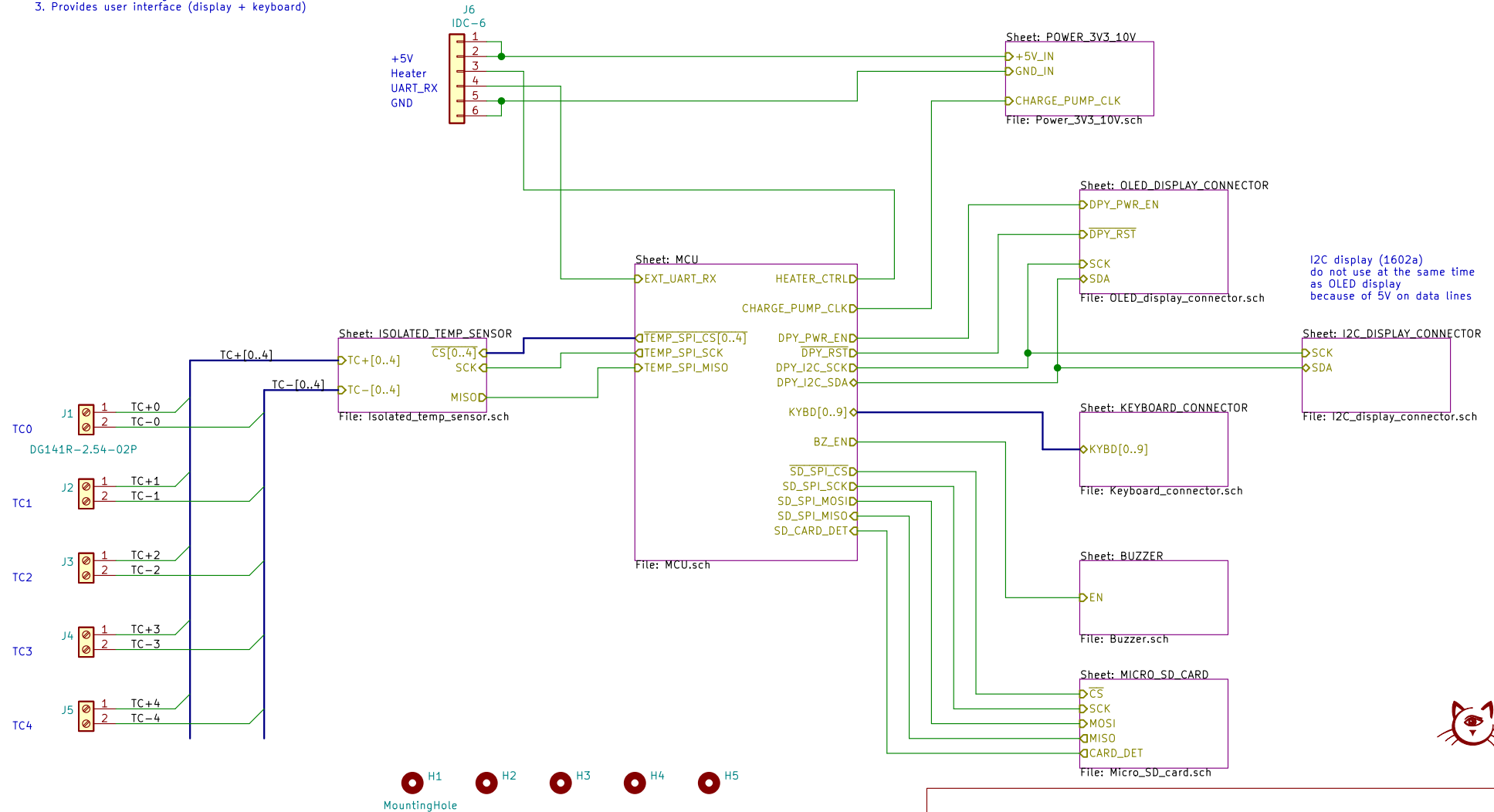


Controller

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



Yuriy Volkov

