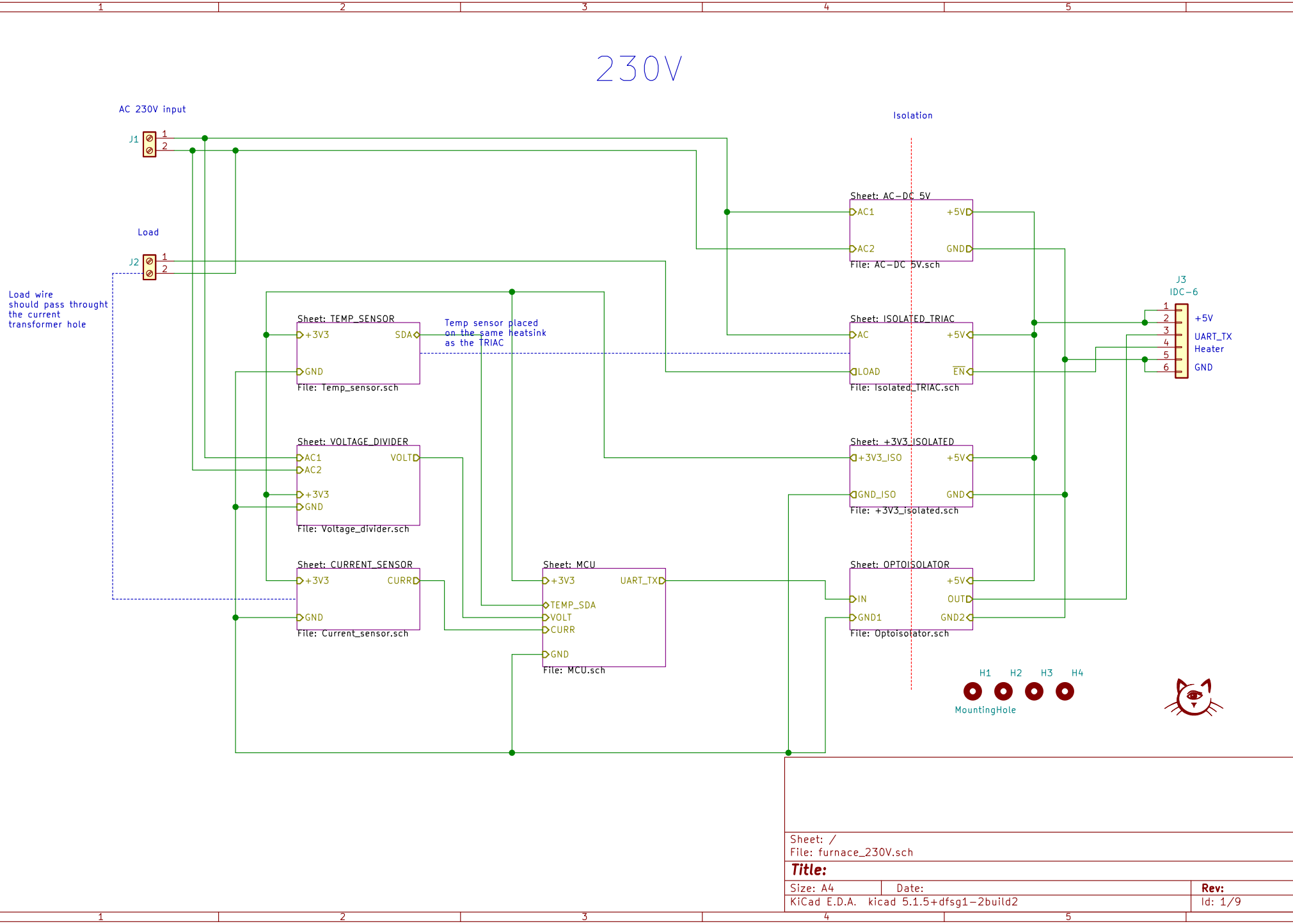
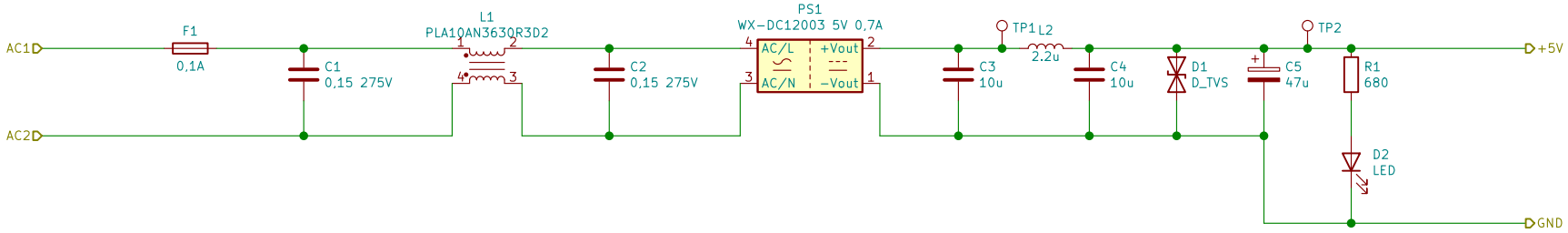
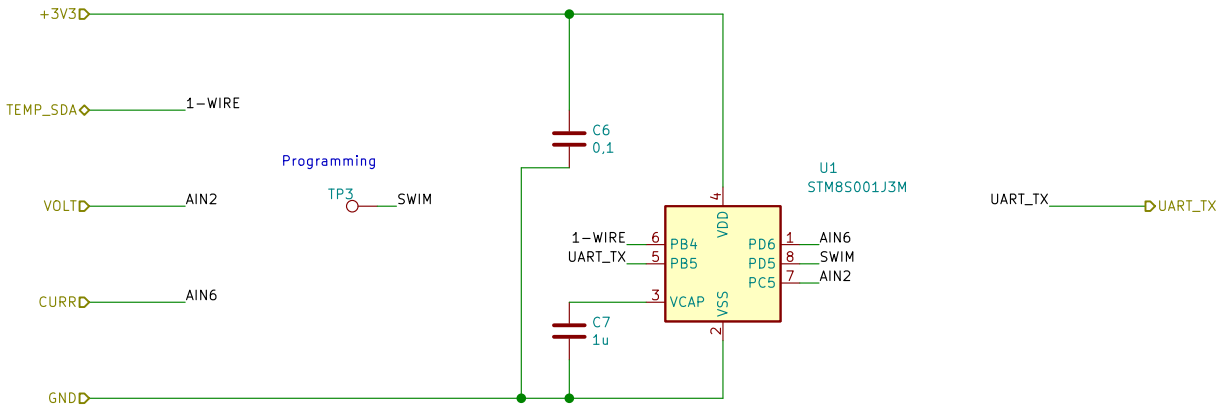

