J: Connectors

J1: AC IN
J2: AC Out From Dimmer Circuit 0
J3: AC Out From Dimmer Circuit 1
J4: AC Out From Relay 1
J5: AC Out From Relay 2

J1 AC_IN: 1 AC_L, 2 AC_N

J2 AC_OUT_1: 1 AC_LOUT, 2 AC_N

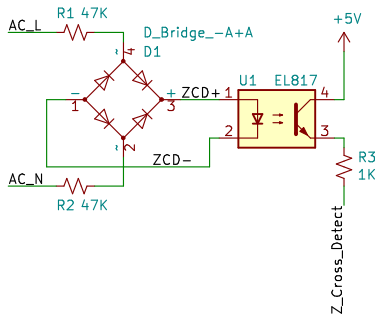
J3 AC_OUT_2: 1 AC_LOUT_1, 2 AC_N

J4 Relay_1: 1 NO_1, 2 NC_1

J5 Relay_2: 1 NO, 2 NC

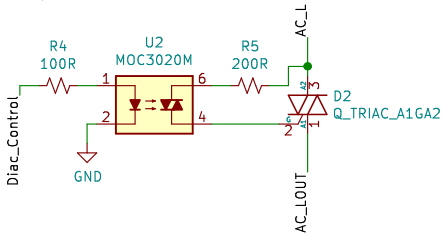
CONNECTORS

DIMMER INPUT CIRCUIT

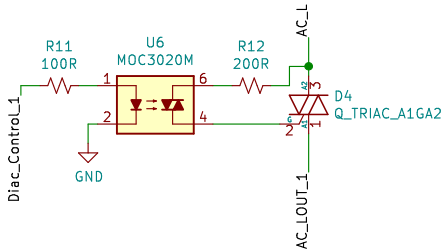


Zero - Crossing Detect Circuit for Dimmer Applications
**outputs to MCU as interrupt --> Z_Cross_Detect

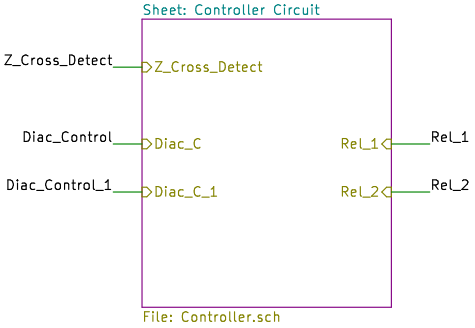
AC Pulse-Width-Modulation (PWM) Circuit
**Controlledd from MCU PWM via --> Diac_Control
**Outputs to J2



**Controlledd from MCU PWM via --> Diac_Control_1
**Outputs to J3

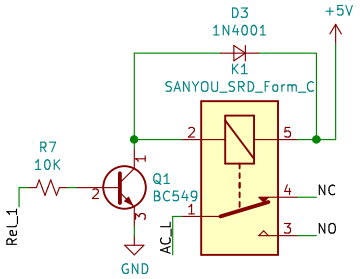


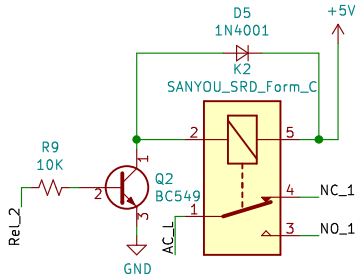
DIMMER OUTPUT CIRCUIT



Controller Sub-Circuit
**Contains DC Input for Power Supply

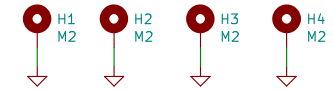
** Rel_1 & Rel_2: input from MCU to Relay 1 & 2 respectively