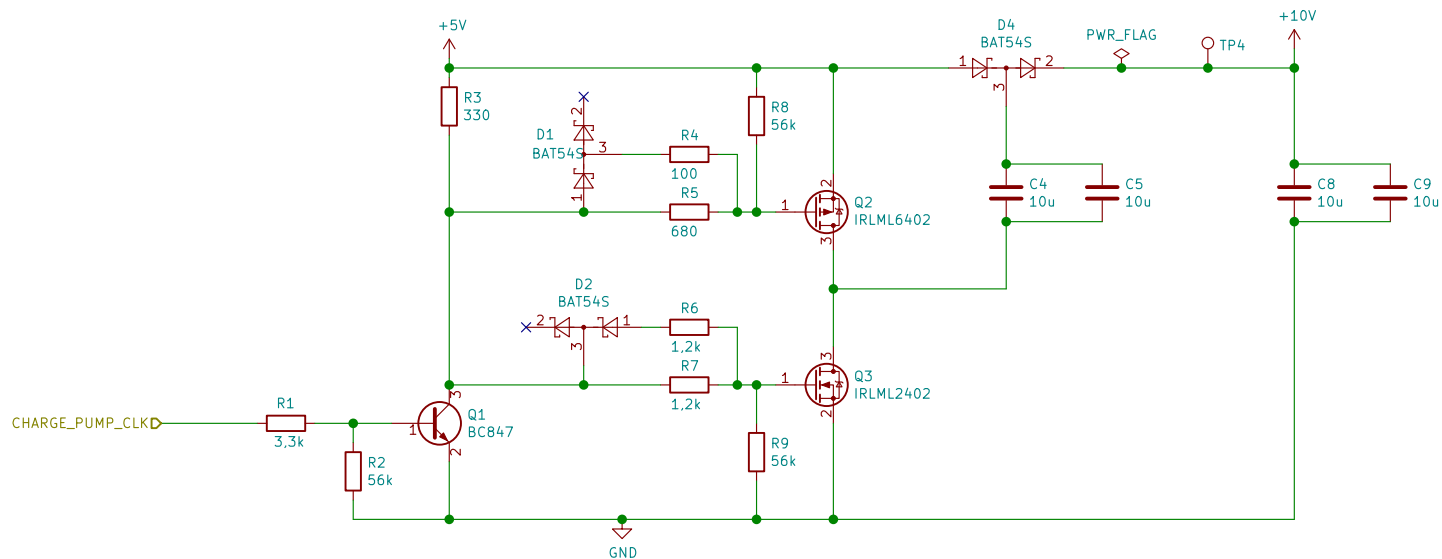
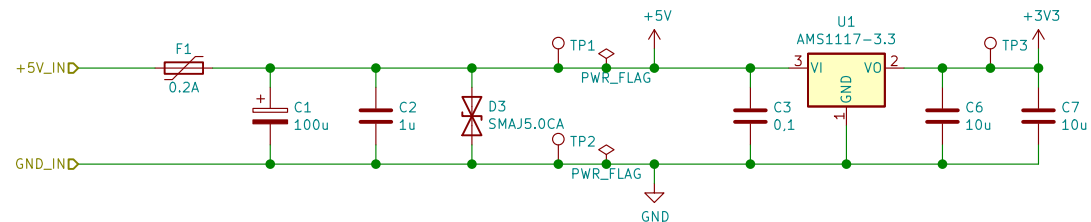
Sheet: /
File: furnace_controller.sch

