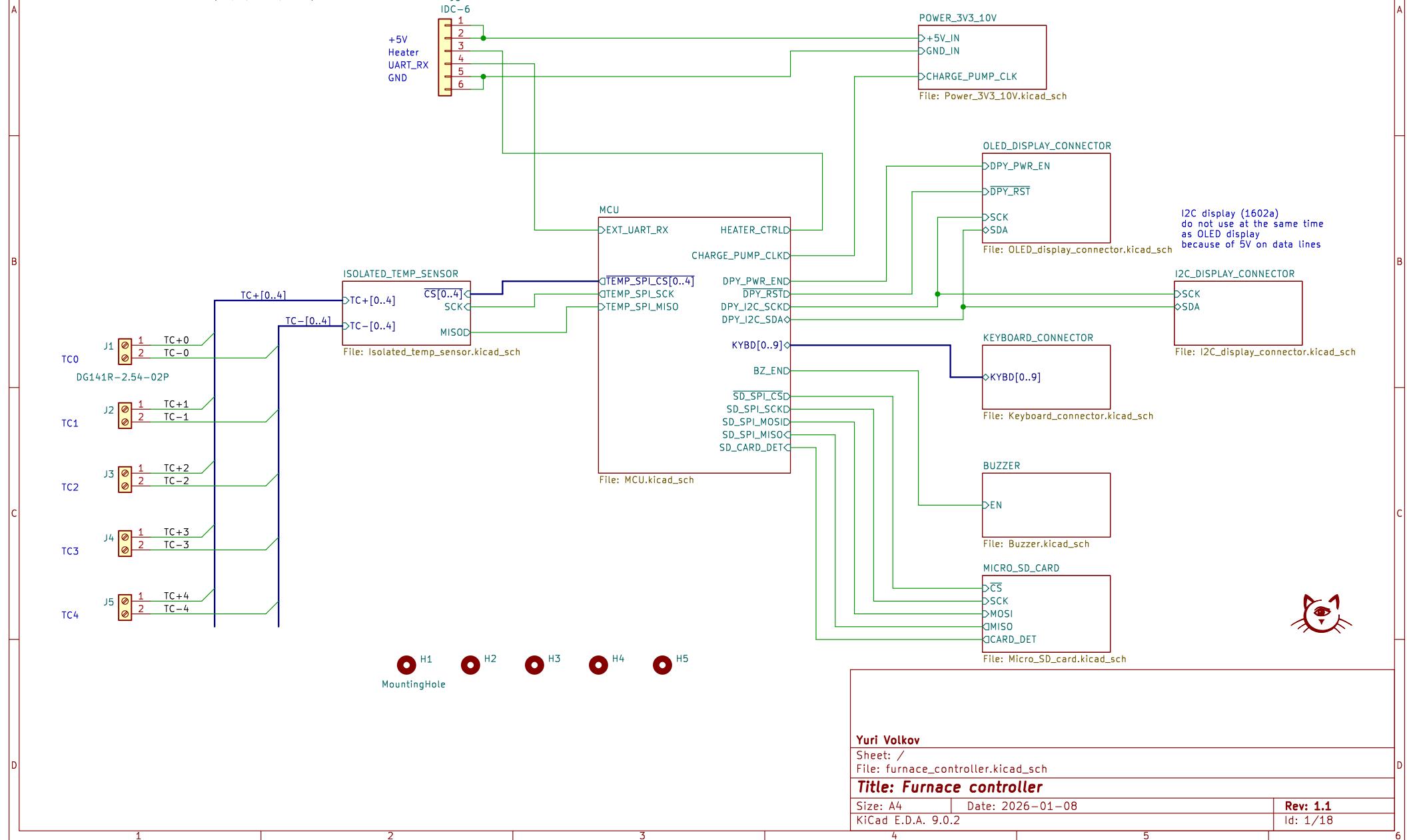