230V
AC 230V input
J1
1
2
Load
J2
1
2
Load wire
should pass throught
the current
transformer hole
Isolation
Sheet: AC-DC_5V
AC1
AC2
+5V
GND
File: AC-DC_5V.sch
Sheet: TEMP_SENSOR
+3V3
GND
SDA
File: Temp_sensor.sch
Temp sensor placed
on the same heatsink
as the TRIAC
Sheet: ISOLATED_TRIAC
AC
LOAD
+5V
EN
File: Isolated_TRIAC.sch
J3
IDC-6
1
2
3
4
5
6
+5V
UART_TX
Heater
GND
Sheet: VOLTAGE_DIVIDER
AC1
AC2
+3V3
GND
VOLT
File: Voltage_divider.sch
Sheet: +3V3_ISOLATED
+3V3_ISO
GND_ISO
+5V
GND
File: +3V3_isolated.sch
Sheet: CURRENT_SENSOR
+3V3
GND
CURR
File: Current_sensor.sch
Sheet: MCU
+3V3
TEMP_SDA
VOLT
CURR
GND
UART_TX
File: MCU.sch
Sheet: OPTOISOLATOR
IN
GND1
+5V
OUT
GND2
File: Optoisolator.sch
H1
H2
H3
H4
MountingHole
Sheet: /
File: furnace_230V.sch
Title:
Size: A4
Date:
Rev:
KiCad E.D.A. kicad 5.1.5+dfsg1-2build2
Id: 1/9