Title: Furnace controller

Size: A4 Date: 2021-09-30
KiCad E.D.A. kicad 5.1.10-88a1d61d5890ubuntu20.04.1

Rev: 1.0
Id: 1/18

Power sources 3V3 and 10V



Yuriy Volkov

Sheet: /POWER_3V3_10V/

File: Power_3V3_10V.sch

Title: Furnace controller

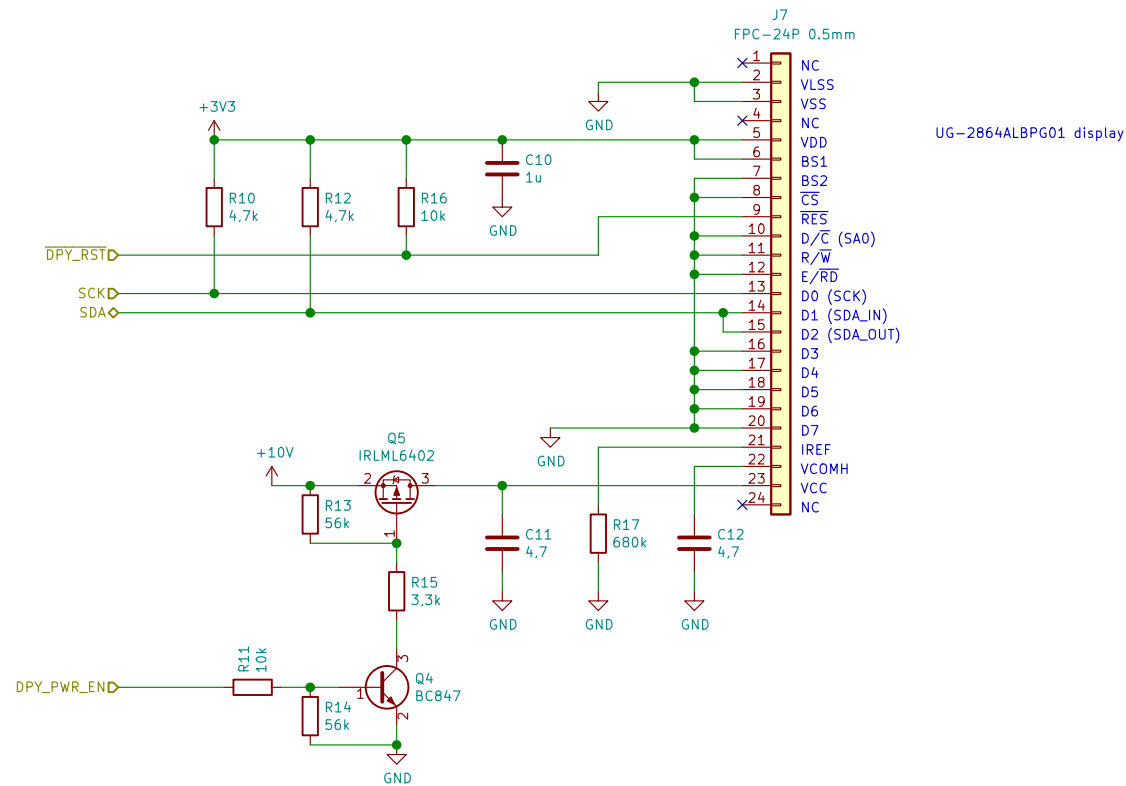
Size: A4 Date: 2021-09-30

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

Rev: 1.0

Id: 2/18

Connector fo OLED display



Yuriy Volkov

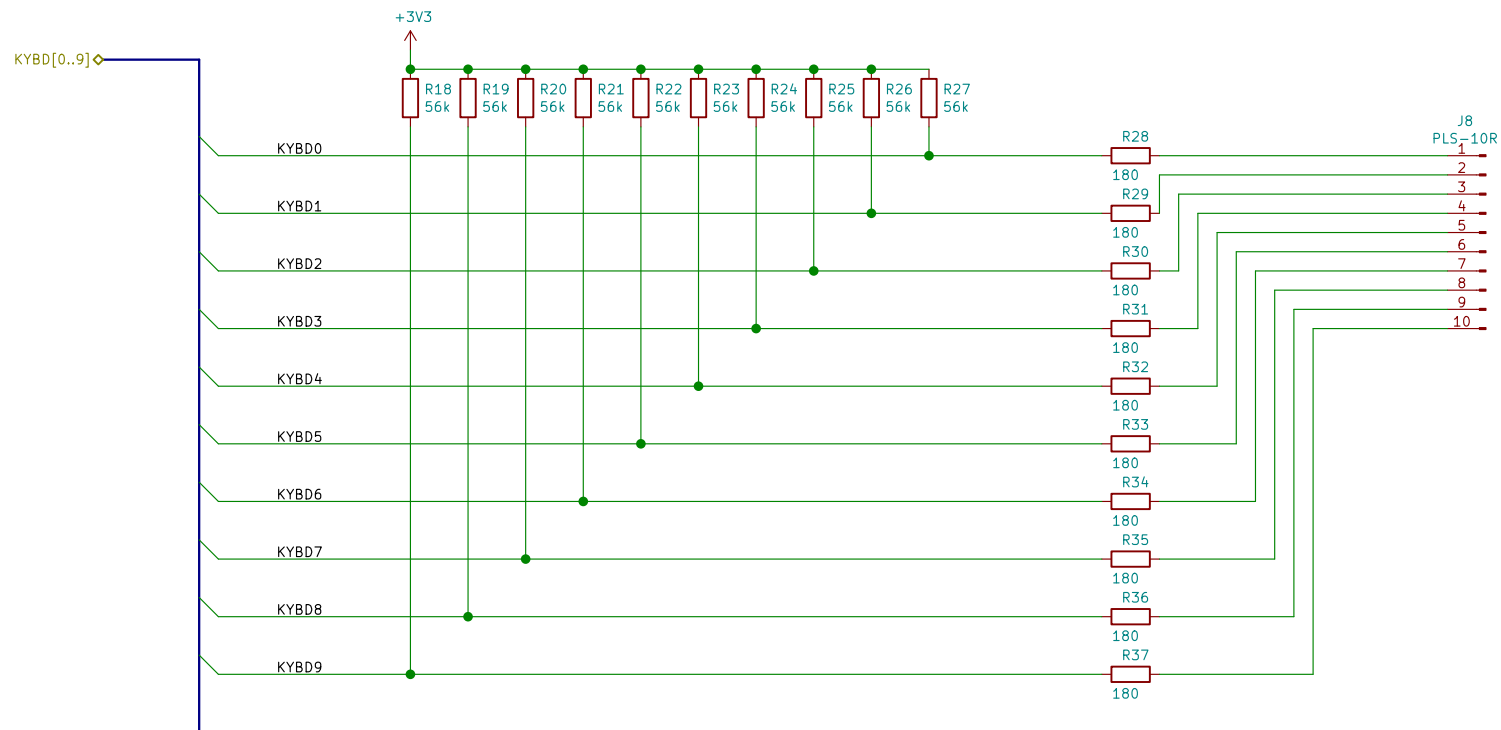
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File: OLED_display_connector.sch