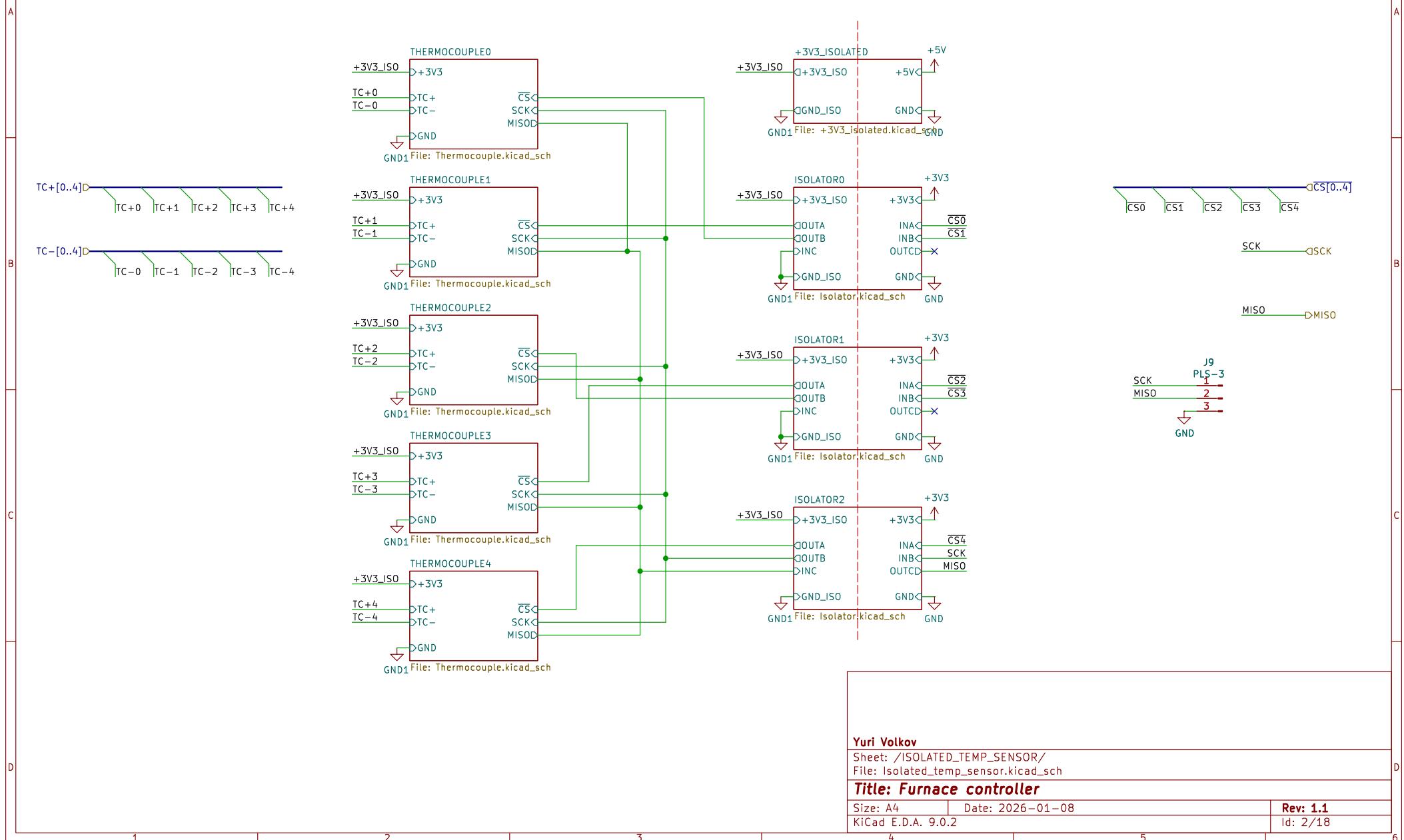


