



# Homing sensor – PoHome1IRNPN

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*User's manual*



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## Description

Homing sensors are based on non - mechanical working principle, which makes them highly accurate and repeatable by not having any moving parts. The Sensors have very high accuracy and a very low failure rate. PoLabs - PoHome homing sensor will ensure accuracy in tool changes, job fixtures, homing protocols, automation. The homing sensor is very easy to mount and set in the perfect position on a machine or device. The sensor has LED diodes to indicate the state of the sensor. It is a simple device and it is compatible with most CNC software and hardware.

## Specifications

Specification – PoHome1IRNPN Homing sensor	
Output mode :	NPN NO. NC.
Detection distance:	5 mm
Detection object:	Diameter 1 mm nontransparent object
Operating Voltage:	5-24 VDC +/-10%
Indicator:	red LED indicator
Response time:	0,3 ms max
Output current:	100 mA-24VDC
Current consumption:	<10 mA
Residual voltage:	<1.0 V DC
Operating temperature:	-10° - 50°C
Short-circuit protection:	YES
Reverse polarity protection:	YES
Material of housing:	ABS
IP rating:	IP64

## Features

- High accuracy with no moving parts,
- Homing repeatability within 10 microns (0,01 mm),
- Water-resistant – IP rating: IP64,
- Wide working voltage range 5 - 24 VDC,
- 2m long high-quality flex cable,
- Easy mounting using M3 screws.

## Sensor wiring

### 1. Sensor pinout

- Brown - (5-24 VDC),
- Blue - ( GND).
- Black - (NO - Normally Open),
- White - (NC - Normally Closed).
- **WARNING:** Connecting the power polarity in reverse will damage the sensor

### 2. NPN sensor pinout

## NPN 3-wire standard diagram

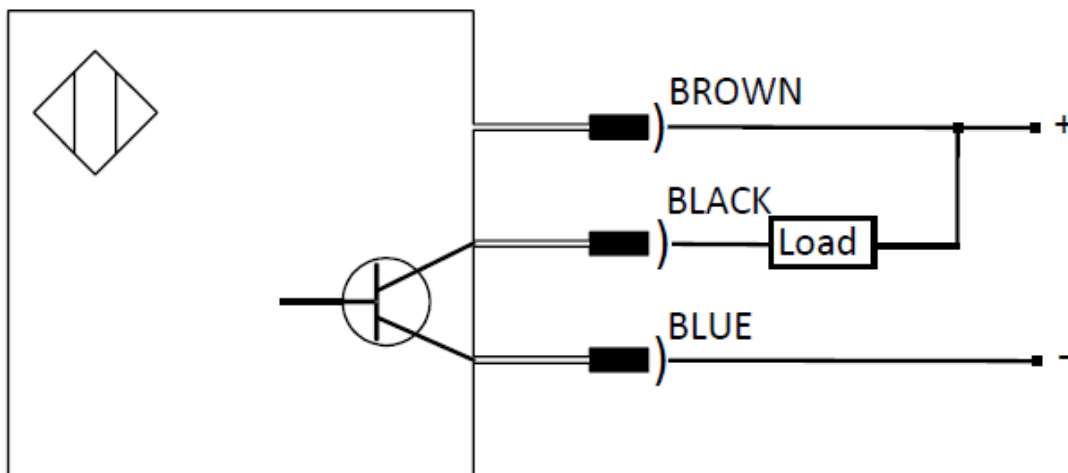


Figure 1:Standard diagram NPN sensor

### 3. Installation – connecting PoHome1IRNPN to power and PoKeys57CNC device

Sensor must be wired to 5-24 V power supply that has common GND to PoKeys57CNC device. Wire the output signal of the homing sensor (black wire) to target PoKeys home/limit switch input directly.

