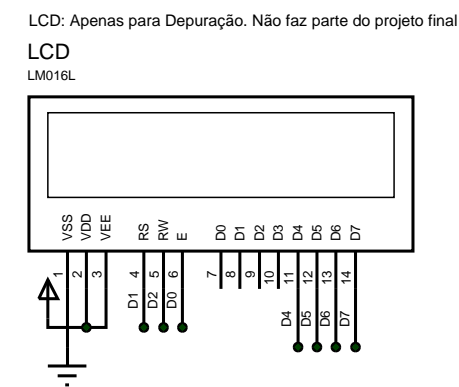


FONTE DE ALIMENTAÇÃO

D2: Diodo de uso geral de 2A

[illegible]

CONTROLADOR PRINCIPAL - PROTOSWARBOT

The schematic diagram illustrates the main controller for the Protoswarbot, centered around a PIC18F4550 microcontroller. The microcontroller is connected to several key components:

- Power and Timing:** VDD and VSS pins are connected to a 5V supply. Timing is provided by a crystal oscillator (X1) with 22pF capacitors (C1, C2) connected to CLKIN and CLKOUT pins.
- Serial Communication:** The I2C interface is connected via SDA and SCL pins to an I2C connector (J2) and an I2C module (IC2). The UART interface uses TX and RX pins connected to a TX module (TX 5) and an RX module (RX 6).
- Input/Output:** The microcontroller has multiple digital I/O pins (D0-D7, B0-B7) connected to various modules like PORT D, PORT B, and EXTRAS. It also includes an analog input (A0) connected to a light sensor (LDR1) via a voltage divider (R1, R2) and a switch (SW1).
- Other Components:** A 10k resistor (R10) is connected to SCL, and a 10k resistor (R11) is connected to SDA. A 100nF capacitor (C4) is connected to VDD, and a 100nF capacitor (C5) is connected to VSS. A 1k resistor (R8) is connected to VDD, and a 1k resistor (R9) is connected to VSS.

The diagram shows a comprehensive setup for the microcontroller, including power, timing, communication, and input/output connections.

*U7 pode ser o PIC16F877 ou PIC18F4550, que têm pinagem semelhante

