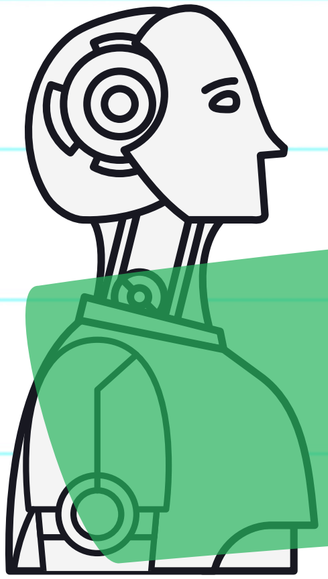
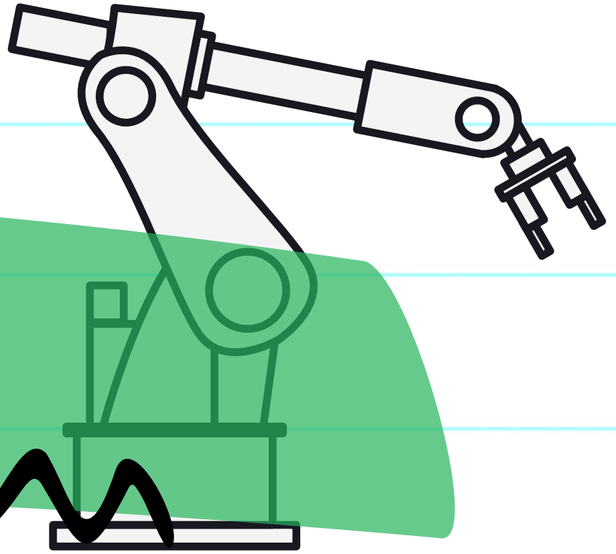


AUXILIAR 2



Profesora: Carolina Silva

Auxiliares:

Makarena Torres

Francisco Cáceres

Ayudantes:

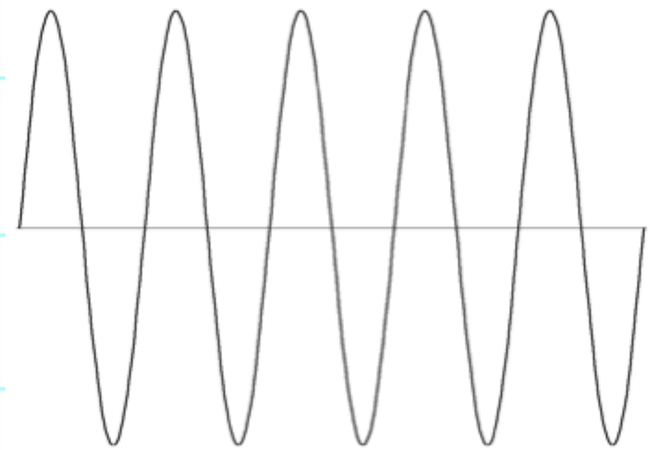
Nicole Ortiz

Randy Bartolo

Fernando Navarrete

ACTUADORES

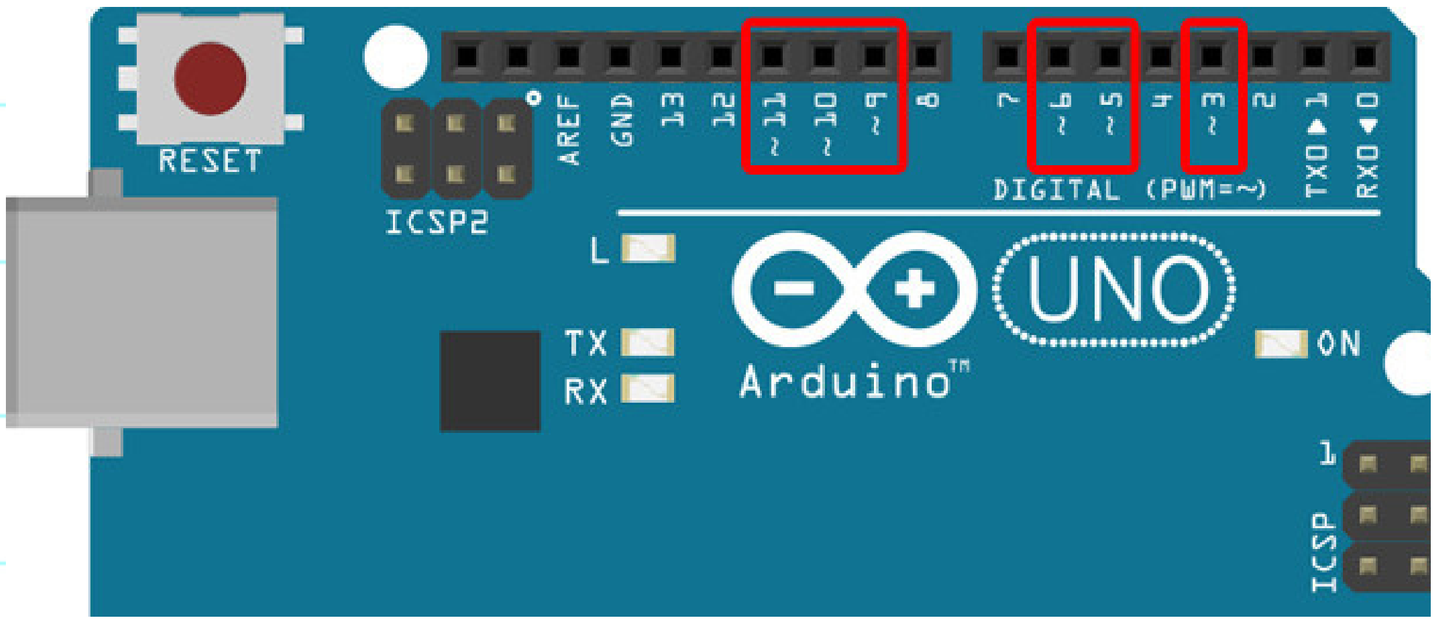
SEÑALES

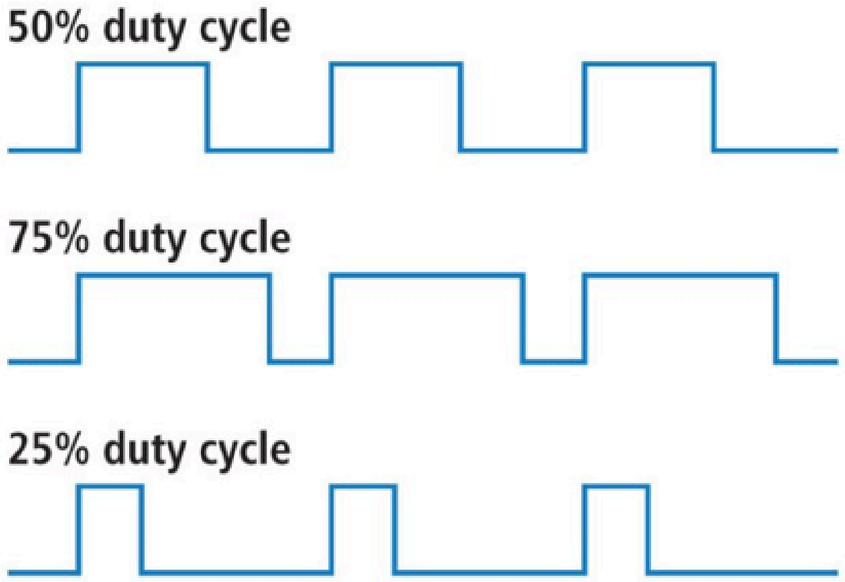


ACTUADOR

SEÑALES PWM

