

CONNECTORS TROUBLESHOOTING MANUAL

If you experience issues with motor temperature, problems with hall/encoder sensors, or other connection issues, it might be due to water entering the connectors, debris inside of the connectors, unplugged connectors or bent pins. SurRon/Talaria wiring harnesses and Torp wiring harness are not waterproof, and **water can cause corrosion or bad connections**. See an example on [page 4](#).

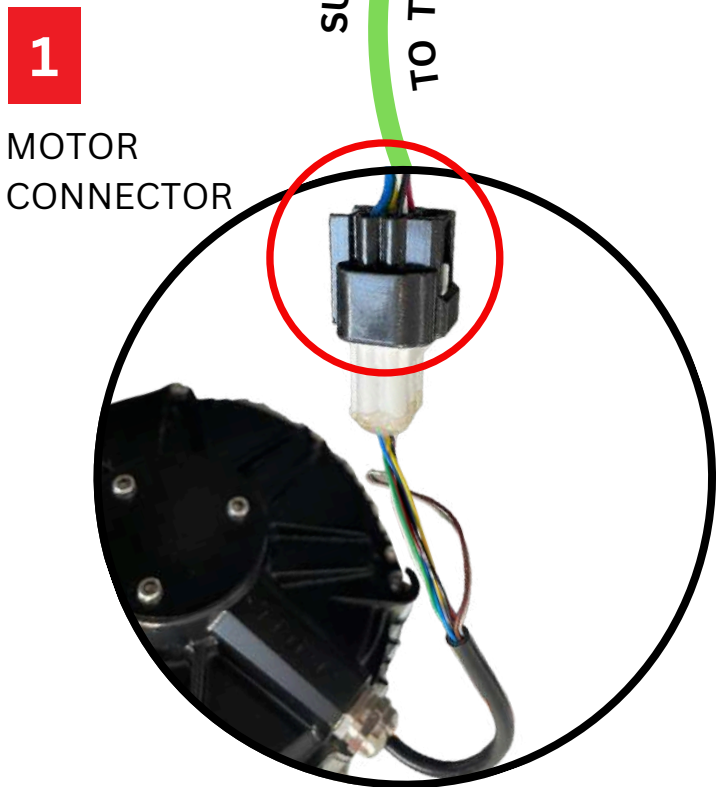
Even if the connectors are plugged in, and seem fine, we recommend unplugging them and using **contact spray**. After drying, apply **dielectric grease** to the connectors.

If you're experiencing issues with **BMS / battery communication**, skip to [page 5](#).

In case the **controller is not responding** (no Bluetooth connection, no green light on the controller is lit) please follow the "Controller Fault Diagnosis manual".

There are 3 connectors to examine between the motor and the controller, if you're having issues with **temperature, or hall/encoder**. See [page 2-4](#).