Title: Furnace controller

Size: A4 Date: 2021-09-30
KiCad E.D.A. kicad 5.1.10-88a1d61d5890ubuntu20.04.1

Rev: 1.0
Id: 3/18

Connector for matrix keyboard



Yuriy Volkov

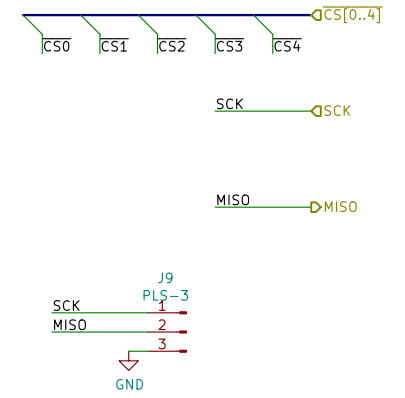
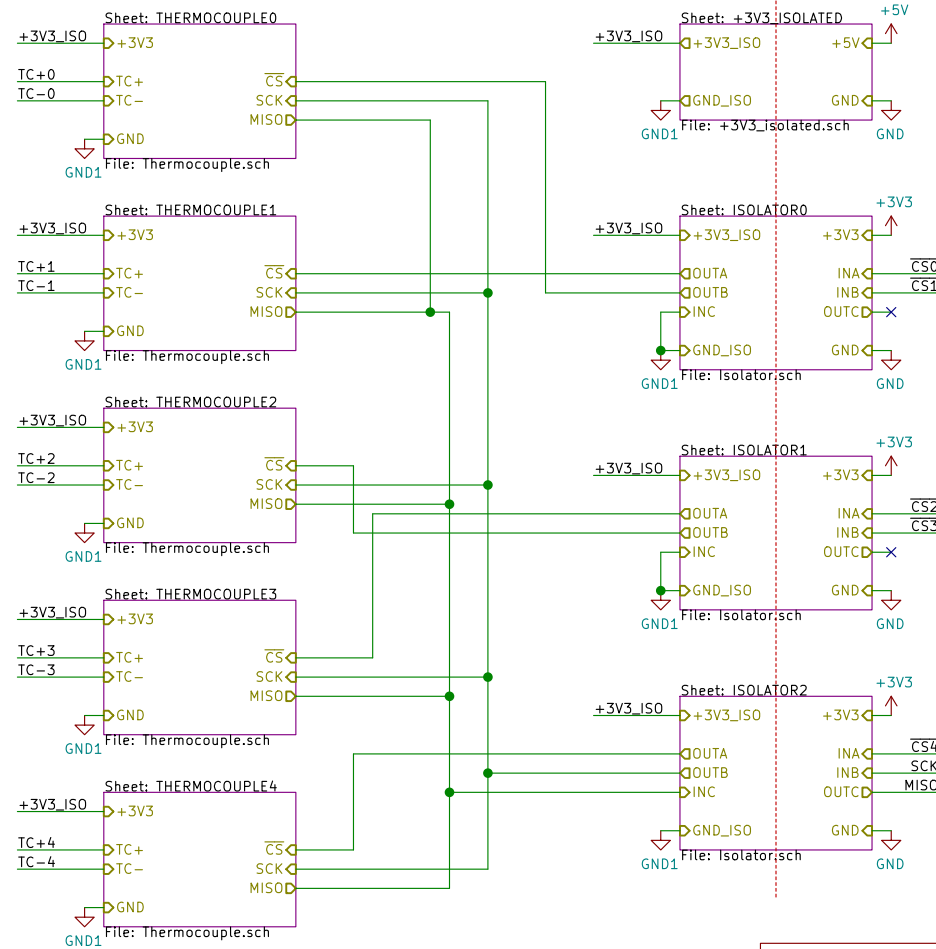
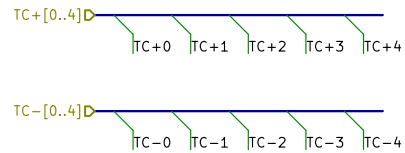
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File: Keyboard_connector.sch

Title: Furnace controller

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

Date: 2021-09-30
Rev: 1.0
Id: 4/18

Isolated 5x temperature sensor



Yuriy Volkov

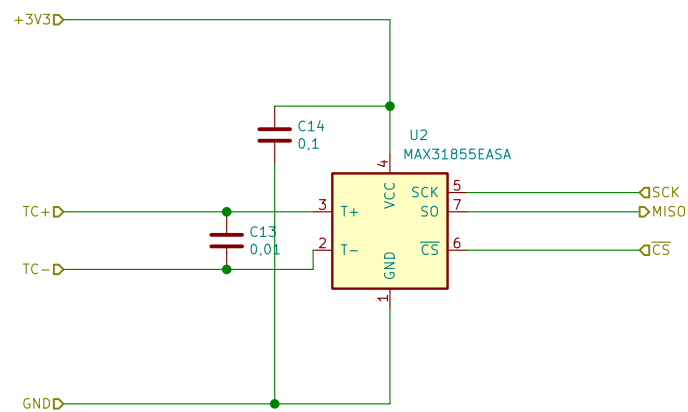
Sheet: /ISOLATED_TEMP_SENSOR/
File: Isolated_temp_sensor.sch

