- Blue BU
- Green GN
- Grey GY
- Orange OG
- Red RD
- White WH
- Yellow YE

CONNECTORS

Gold pins: male side. Dark sockets: female side.

- Bullet connectors
- Splice: wires are joined at this point
- JST SM plug

NOTES

1. The internal / external battery switch selects the battery feeding the + of both controllers: the built-in pack or the battery plugged into the 4-hole external socket. The – of the external socket is joined directly to the – of the pack and of the controllers, without going through the switch.
2. On the original, the pin numbers of the link connector between the controllers do not match from one side to the other: front controller side, blue on 4, green on 3, orange on 1; rear controller side, orange on 4, green on 2, blue on 1. The wires are matched here by colour.
3. On the original, the warning light controller inputs are only marked SC and JS. The SC wire reaches the rear controller in the same red plug as a white wire coming from the front controller, whose function the original does not give.
4. Each red tail light has three wires. The red and the black join the driving lights, fed through the side light switch. The yellow goes to the front controller and turns white after the grey plug. The original does not say which one drives the brake light.
5. Both brake switches share one "left / right" label on the original, which does not say which one is on the left.
6. The original diagram shows no throttle.

DOCUMENT

Based on the manufacturer diagram "Schéma électrique DUALTRON Ultra" dated 26 April 2019.

Redrawn by FōhzShop on 1 November 2026.

Disconnect the battery before any work.

CONNECTOR PINOUT

Connector	To	Wire
Front controller Motor phases	**Front motor** Connectors: Bullet connectors	Blue · Motor phase Green · Motor phase Yellow · Motor phase
Front controller Controller link	**Rear controller** Controller link Connectors: JST SM plug	4 → 1 · Blue 3 → 2 · Green 1 → 4 · Orange
Front controller Rear controller	**Rear controller** Warning Connectors: JST SM plug	→ 2 · White
Rear controller Motor phases	**Rear motor** Connectors: Bullet connectors	Yellow · Motor phase Green · Motor phase Blue · Motor phase
Rear controller DC-DC supply	**DC-DC converter** Input Connectors: JST SM plug	2 · Orange · IN+ 1 · Black · IN–
Battery Output	**Internal / external battery switch** Built-in battery Connectors: Bullet connectors	Red · Battery + Red · Battery +
Battery Output	**Splice** Connectors: Bullet connectors	Black · Battery –
Battery Output	**Splice** Connectors: Bullet connectors	Black · Battery –
Charging port 1	**Splice**	1 · Red · Charge + 3 · Black · Charge –
Charging port 2	**Splice**	1 · Red · Charge + 3 · Black · Charge –

Connector	To	Wire
Splice	**Battery** Charge Connectors: Bullet connectors	Red · Charge + Black · Charge –
External battery socket	**Internal / external battery switch** External battery	1 · Red · Battery + 2 · Red · Battery +
External battery socket	**Splice**	4 · Black · Battery –
External battery socket	**Splice**	3 · Black · Battery –
Internal / external battery switch Output	**Front controller** Battery Connectors: Bullet connectors	Red · Battery +
Internal / external battery switch Output	**Rear controller** Battery Connectors: Bullet connectors	Red · Battery +
Splice	**Front controller** Battery Connectors: Bullet connectors	Black · Battery –
Splice	**Rear controller** Battery Connectors: Bullet connectors	Black · Battery –
Display	**Rear controller** Display Connectors: JST SM plug	Red Orange Black Green Blue Yellow

Connector	To	Wire
Speed limit plug	**Front controller** Speed limit	Grey Grey
Front drive switch	**Front controller** Front drive Connectors: JST SM plug	Blue, then green after the connector Green
Brake switch 1	**Splice**	Blue Red
Brake switch 2	**Splice**	Blue Red
Splice	**Connector** Brakes	→ 2 · Blue → 1 · Red
Connector Output	**Rear controller** Brakes	2 · White
Connector Output	**Splice**	1 · Red
DC-DC converter Output	**Splice**	Red · +12 V
DC-DC converter Output	**Splice** Connectors: Bullet connectors	Black · Ground
Splice	**Warning light switch**	Red
Side light switch	**Splice**	Red
Splice	**Side light switch** Connectors: Bullet connectors	Red

Connector	To	Wire
Driving light 1	**Splice** Connectors: JST SM plug	2 · Red 1 · Black
Driving light 2	**Splice** Connectors: JST SM plug	2 · Red 1 · Black
Tail and brake light 1 Input 1	**Splice** Connectors: JST SM plug	2 · Red 1 · Black
Tail and brake light 1 Input 2	**Front controller** Tail light Connectors: JST SM plug	Yellow, then white after the connector
Tail and brake light 2 Input 1	**Splice** Connectors: JST SM plug	2 · Red 1 · Black
Tail and brake light 2 Input 2	**Front controller** Tail light Connectors: JST SM plug	Yellow, then white after the connector
Warning light controller SC / JS	**Warning light switch** Connectors: JST SM plug	1 · Red, then yellow after the connector · JS
Warning light controller SC / JS	**Rear controller** Warning Connectors: JST SM plug / JST SM plug	2 → 1 · White · SC
Warning light controller GND	**Front controller** Warning Connectors: JST SM plug	1 · Black · Ground
Warning light controller LF	**Warning light 1** Connectors: JST plug	1 · Black · LED – 2 · Red · LED +
Warning light controller LR	**Warning light 2** Connectors: JST SM plug	1 · Black · LED – 2 · Red · LED +