PULSE WIDTH MODULATED ⟷ MODULACIÓN POR ANCHO DE PULSO

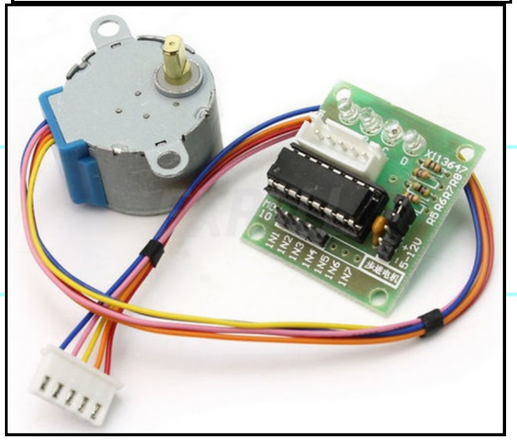




ACTUADORES: MOTORES

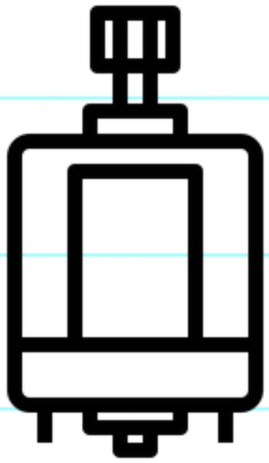
MOTORES DC

SERVOMOTORES



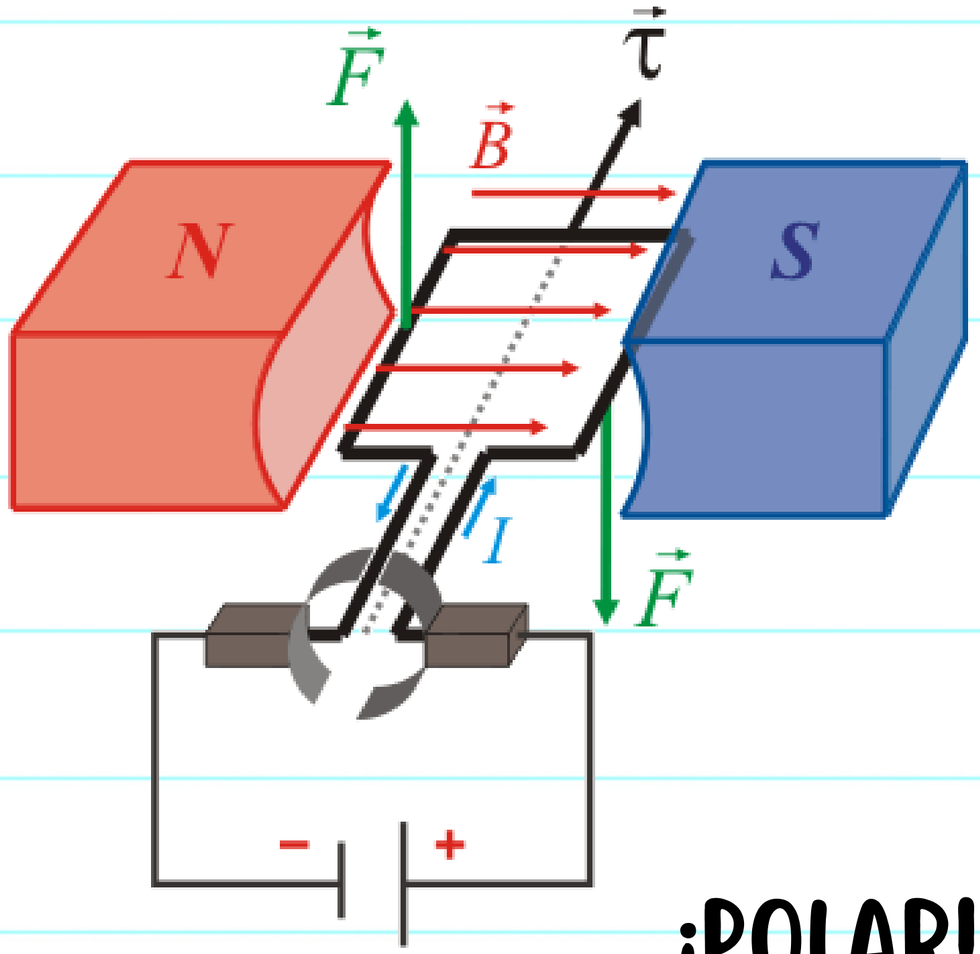