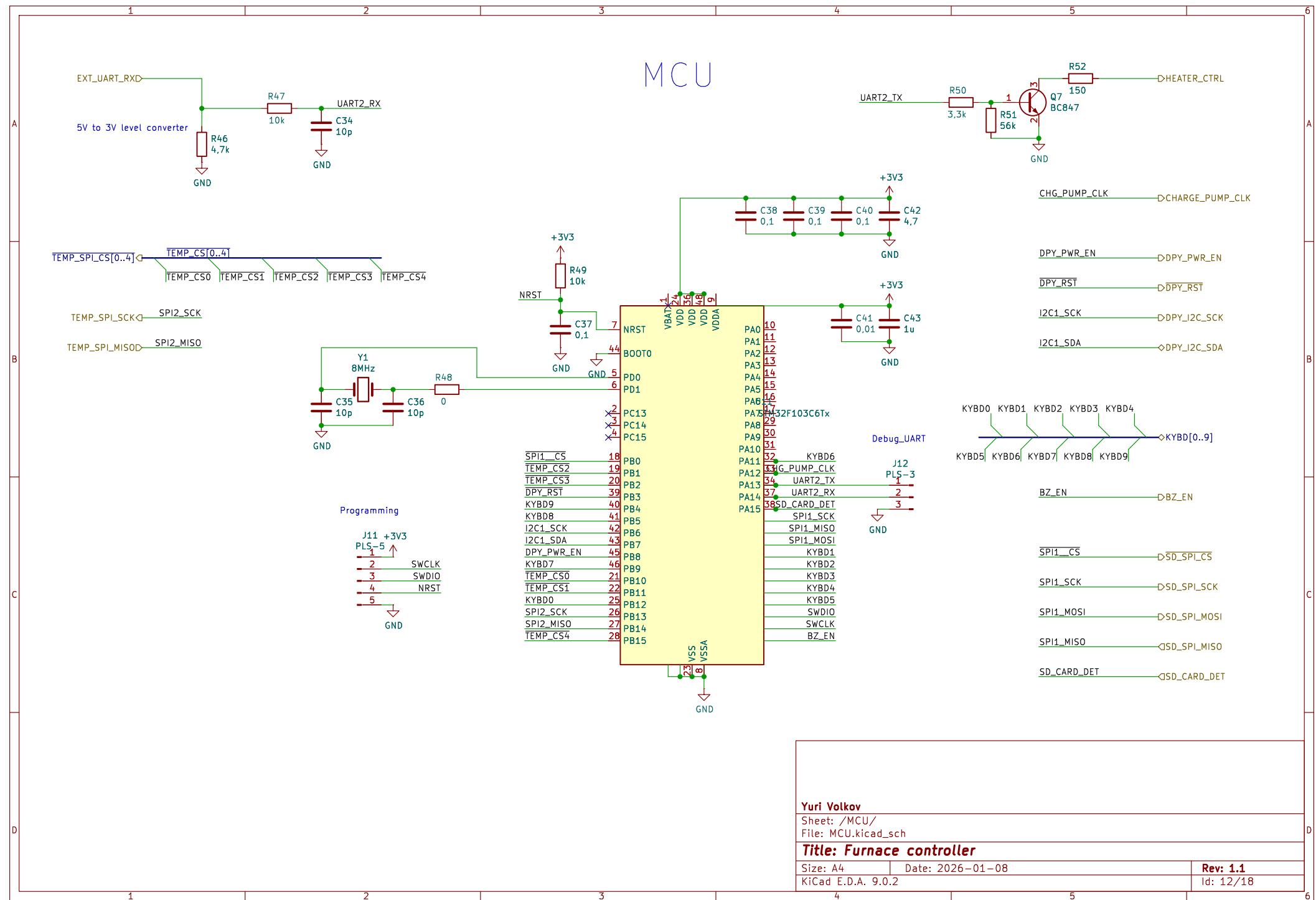
Controller

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

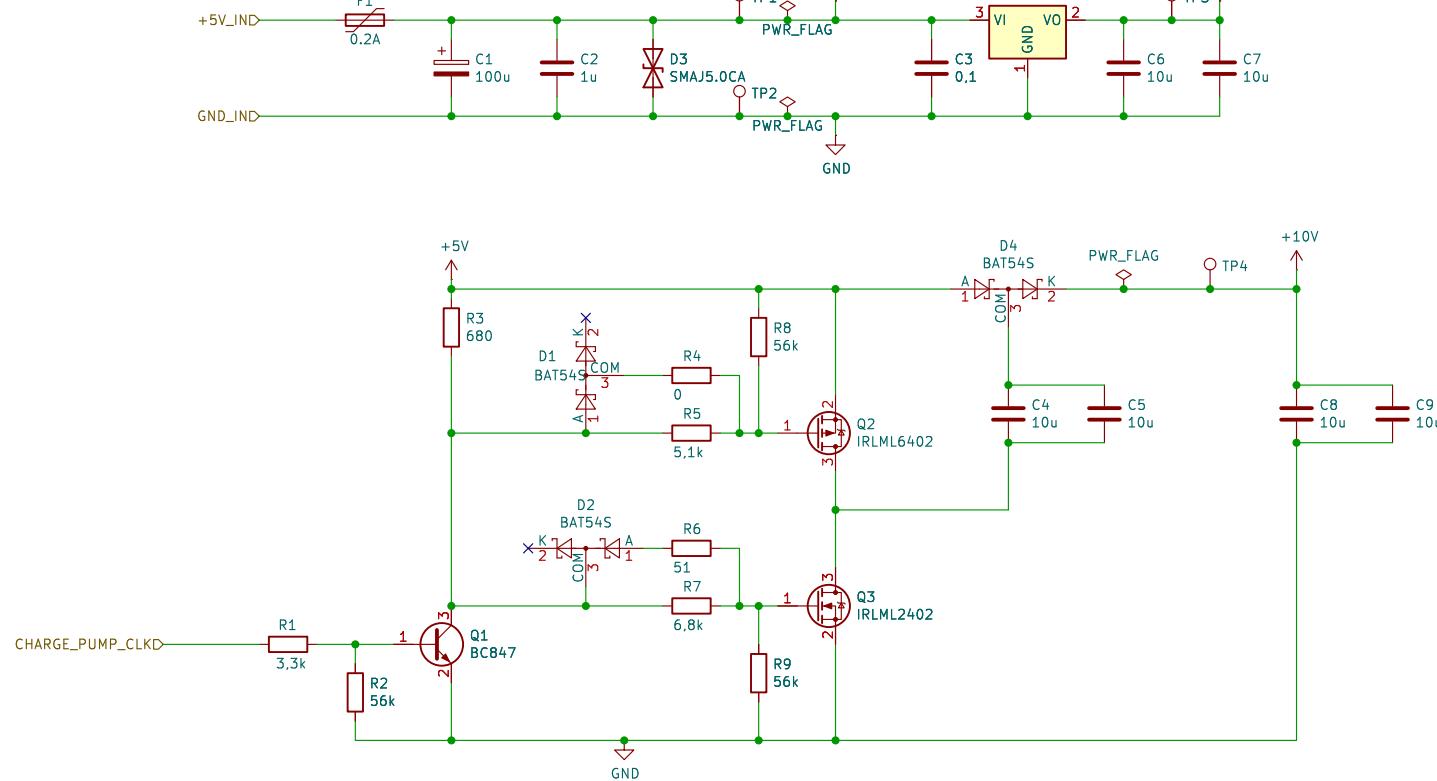


