Example of how to connect a DIN-RAIL 24VDC Opto to USBCNC CPU 5B

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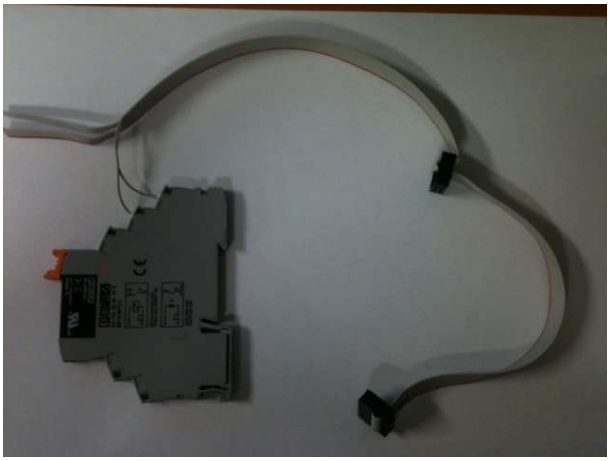
We assume you have a USBCNC CPU 5B
We also assume you need to connect an extra home switch for the 6th home sensor, which is not integrated in our CPU Sensor Holder.
(This example can also be implemented for other signals like Spindle RPM, SYNC etc)

Step 1 Cable to USBCNC CPU 5B

Between the CPU 5B HOME connector and the HOME connector on the CPU Sensor Holder there is a 10 pole ribbon cable
This cable needs to be removed
A new cable needs to be made, that has two 10 pole connector and an open end
Which can be inserted in the DIN rail opto



PIN6 of the ribbon cable needs to be connected to PIN 11 of the OPTO

PIN10 of the ribbon cable needs to be connected to PIN 14 of the OPTO

*PIN 1 on the cable is marked in RED

PIN out of CPU V5B home connector
1 Home-1
2 Home-4
3 Home-2
4 Home-5
5 Home-3
6 Home-6
7 +VEXT (FROm external power)
8 Ground
9 +5VDC
10 Ground

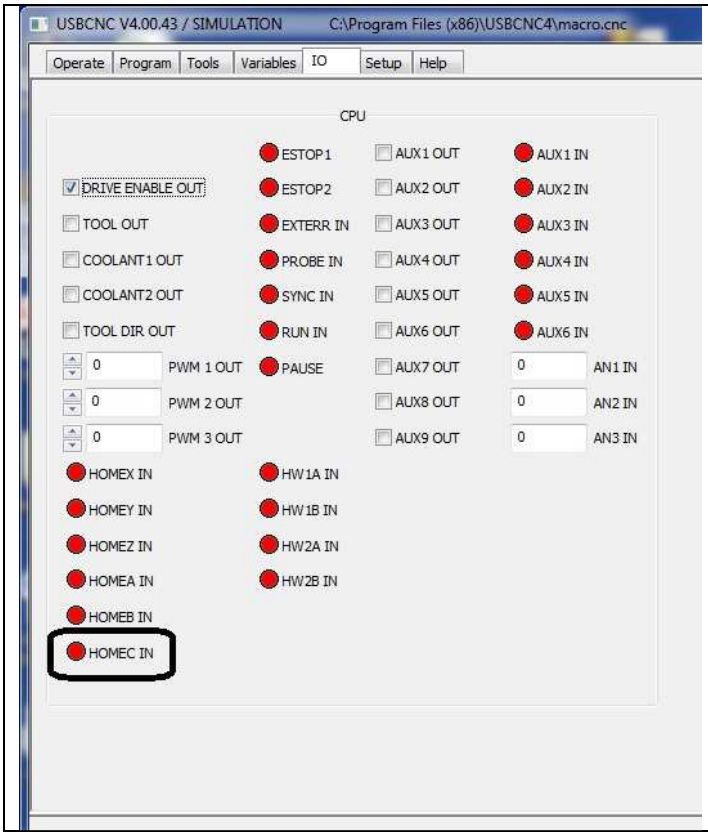
Step 2 Cable to Sensor or other 24VDC device

To test if the input is working in USBCNC you can connect a 24VDC power supply directly to the opto

+24VDC should be connected to A1 of DINRAIL Opto
- (ground) should be connected to A2 of DINRAIL Opto

When the power supply is switched on, the LED on the OPTO should be lit.

