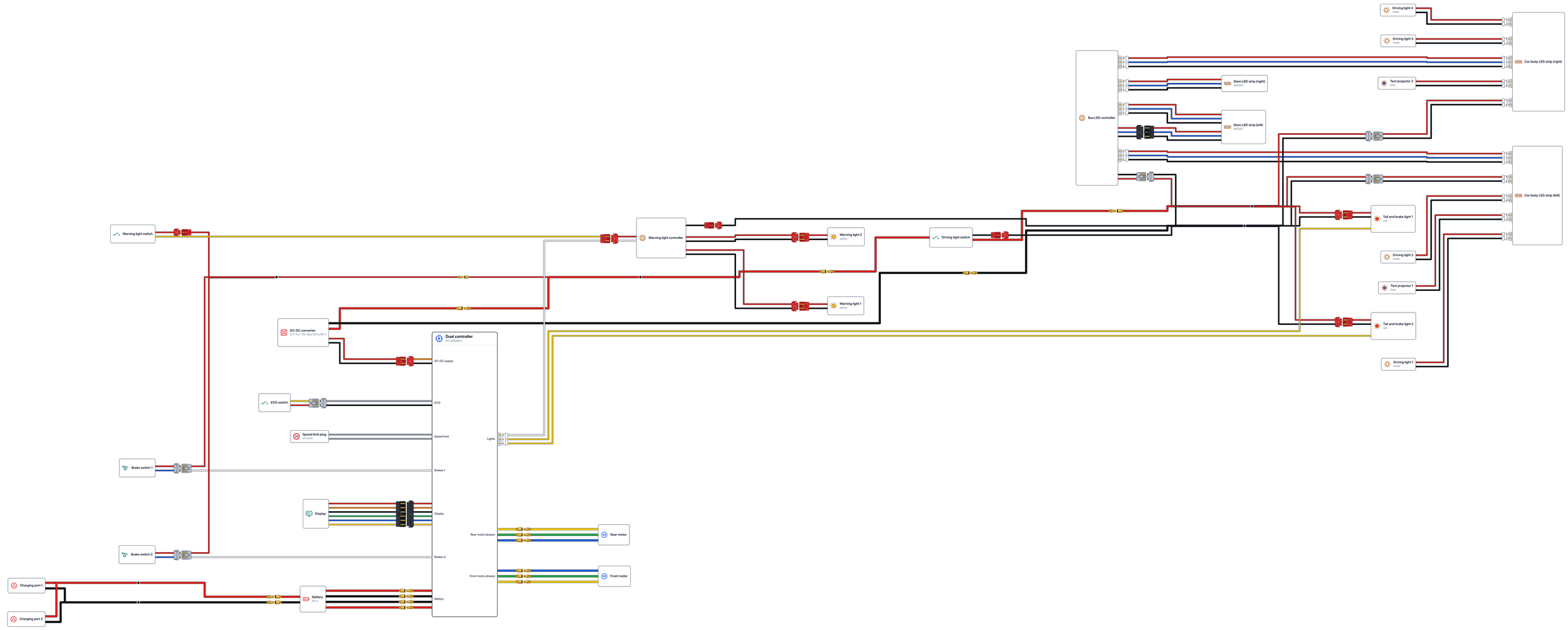
WIRING DIAGRAM

Dualtron Spider 2 | 60 V

FOHZSHOP.FR



WIRE COLOURS

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

CONNECTORS

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

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

NOTES

1. According to the original, the two tail and brake lights and the two yellow warning lights sit at the rear end of the controller.
2. Each red tail light has three wires marked + (red), – (black) and ≈ (yellow). The yellow one goes straight to the controller, on the 3-pin header that also takes the SC wire of the warning light controller.
3. The warning light controller inputs are only marked SC and JS on the original. SC takes the white wire from the controller, JS the warning light switch.
4. The driving lights and the text projectors plug into the car body LED strips, which receive a red and black cable in addition to the RGB cable. The original does not draw the tracks of these strips. On each one, one of the two RGB headers, both marked V+, DO and GND, is not connected.
5. The left pole strip has a second output marked U+, OUT and U–, wired to the 3-pin input of the bus LED controller. A small unlabelled dark grey block is drawn next to its outputs.
6. A small unlabelled dark grey box is drawn on the leads of each text projector.
7. Three 2-pin plugs have only one pin wired: the warning light controller ground (pin 1), the driving light switch indicator negative (pin 1) and the warning light switch (pin 2).
8. Both brake switches carry the same "left / right" label on the original, which does not say which one is on the left.
9. The original diagram shows no throttle.

DOCUMENT

Based on the manufacturer diagram "Schéma électrique DUALTRON Spider 2" dated 21 March 2023.

Redrawn by FOhZShop on 1 November 2026.

Disconnect the battery before any work.

