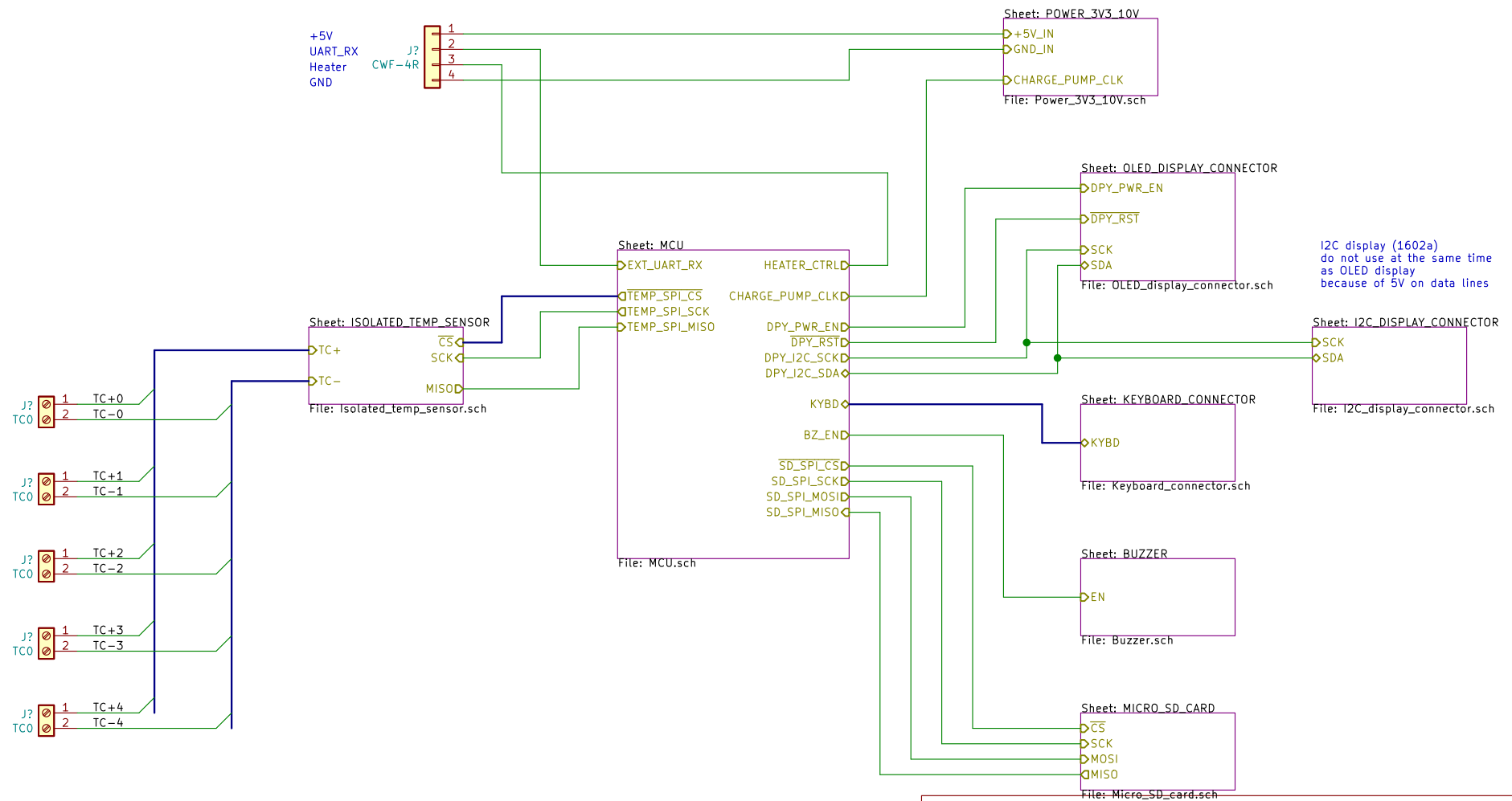


Controller

This board
1. Mesures furnace temperature
2. Controls load throught the 230V board
3. Provides user interface (display + keyboard)



