

230V

AC 230V input

J1
TC0

Load

J2
TC0

Load wire
should pass through
the current
transformer hole

Sheet: TEMP_SENSOR

+3V3
GND
File: Temp_sensor.sch

Temp sensor placed
on the same heatsink
as the TRIAC

Sheet: VOLTAGE_DIVIDER

AC1
AC2
+3V3
GND
File: Voltage_divider.sch

Sheet: CURRENT_SENSOR

+3V3
GND
File: Current_sensor.sch

Sheet: MCU

+3V3
TEMP_SDA
VOLT
CURR
GND
File: MCU.sch

Isolation

Sheet: AC-DC 5V

AC1
AC2
+5VD
GND
File: AC-DC 5V.sch

Sheet: ISOLATED_TRIAC

AC
LOAD
+5V
EN
File: Isolated_TRIAC.sch

Sheet: +3V3_ISOLATED

+3V3_ISO
GND_ISO
+5V
GND
File: +3V3_Isolated.sch

Sheet: OPTOISOLATOR

IN
GND1
OUTD
GND2
File: Optoisolator.sch

J3
IDC-6

+5V
UART_TX
Heater
GND

Sheet: /
File: furnace_230V.sch

Title:

Size: A4

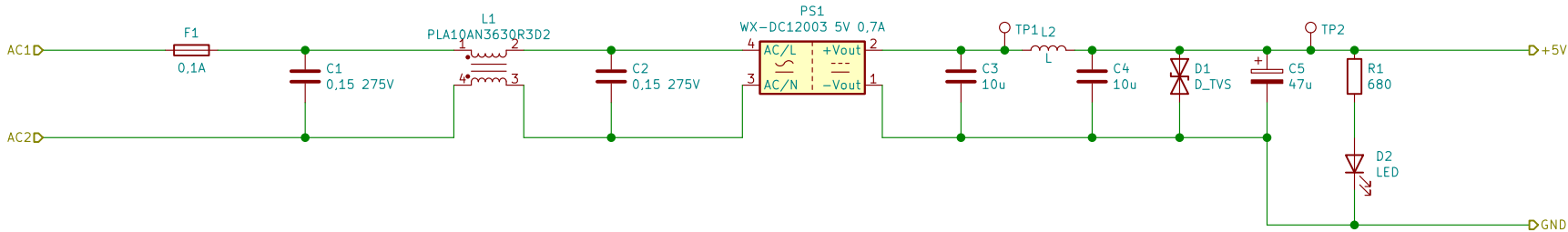
Date:

KiCad E.D.A. kicad 5.1.10-88a1d61d5890ubuntu20.04.1

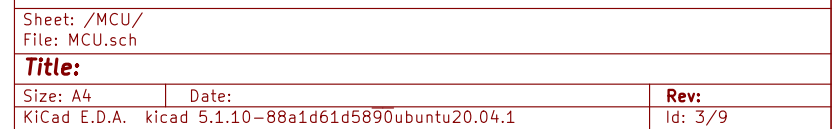
Rev:

Id: 1/9

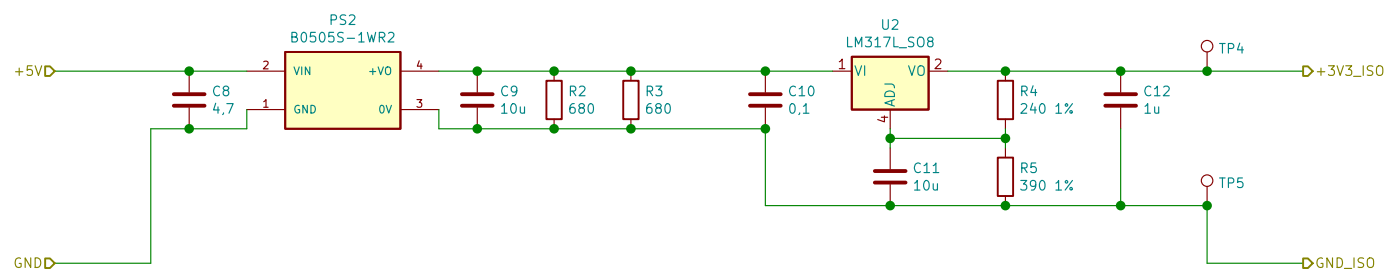
AC/DC +5V power source



Sheet: /AC-DC 5V/ File: AC-DC 5V.sch		
Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. kicad 5.1.10-88a1d61d5890ubuntu20.04.1		Id: 2/9

