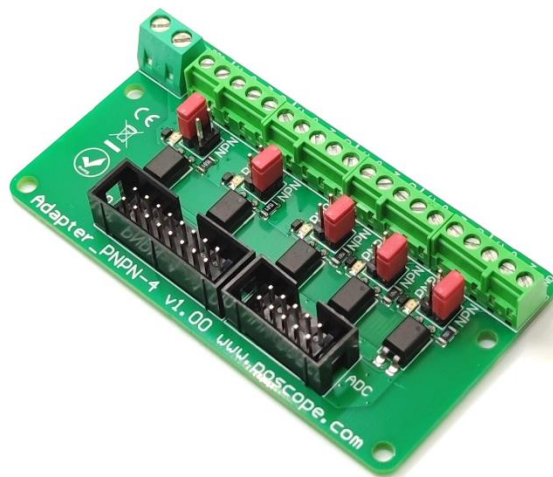




Adapter PNP

User's manual

v1.0



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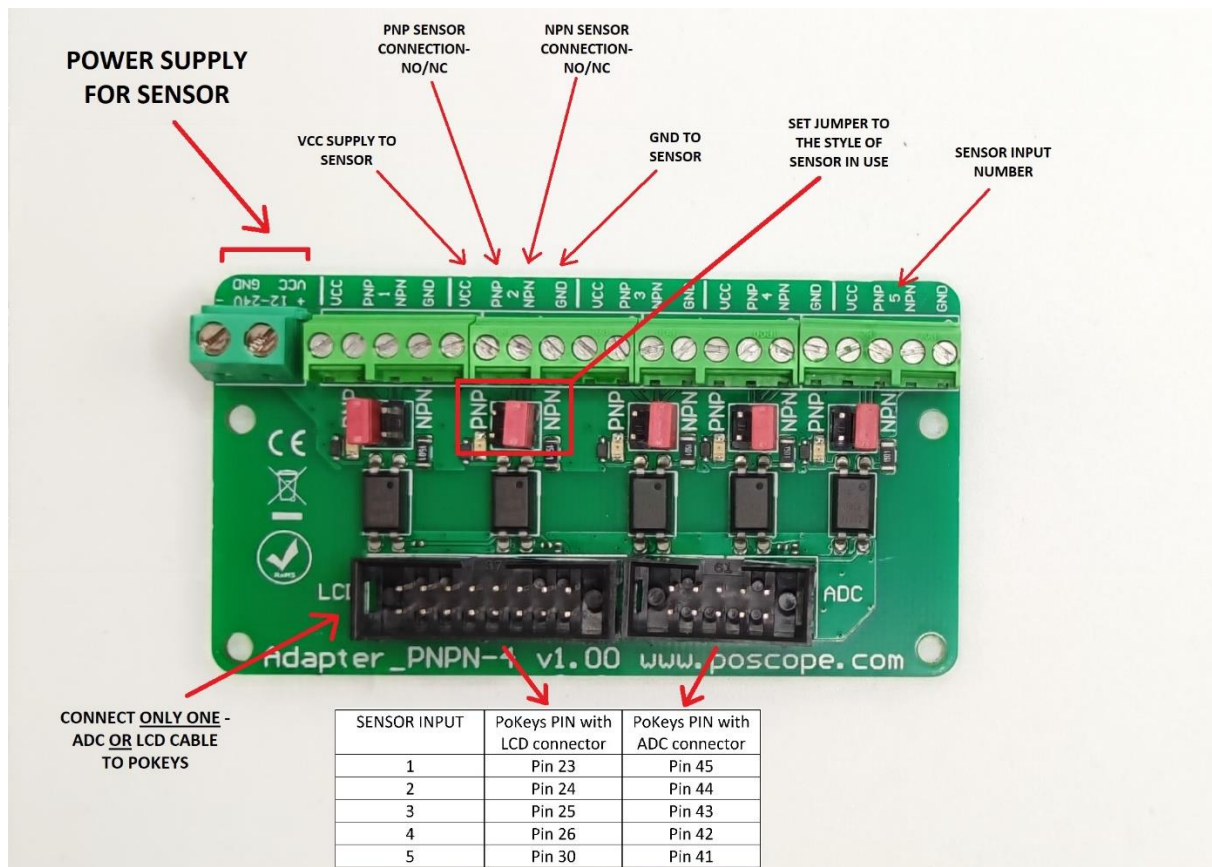
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1 Introduction

AdapterPNPN simplifies the connection of sensors, switches, induction sensors or even probe to the PoKeys57CNC controller. The adapter has two connectors that you easily and directly connect to the LCD or ADC connector (you can only connect one of the two) on PoKeys57CNC. Through the chosen connector, you have access to 5 input pins that are native PoKeys pins. That way you have ability to connect probe or other more sophisticated devices that demand a PoKeys pin. The other side of the adapter has screw terminals for connecting sensors. The side with the sensors is galvanically isolated from PoKeys57CNC so there is additional safety from EMC spikes or other interference. Because of that, sensor side needs separate power supply from 12V to 24V.

