

Sequence of Operations

1. User enters their code for validation
2. User presses the validation push button. If the code is not validated, the user cannot proceed. If it is validated, they can proceed.
3. User can press S (start) to start the circuit. They can then also turn it off with R. While the circuit is running, no modification to the entered code or validation logic will disrupt it. The only way to turn it off is with R (reset).
4. At this point, if the circuit is running, the motor will receive a small amount of voltage that is going through three series resistors.
5. The user can activate the G push button to activate relay 1 and skip the first series resistor. The motor now receives ~4V of power.
6. The user can now activate the H push button to then bypass the second series resistor. The motor now receives ~4 more volts of power.
7. The last relay can be activated with the J pushbutton to activate the last relay and bypass the last series resistor, thus delivering the rest of the voltage to the motor to have it running at 12V.