TRAINING

i³ ...Display, Control, Communicate

Tutorial

Digital I/O Configuration

IMO

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Introduction

The purpose of this tutorial is to demonstrate how to configure the on-board digital I/O of the ***i***^{3}.

The ***i***^{3} accepts inputs from devices that provide either a PNP or NPN signal. This needs to be configured in hardware and the user program.

Hardware Setting

JP1 Setting for the digital I/O

The digital inputs and outputs can be set to 0V common (NPN) or 24V pull up (PNP). To access the Jumpers that configure the physical I/O, disconnect the ***i***^{3} and remove the back cover (shown in Figure 1.)

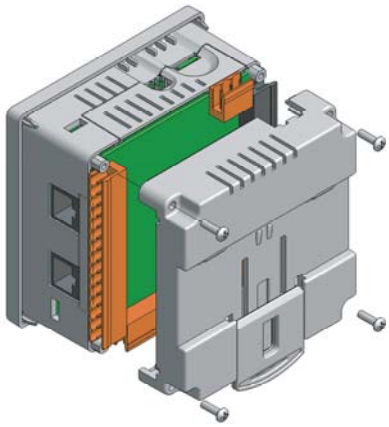


Figure 1: Removing the Back Cover

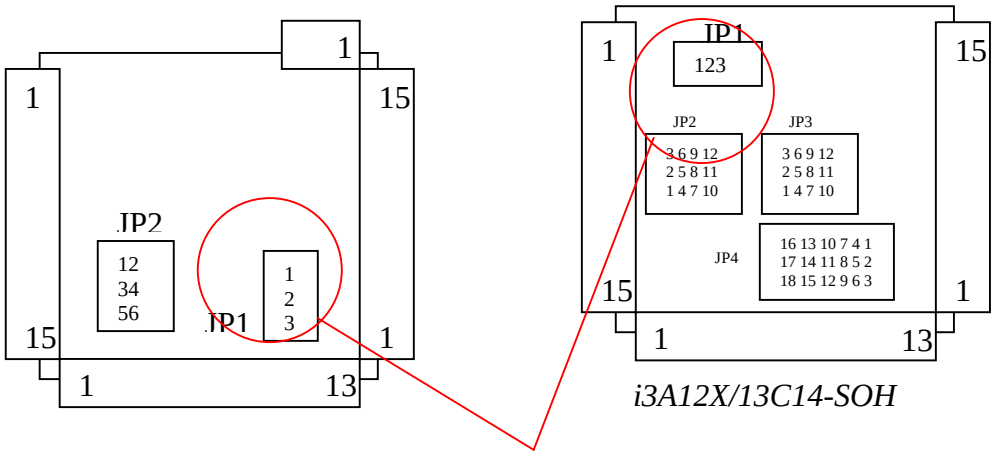
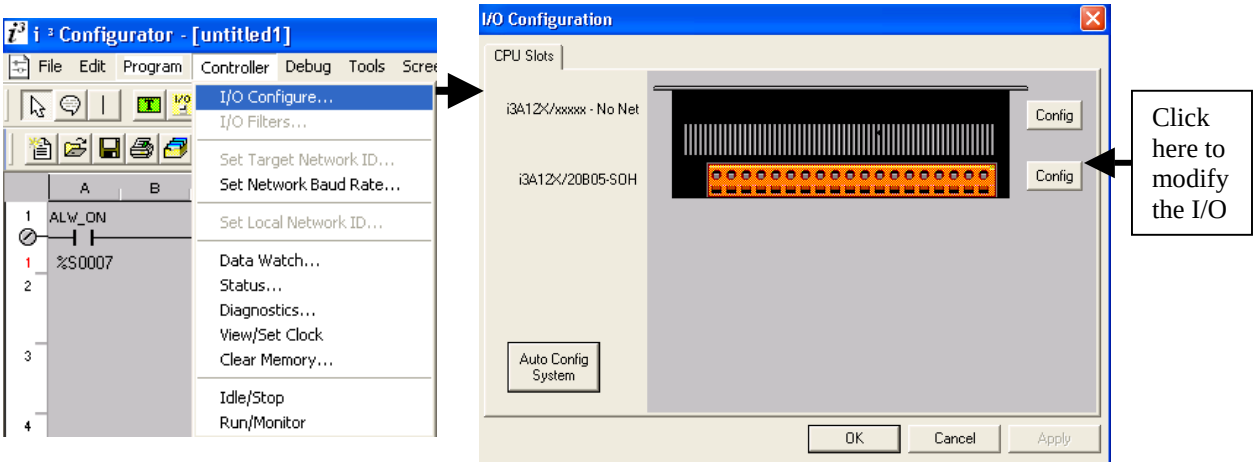


