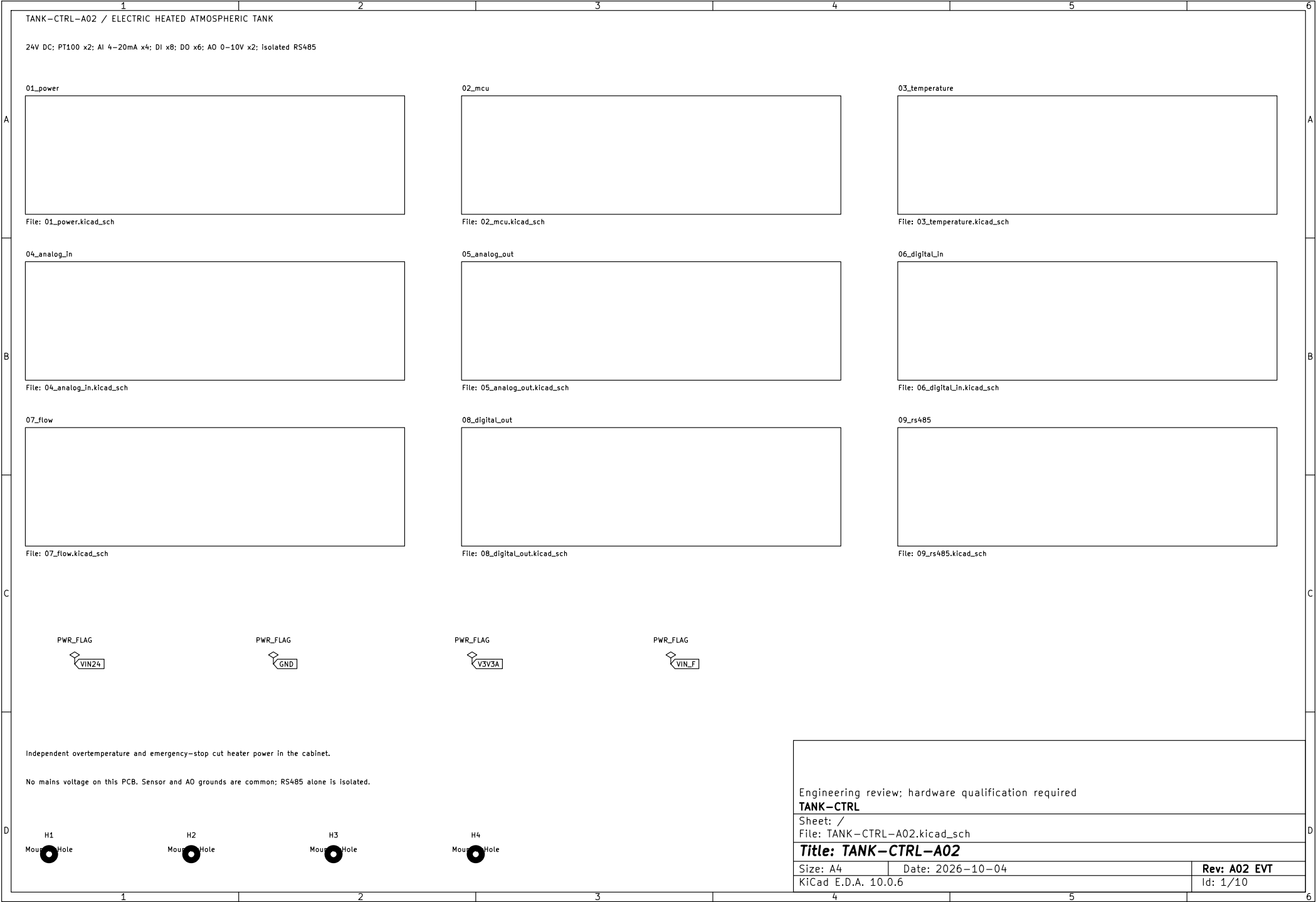




NET LABELS CONNECT ACROSS SHEETS. Candidate circuit: do not fabricate without review.

J1
24V DC IN

F1
1A

D2
5MBJ30CA

C1
47u

C2
100n

U1
R-78HB5.0-0.5

U2
R-78HB12-0.5

C3
10u

C4
10u

U3
AP2112K-3.3

C5
1u

C6
10u

U27
TPS26600PWPR

R90
140k

R91
10k

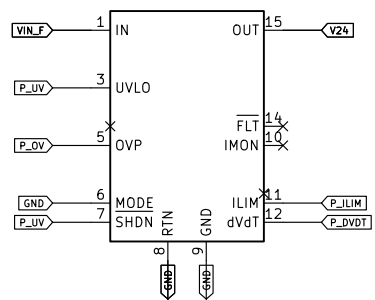
R92
240k

R93
10k

R94
16k

C90
10n

C91
100n



Engineering review: hardware qualification required

TANK-CTRL

Sheet: /01_power/

File: 01_power.kicad_sch

Title: 01 power

Size: A2

Date: 2026-10-04

Rev: A02 EVT

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Id: 2/10

NET LABELS CONNECT ACROSS SHEETS. Candidate circuit: do not fabricate without review.