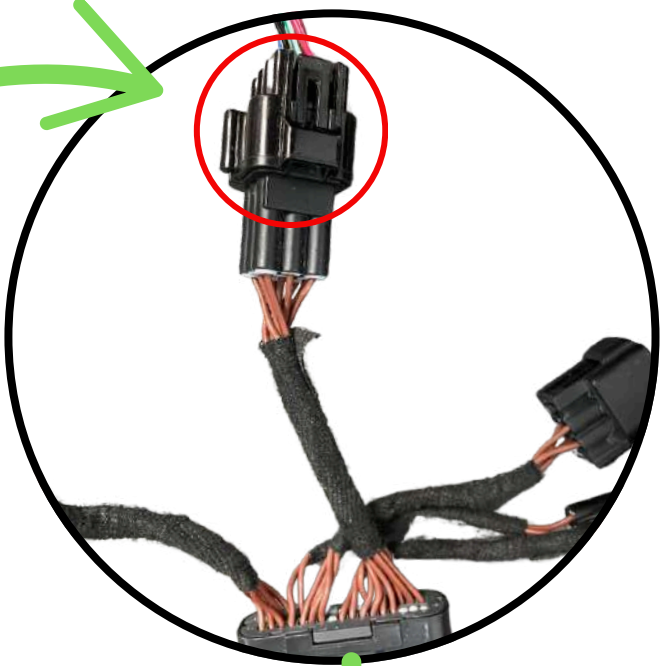
CONNECTORS DIAGRAM



SURRON WIRING HARNESS
TO TORP WIRING HARNESS

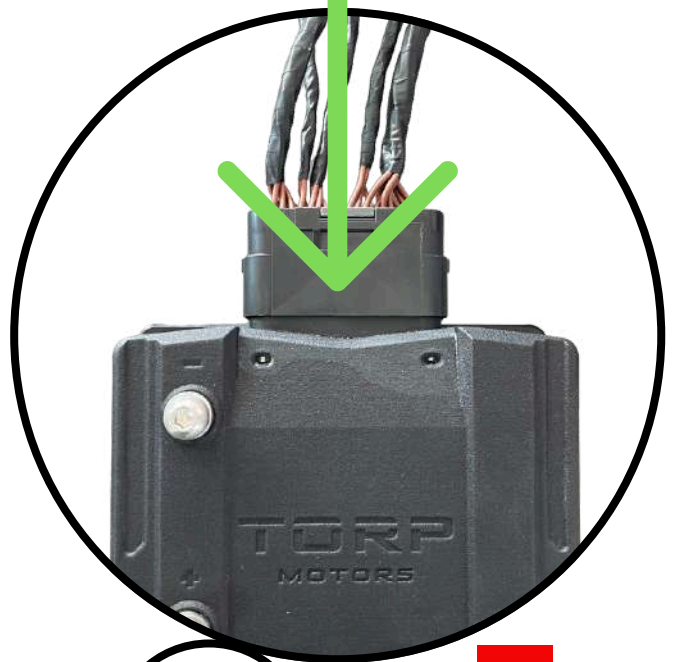
A green arrow points from the motor connector towards the top-right diagram.

2 9-PIN
CONNECTOR



TORP WIRING
HARNESS TO
TORP MAIN
CONNECTOR

A green arrow points from the 9-pin connector towards the bottom-right diagram.



UNABLE TO CALIBRATE CONTROLLER UNREALISTIC TEMPERATURE READINGS

To diagnose the issue, open the Torp app. Go to the 5th screen and open **Diagnostics**.

Possible issues

How it manifests

CASE 1: Temp sensor wire is broken (white)

Temp motor:	4081 (-99.9 °C)
Temp motor resistance:	2913200 Ω
Temp controller:	2077 (24.1 °C)
HALL 1:	1
HALL 2:	0
HALL 3:	0

Torp app Diagnostics

Temperature motor is -99,
Temperature motor resistance is higher then 100.000, but not "Infinity"

CASE 2: Ground wire is broken (black) or motor 6-pin connector is not plugged in

Temp motor:	4095 (-99.9 °C)
Temp motor resistance:	Infinity Ω
Temp controller:	2083 (24.1 °C)
HALL 1:	1
HALL 2:	1
HALL 3:	1

Torp app Diagnostics

Temperature motor is -99,
Temperature motor resistance is "Infinity"
Hall 1/2/3 are all 1's

CASE 3: Positive 5V wire is broken (red)

Temp motor:	789 (17.5 °C)
Temp motor resistance:	587 Ω
Temp controller:	2077 (24.3 °C)
HALL 1:	1
HALL 2:	1
HALL 3:	1

Torp app Diagnostics

Hall 1/2/3 are all 1's,
Motor temperature is OK

For a video explaining these connections and their locations, click [here](#).

MOTOR **TEMPERATURE JUMPS** ENTERING TEMPERATURE **LIMIT**

MAIN TORP CONTROLLER CONNECTOR

Check all the pins on the main Torp controller connector carefully to ensure that water breach hasn't caused any pins to corrode or break off as shown below:



