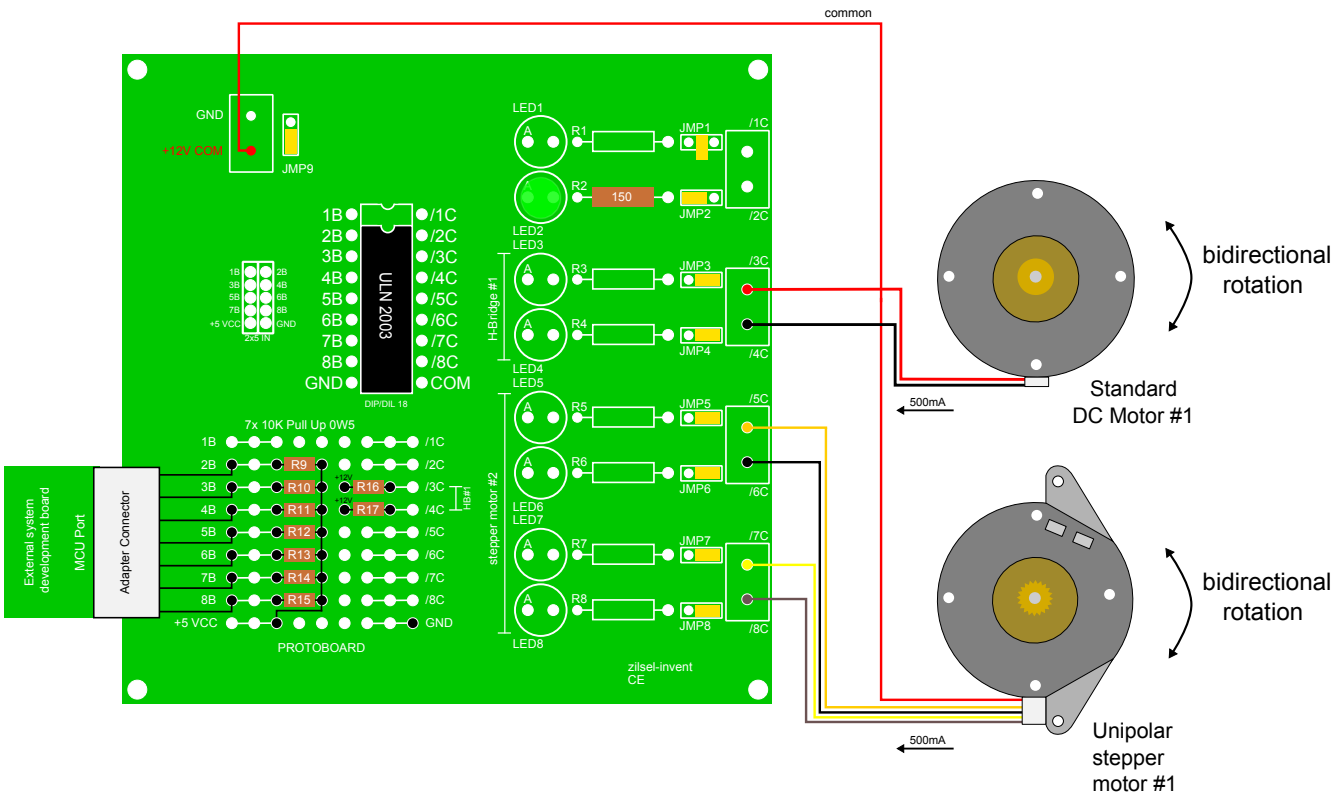


ULN 2003

1x Unipol stepper motor

1x Standard DC motor

1x LED Indicator



Unipolar stepper motor, Standard DC motor and LED indicator

7-Channels driver

ULN2003 TTL / 5V CMOS

Available seven channels, 1B/1C channel excluded/inactive.

Motors:

Unipolar stepper motor connected to the last four pins of the Darlington driver ULN2003.
Identical connection for B12xxx series.

Standard DC motor (two wires) connected to /3C and /4C

Connection:

If your system development board does not have 2x5 input pin head male connector, use the prototype panel to build adapter connector.

Jumpers configuration JMP2 - JMP4:

JMP2 - LED2 active
JMP3, JMP4 - standard DC motor active

Jumpers configuration JMP5 - JMP8:

Yellow LED matrix active: NO
Unipolar stepper motor active: YES

7x Pull Up 10K resistors

Use the prototype panel to add seven additional resistors for each of the seven Darlington transistor channels.

H-Bridge resistors: R16 i R17.

R16 is connected to /3C.
R17 is connected to /4C.
The other end of each resistor is connected to 12V.

R16, R17 = 82, 1W

Remarks: The examples relate to the DC motors rated at 12V and $\leq 500\text{mA}$,
LED and resistor values are calculated regarding TTL / 5V CMOS logic families / 12V.

Before using, be sure to consult the manufacturer's documentation/specification of DC motors / ULN2xxx / BA12xxx IC circuits.

MCU - microcontroller unit

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