

L293D

Motor Drivers / DIP-16

The 16-pin DIP H-bridge: power domains, paired outputs and enable logic.

01 Pin map / top view, notch up

Left side, top to bottom

1 EN1,2; 2 IN1; 3 OUT1; 4 GND; 5 GND; 6 OUT2; 7 IN2; 8 motor VCC2.

Right side, bottom to top

9 EN3,4; 10 IN3; 11 OUT3; 12 GND; 13 GND; 14 OUT4; 15 IN4; 16 logic VCC1.

Supplies

Logic VCC1: 4.5-7 V; motor VCC2 up to 36 V per datasheet. Connect all ground pins.

02 Direction table / each pair

EN LOW

Outputs disabled -> coast.

EN HIGH, IN1/IN2 = 10

OUT1/OUT2 = 10 -> forward (wiring-dependent).

EN HIGH, IN1/IN2 = 01

OUT1/OUT2 = 01 -> reverse.

EN HIGH, equal inputs

Both outputs equal -> brake.

03 Limits

Current

600 mA per channel rating; thermal/package limits can reduce usable current.

Protection

L293D includes clamp diodes; L293 without D differs.

Speed

Apply PWM to the enable input; account for driver voltage drop.

Before you power on

Confirm DIP orientation before powering up. Motor voltage belongs on pin 8, not logic pin 16.

L293D / continued

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Datasheets & further reading

ST L293D datasheet

<https://www.st.com/resource/en/datasheet/l293d.pdf>