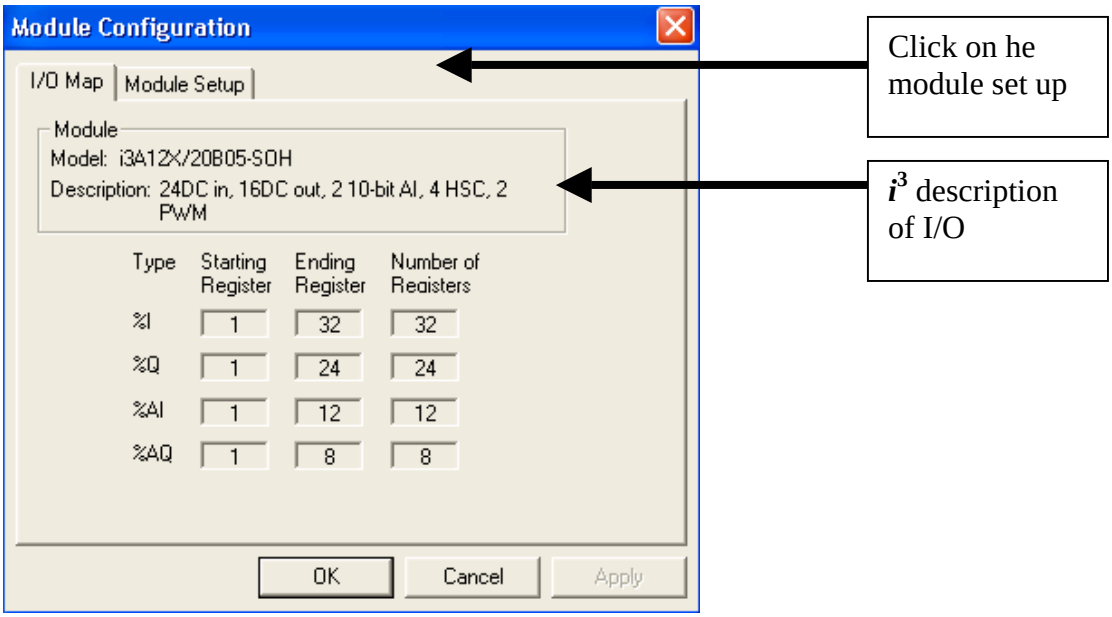
Figure 2: Position of JP1

Description	JP1 Position
24V Pullup (pnp)	2-3
0V Common (npn)	1-2

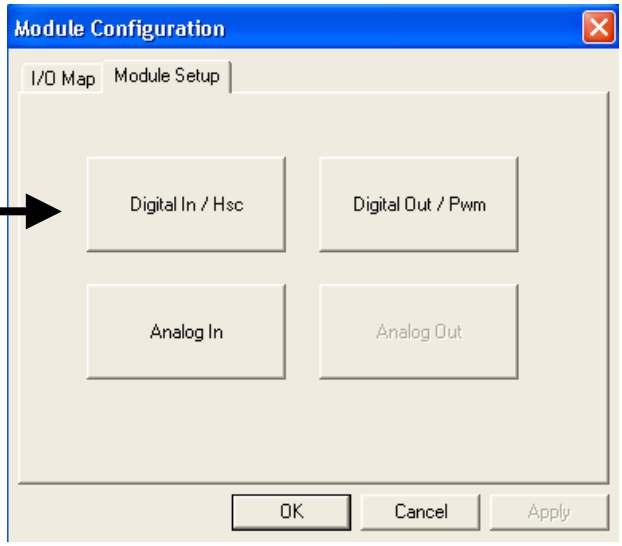
When the ***i***^{3} is in 24V pull up mode a 24V signal is required to drive an input ON. When in 0V common mode the input will be activated when the connection between 0V and the input has been closed. These also depend on whether the software has been set to active high or active low.

