

Rev.05
Add +12 on J11
Change J11 Pin5 GND to Vac(Analog)
Expand Z-axis move range by 1mm up and down

Rev.04
<Components>
* Move LCD-Panel position lower for safety and visibility
* Increase 12V power pattern to 1mm
<Schematics>
* Add pull-down R16 for LED controller
* Add pull-down R23 for Laser input
* Enable connect Z-axis rail to GND for noise suppress
* Add two GND to J11 pin2 and 4
<Mechanical drawings>
* Increase in size above the PCB due to additional circuit

Rev.03
<Components>
* Add Q1/Q2/PIC/SW/LED/LED driver/CONNECTORs/LCD/etc.

<Schematics>
* Reduce wiring
* Add connector J11, * Connect each GND
* Enabled connecting Z axis upper and lower limit sensor by open-corrector
* Add motor relay-connector J7-J9
* Add Laser assist function(Marker j3-J6/SW2, assist LED/LCD)
* Add TopLight assist function(relay-connector J8-J10, LED driver J12)
* Enable connect Z-axis motor to GND for noise suppress

<Mechanical drawings>
* Increase in size above the PCB due to additional circuit

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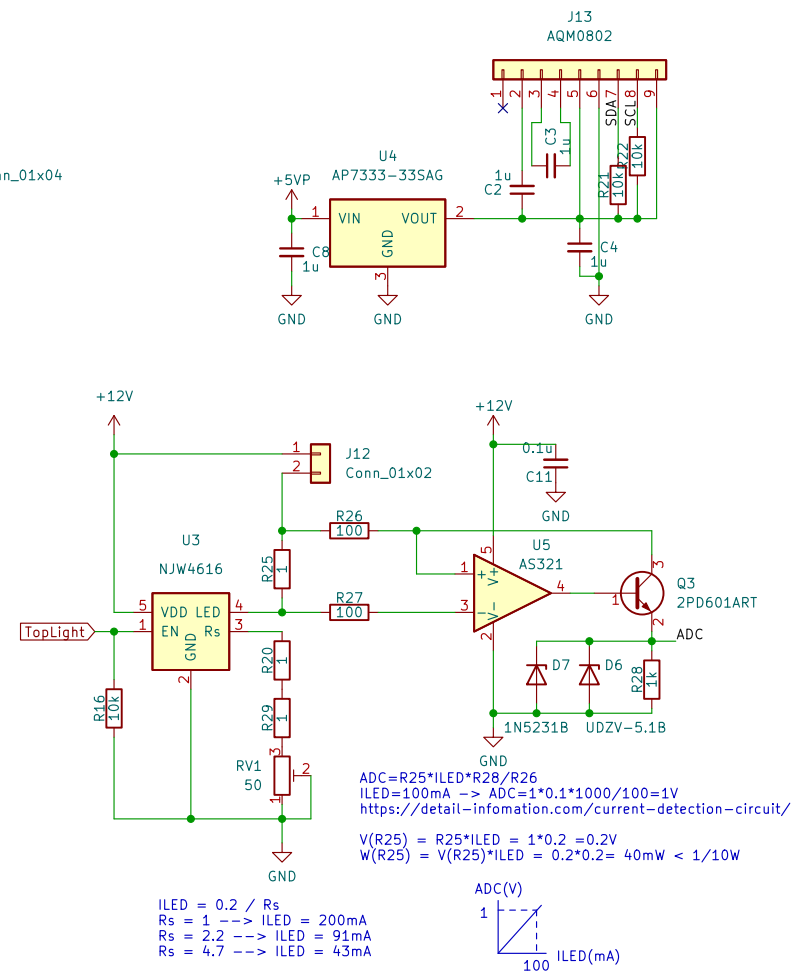
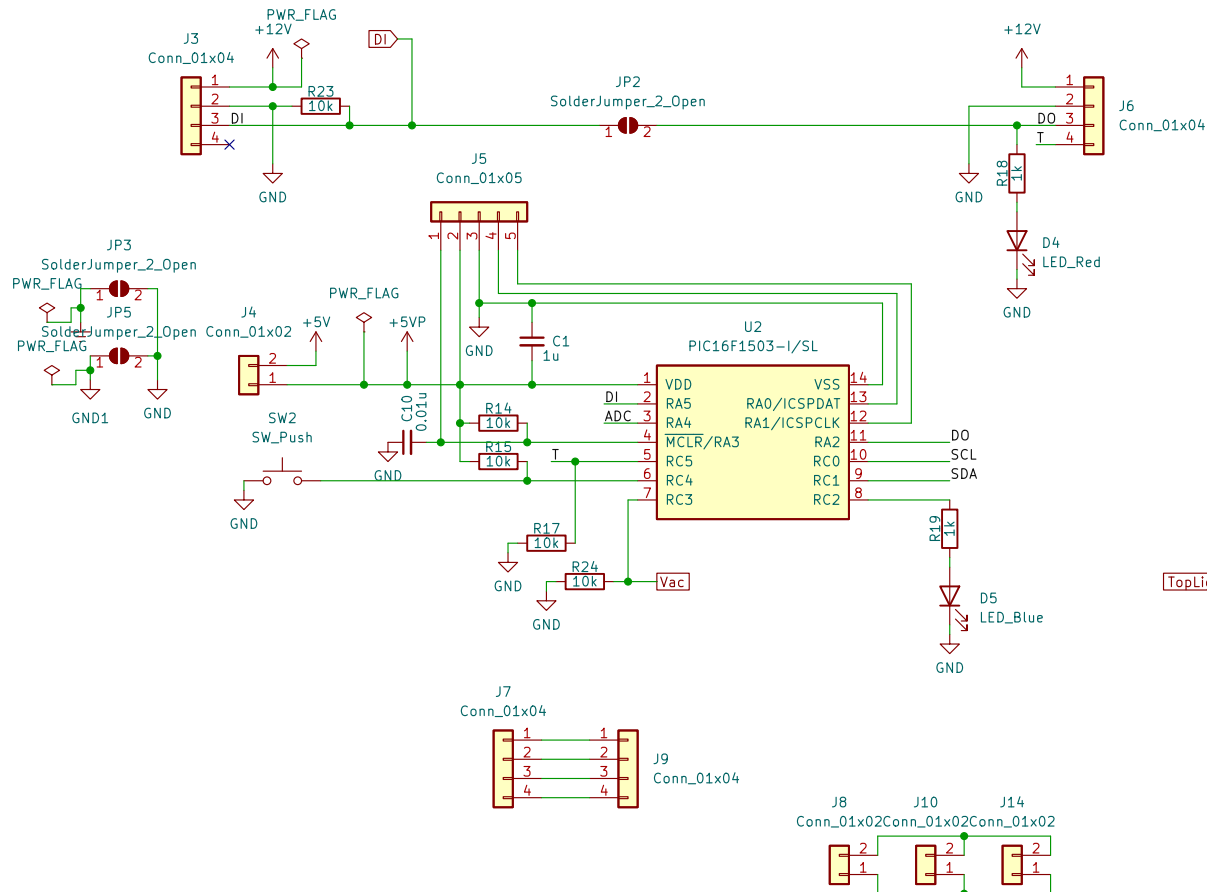
Title: Compact PnP Z-axis