NET LABELS CONNECT ACROSS SHEETS. Candidate circuit; do not fabricate without review.

U5
MAX31865AAP+

J4
PT100-3WIRE 1

R5
400R

C15
100n

C16
100n

C17
100n

R6
10k

U6
MAX31865AAP+

J5
PT100-3WIRE 2

R7
400R

C18
100n

C19
100n

C20
100n

R8
10k

TEMP1_RDY_N
1
SDI
14
SPI1_MOSI
15
SCLK
16
TEMP1_CS
17
SDO
18
GND
19

BIAS
4
REFIN+
5
REFIN-
6
ISENSOR
7
FORCE+
8
FORCE2
9
RTDIN+
10
RTDIN-
11
FORCE-
12

T1_FPLUS
1
T1_FPLUS
2
T1_FMINUS
3

T1_FPLUS
1
T1_FPLUS
2
T1_FMINUS
3

T2_FPLUS
1
T2_FPLUS
2
T2_FMINUS
3

T2_FPLUS
1
T2_FPLUS
2
T2_FMINUS
3

TEMP2_RDY_N
1
SDI
14
SPI2_MOSI
15
SCLK
16
TEMP2_CS
17
SDO
18
GND
19

BIAS
4
REFIN+
5
REFIN-
6
ISENSOR
7
FORCE+
8
FORCE2
9
RTDIN+
10
RTDIN-
11
FORCE-
12

T2_FPLUS
1
T2_FPLUS
2
T2_FMINUS
3

T2_FPLUS
1
T2_FPLUS
2
T2_FMINUS
3

Engineering review: hardware qualification required
TANK-CTRL
Sheet: /03_temperature/
File: 03_temperature.kicad_sch
Title: 03 temperature
Size: A2 | Date: 2026-10-04 | Rev: A02 EVT
Kicad E.D.A. 10.0.6 | Id: 4/10

NET LABELS CONNECT ACROSS SHEETS. Candidate circuit: do not fabricate without review.