Title: Furnace controller

Size: A4 Date: 2021-09-30
KiCad E.D.A. kicad 5.1.10-88a1d61d5890ubuntu20.04.1

Rev: 1.0
Id: 5/18

Thermocouple sensor



Yuriy Volkov

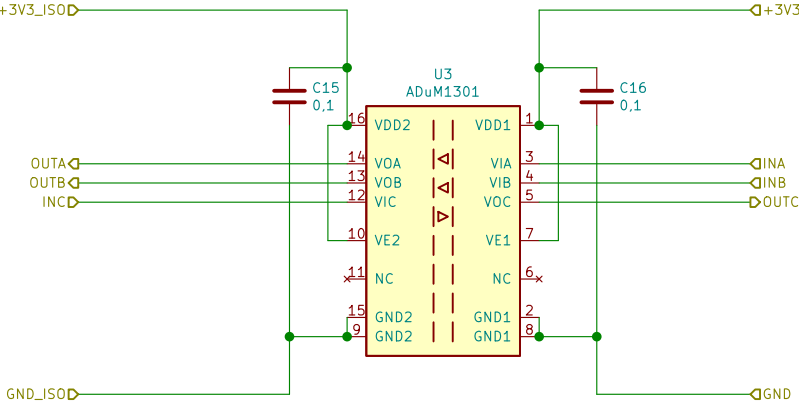
Sheet: /ISOLATED_TEMP_SENSOR/THERMOCOUPLE0/
File: Thermocouple.sch

Title: Furnace controller

Size: A4 Date: 2021-09-30
KiCad E.D.A. kicad 5.1.10-88a1d61d5890ubuntu20.04.1

Rev: 1.0
Id: 6/18

Isolator for thermocouple



Yuriy Volkov

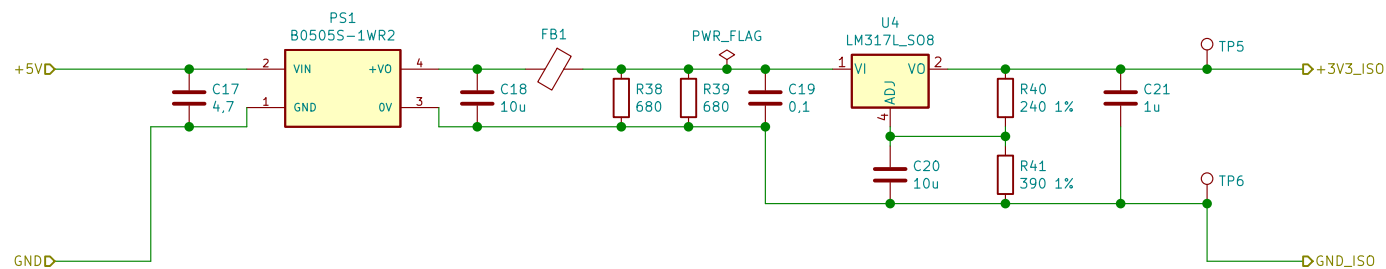
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File: Isolator.sch

Title: Furnace controller

Size: A4 Date: 2021-09-30
KiCad E.D.A. kicad 5.1.10-88a1d61d5890ubuntu20.04.1

Rev: 1.0
Id: 7/18

Isolated +3V3 power source



Yuriy Volkov

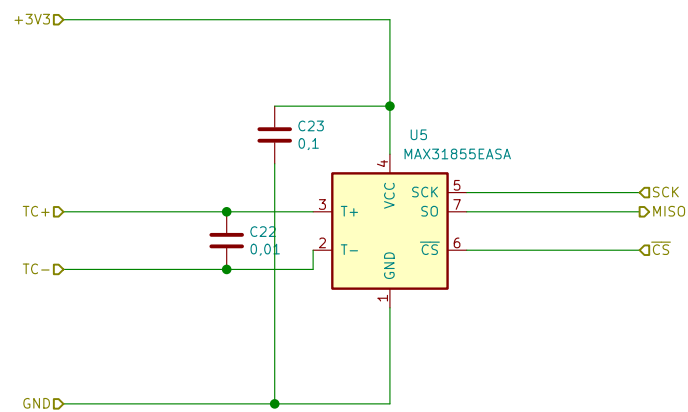
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File: +3V3_isolated.sch