MOTORES PAP

MOTOR DC



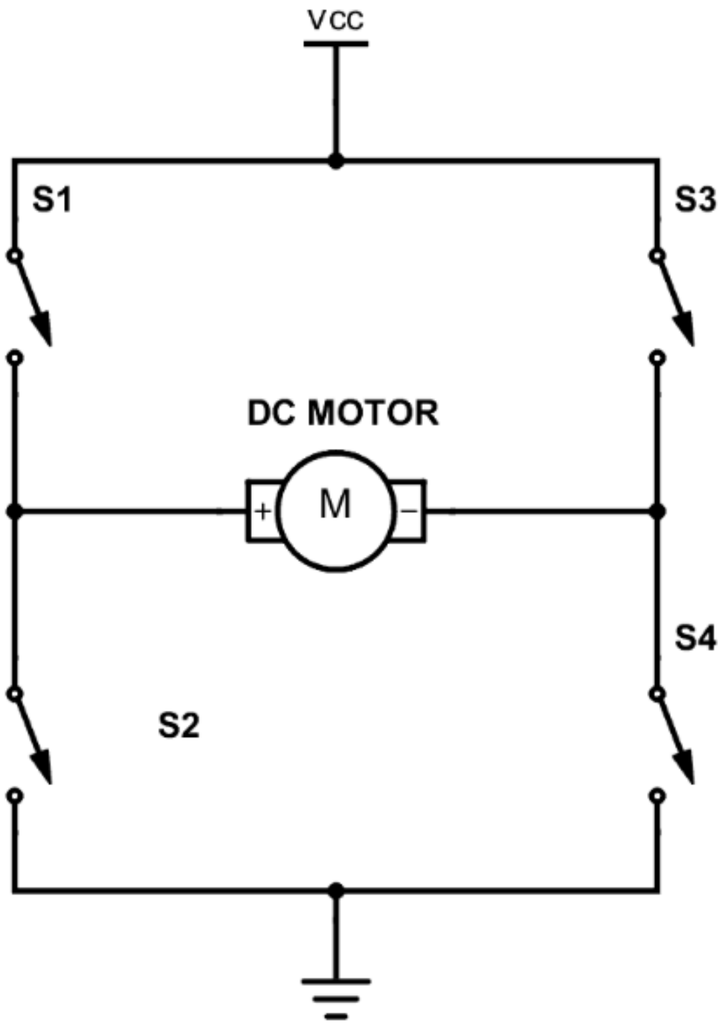
$$P = \tau\omega$$

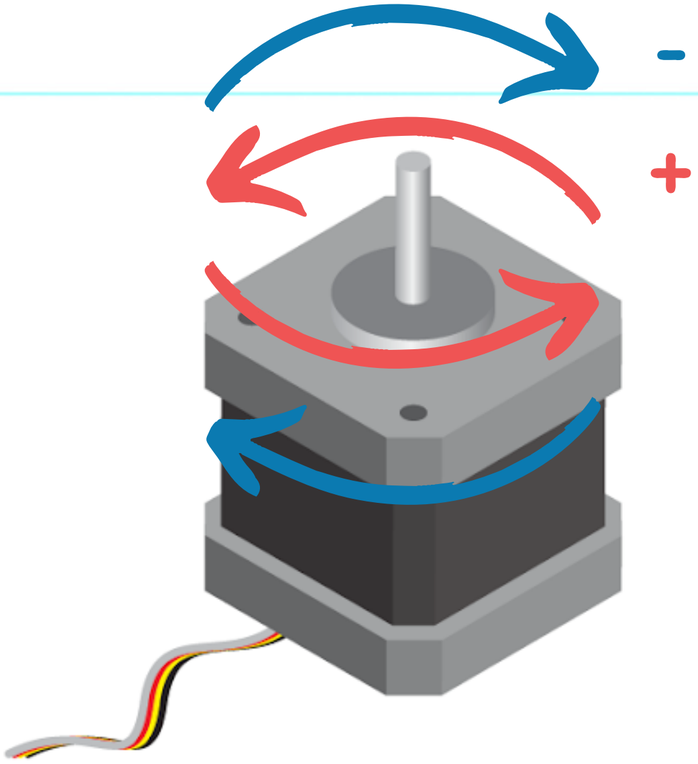
$$\varepsilon = -\frac{d\Phi}{dt}$$



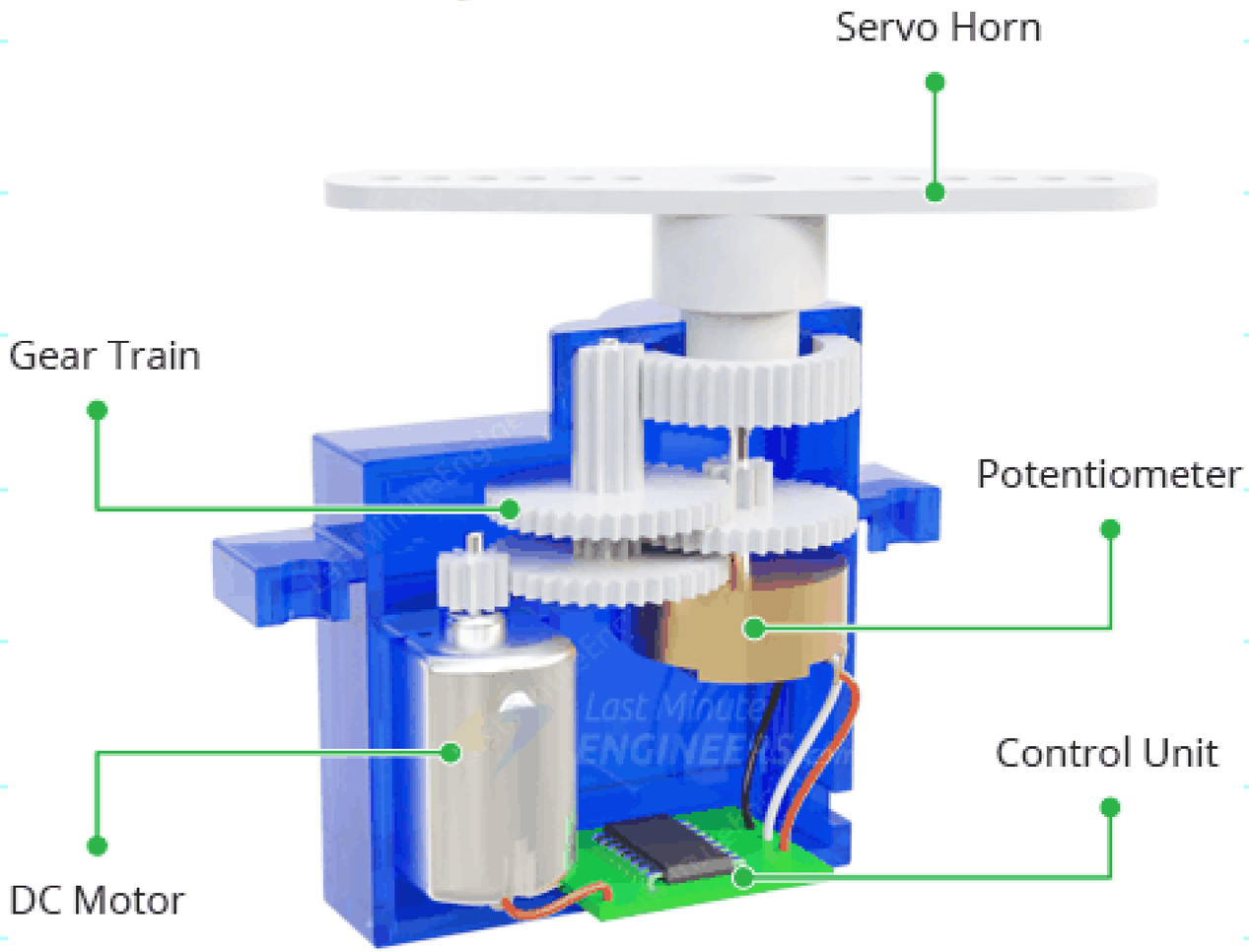
¡POLAR!

