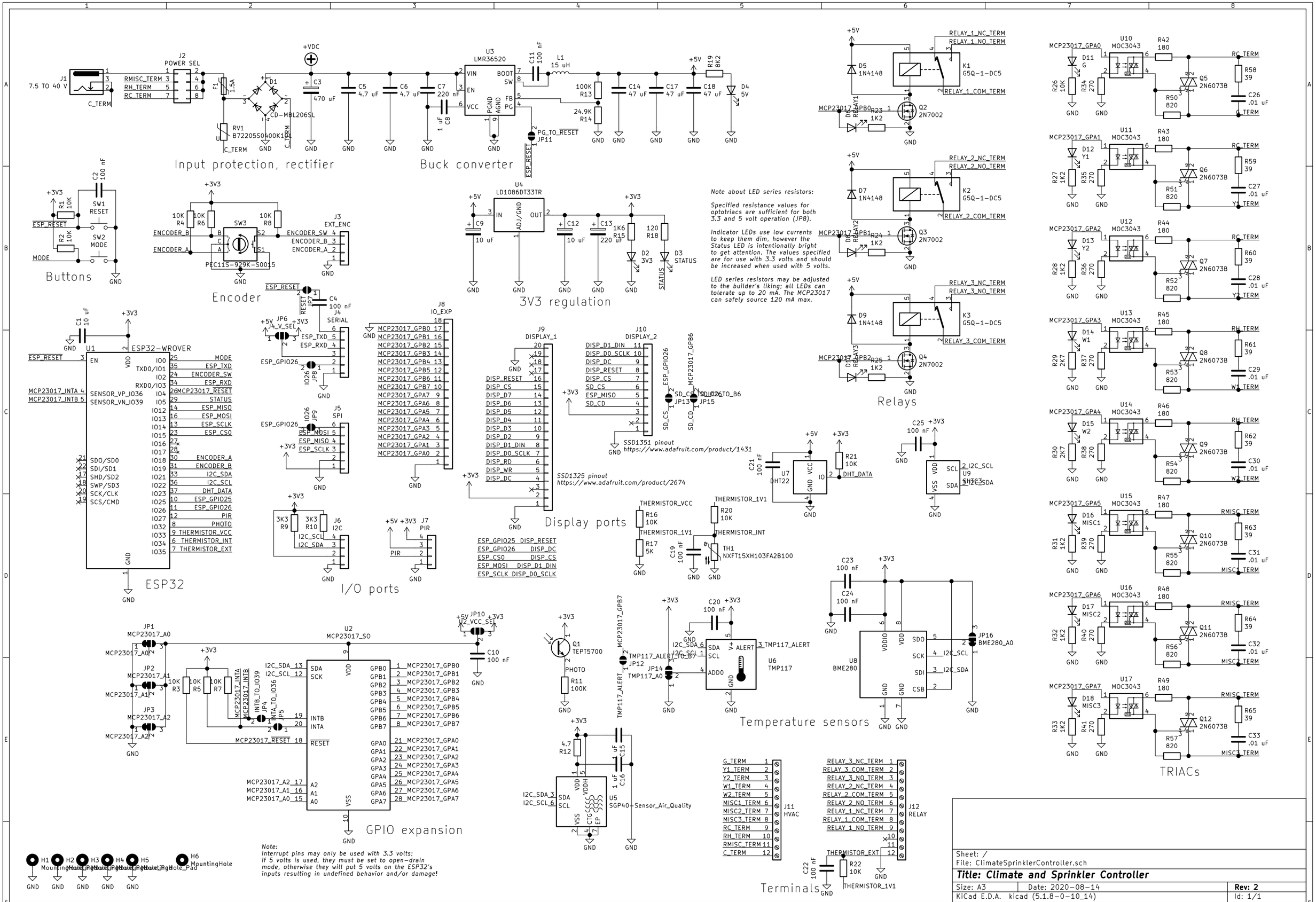
Input protection, rectifier
Buck converter
Buttons
Encoder
3V3 regulation
Relays
ESP32
Display ports
I/O ports
Temperature sensors
TRIACs
GPIO expansion
Terminals
Note about LED series resistors:
Specified resistance values for optotriacs are sufficient for both 3.3 and 5 volt operation (JP8).
Indicator LEDs use low currents to keep them dim, however the Status LED is intentionally bright to get attention. The values specified are for use with 3.3 volts and should be increased when used with 5 volts.
LED series resistors may be adjusted to the builder's liking; all LEDs can tolerate up to 20 mA. The MCP23017 can safely source 120 mA max.
SSD1351 pinout
https://www.adafruit.com/product/1431
SSD1325 pinout
https://www.adafruit.com/product/2674
Note:
Interrupt pins may only be used with 3.3 volts;
if 5 volts is used, they must be set to open-drain mode, otherwise they will put 5 volts on the ESP32's inputs resulting in undefined behavior and/or damage!
Sheet: /
File: ClimateSprinklerController.sch
Title: Climate and Sprinkler Controller
Size: A3
Date: 2020-08-14
Rev: 2
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