Title: Furnace controller

Size: A4 Date: 2021-09-30
KiCad E.D.A. kicad 5.1.10-88a1d61d5890ubuntu20.04.1

Rev: 1.0
Id: 8/18

Thermocouple sensor



Yuriy Volkov

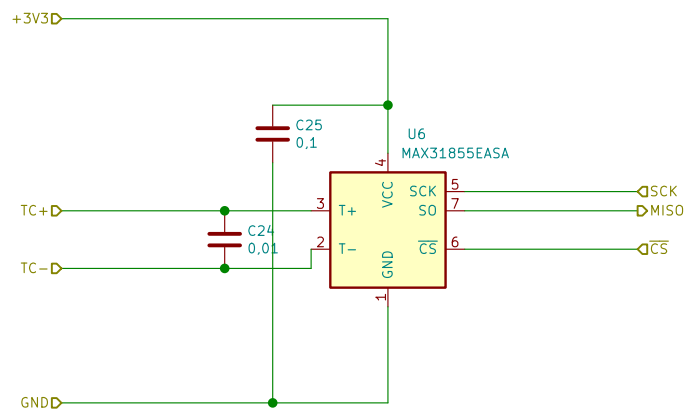
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File: Thermocouple.sch

Title: Furnace controller

Size: A4 Date: 2021-09-30
KiCad E.D.A. kicad 5.1.10-88a1d61d5890ubuntu20.04.1

Rev: 1.0
Id: 9/18

Thermocouple sensor



Yuriy Volkov

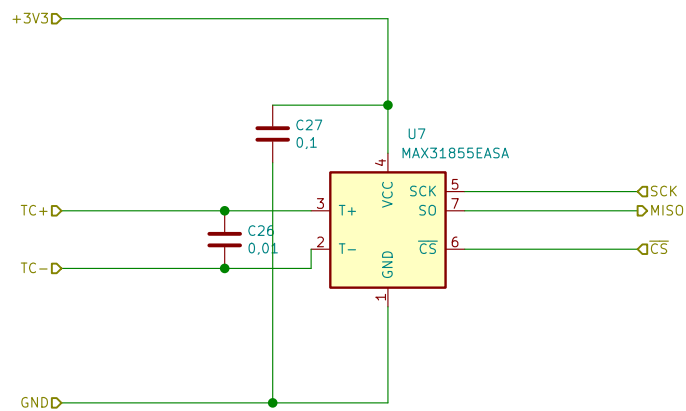
Sheet: /ISOLATED_TEMP_SENSOR/THERMOCOUPLE2/
File: Thermocouple.sch

Title: Furnace controller

Size: A4 Date: 2021-09-30
KiCad E.D.A. kicad 5.1.10-88a1d61d5890ubuntu20.04.1

Rev: 1.0
Id: 10/18

Thermocouple sensor



Yuriy Volkov

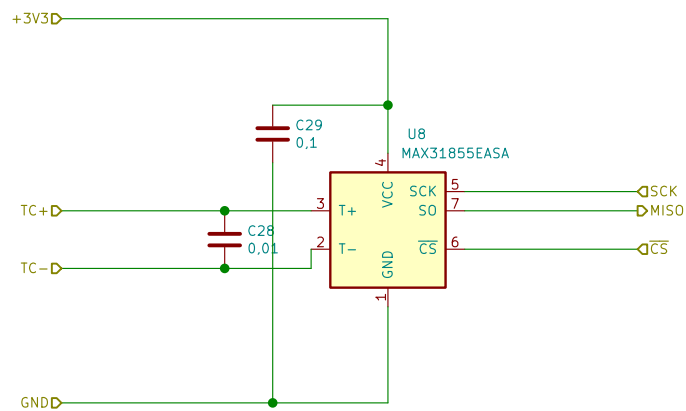
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File: Thermocouple.sch

Title: Furnace controller

Size: A4 Date: 2021-09-30
KiCad E.D.A. kicad 5.1.10-88a1d61d5890ubuntu20.04.1

Rev: 1.0
Id: 11/18

Thermocouple sensor



Yuriy Volkov

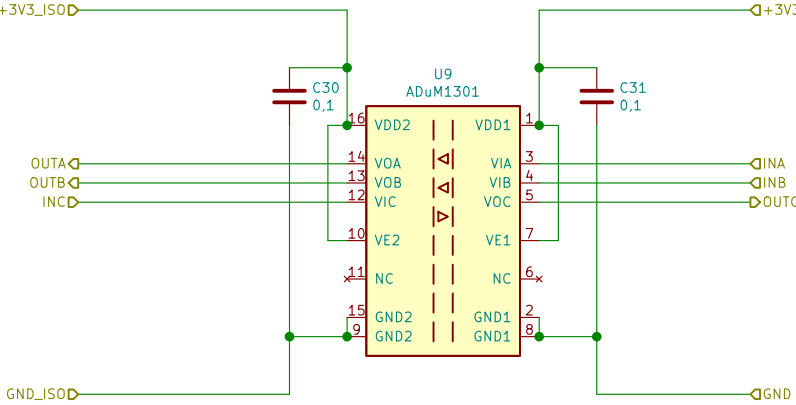
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File: Thermocouple.sch