U7
ADS1115IDGSR

C21
100n

R9
10k

J6
4-20mA 1

F2
50mA

R10
100R

R11
1k

C22
100n

D4
BAT545

J7
4-20mA 2

F3
50mA

R12
100R

R13
1k

C23
100n

D5
BAT545

J8
4-20mA 3

F4
50mA

R14
100R

R15
1k

C24
100n

D6
BAT545

J9
4-20mA 4

F5
50mA

R16
100R

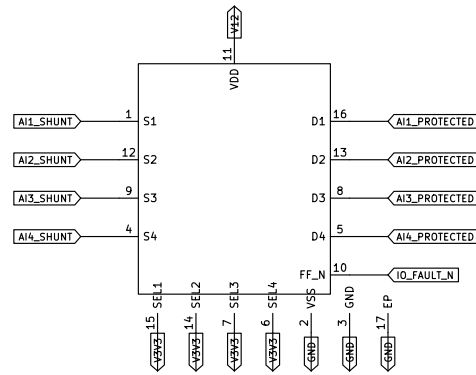
R17
1k

C25
100n

D7
BAT545

U28
TMUX7412FRRPR

C92
100n



Engineering review: hardware qualification required

TANK-CTRL

Sheet: /04_analog_in/

File: 04_analog_in.kicad_sch

Title: 04 analog in

Size: A2

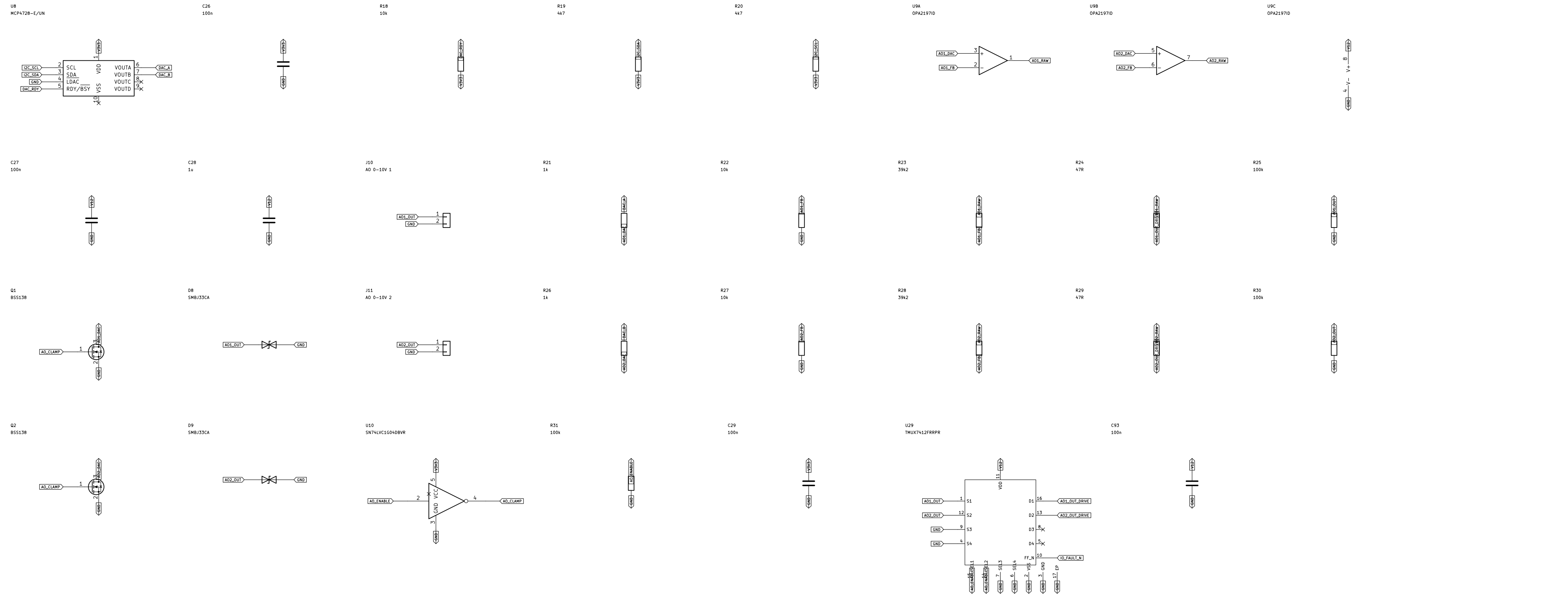
Date: 2026-10-04

Rev: A02 EVT

KiCad E.D.A. 10.0.6

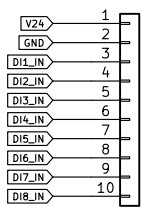
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NET LABELS CONNECT ACROSS SHEETS. Candidate circuit: do not fabricate without review.

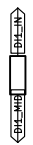


NET LABELS CONNECT ACROSS SHEETS. Candidate circuit: do not fabricate without review.