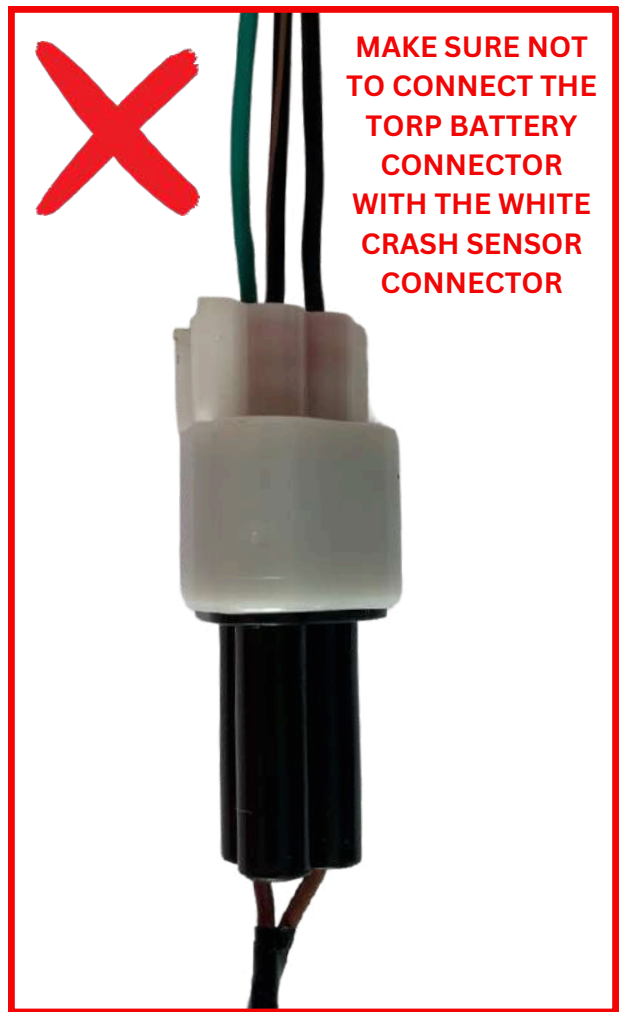
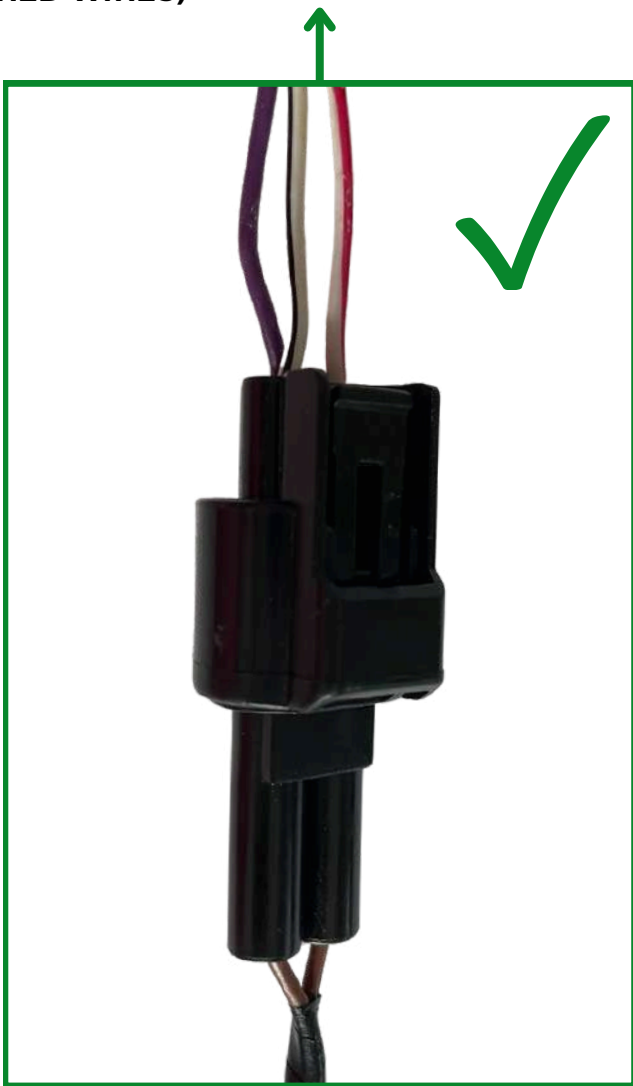
In case there is no corrosion and water breach, watch [this video](#) to determine the issue.

BATTERY COMMUNICATION CONNECTOR

“No BMS communication”