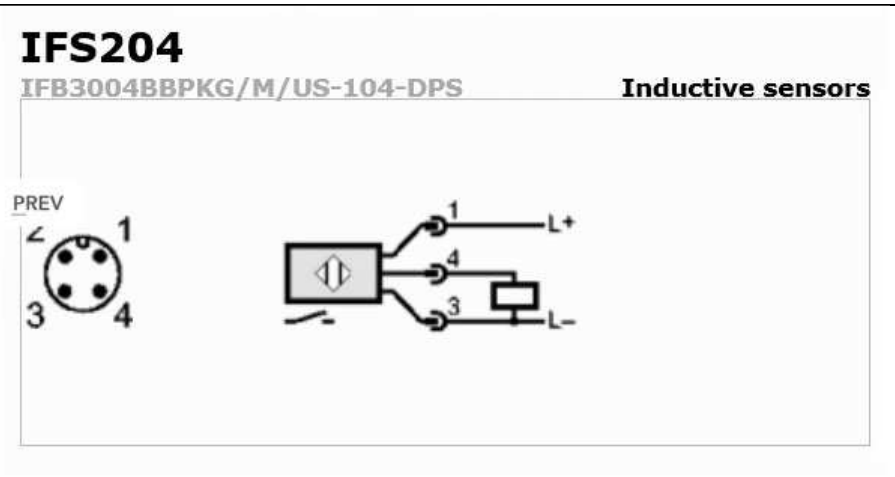
Step 3 Check if signal comes through in USBCNC software



Also in USBCNC software, in the tab IO the home sensor 6 LED should change color. (from red to green or vice versa)

- Make sure software is not in simulation mode when doing test
- When turning on/off power source for 24VDC, wait long enough that capacitor in power supply really discharges. This can take up to a minute

Step 4 connecting to a proximity switch IFM IFS204 (Product code 1998)



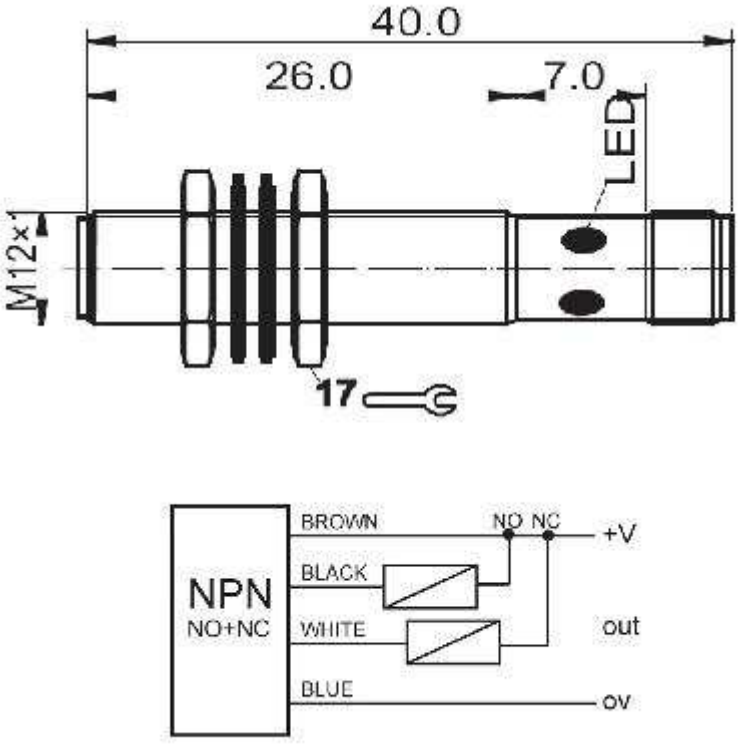
1. Brown +24V DC

2. White Not connected

3. Blue Connect to A2 of OPTO and also to ground of 24VDC power supply

4. Black Connect to A1 of OPTO

Step 4 Example for pluggable Proximity Switch (Product code 1109)



With this type of sensor you can chose between NO or NC, don't connect both! When A2 of the OPTO is connected to White it acst as a normally closed switch, when A2 is connected to

1. Brown Connect to A1 and also +24VDC
2. White Connect to A2 for NC (normally closed)
3. Blue Ground
4. Black Connect to A2 for NC (normally open)