Isolated 5x temperature sensor





Power sources 3V3 and 10V



Yuri Volkov

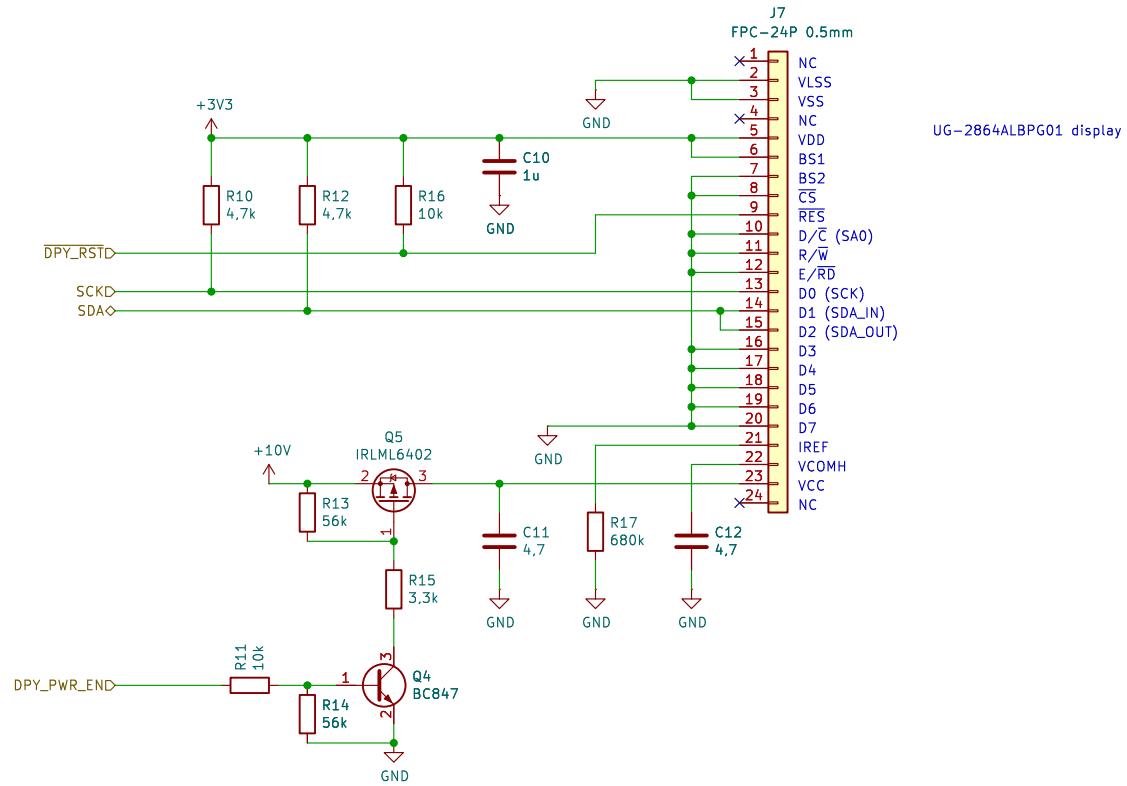
Sheet: /POWER_3V3_10V/
File: Power_3V3_10V.kicad_sch