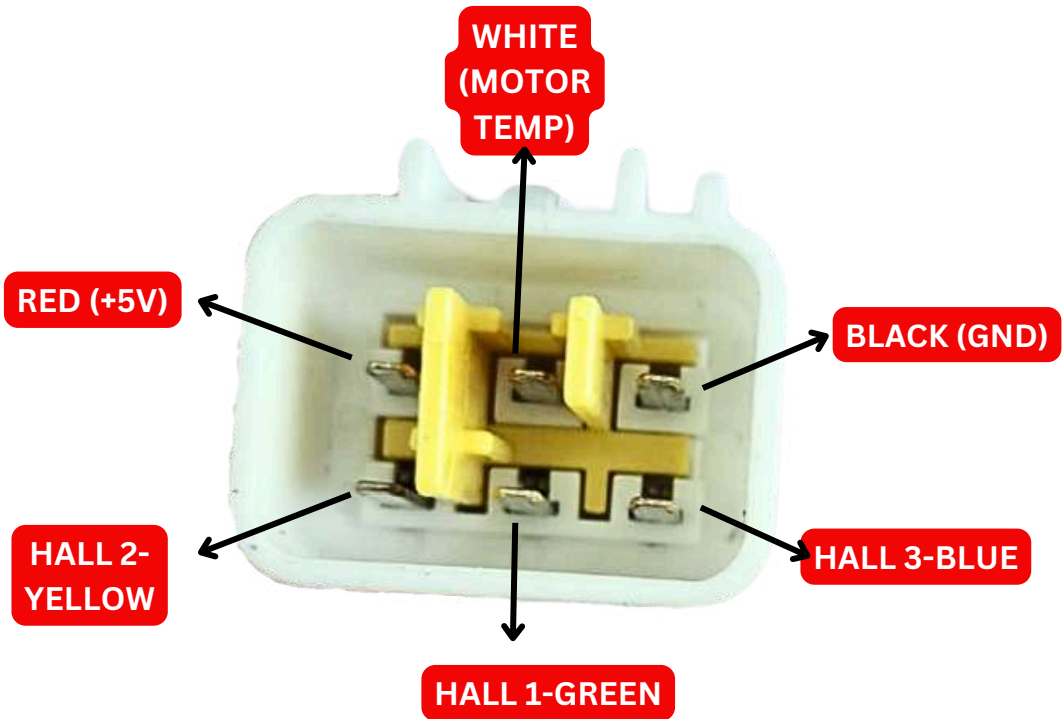
If you're experiencing battery communication error, the 3-pin battery communication connector with two wires on the Torp wiring is not properly connected or the connection is loose, please see the photo below to make sure it's properly installed.

**SURRON SIDE 3-PIN CONNECTOR
(PURPLE, WHITE-BLACK AND WHITE-
RED WIRES)**

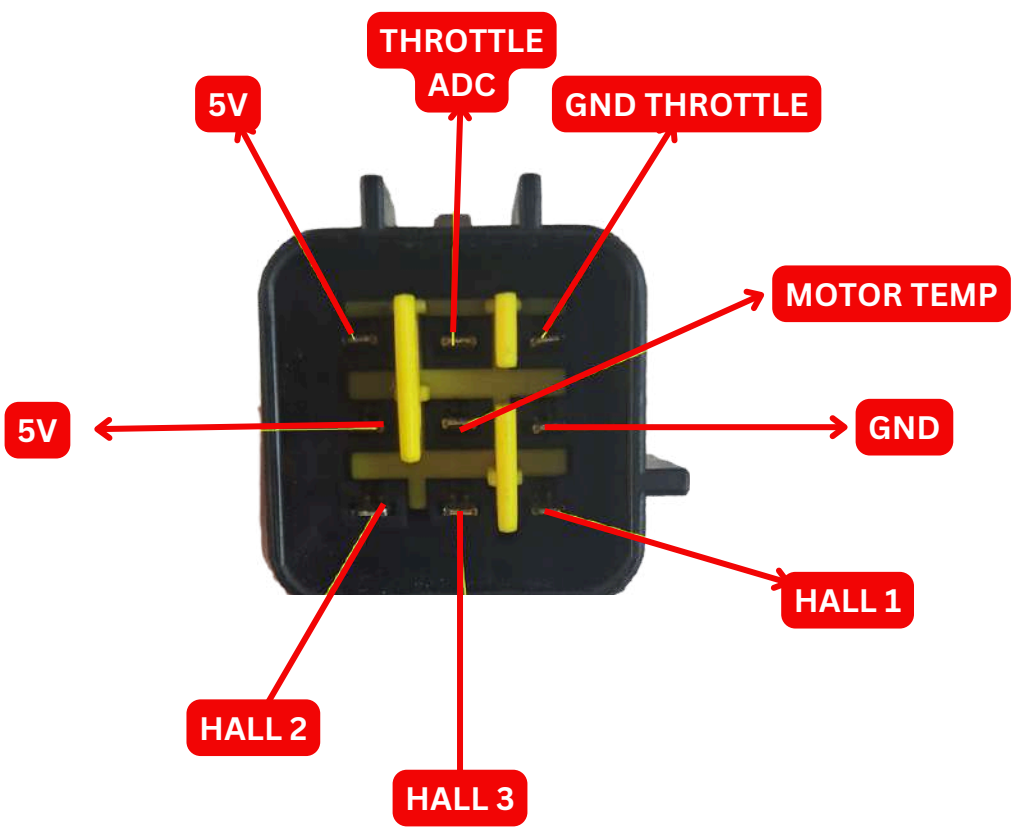


**TORP 3-PIN CONNECTOR WITH TWO
WIRES**

1. 6-PIN MOTOR CONNECTOR PINOUT



2. 9-PIN CONNECTOR PINOUT



3. MAIN TORP WIRING HARNESS PIN-OUT

