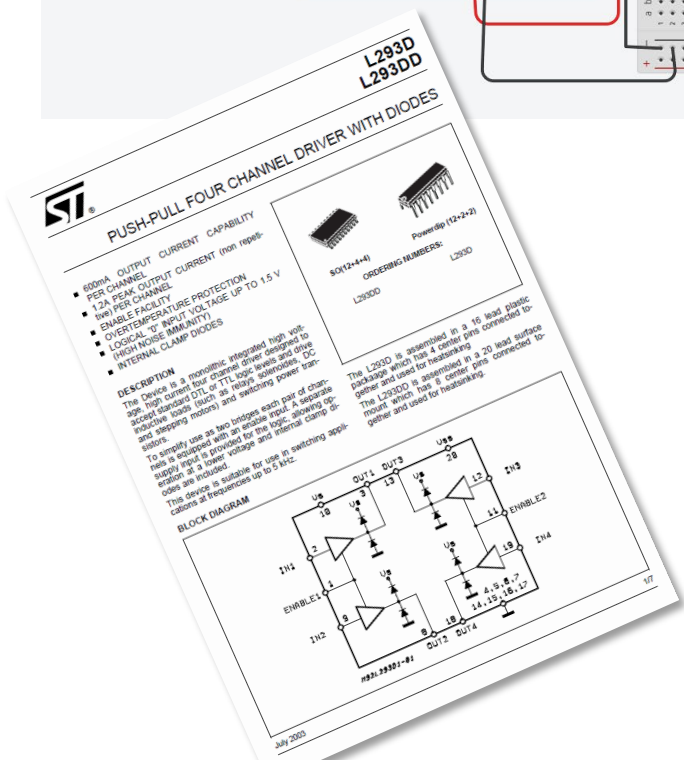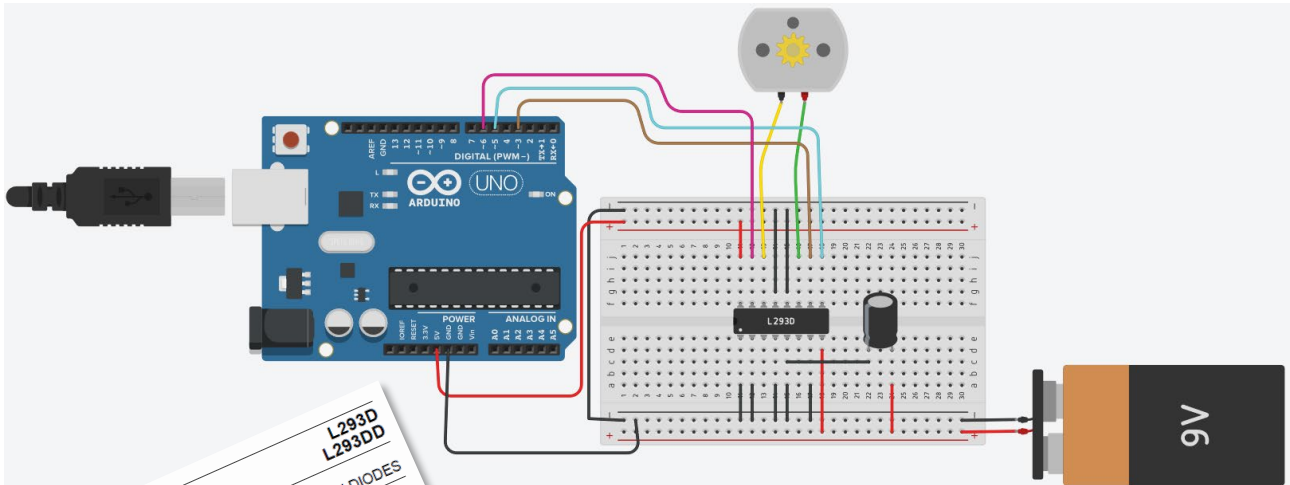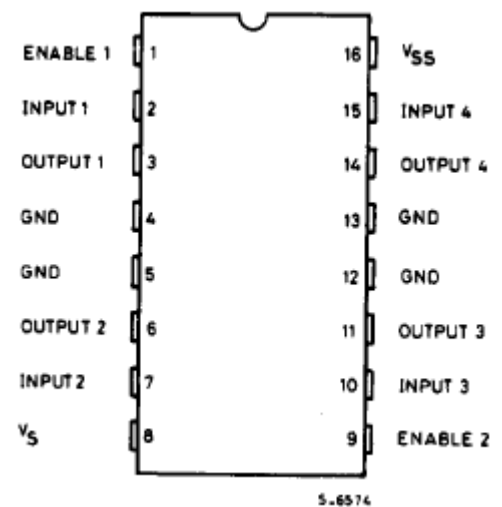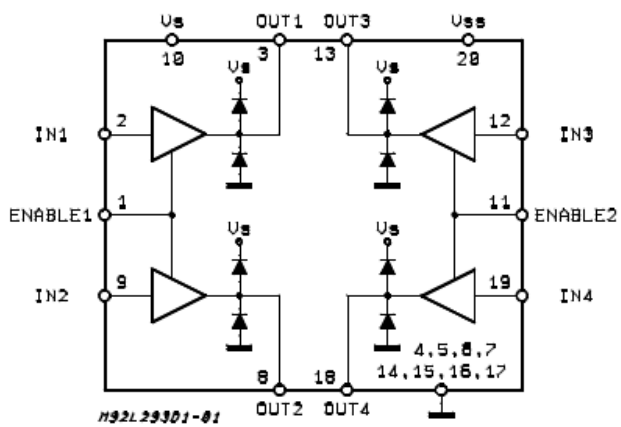# H-bro med L293