Title: Furnace controller

Size: A4 Date: 2026-01-08
KiCad E.D.A. 9.0.2

Rev: 1.1
Id: 13/18

Connector fo OLED display



Yuri Volkov

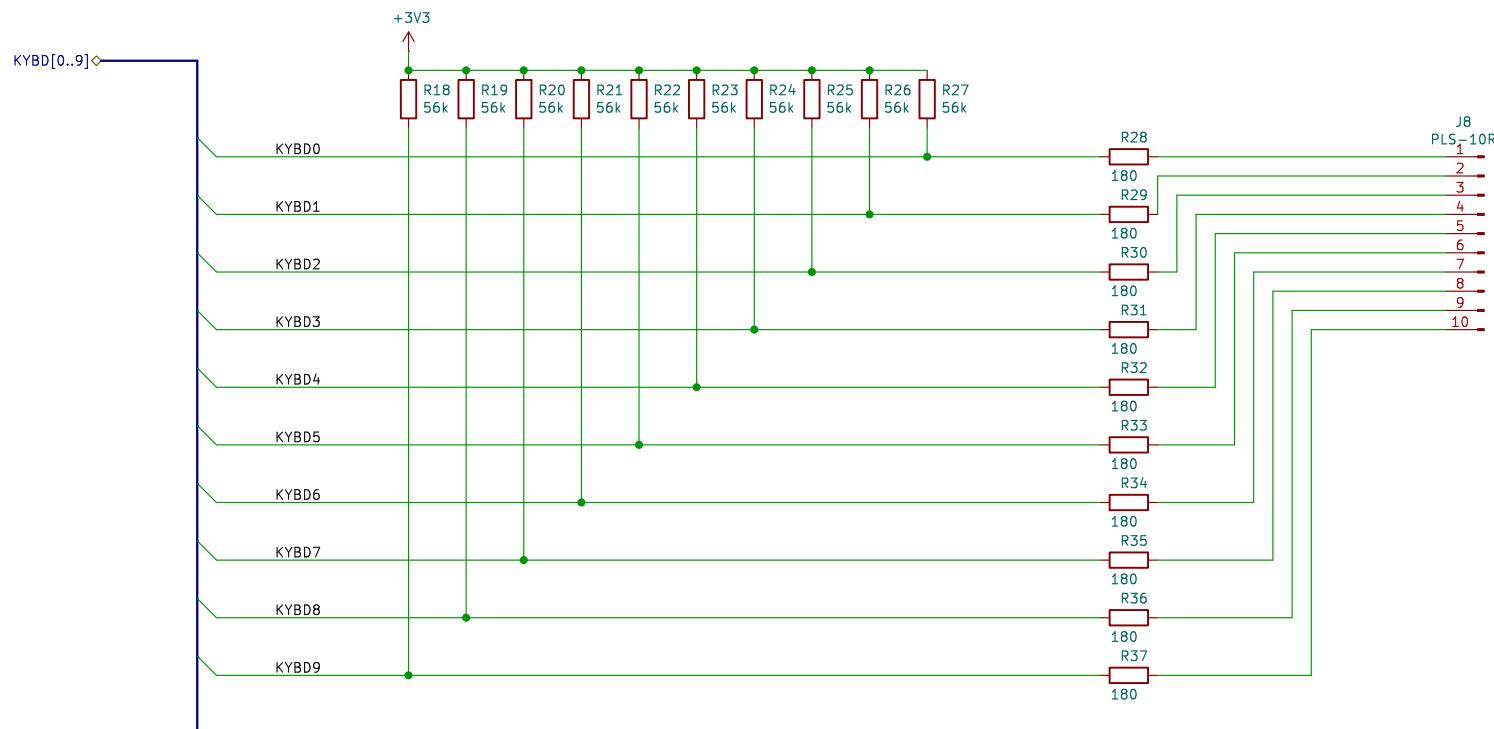
Sheet: /OLED_DISPLAY_CONNECTOR/
File: OLED_display_connector.kicad_sch