# AC/DC +5V power source



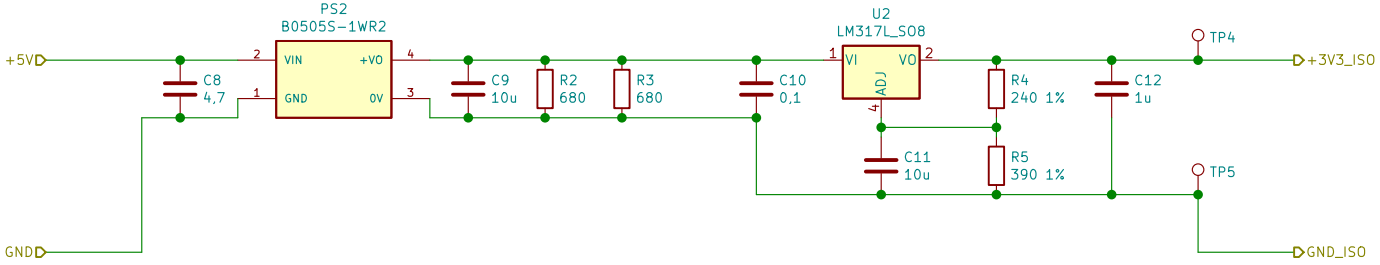

| | | |
|---|---|---|
| Sheet: /AC-DC 5V/ | | |
| File: AC-DC 5V.sch | | |
| **Title:** | | |
| Size: A4 | Date: | **Rev:** |
| KiCad E.D.A. kicad 5.1.5+dfsg1-2build2 | | Id: 2/9 |

# MCU



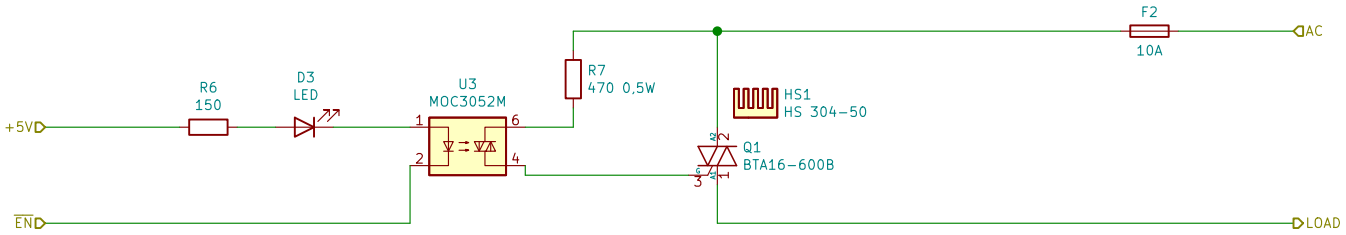

| | | |
|---|---|---|
| Sheet: /MCU/ | | |
| File: MCU.sch | | |
| **Title:** | | |
| Size: A4 | Date: | **Rev:** |
| KiCad E.D.A. kicad 5.1.5+dfsg1-2build2 | | Id: 3/9 |

# Isolated +3V3 power source



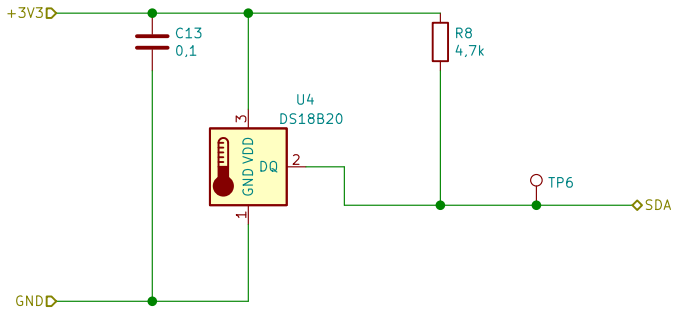

| | | |
|---|---|---|
| Sheet: /+3V3_ISOLATED/ | | |
| File: +3V3_isolated.sch | | |
| **Title:** | | |
| Size: A4 | Date: | **Rev:** |
| KiCad E.D.A. kicad 5.1.5+dfsg1-2build2 | | Id: 4/9 |

