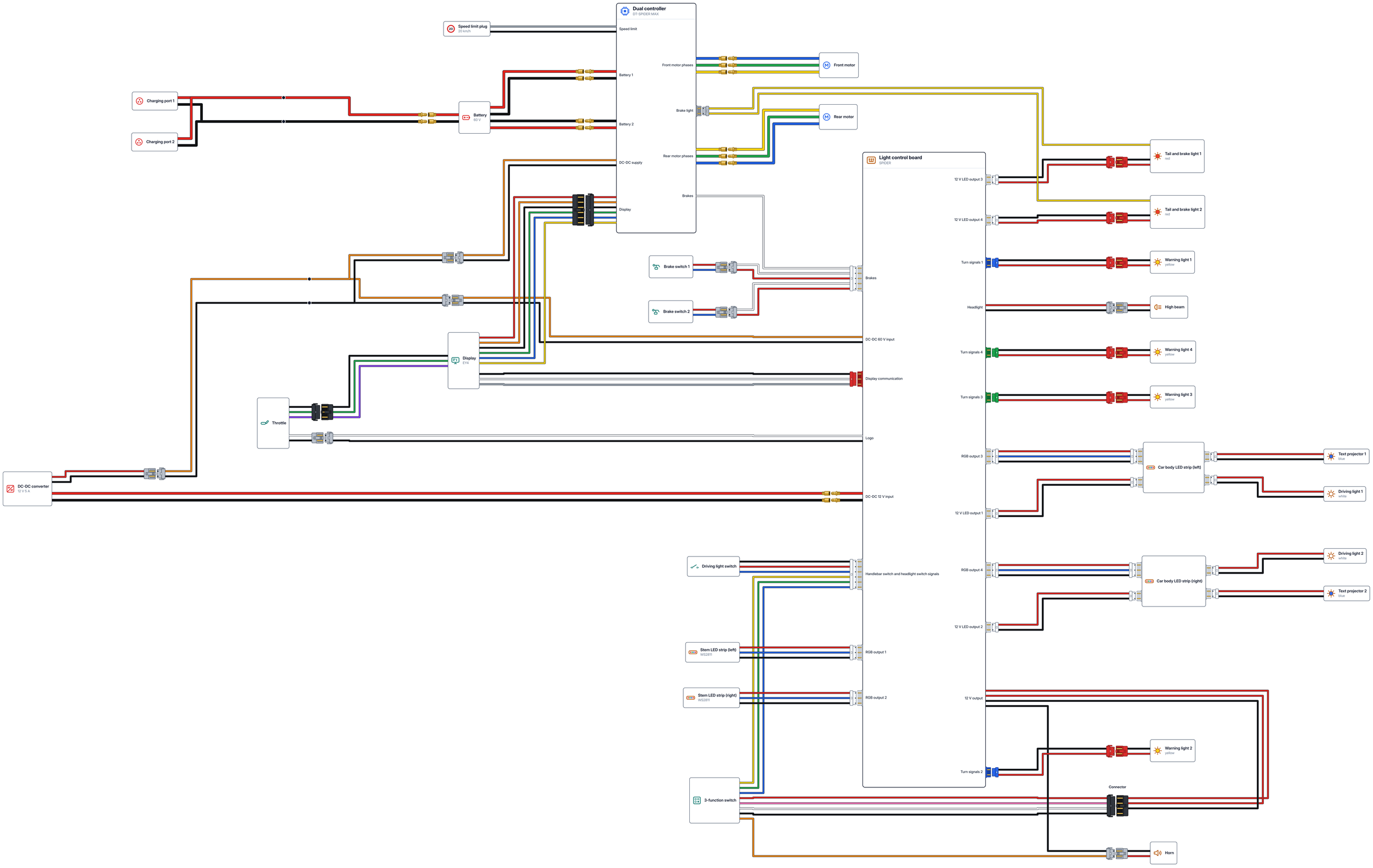
WIRING DIAGRAM

Dualtron Spider Max | 60 V

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WIRE COLOURS

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

CONNECTORS

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

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

NOTES

1. Both brake switches carry the same "left / right" label on the original, which does not say which one is on the left.
2. On each brake switch, the red wire continues white after the grey connector, and the blue wire continues red.
3. The driving light and the text projector on each side plug into the board of the car body LED strip, which receives a red and black cable from the light board in addition to the RGB cable. The original does not draw the tracks of this board. One two-pin header and one RGB header stay free on it; both RGB headers are marked DO.
4. According to the original, warning lights 3 and 4 and both tail and brake lights sit at the rear end of the controller.
5. The 3-function switch has four buttons on the original: headlight, left turn, right turn and horn. Apart from the orange wire going to the horn, the original does not say which wire serves which button.
6. On the black three-pin connector between the light board 12 V output and the switch, pin 3 carries two wires on the switch side, red and pink, and the red wire of pin 2 continues white.
7. On the original, the pink switch wire is drawn peach, and pale orange where it leaves the switch.
8. Pin 1 of the controller brake light header has no wire on the original.
9. On the original, the black wire of the driving light switch leaves below the ON / OFF marks, not below a terminal.
10. A small unlabelled dark grey box is drawn on the leads of each text projector, as on the cable between the throttle and the display.

