

L298N

Motor Drivers / Dual H-bridge

Dual H-bridge connections, direction logic and module jumper cautions.

01 Module terminals

Motor A

OUT1/OUT2; IN1/IN2 set direction; ENA enables or receives PWM.

Motor B

OUT3/OUT4; IN3/IN4 set direction; ENB enables or receives PWM.

Power

VS motor supply, 5 V logic, GND. Common boards label VS as +12V; actual limits depend on module.

02 Truth table / each bridge

EN = 0

Inputs any -> outputs high impedance -> coast.

EN = 1, IN = 10

OUT = 10 -> one direction.

EN = 1, IN = 01

OUT = 01 -> reverse direction.

EN = 1, IN = 00 or 11

Equal outputs -> brake.

03 Jumper checklist

ENA / ENB

Remove the matching enable jumper before connecting a PWM signal.

5V-EN

Regulator jumper rules vary. Check whether the 5 V terminal is an input or output before wiring it.

Voltage drop

Bipolar output stage loses several volts under load; allow for heat and reduced motor voltage.

Before you power on

Do not connect an external 5 V source against an enabled onboard regulator output.
Verify module diode protection and supply limits.

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Datasheets & further reading

ST L298 datasheet

<https://www.st.com/resource/en/datasheet/l298.pdf>