Title: Furnace controller

Size: A4 Date: 2026-01-08
KiCad E.D.A. 9.0.2

Rev: 1.1
Id: 14/18

Connector for matrix keyboard



Yuri Volkov

Sheet: /KEYBOARD_CONNECTOR/
File: Keyboard_connector.kicad_sch

Title: Furnace controller

Size: A4 Date: 2026-01-08
KiCad E.D.A. 9.0.2

Rev: 1.1
Id: 15/18

A

A

B

B

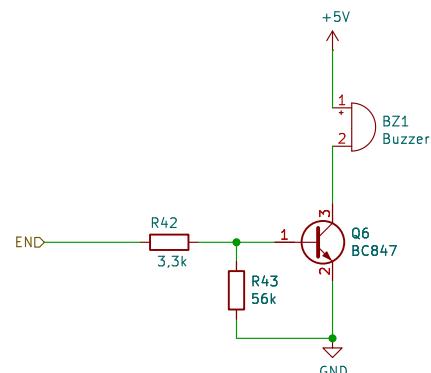
C

C

D

D

Buzzer

**Yuri Volkov**

Sheet: /BUZZER/

File: Buzzer.kicad_sch

Title: Furnace controller

Size: A4 Date: 2026-01-08

KiCad E.D.A. 9.0.2

Rev: 1.1

Id: 16/18

1 2 3 4 5 6

A

A

B

B

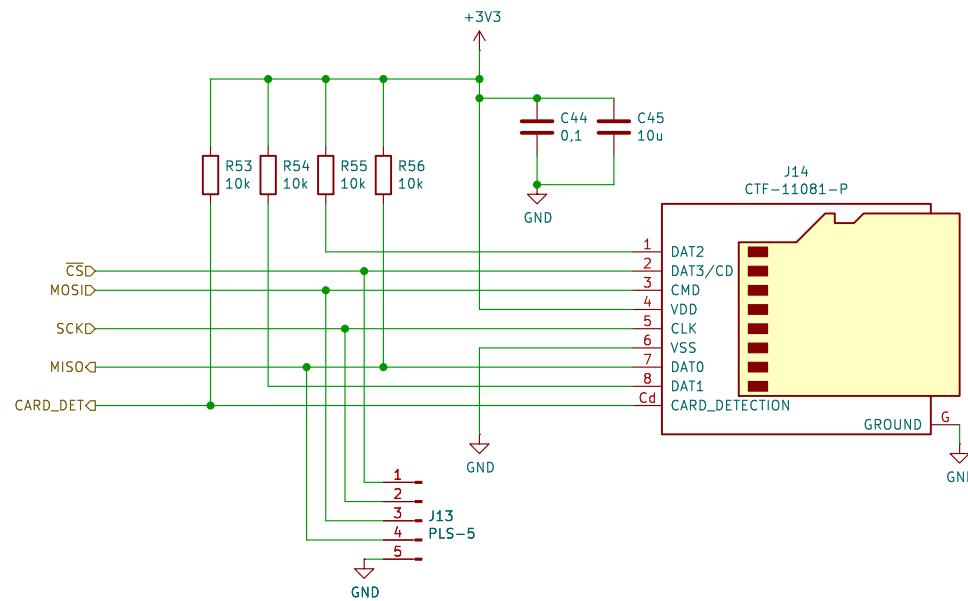
C

C

D

D

Micro-SD card connector



Yuri Volkov

Sheet: /MICRO_SD_CARD/
File: Micro_SD_card.kicad_sch

Title: Furnace controller

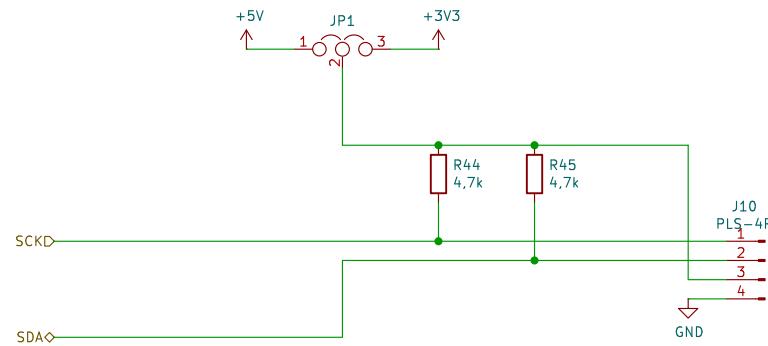
Size: A4 Date: 2026-01-08
KiCad E.D.A. 9.0.2