CONNECTOR PINOUT

Connector	To	Wire
Dual controller Front motor phases	**Front motor** Connectors: Bullet connectors	Blue · Motor phase Green · Motor phase Yellow · Motor phase
Dual controller Rear motor phases	**Rear motor** Connectors: Bullet connectors	Yellow · Motor phase Green · Motor phase Blue · Motor phase
Dual controller DC-DC supply	**DC-DC converter** Input Connectors: JST SM plug	2 · Orange, then red after the connector · IN+ 1 · Black · IN–
Battery Output	**Dual controller** Battery Connectors: Bullet connectors	Red · Battery + Black · Battery – Black · Battery – Red · Battery +
Charging port 1	**Splice**	1 · Red · Charge + 3 · Black · Charge –
Charging port 2	**Splice**	1 · Red · Charge + 3 · Black · Charge –
Splice	**Battery** Charge Connectors: Bullet connectors	Red · Charge + Black · Charge –

Connector	To	Wire
Display	**Dual controller** Display Connectors: JST SM plug	Red Orange Black Green Blue Yellow
Brake switch 1	**Dual controller** Brakes 1 Connectors: JST SM plug	Blue, then white after the connector
Brake switch 1	**Splice** Connectors: JST SM plug	Red
Brake switch 2	**Dual controller** Brakes 2 Connectors: JST SM plug	Blue, then white after the connector
Brake switch 2	**Splice** Connectors: JST SM plug	Red
Speed limit plug	**Dual controller** Speed limit	Grey Grey
ECO switch	**Dual controller** ECO Connectors: JST SM plug	Yellow, then grey after the connector Red, then black after the connector
DC-DC converter Output	**Splice** Connectors: Bullet connectors	Red · +12 V

Connector	To	Wire
DC-DC converter Output	**Splice** Connectors: Bullet connectors	Black · Ground
Splice	**Driving light switch** Connectors: Bullet connectors	Red
Splice	**Splice** Connectors: Bullet connectors	Red
Driving light switch	**Splice** Connectors: JST SM plug	1 · Black · Switch light negative
Splice	**Driving light switch** Connectors: Bullet connectors	Red
Warning light switch	**Splice** Connectors: JST SM plug	2 · Red
Warning light controller Lit	**Warning light 1** Connectors: JST SM plug	⇒ 2 · Red · LED + ⇒ 1 · Black · LED –
Warning light controller Lit	**Warning light 2** Connectors: JST SM plug	⇒ 2 · Red · LED + ⇒ 1 · Black · LED –
Warning light controller GND	**Splice** Connectors: JST SM plug	1 · Black · Ground
Warning light controller Input	**Warning light switch** Connectors: JST SM plug	1 · Red, then yellow after the connector · JS

Connector	To	Wire
Warning light controller Input	**Dual controller** Lights Connectors: JST SM plug / Board header	2 ⇒ 1 · White · SC
Bus LED controller Power	**Splice** Connectors: JST SM plug	1 · Black 2 · Red
Bus LED controller RGB output 1	**Stem LED strip (left)** Input Connectors: Board header	Red · +12 V Blue · LED data Black · Ground
Bus LED controller RGB output 2	**Stem LED strip (right)** Connectors: Board header	Red · +12 V Blue · LED data Black · Ground
Bus LED controller RGB output 3	**Car body LED strip (left)** Input Connectors: Board header / Board header	Red · LED + Blue · LED data Black · Ground
Bus LED controller RGB output 4	**Car body LED strip (right)** Input Connectors: Board header / Board header	Red · LED + Blue · LED data Black · Ground
Stem LED strip (left) Output	**Bus LED controller** Input Connectors: JST SM plug	⇒ 1 · Red · U+ ⇒ 2 · Blue · OUT ⇒ 3 · Black · U–
Car body LED strip (left) Power	**Splice** Connectors: Board header / JST SM plug	1 · Red 2 · Black

Connector	To	Wire
Car body LED strip (right) Power	**Splice** Connectors: Board header / JST SM plug	1 · Red 2 · Black
Driving light 1	**Car body LED strip (left)** LED output 1 Connectors: Board header	⇒ 1 · Red ⇒ 2 · Black
Driving light 2	**Car body LED strip (left)** LED output 3 Connectors: Board header	⇒ 1 · Red ⇒ 2 · Black
Driving light 3	**Car body LED strip (right)** LED output 1 Connectors: Board header	⇒ 1 · Red ⇒ 2 · Black
Driving light 4	**Car body LED strip (right)** LED output 3 Connectors: Board header	⇒ 1 · Red ⇒ 2 · Black
Text projector 1	**Car body LED strip (left)** LED output 2 Connectors: Board header	⇒ 1 · Red · LED + ⇒ 2 · Black · LED –
Text projector 2	**Car body LED strip (right)** LED output 3 Connectors: Board header	⇒ 1 · Red · LED + ⇒ 2 · Black · LED –
Tail and brake light 1 Input 1	**Splice** Connectors: JST SM plug	2 · Red · LED + 1 · Black · LED –
Tail and brake light 1 Input 2	**Dual controller** Lights Connectors: Board header	⇒ 3 · Yellow · LED +
Tail and brake light 2 Input 1	**Splice** Connectors: JST SM plug	2 · Red · LED + 1 · Black · LED –
Tail and brake light 2 Input 2	**Dual controller** Lights Connectors: Board header	⇒ 2 · Yellow · LED +