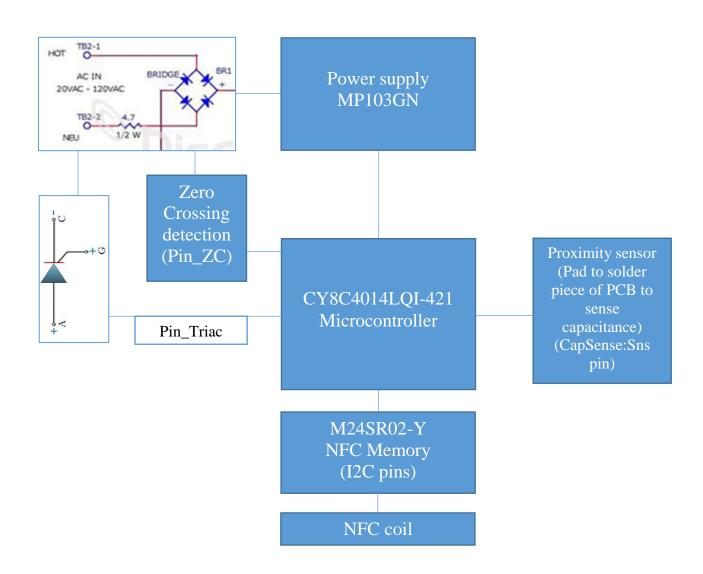
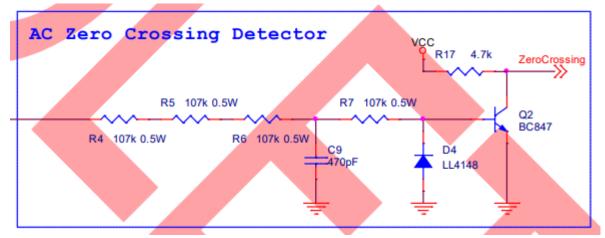


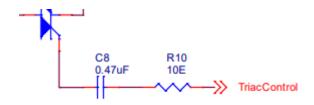
- 1. Design done in KiCAD
- 2. 230V input MP103GN based AC-DC 5V power supply
- 3. CY8C4014LQI-421 IC controls thyristor state + Capacitive Sensing connection
- 4. Zero crossing detection connected to CY8C4014LQI-421
- 5. M24SR02-Y (TSSOP8 package) NFC IC, connected to CY8C4014LQI-421 via I2C
- 6. PCB size: width 14mm, length <=55mm



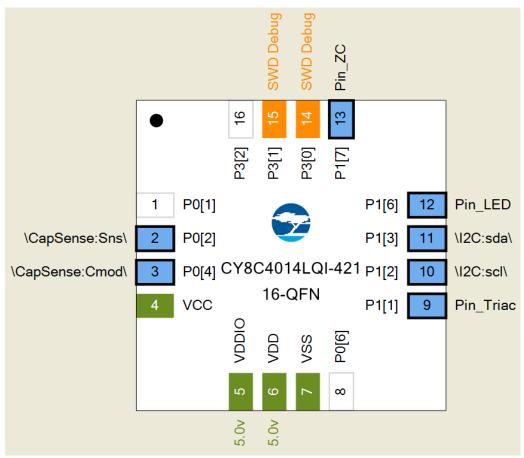
Functional diagram



Zero Crossing detection



Thyristor gate control circuit



CapSense:Cmod – Capacitor connected to GND 2.2nF
CapSense:Sns – Connected to proximity sensor
Pin\_ZC – Connected to zeroCrossing detector output
Pin\_Triac – Thyristor control output
SWD Debug – Connected to programming pads on PCB
Pin\_LED – Status LED located on PCB