Rev: 1.1
Id: 17/18

1 2 3 4 5 6

1 2 3 4 5 6

I2C display connector for OLED or LCD display



Yuri Volkov

Sheet: /I2C_DISPLAY_CONNECTOR/
File: I2C_display_connector.kicad_sch

Title: Furnace controller

Size: A4 Date: 2026-01-08
KiCad E.D.A. 9.0.2

Rev: 1.1
Id: 18/18

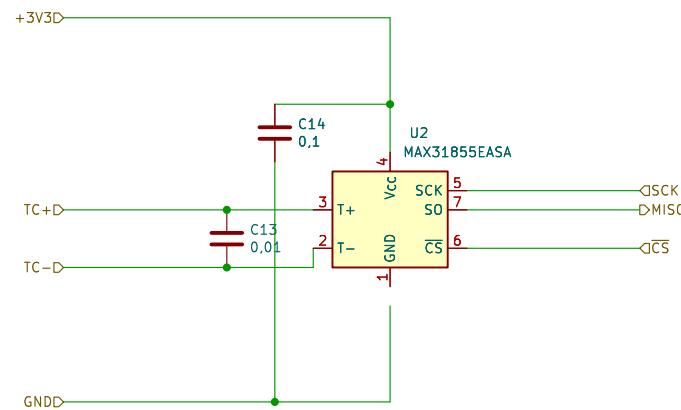
1 2 3 4 5 6

1 2 3 4 5 6

A

A

Thermocouple sensor



B

B

C

C

D

D

Yuri Volkov

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

Title: Furnace controller

Size: A4 Date: 2026-01-08
KiCad E.D.A. 9.0.2

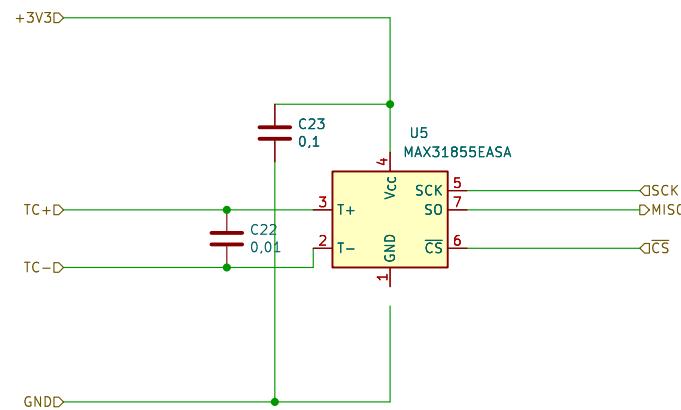
Rev: 1.1
Id: 3/18

1 2 3 4 5 6

A

A

Thermocouple sensor



B

B

C

C

D

D

Yuri Volkov

Sheet: /ISOLATED_TEMP_SENSOR/THERMOCOUPLE1/
File: Thermocouple.kicad_sch

Title: Furnace controller

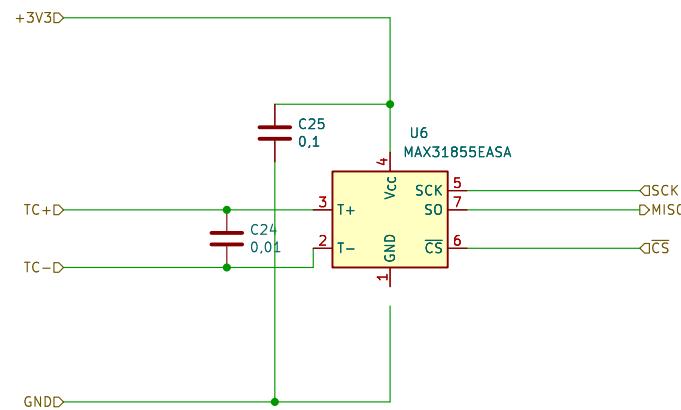
Size: A4 Date: 2026-01-08
KiCad E.D.A. 9.0.2

Rev: 1.1
Id: 4/18

A

A

Thermocouple sensor



B

B

C

C

D

D

Yuri Volkov

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

Title: Furnace controller

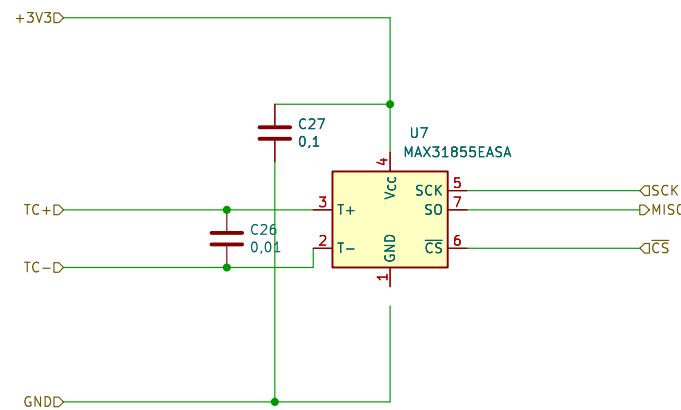
Size: A4 Date: 2026-01-08
KiCad E.D.A. 9.0.2