# Isolated TRIAC control circuit



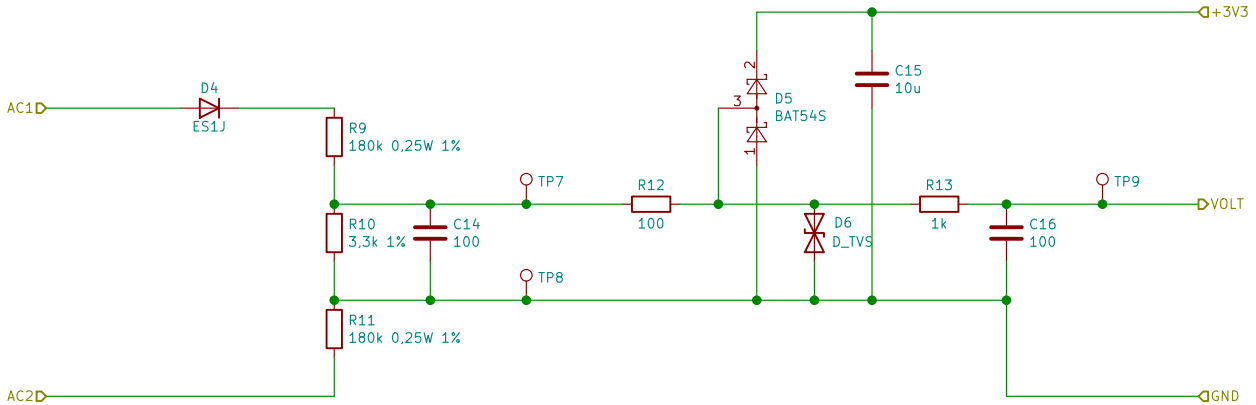

| | |
|---|---|
| Sheet: /ISOLATED_TRIAC/ | |
| File: Isolated_TRIAC.sch | |
| **Title:** | |
| Size: A4 | Date: |
| KiCad E.D.A. kicad 5.1.5+dfsg1-2build2 | Id: 5/9 |

# 1-wire temperature sensor



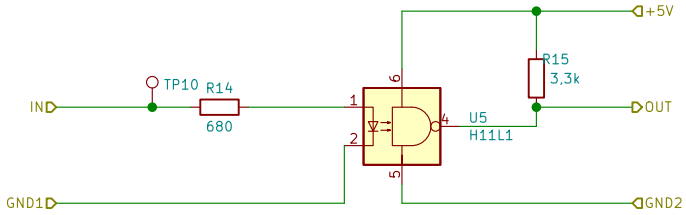

| | | |
|---|---|---|
| Sheet: /TEMP_SENSOR/ | | |
| File: Temp_sensor.sch | | |
| **Title:** | | |
| Size: A4 | Date: | **Rev:** |
| KiCad E.D.A. kicad 5.1.5+dfsg1-2build2 | | Id: 6/9 |

# Input 230V voltage measurement circuit



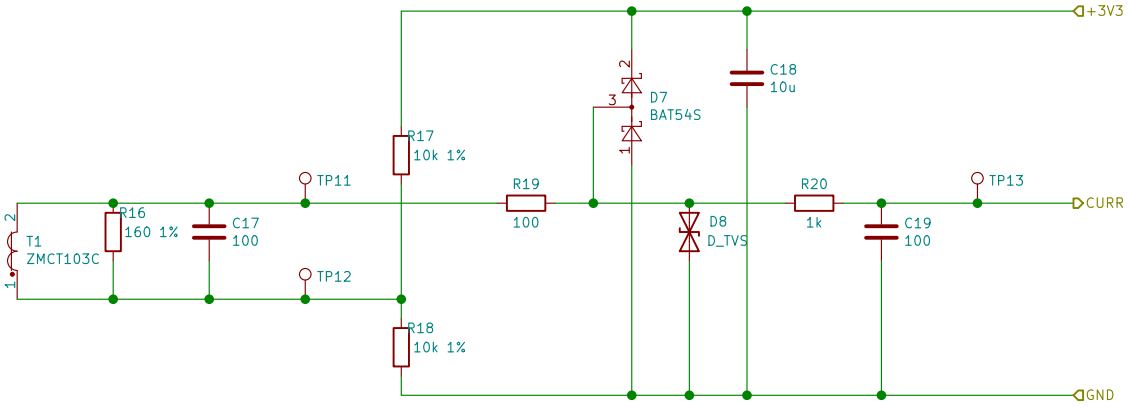

| | | |
|---|---|---|
| Sheet: /VOLTAGE_DIVIDER/ | | |
| File: Voltage_divider.sch | | |
| **Title:** | | |
| Size: A4 | Date: | **Rev:** |
| KiCad E.D.A. kicad 5.1.5+dfsg1-2build2 | | Id: 7/9 |

# UART isolator




| | | |
|---|---|---|
| Sheet: /OPTOISOLATOR/ | | |
| File: Optoisolator.sch | | |
| **Title:** | | |
| Size: A4 | Date: | **Rev:** |
| KiCad E.D.A. kicad 5.1.5+dfsg1-2build2 | | Id: 8/9 |

# Load current measurement circuit




| | | |
|---|---|---|
| Sheet: /CURRENT_SENSOR/<br>File: Current_sensor.sch | | |
| **Title:** | | |
| Size: A4 | Date: | **Rev:** |
| KiCad E.D.A. kicad 5.1.5+dfsg1-2build2 | | Id: 9/9 |