Breadboard og Arduino

- **600mA** OUTPUT CURRENT CAPABILITY PER CHANNEL
- 1.2A PEAK OUTPUT CURRENT (non repetitive) PER CHANNEL
- ENABLE FACILITY
- OVERTEMPERATURE PROTECTION
- LOGICAL "0" INPUT VOLTAGE UP TO 1.5 V (HIGH NOISE IMMUNITY)
- INTERNAL CLAMP DIODES

Arduino kode

```
/*
   Dette program tager mod kommandoer tal -255 til 255 for at styre motor
   minus giver en retning + den anden retning. 0=STOP 255=100% power
*/
//********************************
//Setup constants
//********************************
const int enable = 5;
const int left = 3;
const int right = 6;

//********************************
// Global variable
//********************************

int incomingByte = 0;    // for incoming serial data
int motorSpeed = 0;
int oldSpeed = 0;
int ledToggle = 0;

void setup()
{
  //********************************
  // Set input and output pins, set default value
  //********************************
    pinMode(enable,OUTPUT);
    digitalWrite(enable,LOW);

    pinMode(left,OUTPUT);
    analogWrite(left,0);
    pinMode(right,OUTPUT);
    analogWrite(right,0);

    ////////////////////////////
    // FOR DEBUG PURPOSES
    pinMode(13, OUTPUT);
    digitalWrite(13, ledToggle);
    ////////////////////////////
    //********************************
    //Serial connection 9600 Baud
    //********************************
    Serial.begin(9600);
  }
```

```
void loop()
{
  // put your main code here, to run repeatedly:
  motorSpeed = readSerial();

  // Check if speedchange is nessesary
  if (oldSpeed != motorSpeed)
  {
    if (motorSpeed == 0)
    {
      // Shut down all FETs
      digitalWrite(enable, LOW);
      analogWrite(left, 0);
      analogWrite(right, 0);
    }
    else if (motorSpeed > 0)
    {
      digitalWrite(enable, HIGH);
      analogWrite(left, 0);
      analogWrite(right, motorSpeed);
    }
    else if (motorSpeed < 0)
    {
      digitalWrite(enable, HIGH);
      analogWrite(right, 0);
      analogWrite(left, motorSpeed * -1);
    }
    Serial.println(motorSpeed,DEC);

    // Save new speedvalue
    oldSpeed = motorSpeed;
  }
  delay(1000);

  // Toogle the LED 13 for livelight
  ledToggle = ledToggle+1;
  digitalWrite(13,ledToggle%2);
}

//*********************************
// Read data from UART connection
//*********************************
int readSerial()
{
  while (Serial.available() > 0) {
    // read the incoming byte:
    incomingByte = Serial.parseInt();
  }
  return incomingByte;
}
```

Hvis I ikke lykkes med at få kommunikationen til at virke med Arduinoen, så prøv at udskifte dette "while" med "if"

10µF 16V
Polarized
Capacitor
(Elektrolyt)