Title: Furnace controller

Size: A4 Date: 2021-09-30
KiCad E.D.A. kicad 5.1.10-88a1d61d5890ubuntu20.04.1

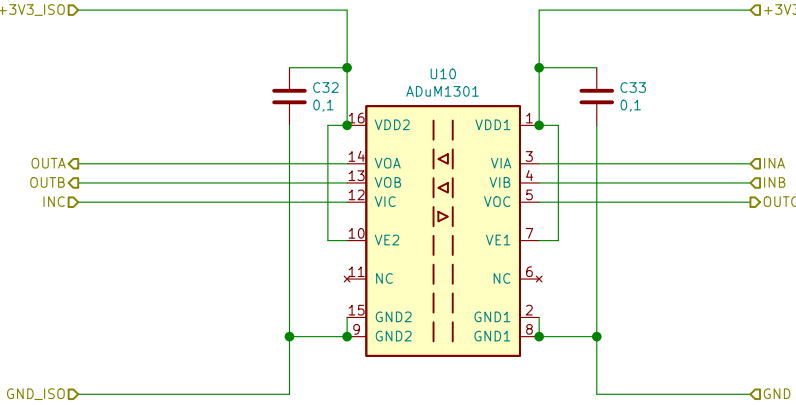
Rev: 1.0
Id: 12/18

Isolator for thermocouple

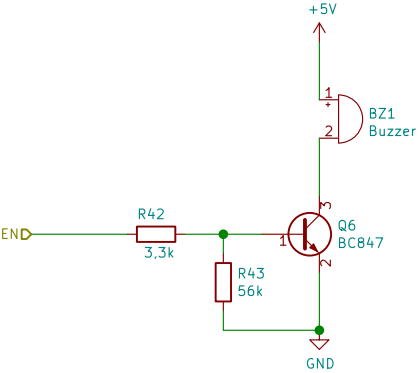


Yuriy Volkov		
Sheet: /ISOLATED_TEMP_SENSOR/ISOLATOR1/		
File: Isolator.sch		
Title: Furnace controller		
Size: A4	Date: 2021-09-30	Rev: 1.0
KiCad E.D.A. kicad 5.1.10-88a1d61d5890ubuntu20.04.1		Id: 13/18

Isolator for thermocouple

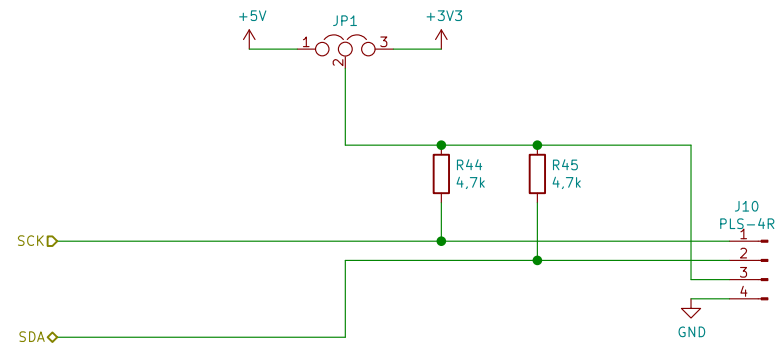


Buzzer



Yuriy Volkov		
Sheet: /BUZZER/		
File: Buzzer.sch		
Title: Furnace controller		
Size: A4	Date: 2021-09-30	Rev: 1.0
KiCad E.D.A. kicad 5.1.10-88a1d61d5890ubuntu20.04.1		Id: 15/18