2 Connectors and pinout

| SENSOR INPUT | PoKeys PIN with LCD connector | PoKeys PIN with ADC connector |
|--------------|-------------------------------|-------------------------------|
| 1 | Pin 23 | Pin 45 |
| 2 | Pin 24 | Pin 44 |
| 3 | Pin 25 | Pin 43 |
| 4 | Pin 26 | Pin 42 |
| 5 | Pin 30 | Pin 41 |

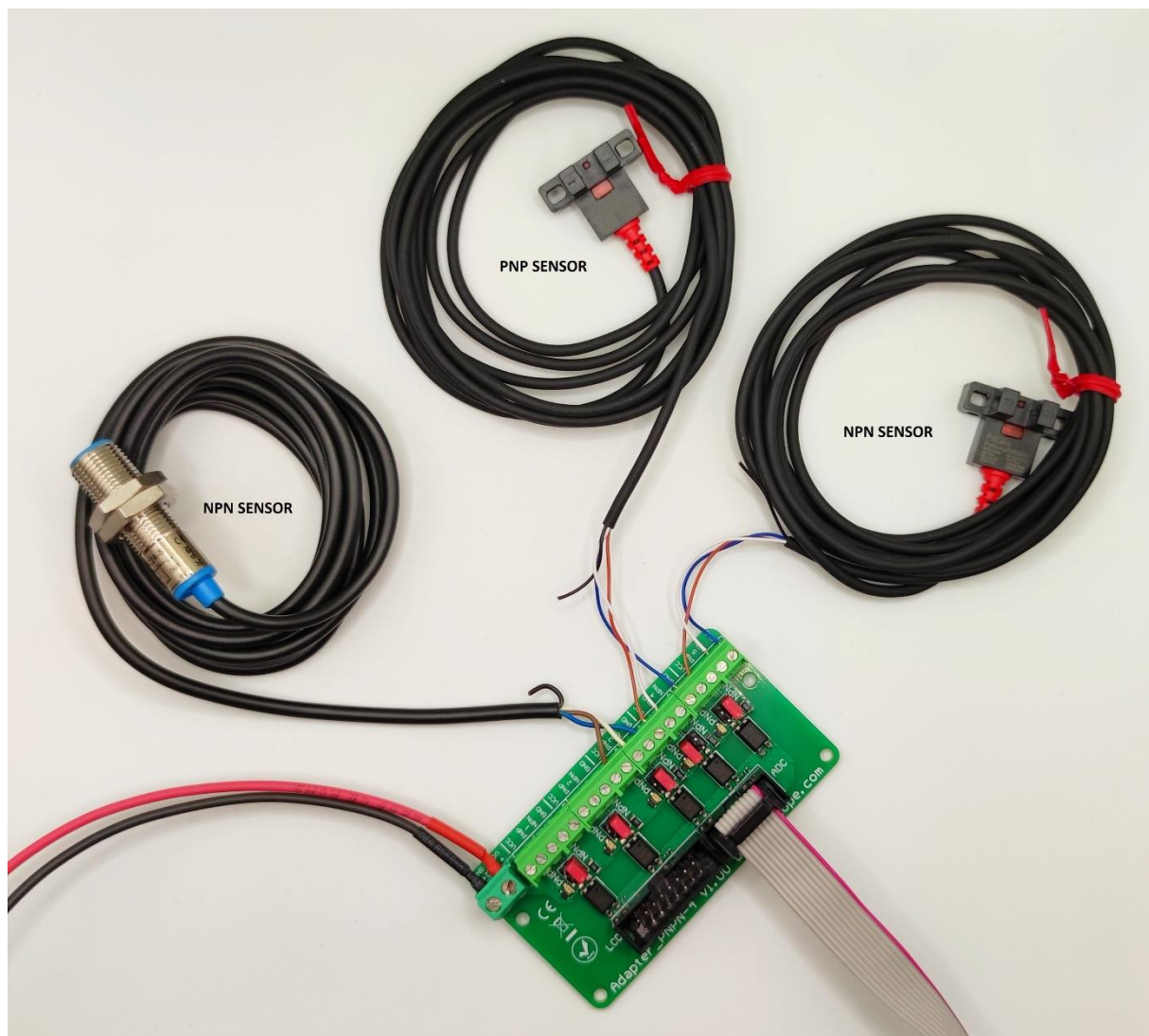


3 Usage examples

Each adapter input contains a serial diode for protection against incorrect wiring. PNP sensor's signal wire should be connected to PNP input on screw terminal. It does not matter if sensor wire is NO (normally open) or NC (normally closed) contact. The benefit of NC wiring is that the error in circuitry and wiring is detected since the signal is not present if for instance you cut the sensor cable. The jumper has to be set accordingly to the PNP side if using PNP sensor.

In case you use NPN sensor, you should connect sensor wire to the NPN input on the terminal, and set the jumper on the NPN side. Again, NO or NC wiring does not matter here, it is managed in the software settings where you can invert the signal if needed.

