

230V

AC 230V input

J? TC0

Load

J? TC0

Load wire should pass through the current transformer hole

Sheet: TEMP\_SENSOR

+3V3 SDA  
GND  
File: Temp\_sensor.sch

Temp sensor placed on the same heatsink as the TRIAC

Sheet: VOLTAGE\_DIVIDER

AC1 AC2  
+3V3 VOLT  
GND  
File: Voltage\_divider.sch

Sheet: CURRENT\_SENSOR

+3V3 CURR  
GND  
File: Current\_sensor.sch

Sheet: MCU

+3V3 UART\_TXD  
TEMP\_SDA  
VOLT  
CURR  
GND  
File: MCU.sch

Sheet: AC-DC 5V

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

Sheet: ISOLATED\_TRIAC

AC +5V  
LOAD EN  
File: Isolated\_TRIAC.sch

Sheet: +3V3\_ISOLATED

+3V3\_ISO +5V  
GND\_ISO GND  
File: +3V3\_Isolated.sch

Sheet: OPTOISOLATOR

IN +5V  
GND1 OUT  
GND2  
File: Optoisolator.sch

J? CWF-4R

4  
3  
2  
1

+5V  
UART\_TX  
Heater  
GND

Sheet: /  
File: furnace\_230V.sch

Title:

Size: A4

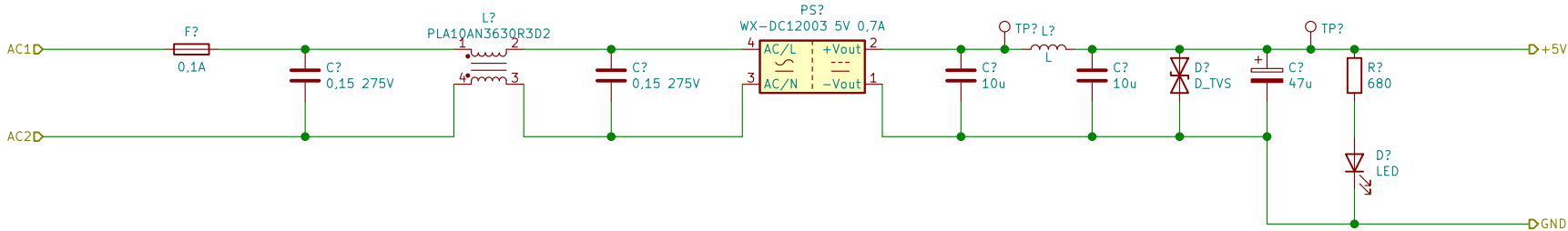
Date:

KiCad E.D.A. kicad (5.1.10)-1

Rev:

Id: 1/9

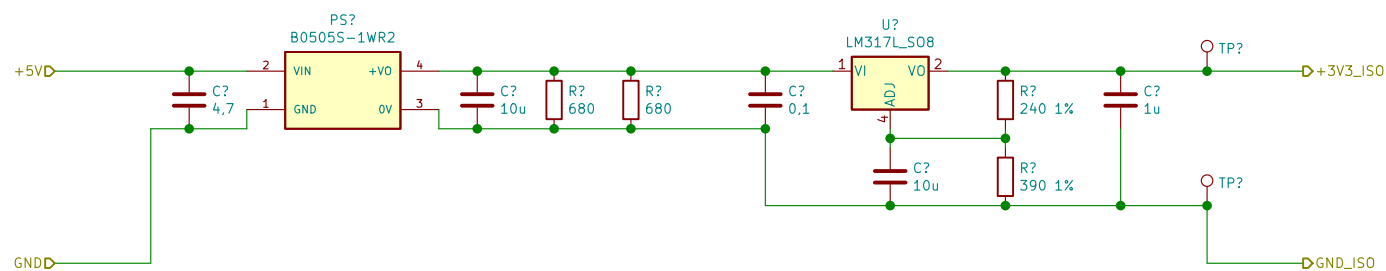
AC/DC +5V power source



Sheet: /AC-DC 5V/ File: AC-DC 5V.sch		
Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. kicad (5.1.10)-1		Id: 2/9



Isolated +3V3 power source



Sheet: /+3V3\_ISOLATED/  
File: +3V3\_isolated.sch

**Title:**

Size: A4

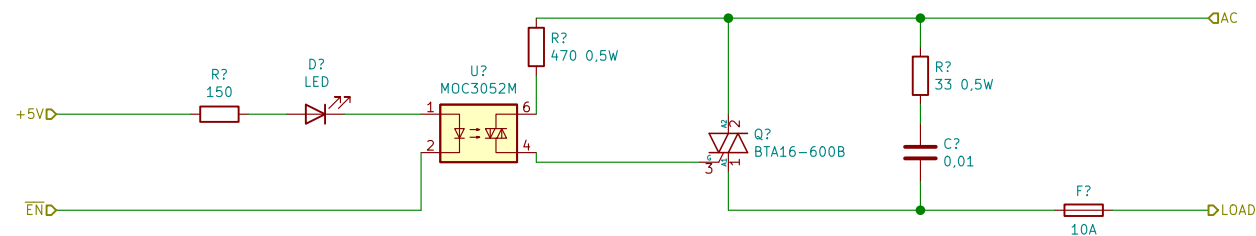
Date:

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**Rev:**

Id: 4/9

# Isolated TRIAC control circuit



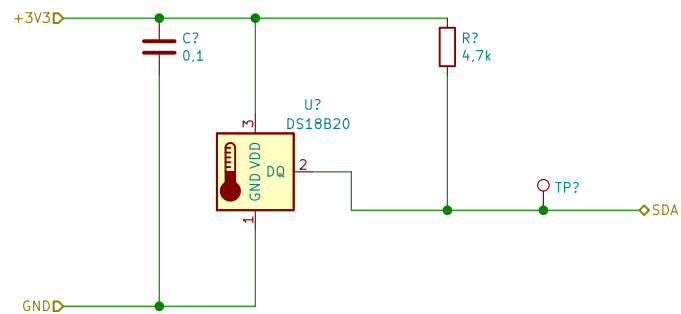
Sheet: /ISOLATED\_TRIAC/  
File: Isolated\_TRIAC.sch

**Title:**

Size: A4 Date:  
KiCad E.D.A. kicad (5.1.10)-1

**Rev:**  
Id: 5/9

# 1-wire temperature sensor



Sheet: /TEMP\_SENSOR/  
File: Temp\_sensor.sch

**Title:**

Size: A4

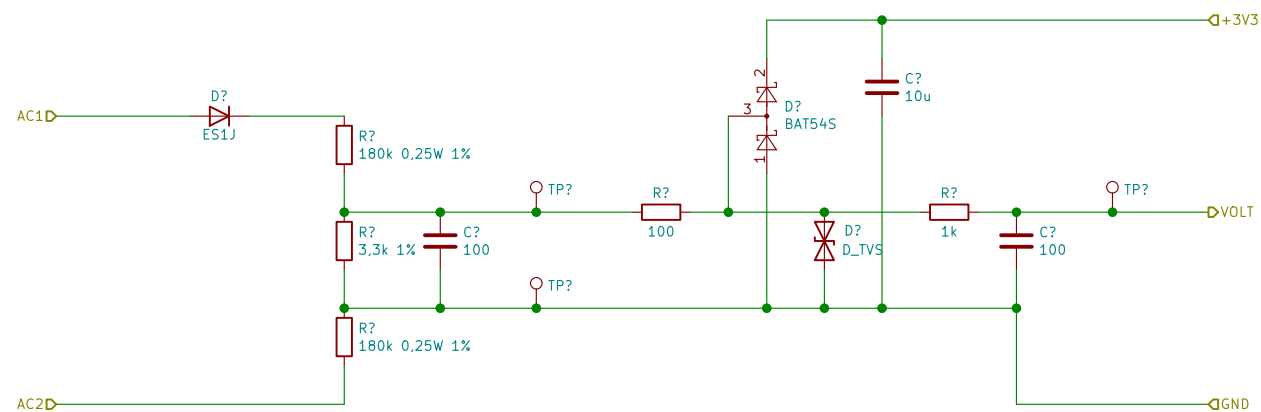
Date:

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Rev:

Id: 6/9

# Input 230V voltage measurement circuit



Sheet: /VOLTAGE\_DIVIDER/  
File: Voltage\_divider.sch

**Title:**

Size: A4

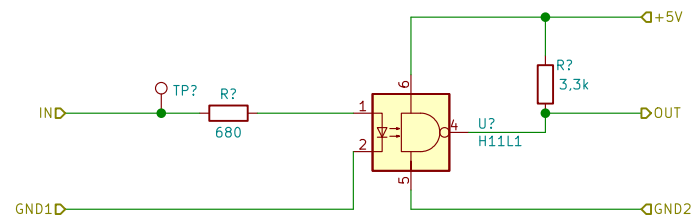
Date:

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**Rev:**

Id: 7/9

# UART isolator



Sheet: /OPTOISOLATOR/  
File: Optoisolator.sch

**Title:**

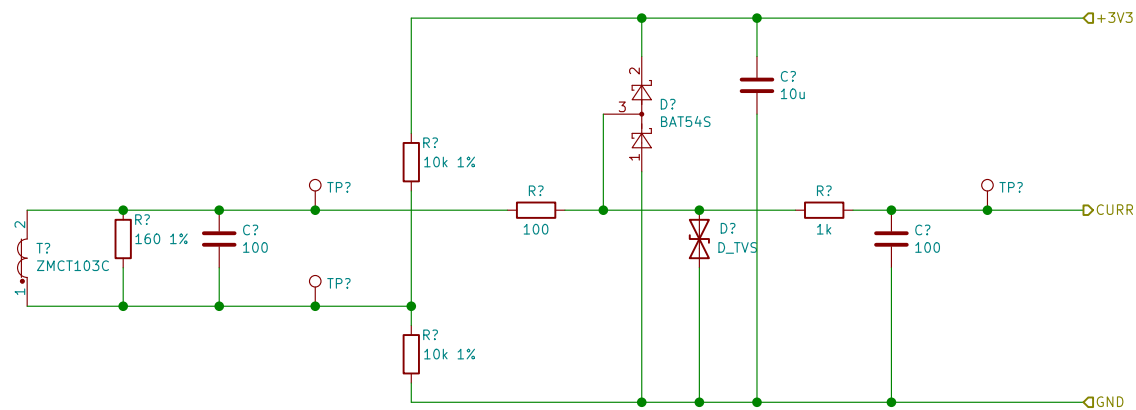
Size: A4  
KiCad E.D.A. kicad (5.1.10)-1

Date:

Rev:  
Id: 8/9



## Load current measurement circuit



Sheet: /CURRENT\_SENSOR/  
File: Current\_sensor.sch

**Title:**

Size: A4	Date:
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Rev:  
Id: 9/9