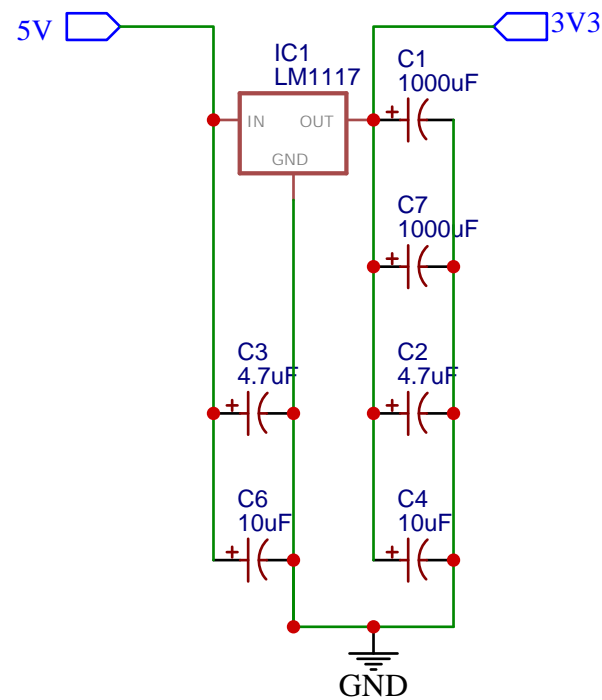
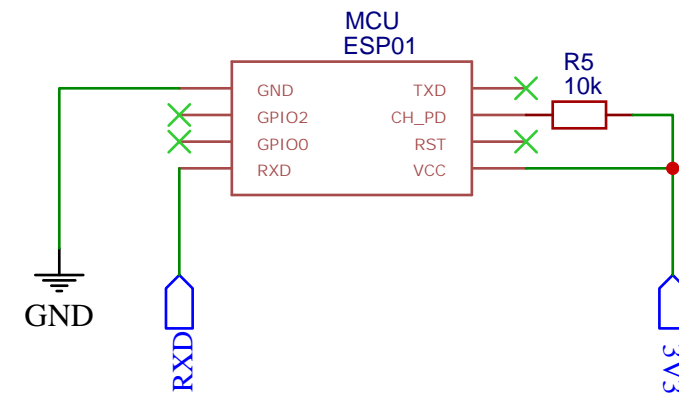


Convert 5V from meter to 3V3 for MCU
2000uF is for handling MCU startup peak

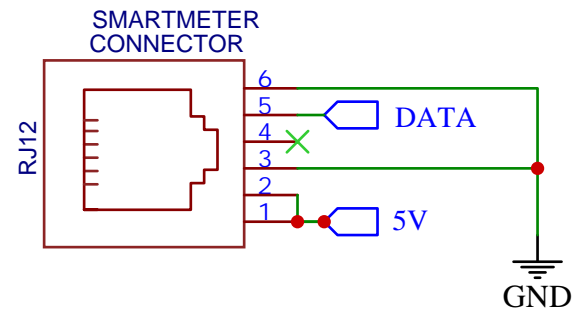


ESP-01 MCU (ESP8266)



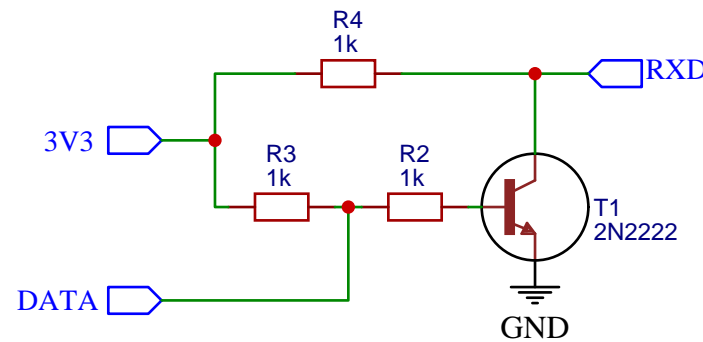
RJ12 connector to DSMR smart meter

Pin 1: provides 5V/100mA from the smart meter
Pin 2: pulled high to 5V to enable data
Pin 3: GND
Pin 5: data, open collector for HIGH signal
Pin 6: data GND



Data signal inverter

When the smart meter is HIGH, the DATA pin becomes an open collector. This means that the DATA pin will effectively be GND. This closes the transistor, causing RXD to go HIGH because of the pull up. When the smart meter is LOW, the DATA pin becomes isolated. This results in current on the transistor base, opening the transistor. This causes RXD to go LOW, because it is connected to GND via the transistor.



TITLE: DSMR ESPHome smart meter

REV: 1.0



Company: Maurice Makaay

Sheet: 1/1

Date: 2021-07-23 Drawn By: mmakaay