

Notice that relay board has a jumper between "Vcc" and "JD-Vcc". Remove it. For complete optical isolation, connect "Vcc" to Arduino +5 volts but do NOT connect Arduino Ground. Connect your Arduino Digital Output pins to "IN0", "IN1" etc. Connect a separate +5 supply to "JD-Vcc" and board Gnd

2.2K for Mega (4.7K ohm for Leonardo) resistor to Gnd fits instead of POT

100 ohm to 5V fits instead of POT

Protected by voltage regulator :
[+12 volts in]-->[1 ohm, 5 watt resistor]-->[1N5402 diode]-->[1000uF, 25v cap]-->2X [LM7805] (to get clean 5V, 1x for arduino, 1x for relay module)

5m analog led strip (do care with the 12V, some are +12 and other -12 aka ground)