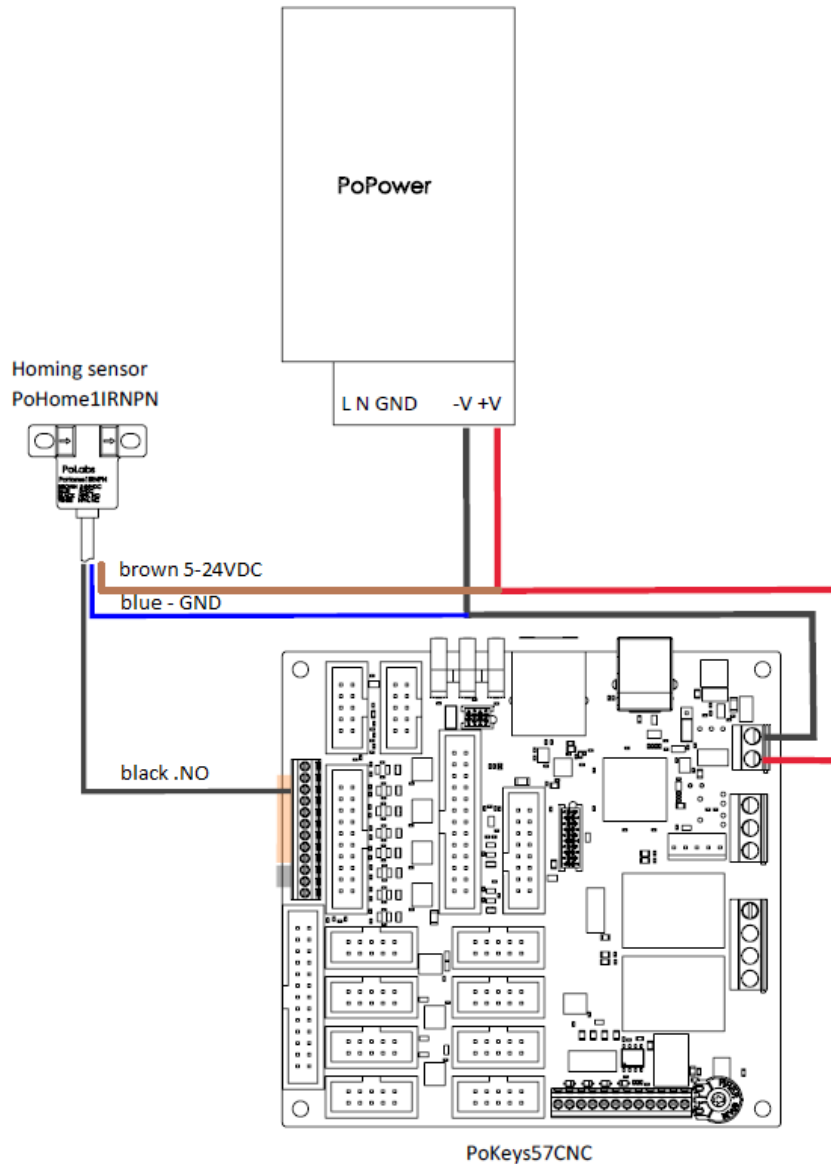


Figure 2: Homing sensor installation (PoKeys57CNC and power supply)

## Configuration PoHome1IRNPN

- PoKeys PlugIn settings:
- In our case we setting CNC lathe (2 axis setting – motor-0, motor1)

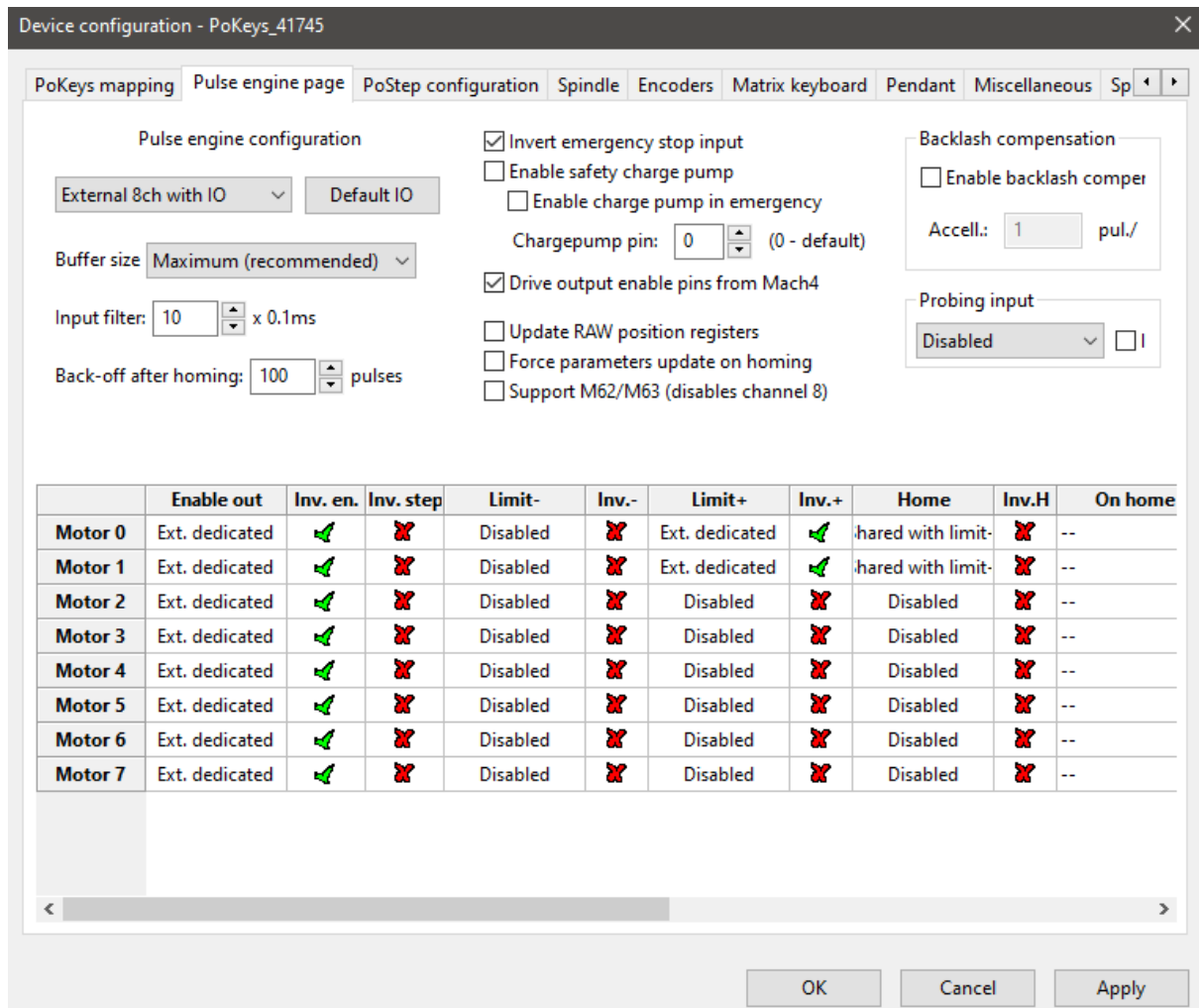


Figure 3: Application example ( MACH 4 )