PUENTE H

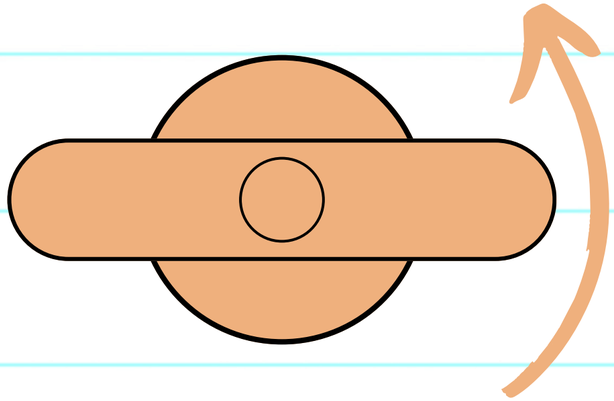




SERVOMOTORES

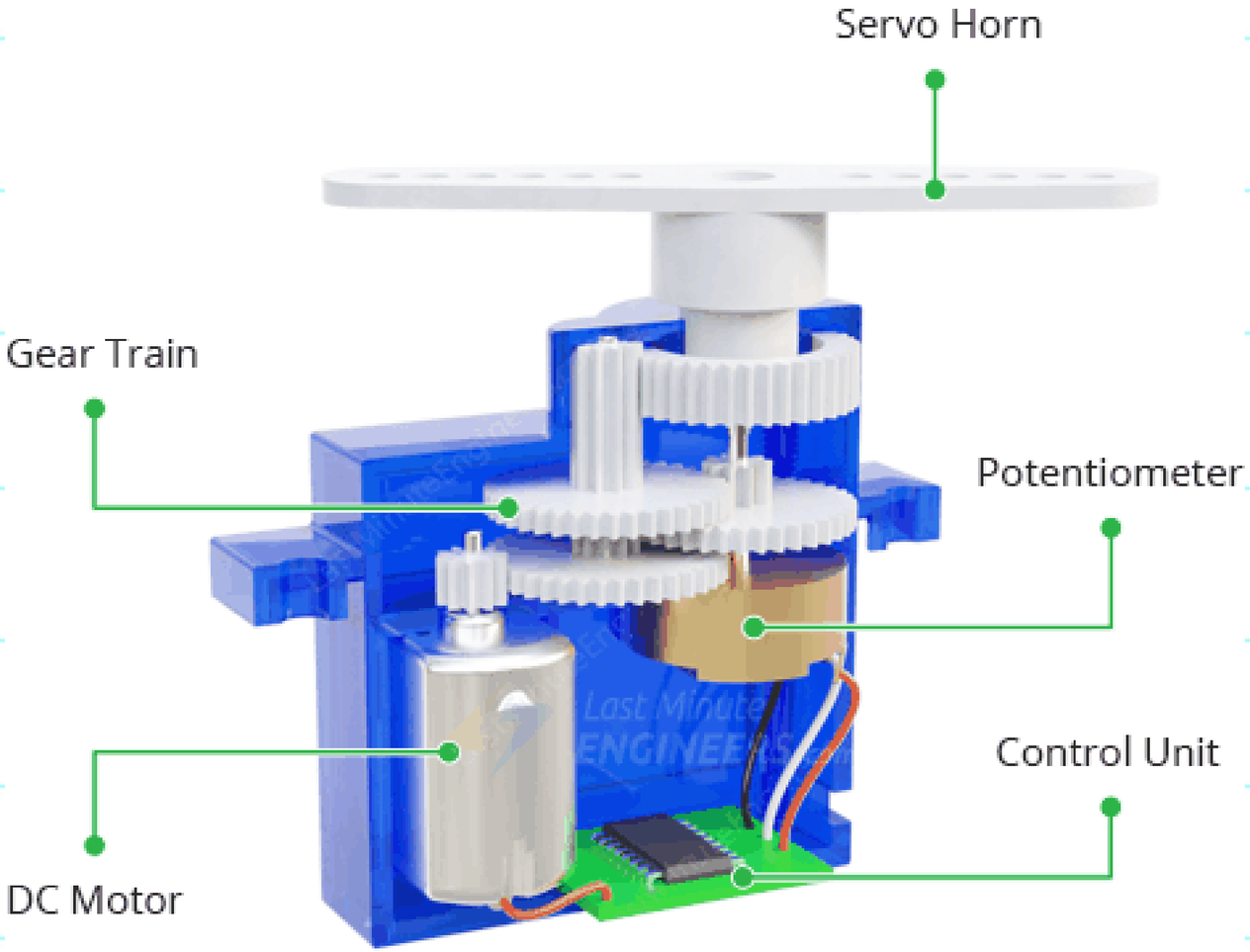


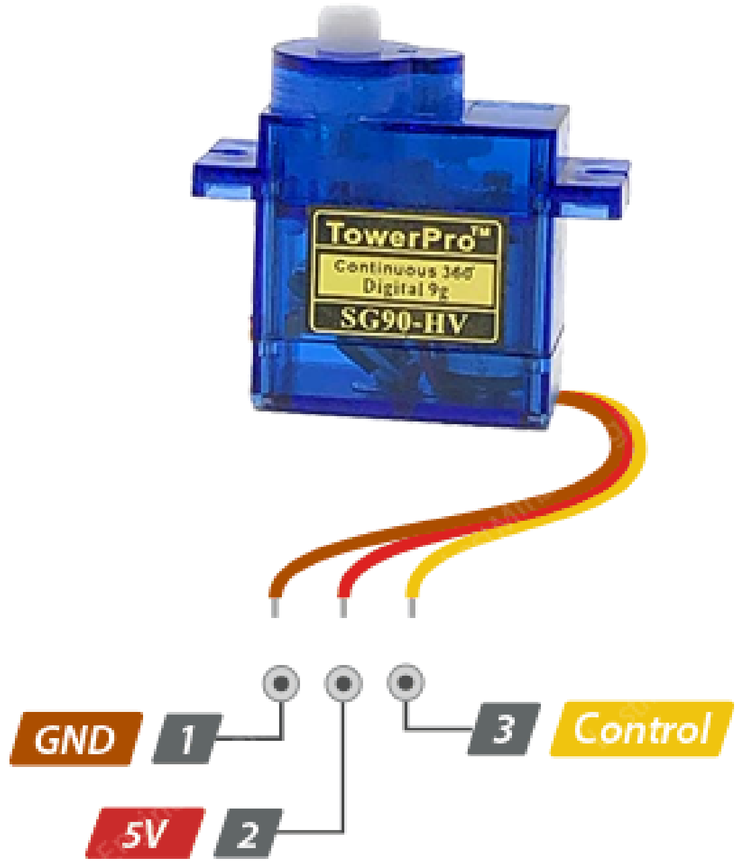
MICROSERVO SG90



0° A 180°

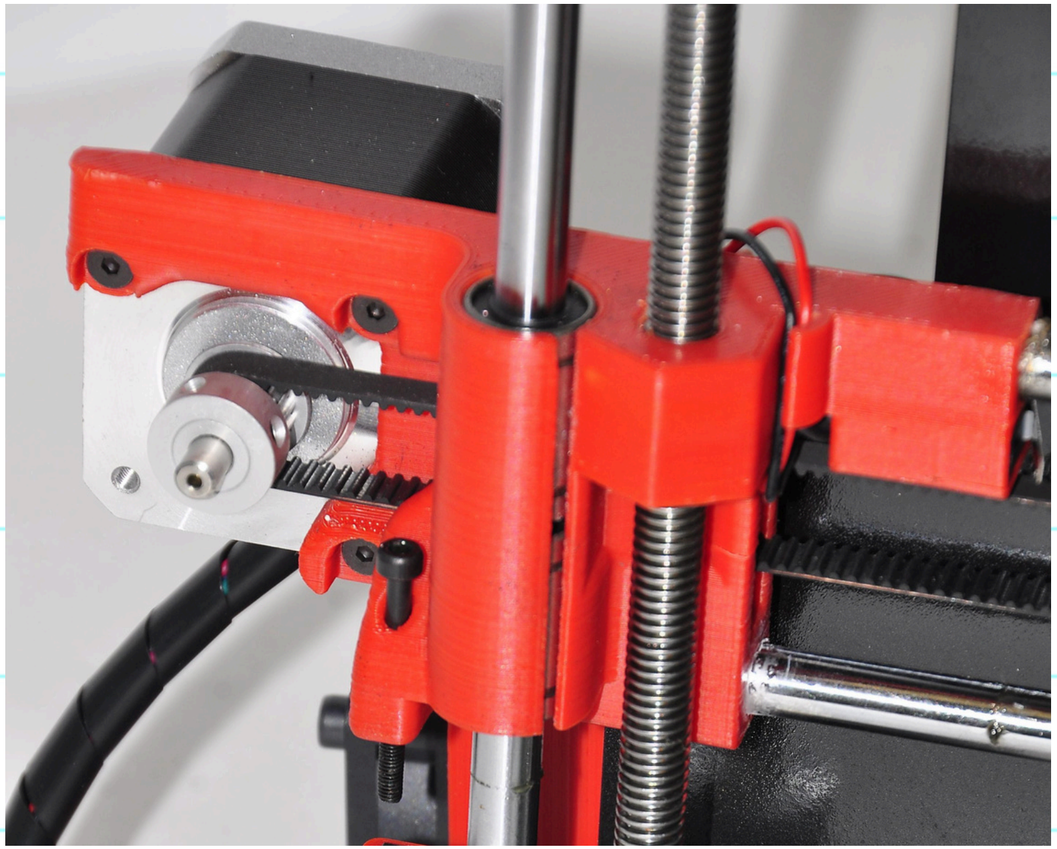