Sheet: /
File: furnace_controller.sch

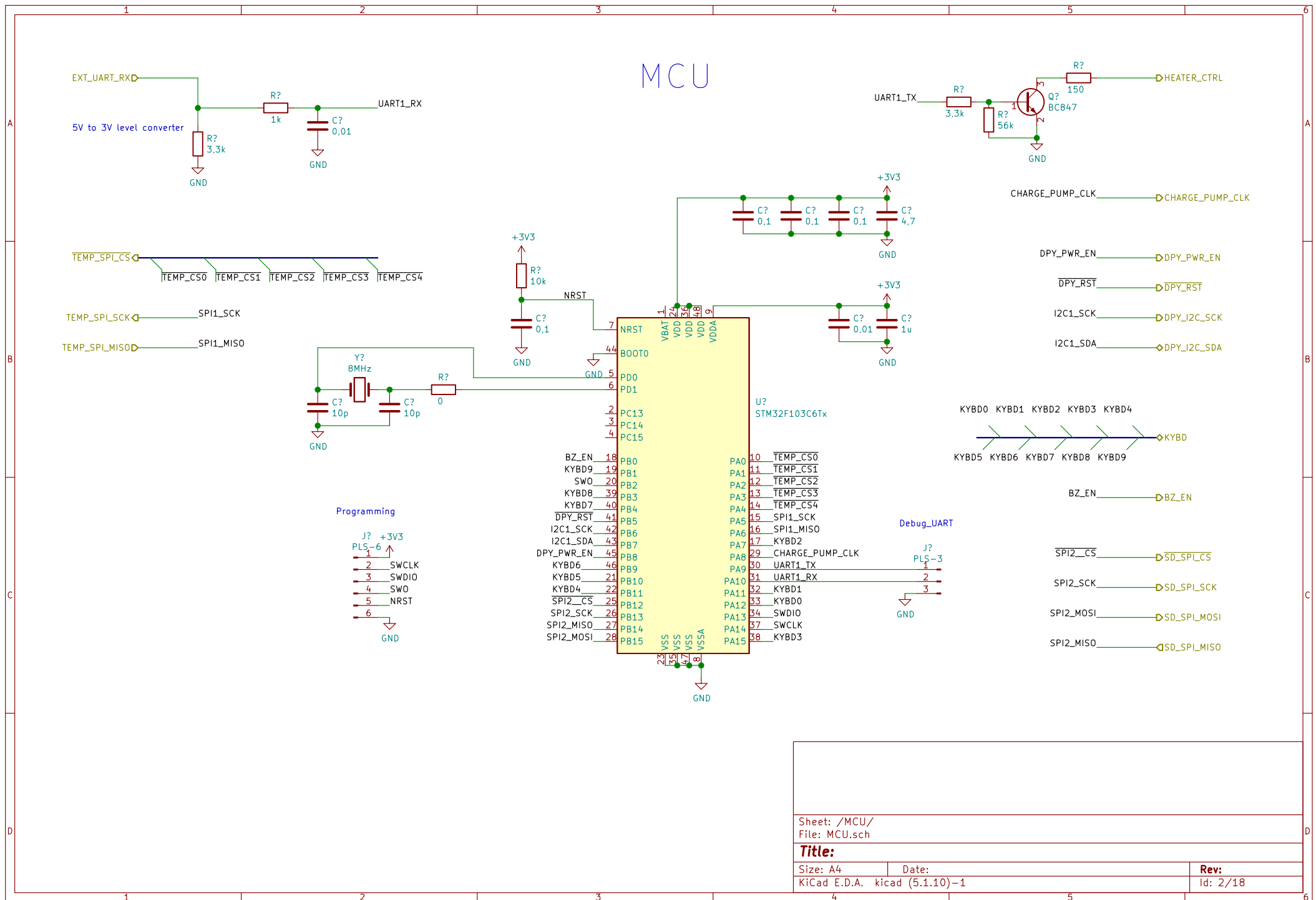
Title:

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

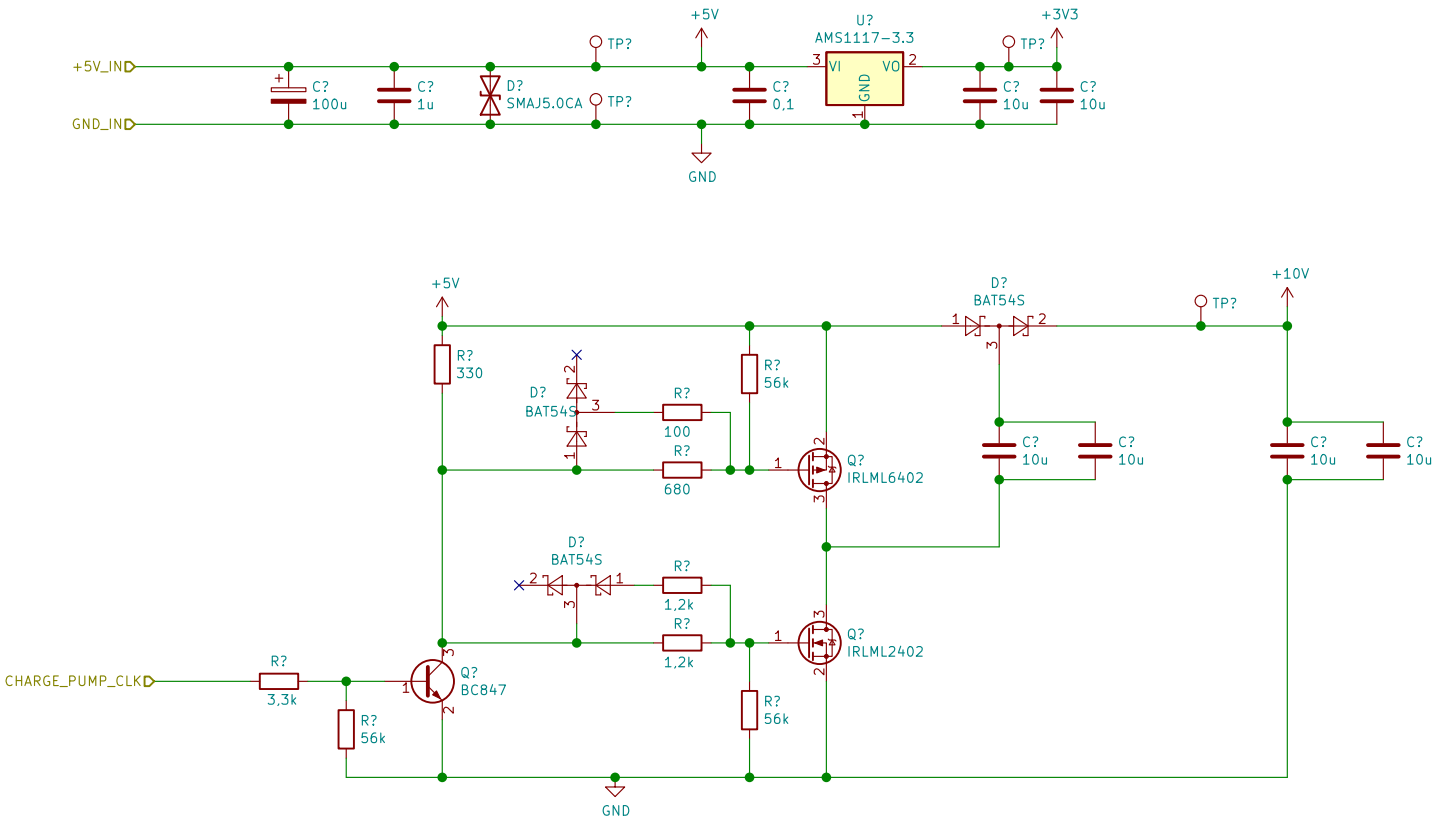
Date:

Rev:

Id: 1/18



Power sources 3V3 and 10V



Sheet: /POWER_3V3_10V/
File: Power_3V3_10V.sch

Title:

Size: A4

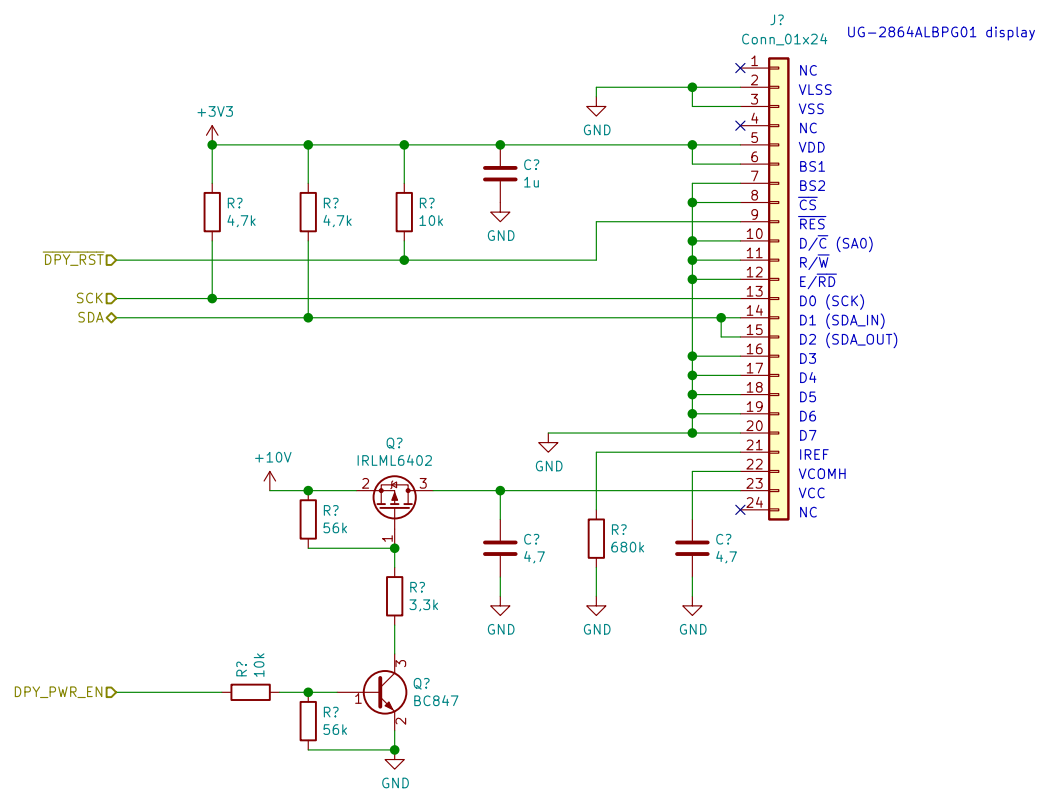
Date:

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

Rev:

Id: 3/18

Connector fo OLED display



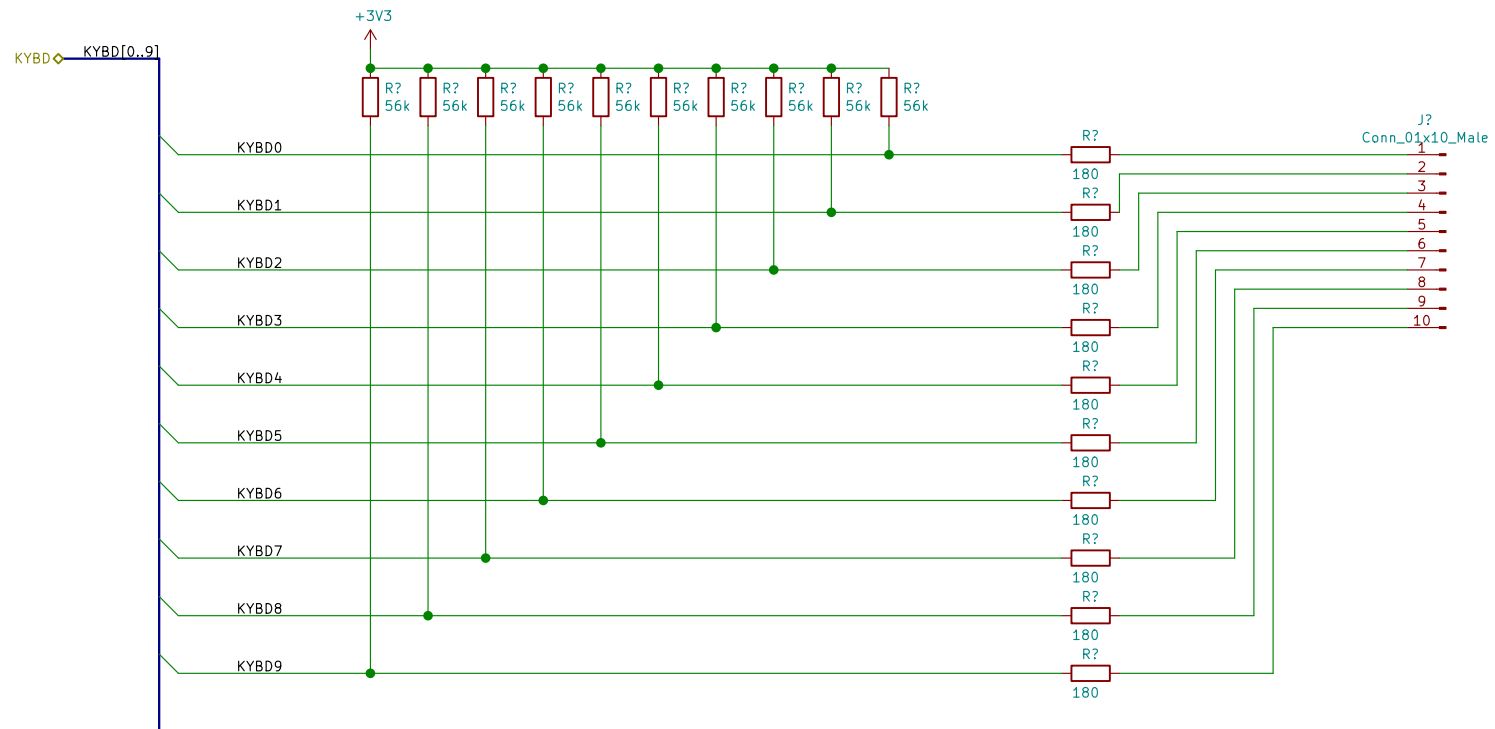
Sheet: /OLED_DISPLAY_CONNECTOR/
File: OLED_display_connector.sch

Title:

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

Rev:
Id: 4/18

Connector for matrix keyboard



Sheet: /KEYBOARD_CONNECTOR/
File: Keyboard_connector.sch

Title:

Size: A4

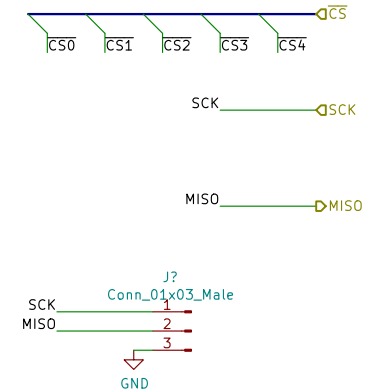
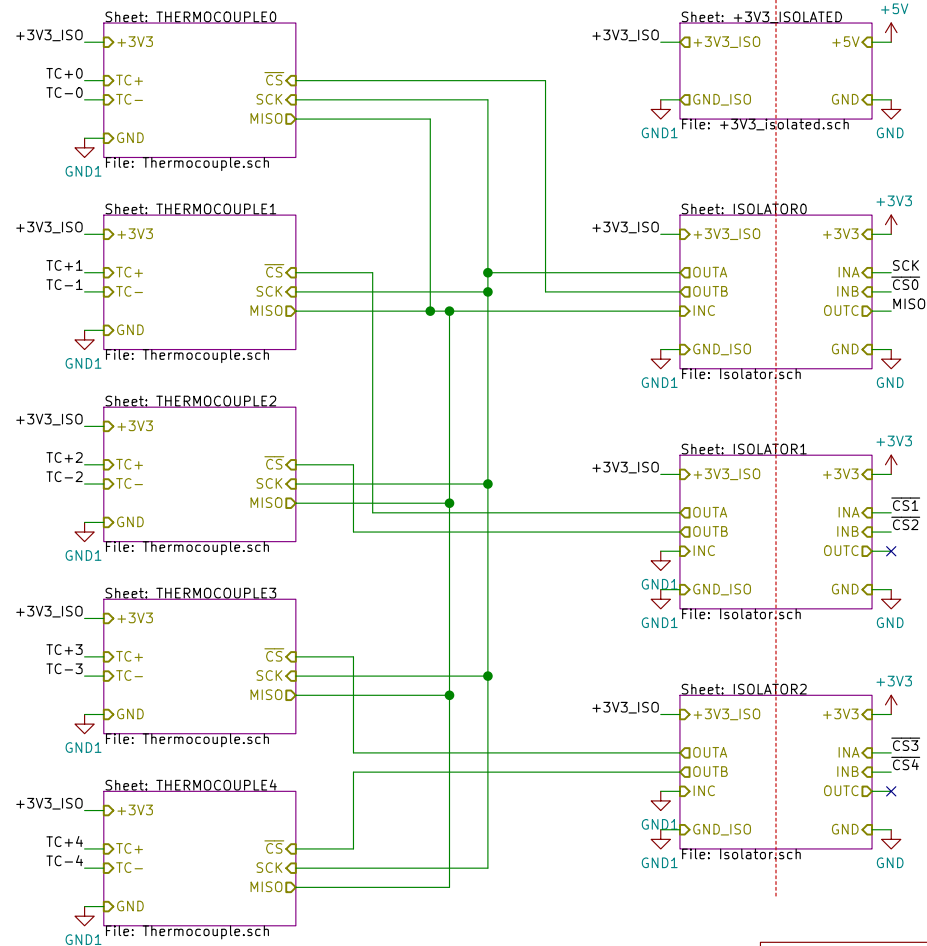
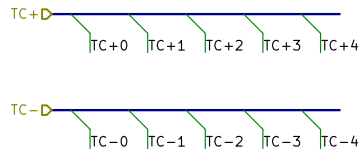
Date:

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

Rev:

Id: 5/18

Isolated 5x temperature sensor



Sheet: /ISOLATED_TEMP_SENSOR/
File: Isolated_temp_sensor.sch

Title:

Size: A4

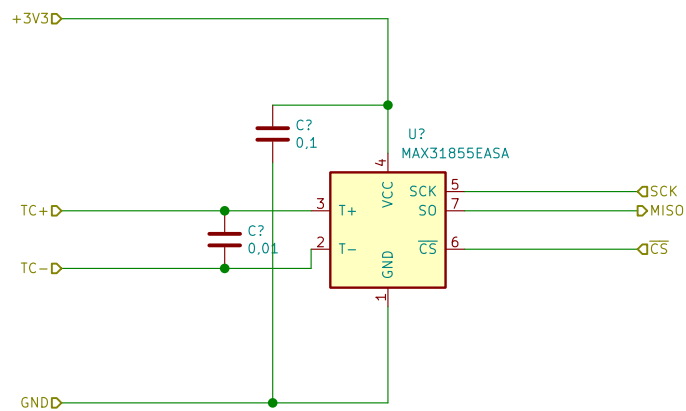
Date:

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

Rev:

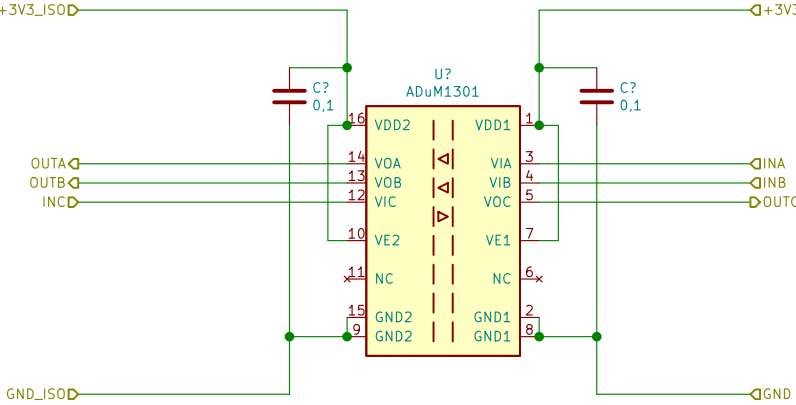
Id: 6/18

Thermocouple sensor



Sheet: /ISOLATED_TEMP_SENSOR/THERMOCOUPLE0/ File: Thermocouple.sch		
Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. kicad (5.1.10)-1		Id: 7/18

Isolator for thermocouple

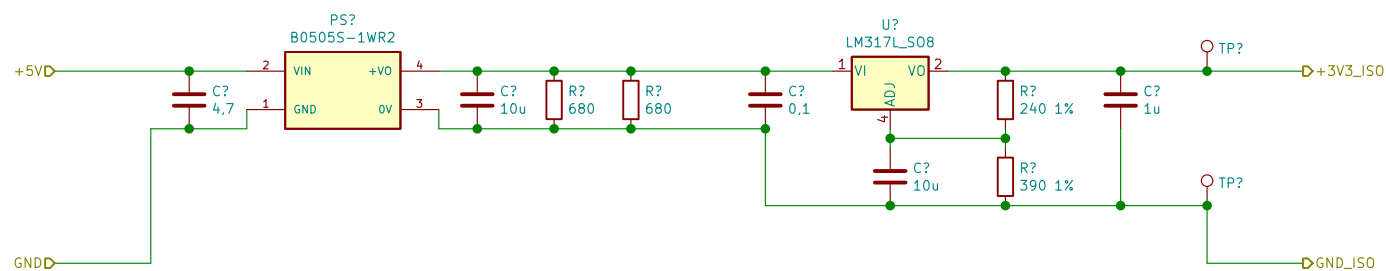


Sheet: /ISOLATED_TEMP_SENSOR/ISOLATOR0/
File: Isolator.sch

Title:

Size: A4	Date:	Rev:
KiCad E.D.A. kicad (5.1.10)-1		Id: 8/18

Isolated +3V3 power source



Sheet: /ISOLATED_TEMP_SENSOR/+3V3_ISOLATED/
File: +3V3_isolated.sch

Title:

Size: A4

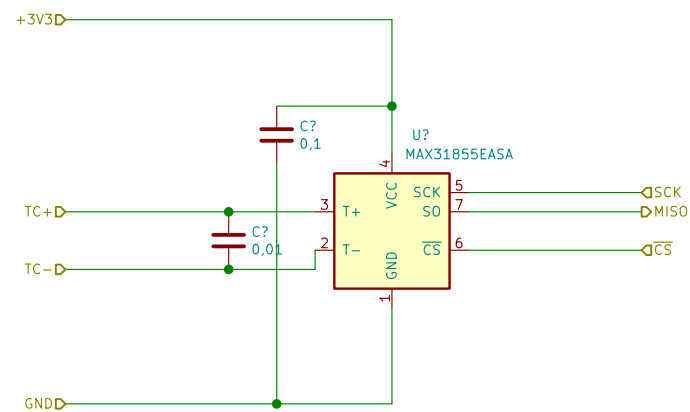
Date:

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

Rev:

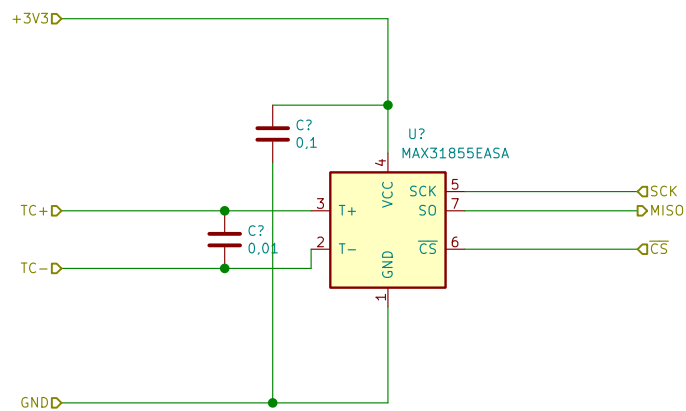
Id: 9/18

Thermocouple sensor



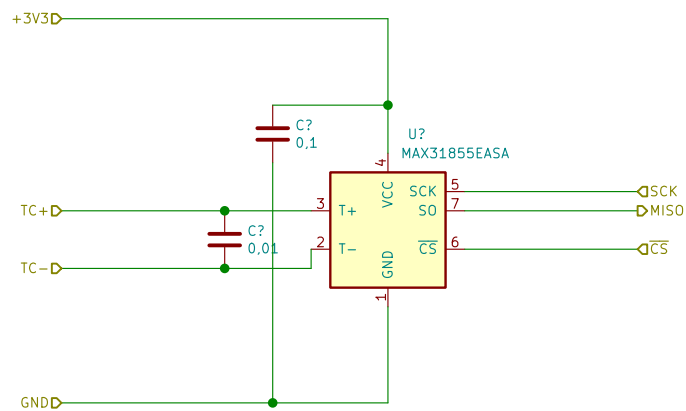
Sheet: /ISOLATED_TEMP_SENSOR/THERMOCOUPLE1/ File: Thermocouple.sch		
Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. kicad (5.1.10)-1		Id: 10/18

Thermocouple sensor



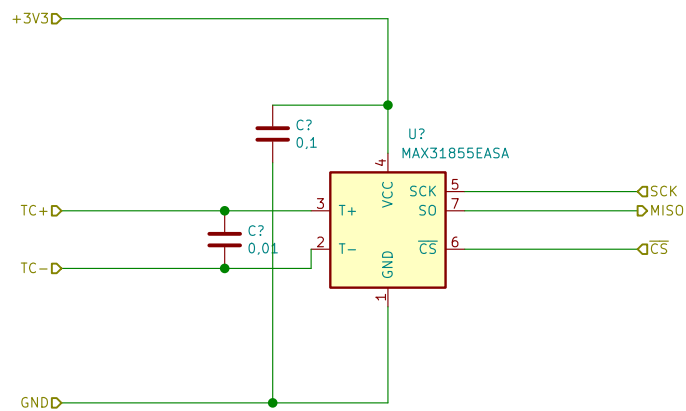
Sheet: /ISOLATED_TEMP_SENSOR/THERMOCOUPLE2/ File: Thermocouple.sch		
Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. kicad (5.1.10)-1		Id: 11/18

Thermocouple sensor



Sheet: /ISOLATED_TEMP_SENSOR/THERMOCOUPLE3/ File: Thermocouple.sch		
Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. kicad (5.1.10)-1		Id: 12/18

Thermocouple sensor



Sheet: /ISOLATED_TEMP_SENSOR/THERMOCOUPLE4/ File: Thermocouple.sch		
Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. kicad (5.1.10)-1		Id: 13/18

Isolator for thermocouple

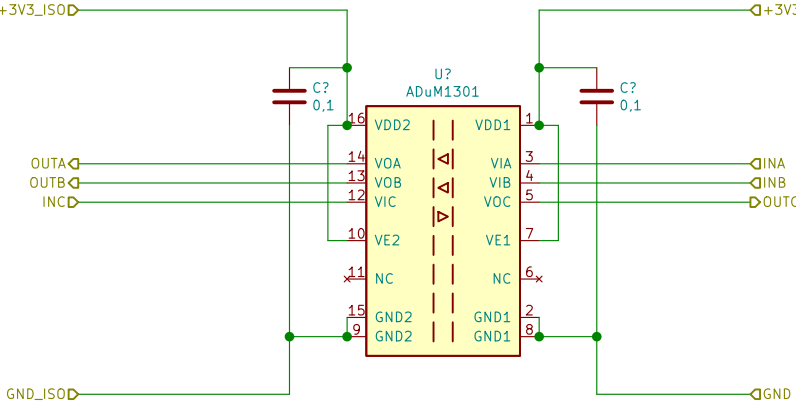
The schematic diagram illustrates the ADuM1301 isolator circuit. The central component is the ADuM1301, a digital isolator with two sides. The left side has pins 14 (VOA), 13 (VOB), 12 (VIC), 10 (VE2), 11 (NC), 15 (GND2), and 9 (GND2). The right side has pins 3 (VIA), 4 (VIB), 5 (VOC), 7 (VE1), 6 (NC), 2 (GND1), and 8 (GND1). The top pins are VDD2 (16) and VDD1 (1). The bottom pins are GND2 (9) and GND1 (8). The diagram shows connections for +3V3_ISO, GND_ISO, +3V3, and GND. It also shows connections for OUTA, OUTB, INCD, INA, INB, and OUTC. Two capacitors, C? 0,1, are connected to the VDD and GND pins on both sides.