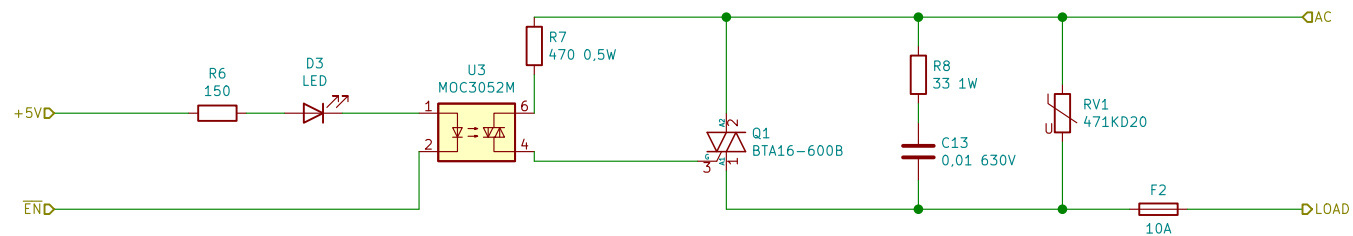


Isolated +3V3 power source



Sheet: /+3V3_ISOLATED/ File: +3V3_isolated.sch		
Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. kicad 5.1.10-88a1d61d5890ubuntu20.04.1		Id: 4/9

Isolated TRIAC control circuit



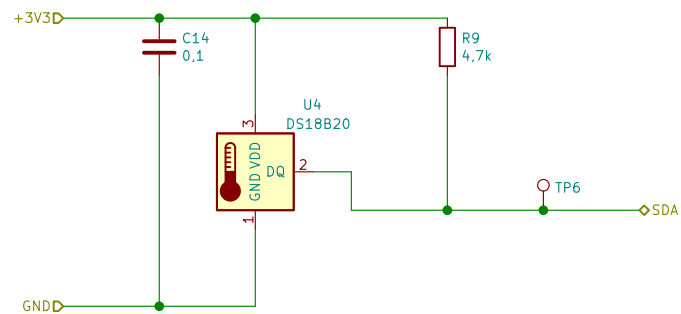
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File: Isolated_TRIAC.sch

Title:

Size: A4 Date: 5.1.10-88a1d61d5890ubuntu20.04.1
KiCad E.D.A. kicad 5.1.10-88a1d61d5890ubuntu20.04.1

Rev: Id: 5/9

1-wire temperature sensor



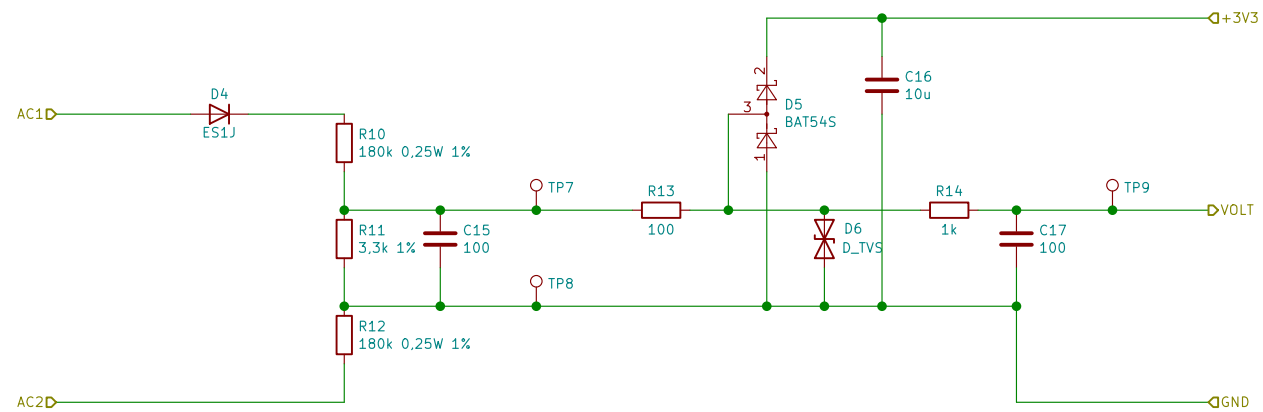
Sheet: /TEMP_SENSOR/
File: Temp_sensor.sch