SERVOMOTORES



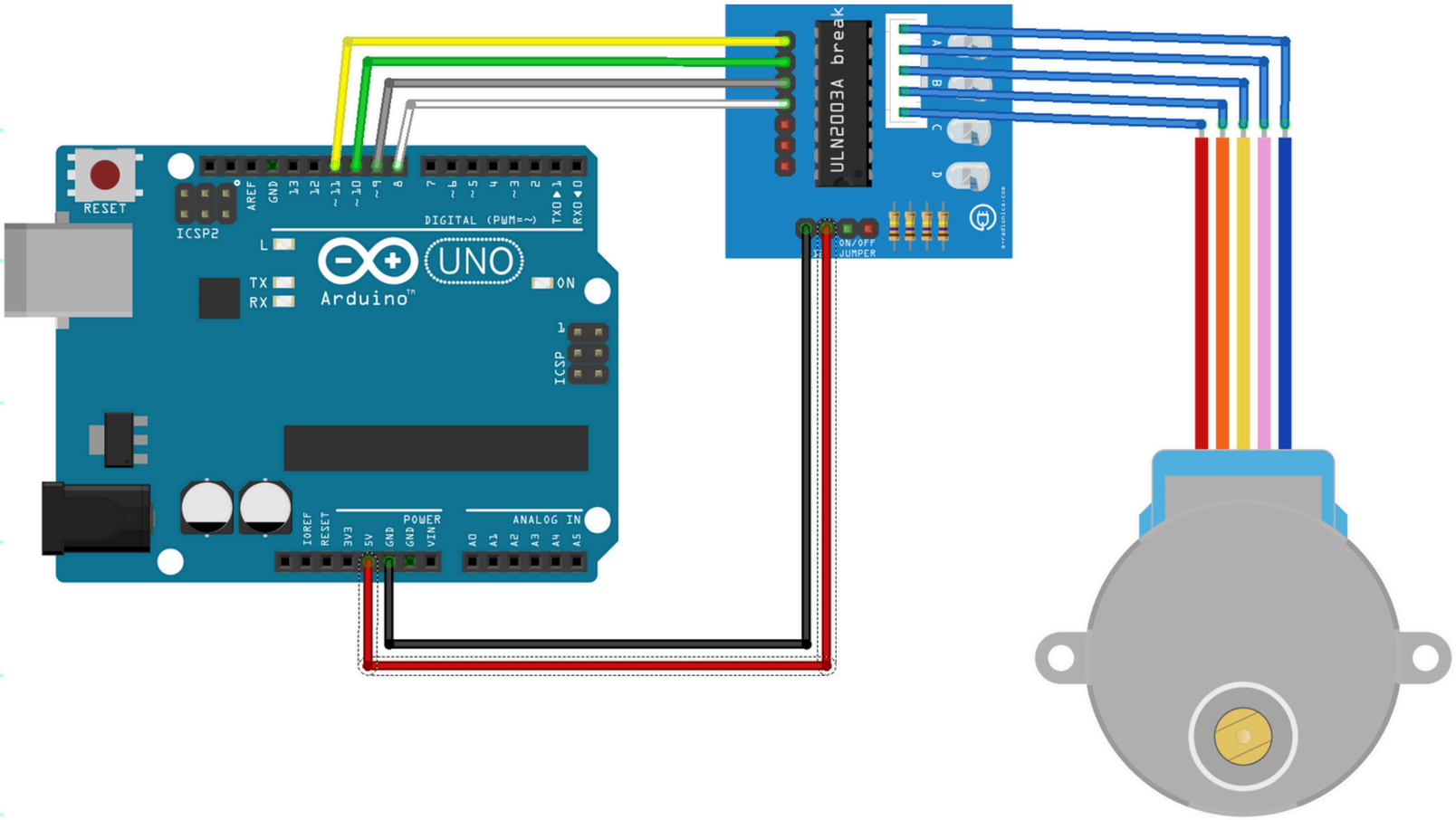


MOTORES PAP

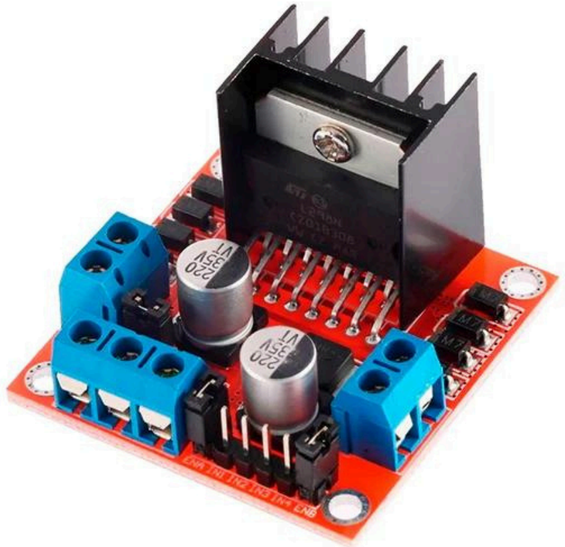
NEMA 17



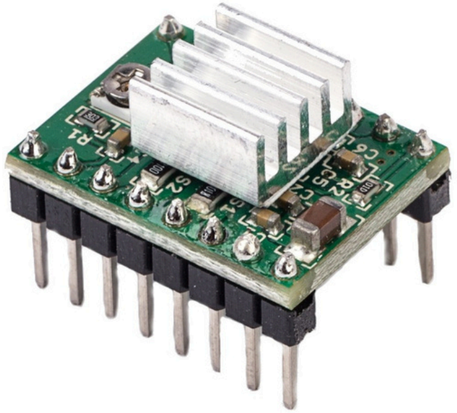
MOTORES PAP


ULN2003A break
A
B
C
D
ON/OFF
JUMPER
RESET
ICSP2
AREF
GND
13
12
~11
~10
~9
8
7
~6
~5
4
~3
2
TX→1
RX←0
DIGITAL (PWM=~)
L
TX
RX
UNO
Arduino™
ON
ICSP
POWER
ANALOG IN
IOREF
RESET
3V3
5V
GND
GND
VIN
A0
A1
A2
A3
A4
A5
fritzing

