LCD display and UI connections

5V/VCC

J6
Main Menu Pot
POT_MENU

RV1
5K

J7
Conn_01x12_Socket
1 2 3 4 5 6 7 8 9 10 11 12

LCD_RS
LCD_RW
LCD_E
LCD_D4
LCD_D5
LCD_D6
LCD_D7
Anode 12

R5
330

R6
10K

R7
10K

Cathode

ENTR_SW
J8
Reset Switch

HOME_SW
J9
Reset Switch

GNDREF

TRANS_POS
Q1
IRLZ44N

PWM_TMR0

R8
220

GNDREF

J10
High Relay Out
1
2
HIGH_READ_VOLT

J14
High sig
HIGH_MODE_RELAY_SIG

J15
Low Sign
LOW_MODE_RELAY_SIG

GNDREF

TRANS_NEG
TRANS_POS
Low Relay Out
J12
1
2
3

J13
Low relay Read
1
2
LOW_READ_VOLT

GNDREF

R4
4.7K

C5
0.1uF

D1
1N4148

J4
Reset Switch
2
1

C3
22pF

Y1
16MHZ

R3
1M

C4
22pF

GNDREF

GNDREF

J5
AREF Volt
1
2

5V/VCC

VCC 10
AVCC 30

9 RESET
13 XTAL1
12 XTAL2
32 AREF

PA0 40 HIGH_MODE_DIV
PA1 39 POT_MENU
PA2 38 CURRENT_SENSE
PA3 37 LOW_MODE_DIV
PA4 36
PA5 35
PA6 34
PA7 33

PB0 1 LED_INDIC_LOW
PB1 2 LED_INDIC_HIGH
PB2 3
PB3 4 PWM_TMR0
PB4 5 LCD_D4
PB5 6 LCD_D5
PB6 7 LCD_D6
PB7 8 LCD_D7

PC0 22 LCD_RS
PC1 23 LCD_RW
PC2 24 LCD_E
PC3 25
PC4 26
PC5 27
PC6 28
PC7 29

PD0 14 HIGH_MODE_RELAY_SIG
PD1 15 LOW_MODE_RELAY_SIG
PD2 16
PD3 17
PD4 18
PD5 19
PD6 20
PD7 21

GND 11
U1
ATmega32A-P

GNDREF

J11
Current Sensor In
CURRENT_SENSE
GNDREF

J3
Transformer Input
TRANS_NEG
TRANS_POS
GNDREF

TRANS_POS
U2
L7805
1 IN OUT 3
2 GND
5V/VCC

C1
0.22uF

C2
1uF

GNDREF

LED_INDIC_LOW
R1
220
J1
Green LED / LOW
1
2
GNDREF

LED_INDIC_HIGH
R2
220
J2
Red LED / HIGH
1
2
GNDREF

HIGH_READ_VOLT
R9-Power
6.8K
HIGH_MODE_DIV
R10-Power
1K
GNDREF

LOW_READ_VOLT
R9
6.8k
LOW_MODE_DIV
R10
1k
GNDREF