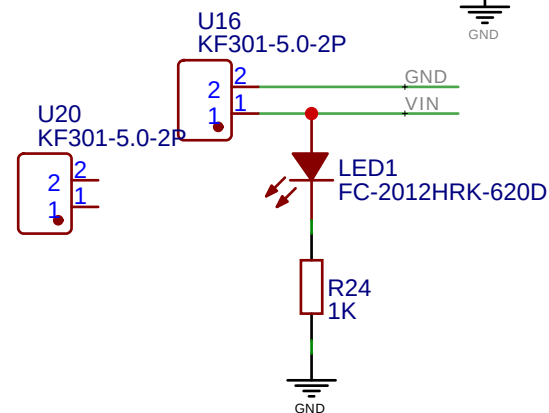
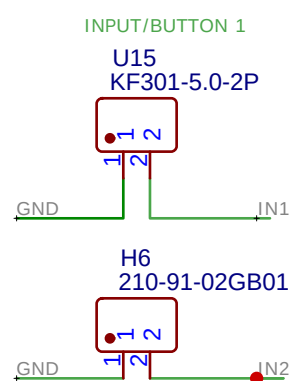




		U19 ESP32_DEVKIT_V1	
	1	EN	30
AIN2	2	36/V _P	29
AIN3	3	39/V _N	28
IN3	4	34/ADC1.6	27
AIN1	5	35/ADC1.7	26
OUT10	6	32/ADC1.4	25
IN1	7	33/ADC1.5	24
OUT12	8	25/ADC2.8	23
OUT9	9	26/ADC2.9	22
OUT8	10	27/ADC2.7	21
IN2	11	14	20
OUT7	12	12	19
OUT6	13	13	18
GND	14		17
5V ESP	15		16



The schematic diagram illustrates a 10-channel relay module. It features a central 12V power rail (VIN) and a common ground (GND). Each of the 10 channels consists of a 12V input (OUT1 to OUT10), a 10K pull-down resistor (R1 to R10), a 100Ω resistor (R14 to R23), a relay driver transistor (Q1 to Q10, AO3400A_C347475), a relay coil (D1 to D10, B5819W_C8598), and a 5V output (OUTPUT 1 to OUTPUT 10). The module is powered by a 12V input (VIN) and a 5V output (OUTPUT 12). The 5V output is connected to a 3V3 regulator (U13, KF301-5.0-3P) and an RS485 transceiver (U14, KF301-5.0-2P). The RS485 transceiver is connected to the I2C SDA and SCL lines. The 3V3 regulator is connected to the GND, A, and B pins. The module also includes a 12V input (VIN) and a 5V output (OUTPUT 12) for the RS485 transceiver.