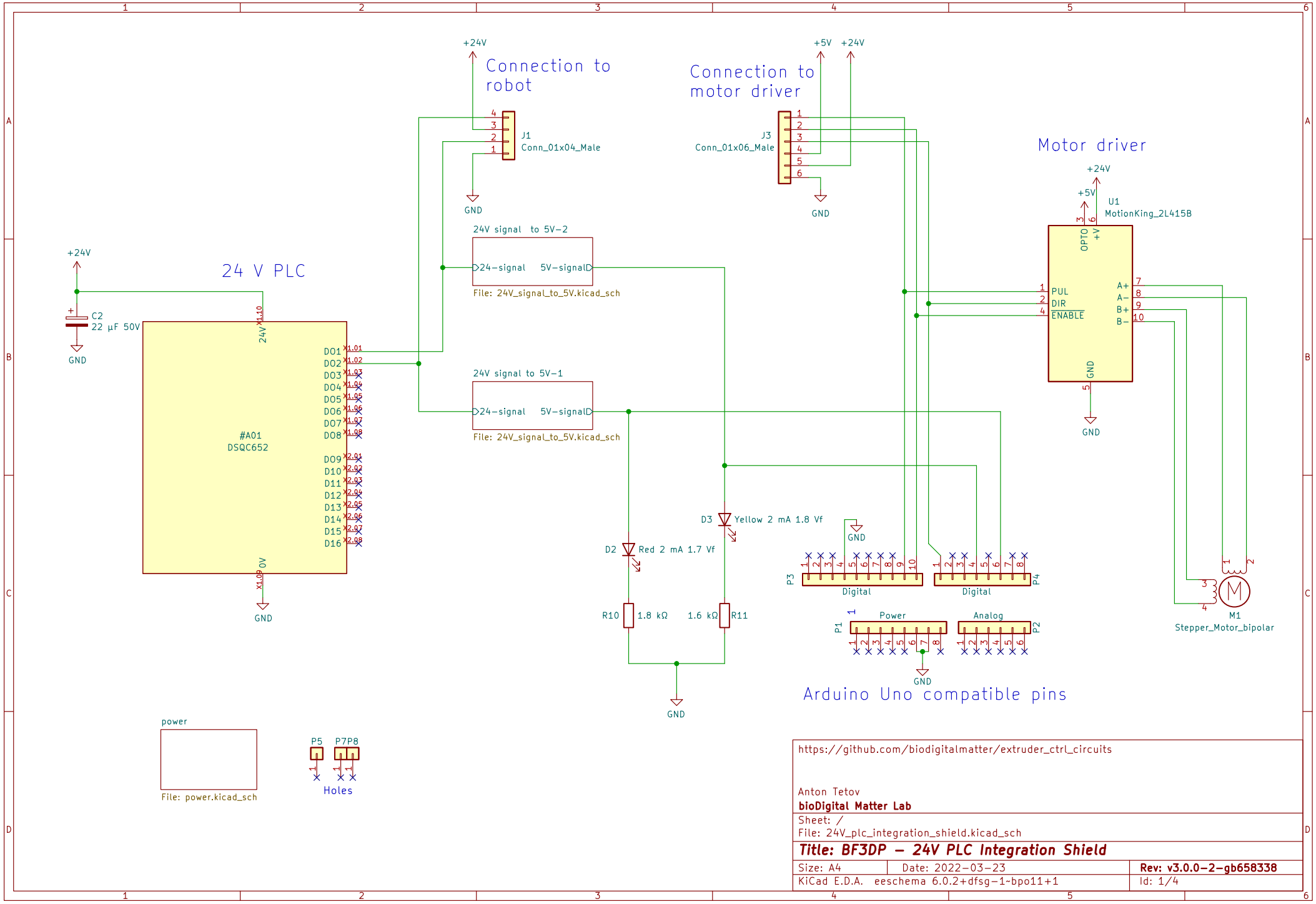
Connection to robot
Connection to motor driver
Motor driver
24 V PLC
Arduino Uno compatible pins
+24V
+5V
GND
J1
Conn_01x04_Male
J3
Conn_01x06_Male
U1
MotionKing_2L415B
OPTO
PUL
DIR
ENABLE
A+
A−
B+
B−
C2
22 µF 50V
#A01
DSQC652
DO1
DO2
DO3
DO4
DO5
DO6
DO7
DO8
DO9
DO10
DO11
DO12
DO13
DO14
DO15
DO16
0V
24V signal to 5V−2
24−signal
5V−signal
File: 24V_signal_to_5V.kicad_sch
24V signal to 5V−1
D3
Yellow 2 mA 1.8 Vf
D2
Red 2 mA 1.7 Vf
R10
1.8 kΩ
1.6 kΩ
R11
P3
Digital
P4
P1
Power
Analog
P2
M1
Stepper_Motor_bipolar
power
File: power.kicad_sch
P5
P7P8
Holes
https://github.com/biodigitalmatter/extruder_ctrl_circuits
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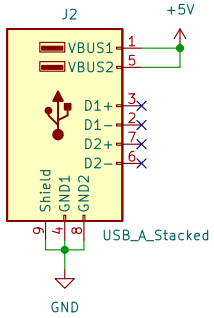
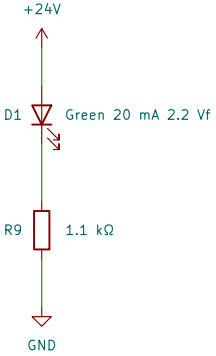
Sheet: /
File: 24V_plc_integration_shield.kicad_sch
Title: BF3DP – 24V PLC Integration Shield
Size: A4
Date: 2022−03−23
Rev: v3.0.0−2−gb658338
KiCad E.D.A. eeschema 6.0.2+dfsg−1−bpo11+1
Id: 1/4