Title:

Size: A4 Date: KiCad E.D.A. kicad 5.1.10-88a1d61d5890ubuntu20.04.1

Rev: Id: 6/9

Input 230V voltage measurement circuit



Sheet: /VOLTAGE_DIVIDER/
File: Voltage_divider.sch

Title:

Size: A4

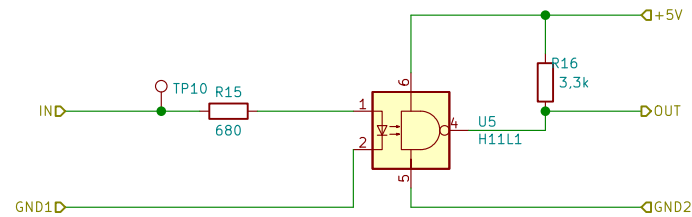
Date:

KiCad E.D.A. kicad 5.1.10-88a1d61d5890ubuntu20.04.1

Rev:

Id: 7/9

UART isolator



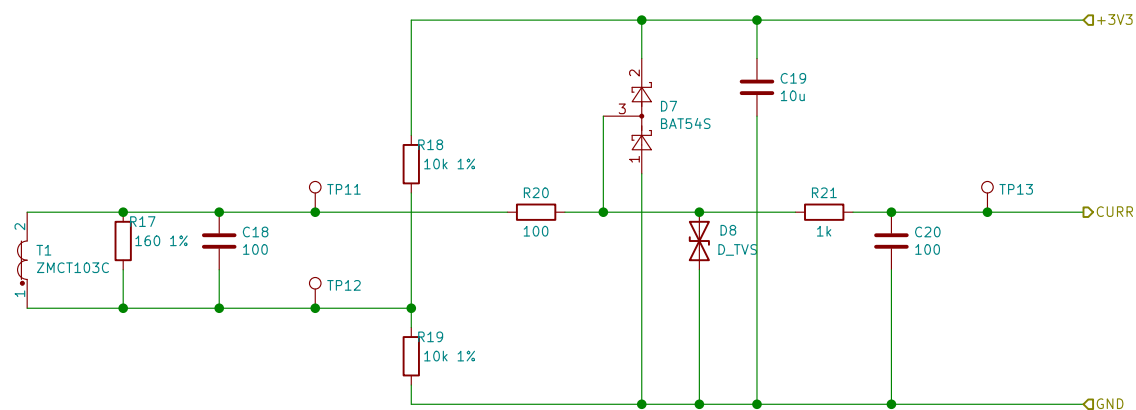
Sheet: /OPTOISOLATOR/
File: Optoisolator.sch

Title:

Size: A4 Date:
KiCad E.D.A. kicad 5.1.10-88a1d61d5890ubuntu20.04.1

Rev:
Id: 8/9

Load current measurement circuit



Sheet: /CURRENT_SENSOR/
File: Current_sensor.sch

Title:

Size: A4 Date: KiCad E.D.A. kicad 5.1.10-88a1d61d5890ubuntu20.04.1

Rev: Id: 9/9