I2C display connector for OLED or LCD display



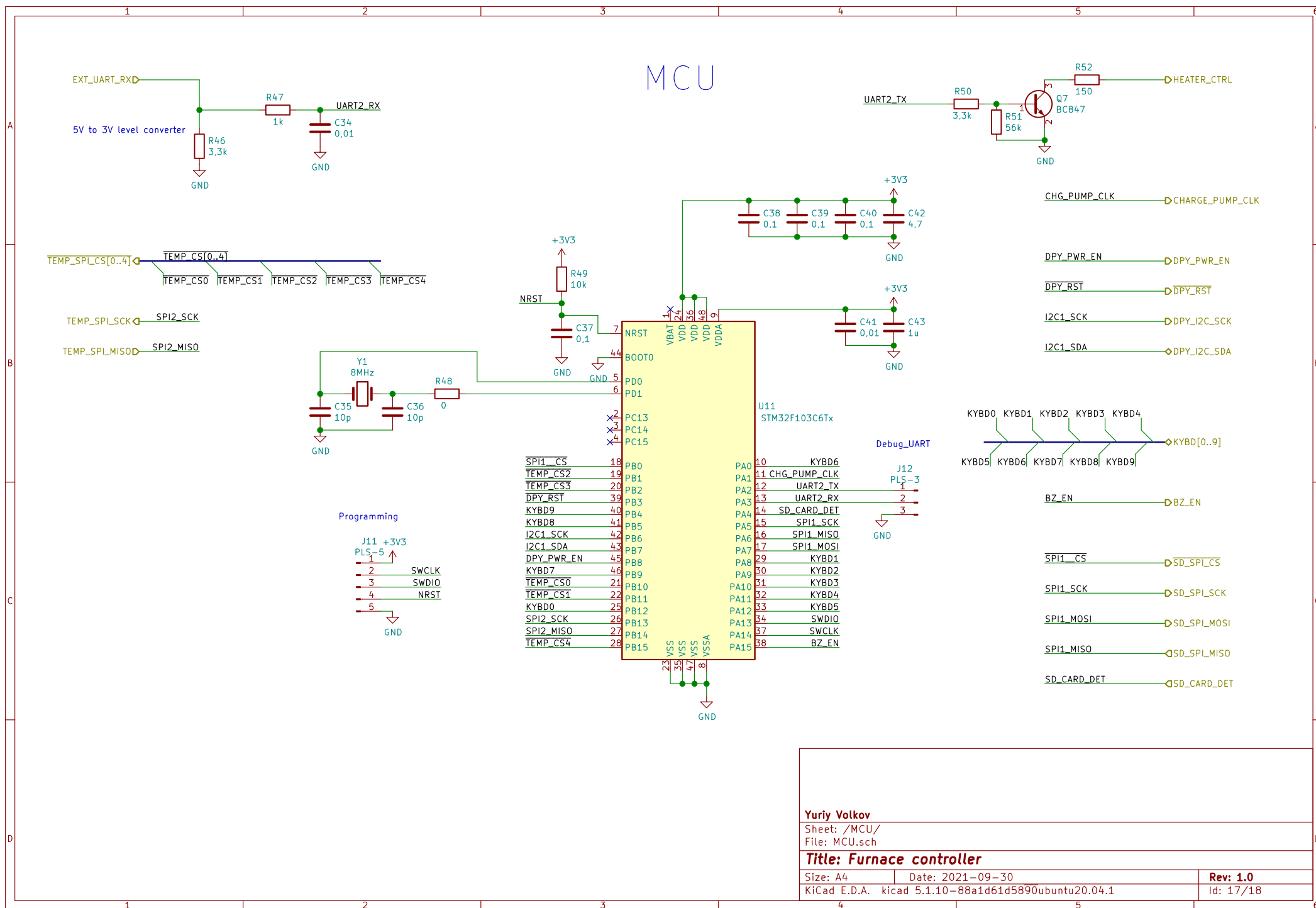
Yuriy Volkov

Sheet: /I2C_DISPLAY_CONNECTOR/
File: I2C_display_connector.sch

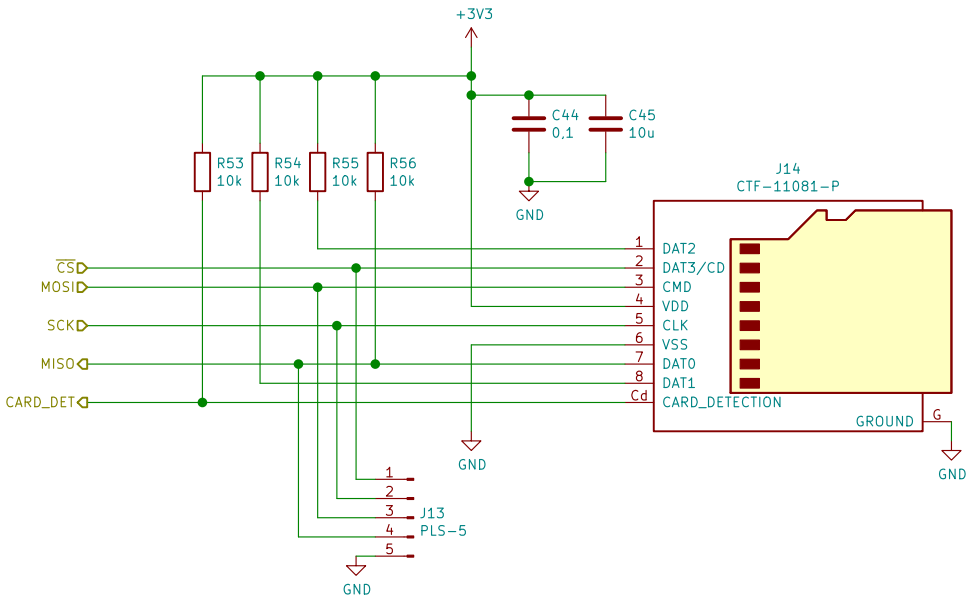
Title: Furnace controller

Size: A4 Date: 2021-09-30
KiCad E.D.A. kicad 5.1.10-88a1d61d5890ubuntu20.04.1

Rev: 1.0
Id: 16/18



Micro-SD card connector



Yuriy Volkov

Sheet: /MICRO_SD_CARD/
File: Micro_SD_card.sch

Title: Furnace controller

Size: A4	Date: 2021-09-30
KiCad E.D.A. kicad 5.1.10-88a1d61d5890ubuntu20.04.1	

Rev: 1.0
Id: 18/18