Connection for future 5V power needs

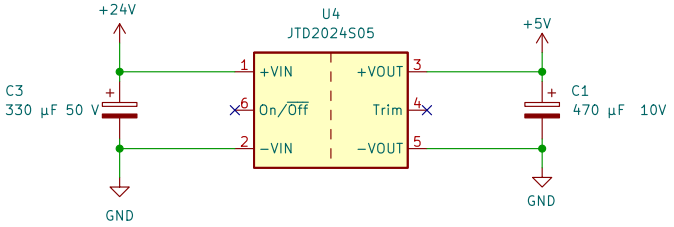
Power supply for Raspberry Pi



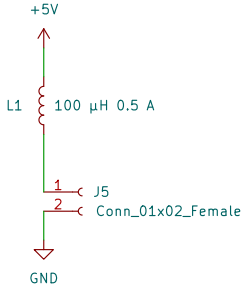
Power on LED



DC/DC 24 V to 5 V



Power supply to 5V PLC



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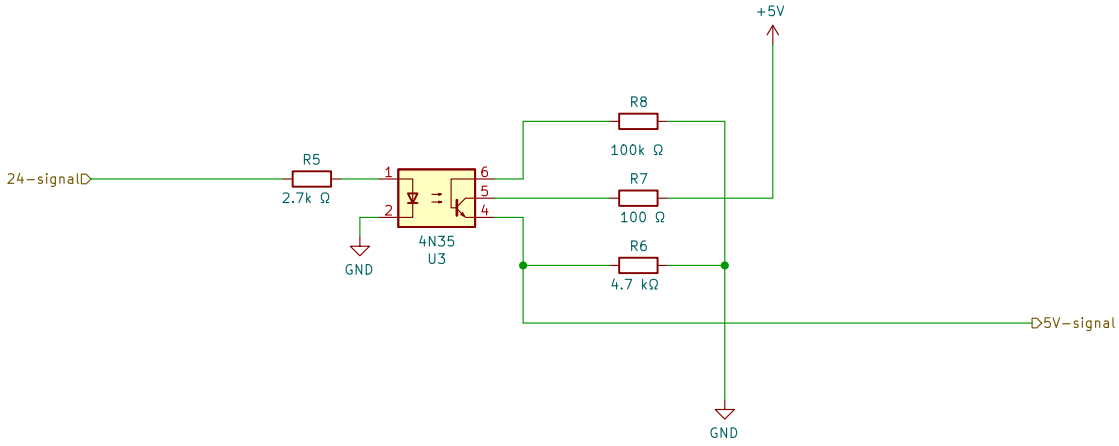
Sheet: /power/
File: power.kicad_sch

Title: BF3DP – 24V PLC Integration Shield

Size: A4	Date: 2022-03-23	**Rev: v3.0.0-2-gb658338**
KiCad E.D.A. eeschema 6.0.2+dfsg-1~bpo11+1		Id: 2/4



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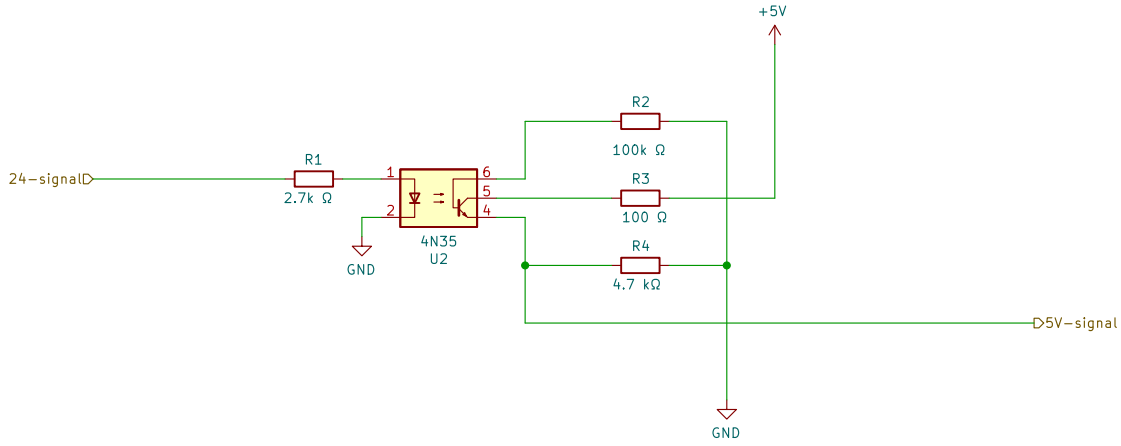
Sheet: /24V signal to 5V-2/
File: 24V_signal_to_5V.kicad_sch

Title: BF3DP – 24V PLC Integration Shield

Size: A4	Date: 2022-03-23	**Rev: v3.0.0-2-gb658338**
KiCad E.D.A. eeschema 6.0.2+dfsg-1~bpo11+1		Id: 3/4



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Sheet: /24V signal to 5V-1/
File: 24V_signal_to_5V.kicad_sch

Title: BF3DP – 24V PLC Integration Shield

Size: A4	Date: 2022-03-23	**Rev: v3.0.0-2-gb658338**
KiCad E.D.A.	eeschema 6.0.2+dfsg-1-bpo11+1	Id: 4/4