NC: Normaly Closed Output from Relay
NO: Normaly Open O/P from Relay

RELAY CIRCUIT



LOGO1 Logo

HS1 Heatsink

Design By: Eliud NGARUIYA

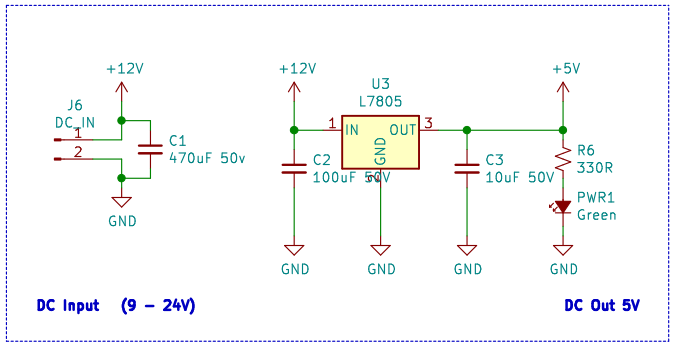
AM

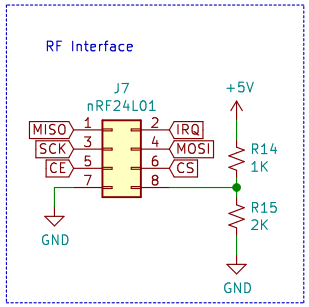
Sheet: /
File: Home_Automation.sch

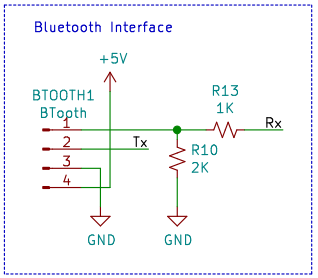
Title: HA_Mesh_Load Controller

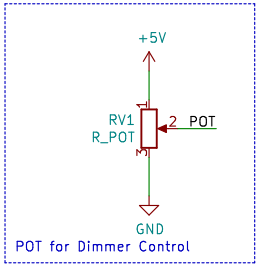
Size: A4 | Date: 2019-06-13 | **Rev: 1.0**

Id: 1/2





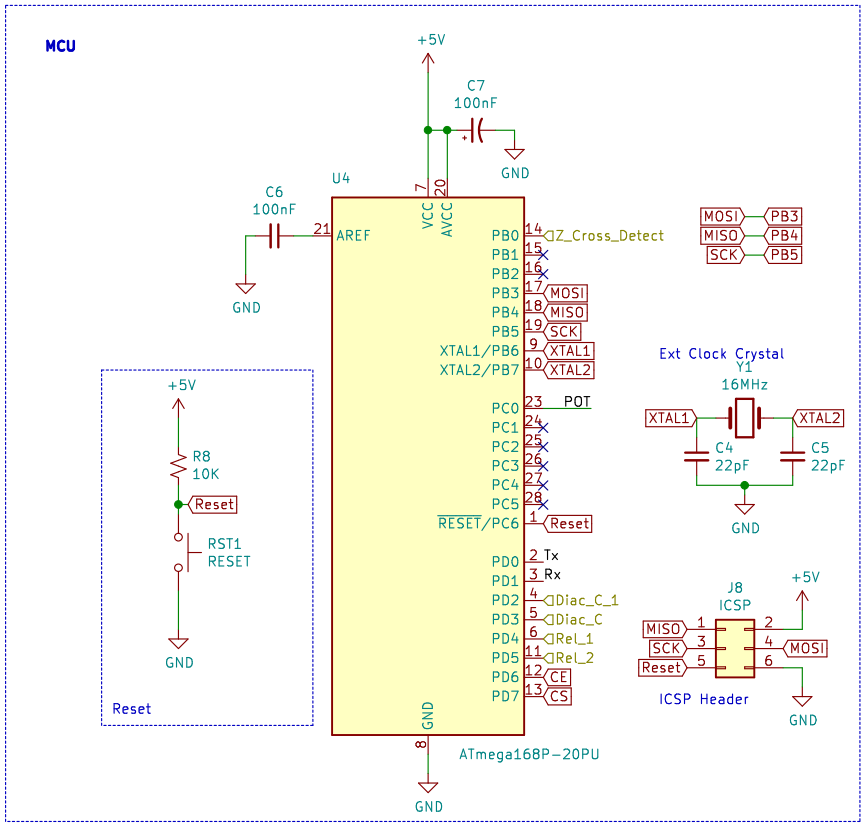




Wireless:
**nRF uses: SPI Interface
CS
CE

**Bluetooth: USART Interface:
Rx & Tx

**POT Pin 2 Goes to MCU Analog I/O pin



Design By: Eliud NGARUIYA		
AM		
Sheet: /Controller Circuit/ File: Controller.sch		
Title: HA_Mesh_Load Controller		
Size: A4	Date: 2019-06-13	**Rev: 1.0**
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