J12
D1-8 24V PNP



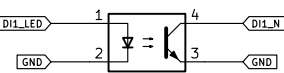
R32
3k3



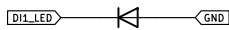
R33
3k3



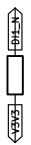
U11
LTV-8175-C



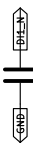
D10
1N4148W



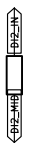
R34
10k



C30
10n



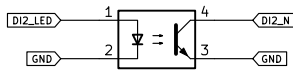
R35
3k3



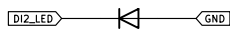
R36
3k3



U12
LTV-8175-C



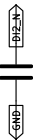
D11
1N4148W



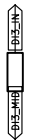
R37
10k



C31
10n



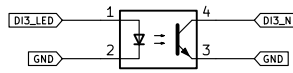
R38
3k3



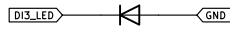
R39
3k3



U13
LTV-8175-C



D12
1N4148W



R40
10k



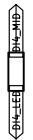
C32
10n



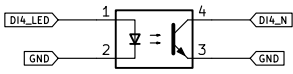
R41
3k3



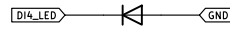
R42
3k3



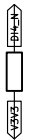
U14
LTV-8175-C



D13
1N4148W



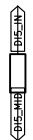
R43
10k



C33
10n



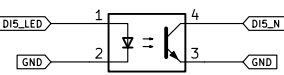
R44
3k3



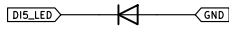
R45
3k3



U15
LTV-8175-C



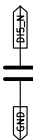
D14
1N4148W



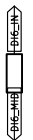
R46
10k



C34
10n



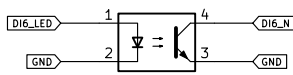
R47
3k3



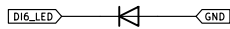
R48
3k3



U16
LTV-8175-C



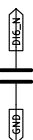
D15
1N4148W



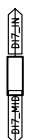
R49
10k



C35
10n



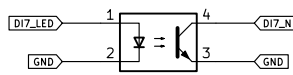
R50
3k3



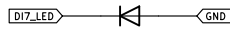
R51
3k3



U17
LTV-8175-C



D16
1N4148W



R52
10k



C36
10n



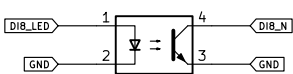
R53
3k3



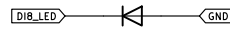
R54
3k3



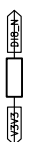
U18
LTV-8175-C



D17
1N4148W



R55
10k



C37
10n



Engineering review: hardware qualification required

TANK-CTRL

Sheet: /06_digital_in/

File: 06_digital_in.kicad_sch

Title: 06 digital in

Size: A2

Date: 2026-10-04

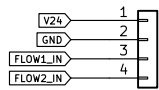
Rev: A02 EVT

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Id: 7/10

NET LABELS CONNECT ACROSS SHEETS. Candidate circuit: do not fabricate without review.

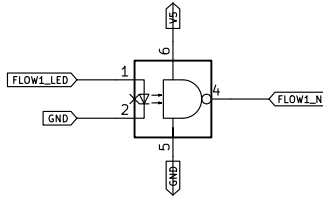
J13
FLOW PNP 0-1kHz



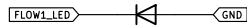
R56
3k3

R57
3k3

U19
H111LM



D18
1N4148W



R58
4k7

C38
100n

R59
3k3

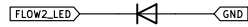
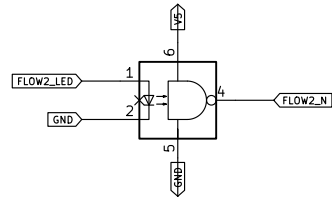
R60
3k3

U20
H111LM

D19
1N4148W

R61
4k7

C39
100n



Engineering review: hardware qualification required

TANK-CTRL

Sheet: /07_flow/

File: 07_flow.kicad_sch

Title: 07 flow

Size: A2

Date: 2026-10-04

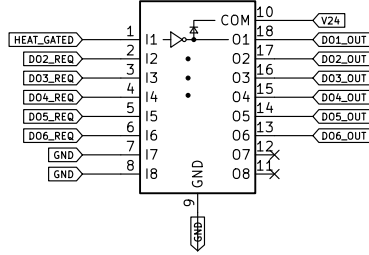
Rev: A02 EVT

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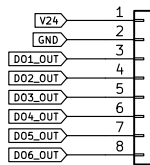
Id: 8/10

NET LABELS CONNECT ACROSS SHEETS. Candidate circuit: do not fabricate without review.

U21
ULN2803ADW



J14
DO1-6 LOW SIDE



R62
100k



R63
100k



R64
100k



R65
100k



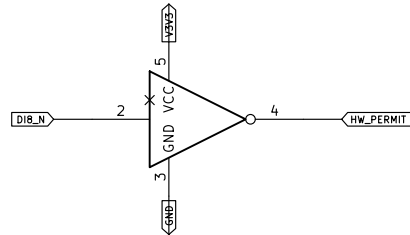
R66
100k



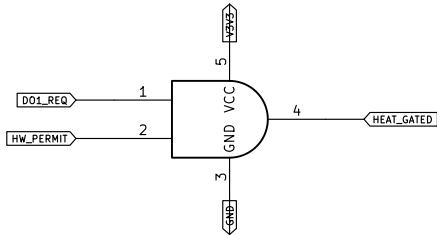
R67
100k



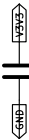
U22
SN74LVC1604DBVR



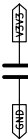
U23
SN74LVC1608DBVR



C40
100n



C41
100n



Engineering review: hardware qualification required

TANK-CTRL

Sheet: /08_digital_out/

File: 08_digital_out.kicad_sch

Title: 08 digital out

Size: A2

Date: 2026-10-04

Rev: A02 EVT

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Engineering review; hardware qualification required			
TANK-CTRL			
Sheet: /09_rs485/			
File: 09_rs485.kicad_sch			
Title: 09 rs485			
Size: A2	Date: 2026-10-04	Rev: A02 EVT	
KiCad E.D.A. 10.0.6			Id: 10/10

TANK-CTRL Sheet: /09_rs485/ File: 09_rs485.kicad_sch	
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Size: A2 KiCad E.D.A. 10.0.6	Date: 2026-10-04 Rev: A02 EVT Id: 10/10