DOCUMENT

Based on the manufacturer diagram "Schéma électrique DUALTRON Spider max" dated 6 April 2023.

Redrawn by FõhzShop 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
Light control board DC-DC 60 V input	**Splice** Connectors: JST SM plug	Orange Black
Light control board Logo	**Throttle** Logo Connectors: JST SM plug	→ 2 · White → 1 · Black
Light control board 12 V output	**Connector** Input	→ 3 · Red → 2 · Red → 1 · Black
Light control board Headlight	**High beam** Connectors: JST SM plug	Red · LED + Black · LED –
Light control board Brakes	**Dual controller** Brakes Connectors: Board header	5 · White · Brake signal
Light control board RGB output 1	**Stem LED strip (left)** Connectors: Board header	Red · +12 V Blue · LED data Black · Ground
Light control board RGB output 2	**Stem LED strip (right)** Connectors: Board header	Red · +12 V Blue · LED data Black · Ground
Light control board RGB output 3	**Car body LED strip (left)** Input Connectors: Board header / Board header	Red · LED + Blue · LED data Black · LED –
Light control board RGB output 4	**Car body LED strip (right)** Input Connectors: Board header / Board header	Red · LED + Blue · LED data Black · LED –

Connector	To	Wire
Light control board 12 V LED output 1	**Car body LED strip (left)** Power Connectors: Board header / Board header	Red Black
Light control board 12 V LED output 2	**Car body LED strip (right)** Power Connectors: Board header / Board header	Red Black
Light control board Turn signals 1	**Warning light 1** Connectors: Board header / JST SM plug	Black · LED – Red · LED +
Light control board Turn signals 2	**Warning light 2** Connectors: Board header / JST SM plug	Black · LED – Red · LED +
Light control board Turn signals 3	**Warning light 3** Connectors: Board header / JST SM plug	Black · LED – Red · LED +
Light control board Turn signals 4	**Warning light 4** Connectors: Board header / JST SM plug	Black · LED – Red · LED +
Light control board 12 V LED output 3	**Tail and brake light 1** Running light Connectors: Board header / JST SM plug	Black · LED – Red · LED +
Light control board 12 V LED output 4	**Tail and brake light 2** Running light Connectors: Board header / JST SM plug	Black · LED – Red · LED +
Battery Output	**Dual controller** Battery 1 Connectors: Bullet connectors	Red · Battery + Black · Battery –
Battery Output	**Dual controller** Battery 2 Connectors: Bullet connectors	Black · Battery – Red · 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 –
Display Controller	**Dual controller** Display Connectors: JST SM plug	Red Orange Black Green Blue Yellow
Display Light board	**Light control board** Display communication Connectors: Board header	Black White Grey
Throttle	**Display** Throttle Connectors: JST SM plug	1 · Black 2 · Green 3 · Violet
3-function switch	**Light control board** Handlebar switch and headlight switch signals Connectors: Board header	Yellow Green Blue
Connector Output	**3-function switch**	3 · Red 3 · Pink 2 · White 1 · Black
Driving light switch	**Light control board** Handlebar switch and headlight switch signals Connectors: Board header	Black Red Blue
Brake switch 1	**Light control board** Brakes Connectors: JST SM plug / Board header	2 → 4 · Red, then white after the connector · Brake signal 1 → 2 · Blue, then red after the connector · +12 V
Brake switch 2	**Light control board** Brakes Connectors: JST SM plug / Board header	2 → 3 · Red, then white after the connector · Brake signal 1 → 1 · Blue, then red after the connector · +12 V

Connector	To	Wire
Speed limit plug	**Dual controller** Speed limit	Grey Black
DC-DC converter Input	**Splice** Connectors: JST SM plug	Red, then orange after the connector · IN+ Black · IN–
DC-DC converter Output	**Light control board** DC-DC 12 V input Connectors: Bullet connectors	Red · +12 V Black · Ground
Splice	**Dual controller** DC-DC supply Connectors: JST SM plug	Orange Black
Horn	**3-function switch** Connectors: JST SM plug	Red, then orange after the connector · Horn
Horn	**Light control board** 12 V output Connectors: JST SM plug	Black · Ground
Tail and brake light 1 Brake light	**Dual controller** Brake light Connectors: Board header	→ 3 · Yellow · Brake light
Tail and brake light 2 Brake light	**Dual controller** Brake light Connectors: Board header	→ 2 · Yellow · Brake light
Car body LED strip (left) LED output 1	**Driving light 1** Connectors: Board header	Red Black
Car body LED strip (left) LED output 2	**Text projector 1** Connectors: Board header	Red · LED + Black · LED –
Car body LED strip (right) LED output 1	**Driving light 2** Connectors: Board header	Red Black
Car body LED strip (right) LED output 2	**Text projector 2** Connectors: Board header	Red · LED + Black · LED –