Sheet: /ISOLATED_TEMP_SENSOR/ISOLATOR1/ File: Isolator.sch		
Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. kicad (5.1.10)-1		Id: 14/18

Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. kicad (5.1.10)–1		Id: 14/18

Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. kicad (5.1.10)–1		Id: 14/18

Isolator for thermocouple

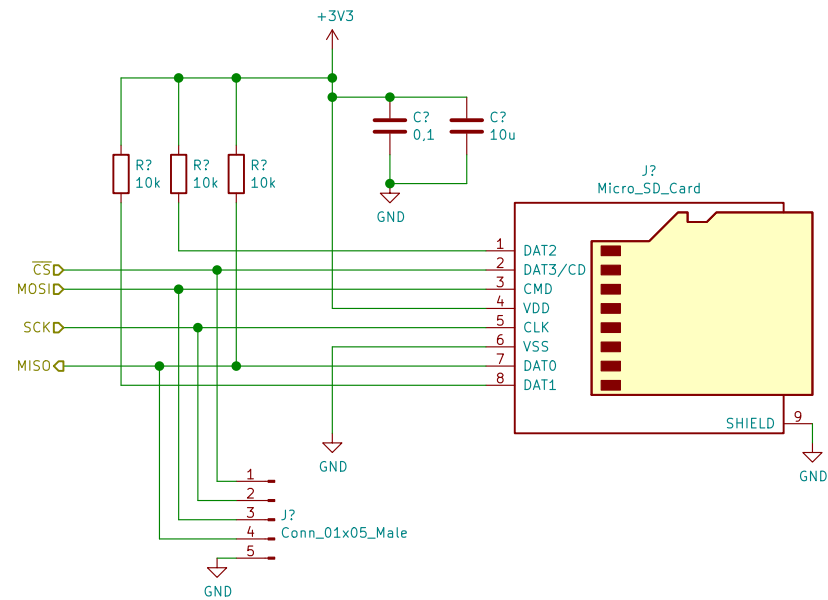


Sheet: /ISOLATED_TEMP_SENSOR/ISOLATOR2/
File: Isolator.sch

Title:

Size: A4	Date:	Rev:
KiCad E.D.A. kicad (5.1.10)-1		Id: 15/18

Micro-SD card connector



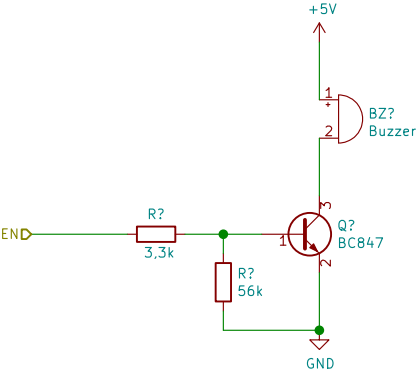
Sheet: /MICRO_SD_CARD/
File: Micro_SD_card.sch

Title:

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

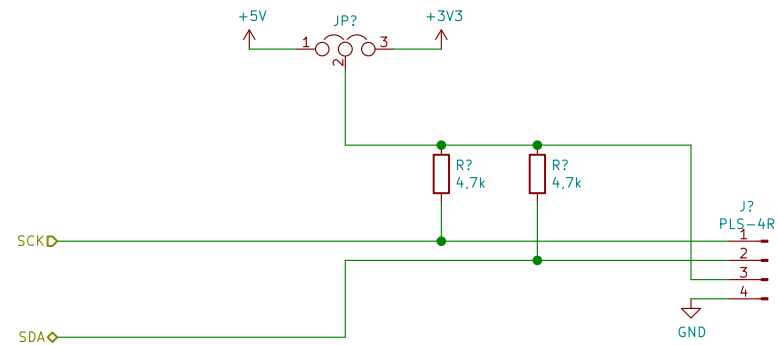
Rev:
Id: 16/18

Buzzer



Sheet: /BUZZER/ File: Buzzer.sch		
Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. kicad (5.1.10)-1		Id: 17/18

I2C display connector for OLED or LCD display



Sheet: /I2C_DISPLAY_CONNECTOR/
File: I2C_display_connector.sch

Title:

Size: A4

Date:

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

Rev:

Id: 18/18