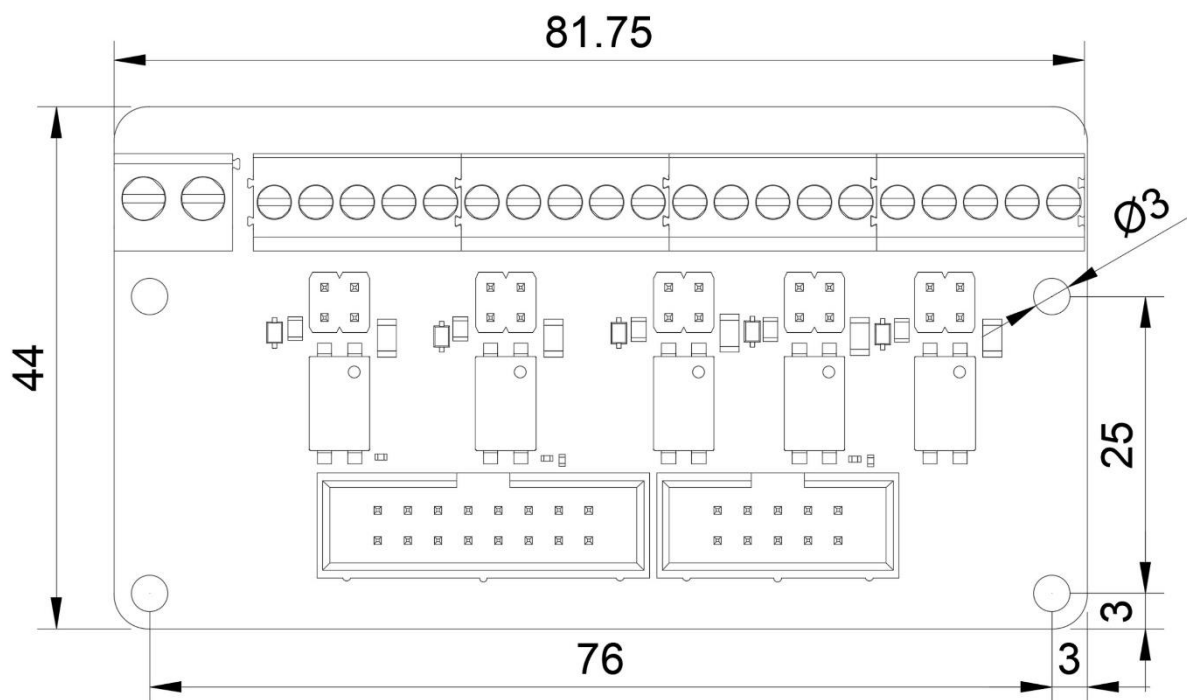
In case you are using ordinary switch contacts, you can wire switch between VCC and PNP terminal and set jumper to PNP. Or you can wire the switch between NPN and GND with jumper set to the NPN. You still have to connect power supply in order for the adapter to work even though switches do not need supply in order to function.



All sensors in the picture have NC leads connected since that is recommended in most use cases. The white signal wire is connected to the appropriate input and jumper is set. For connection with PoKeys57CNC the ADC connector is used.

4 Technical specifications

- Recommended sensor input voltage 12-24 V_{DC}
- Isolation voltage 3000 V_{RMS}
- Switching frequency max 2 kHz to avoid transients
- Working temperature -20 °C ÷ +80 °C
- Mechanical dimensions [mm]:



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