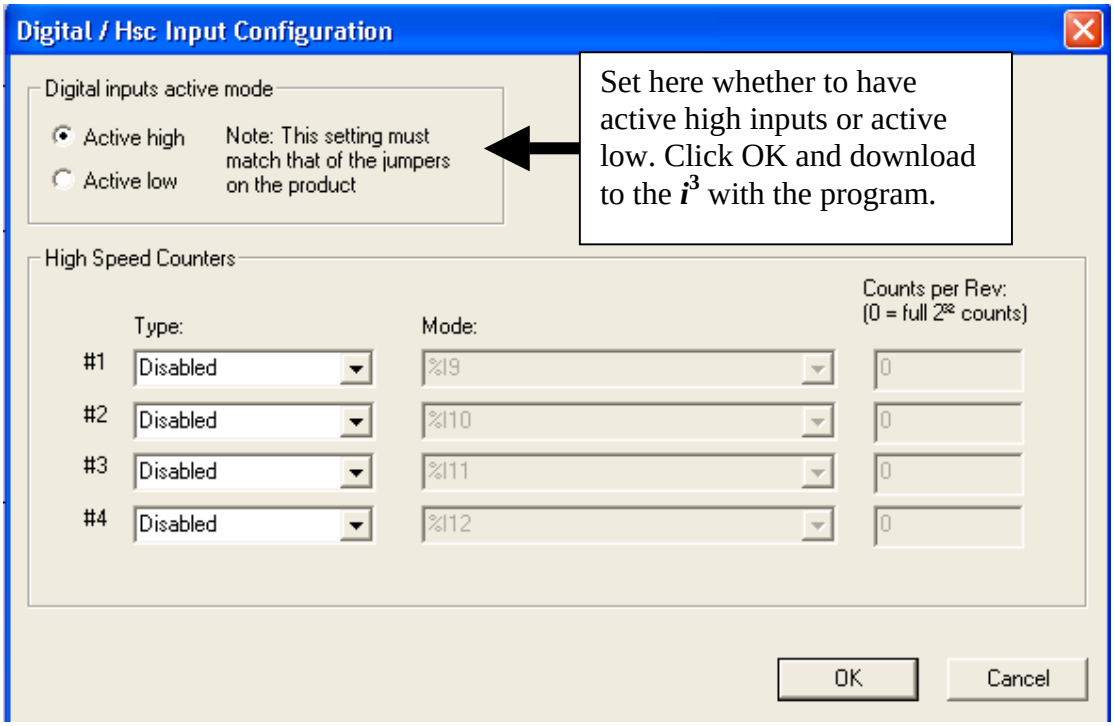
Setting the inputs in the i³ configuration software





Click on the Digital In / HSC to set whether the inputs will be Active High or Active Low





Set here whether to have active high inputs or active low. Click OK and download to the ***i***^{3} with the program.

Digital Inputs in the Program

If the input coils are shown as active, when the input is not activated (whether it be 0V common or 24V pull up) then it is likely that the ***i***^{3} is set as Active LOW.

Input 1 and 2 are not activated, however the contact is closed.

Input 1 is now activated and the contact has gone open.

The unit has now been set to Active HIGH. When there is not a signal to the input the input is not activated. However when a signal is applied the input is activated.

Input 1 and 2 do not have a signal going to them and the contacts are open.

Input 1 now has a signal applied and input 1 contact is closed.

Active High and Active Low operate directly opposite to each other.

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