Size: A4 Date: 2022-09-19

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Rev.5
Add D6 Zener Diode to Protect PIC for over-voltage.
Modified to increase LED current when turned RV1 to the right.
(Swap pin 1 and 3 of RV1)
Delete J8 and J10
Delete JP4 that SolderJumper for Laser Power select
Connect T to RC5 instead of RC3

Rev.4
R16 10k --> delete
Add R23 10k pull-down
Add R16 10k pull-down
Add C10 for reset
Add current detection circuit
Add JP4 for Laser Power Select
RC5:INPUT, RA4:AN3

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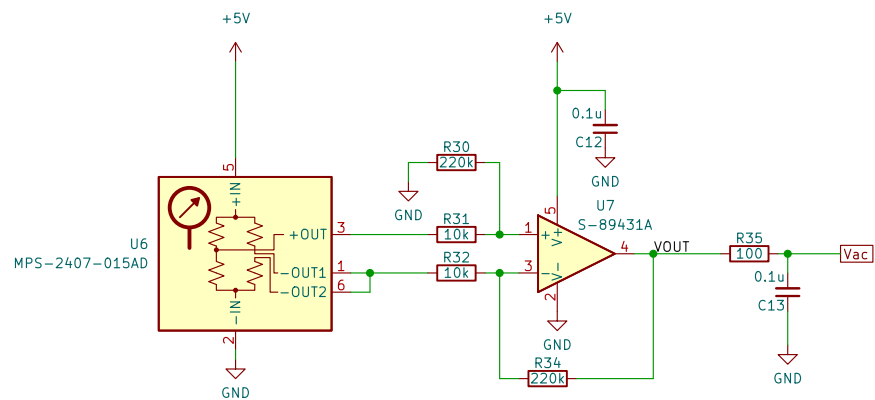
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$$\begin{aligned} \text{Gain} &= R34 / (R32 + R_s) = 100 / (10 + 2.5) = 8 \\ \text{Gain} &= R34 / (R32 + R_s) = 220 / (10 + 2.5) = 18 \\ \text{Gain} &= R34 / (R32 + R_s) = 220 / (5.1 + 2.5) = 29 \\ \text{Offset} &= V_{cc} * R30 / (R30 + R33) = 5 * 220 / (440) = 2.5V \end{aligned}$$

Sheet: /pressure_sensor/
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Title:

Size: A4
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