Rev: 1.1
Id: 5/18

A

A

Thermocouple sensor



B

B

C

C

D

D

Yuri Volkov

Sheet: /ISOLATED_TEMP_SENSOR/THERMOCOUPLE3/
File: Thermocouple.kicad_sch

Title: Furnace controller

Size: A4 Date: 2026-01-08
KiCad E.D.A. 9.0.2

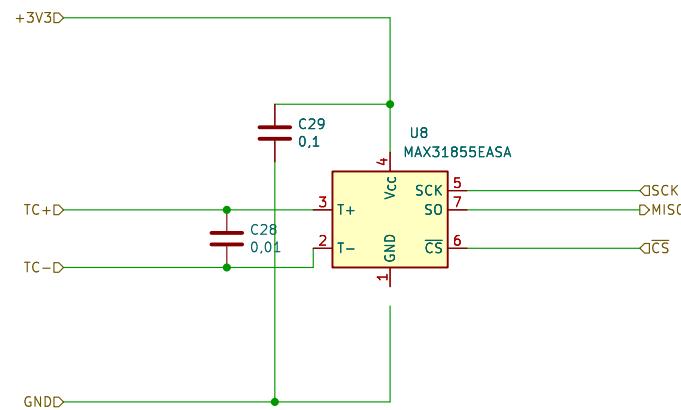
Rev: 1.1
Id: 6/18

1 2 3 4 5 6

A

A

Thermocouple sensor



B

B

C

C

D

D

Yuri Volkov

Sheet: /ISOLATED_TEMP_SENSOR/THERMOCOUPLE4/
File: Thermocouple.kicad_sch

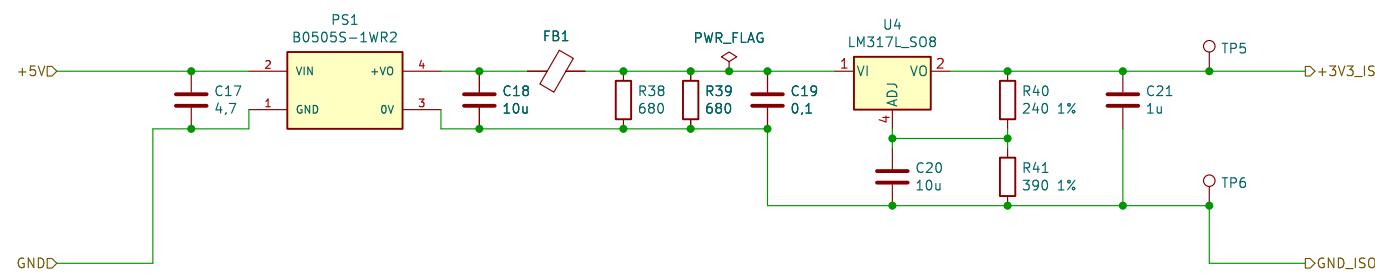
Title: Furnace controller

Size: A4 Date: 2026-01-08
KiCad E.D.A. 9.0.2

Rev: 1.1
Id: 7/18

1 2 3 4 5 6

Isolated +3V3 power source



Yuri Volkov

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

Title: Furnace controller

Size: A4 Date: 2026-01-08
KiCad E.D.A. 9.0.2

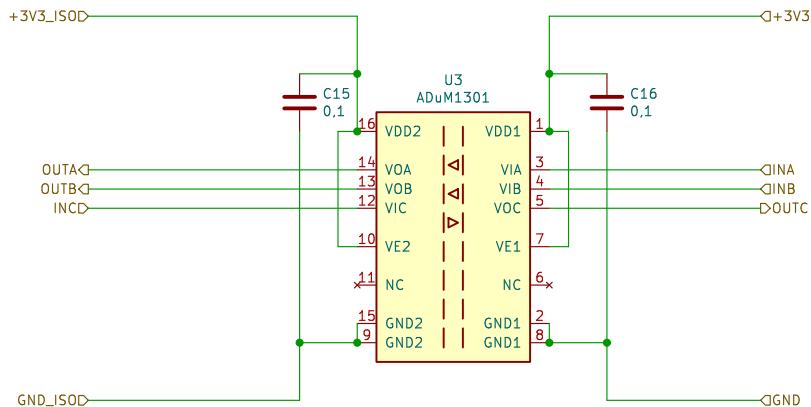
Rev: 1.1
Id: 8/18

1 2 3 4 5 6

A

A

Isolator for thermocouple



B

B

C

C

D

D

Yuri Volkov

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

Title: Furnace controller

Size: A4 Date: 2026-01-08
KiCad E.D.A. 9.0.2

Rev: 1.1
Id: 9/18

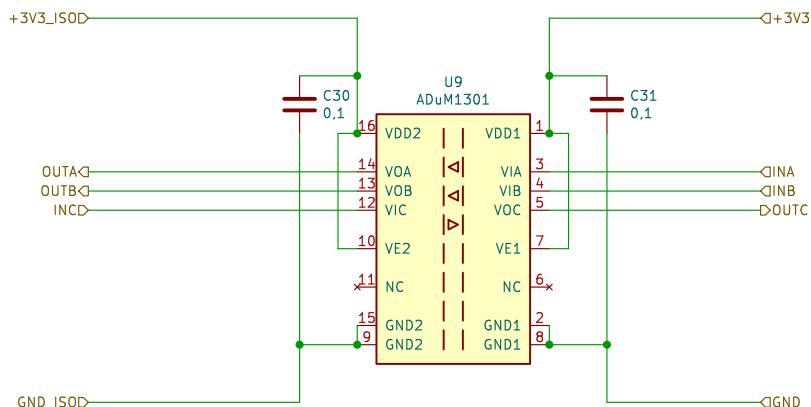
1 2 3 4 5 6

1 2 3 4 5 6

A

A

Isolator for thermocouple



B

B

C

C

D

D

Yuri Volkov

Sheet: /ISOLATED_TEMP_SENSOR/ISOLATOR1/
File: Isolator.kicad_sch

Title: Furnace controller

Size: A4 Date: 2026-01-08
KiCad E.D.A. 9.0.2

Rev: 1.1
Id: 10/18

1 2 3 4 5 6

1 2 3 4 5 6

A

A

Isolator for thermocouple

B

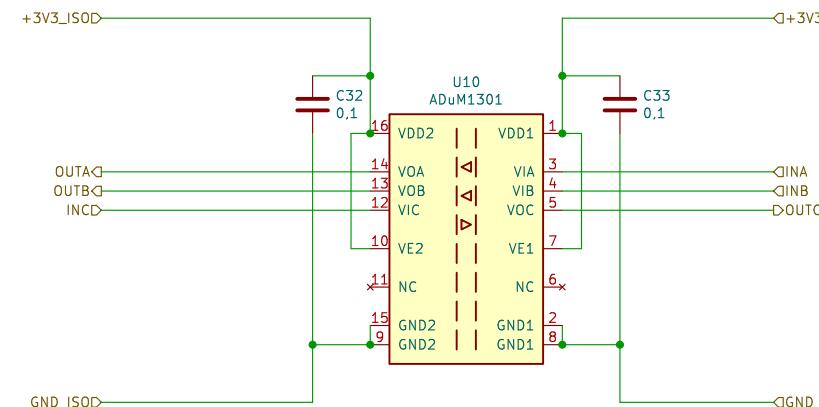
B

C

C

D

D



Yuri Volkov

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

Title: Furnace controller

Size: A4 Date: 2026-01-08
KiCad E.D.A. 9.0.2

Rev: 1.1
Id: 11/18

1 2 3 4 5 6