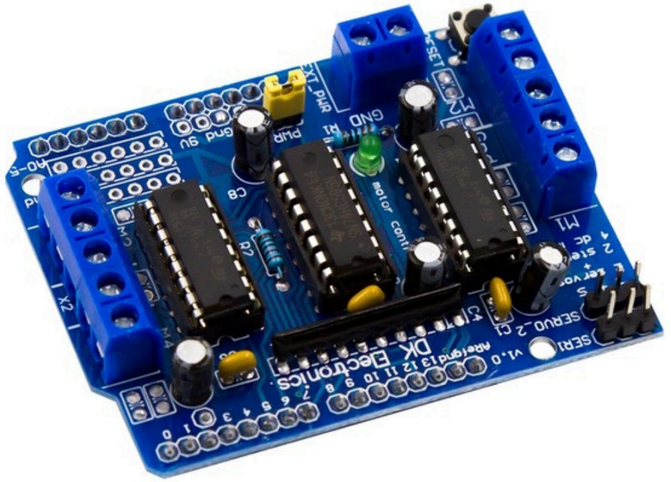
DRIVERS



L298N



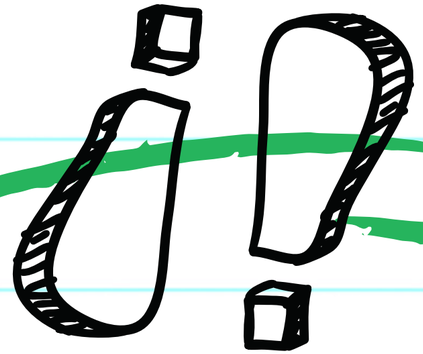
A4948



L293D

COMPARACIÓN Y USOS

Motores DC	ServoMotores	Motores PaP
Mayor Velocidad y Torque	Velocidad relativamente rapida	Muy lentos
Giro libre de precisión, solo importa moverse	El movimiento tiene un grado de control y precisión (feedback)	El movimiento es muy preciso y confiable (feedback)
Hélices de Drones, Vehículos, Refrigeración.	Máquinas de ensamble, Robótica	Impresión 3D, robots de alta precisión, CNC

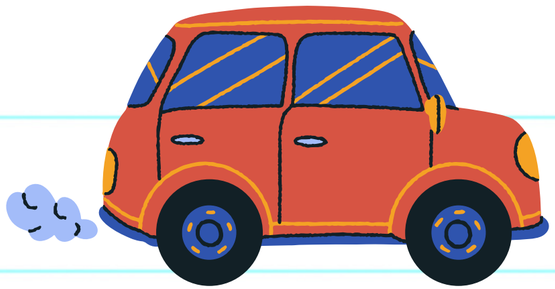


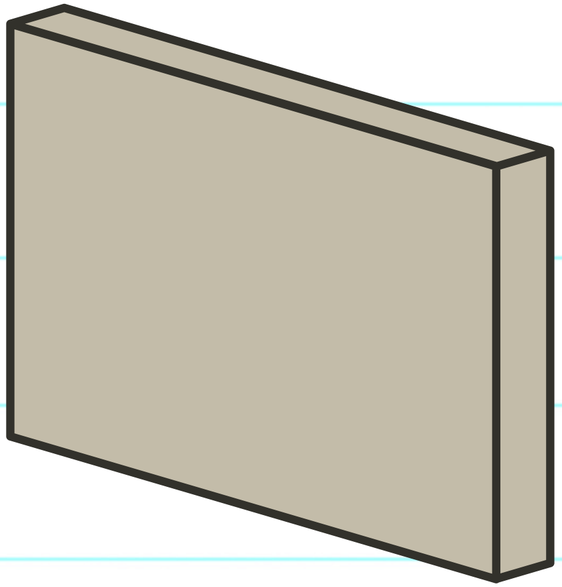
TINKERCAD

AUTODESK® TINKERCAD®

HAGAMOSLO JUNTOS

Creemos el circuito para que este robotito no choque con la pared





AUTODESK®
TINKERCAD®

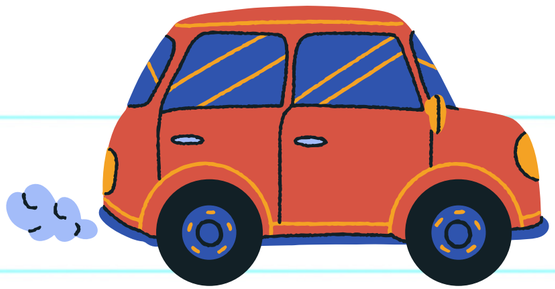
Únete a **Mecatrónica - ME4250** con un vínculo o introduce este código de clase:

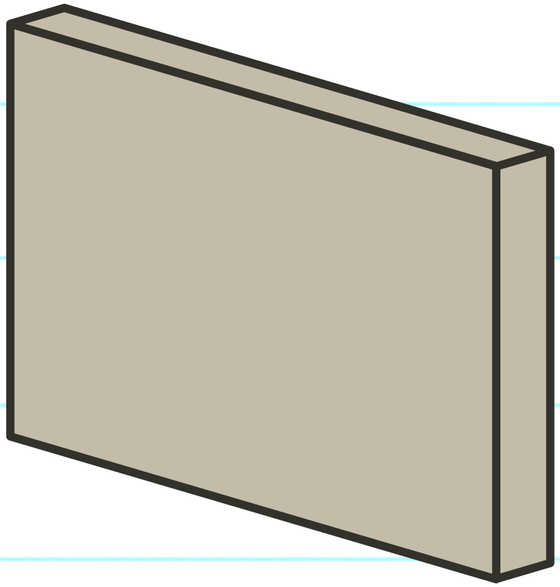
EKW RD4 FQ5

LiNK

DESAFÍO DE HOY

Lograr que el auto gire, utilizando el monitor serial y un sensor de distancia para que se detenga si hay una pared





¡GRACIAS!