INDUSTRIAL CONTROL DIRECT
A B&D Industrial Company

TRAINING

i^3 ...Display, Control, Communicate

Tutorial

Digital I/O Configuration

IMO

Table of Contents

Table of Contents 2
Introduction 3
Hardware Setting 4
JP1 Setting for the digital I/O 4
Setting the inputs in the i^3 configuration software 5
Digital Inputs in the Program 7

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.)

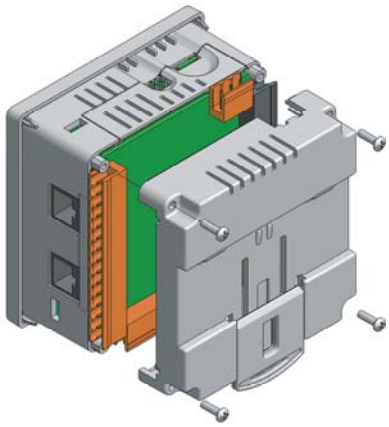


Figure 1: Removing the Back Cover

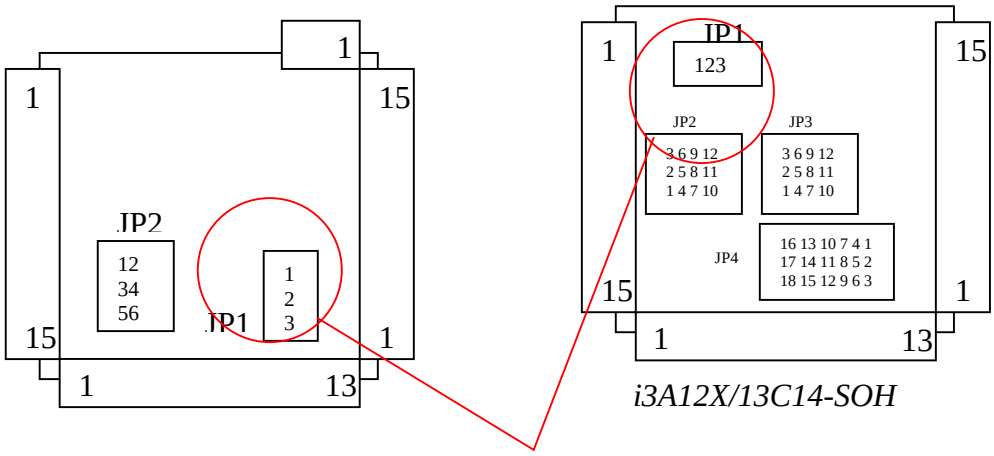
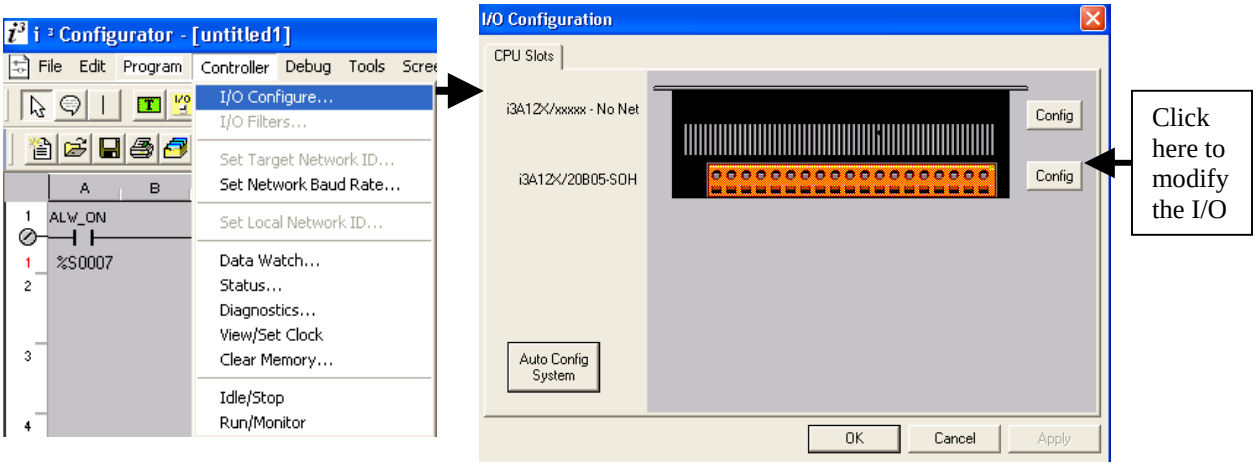


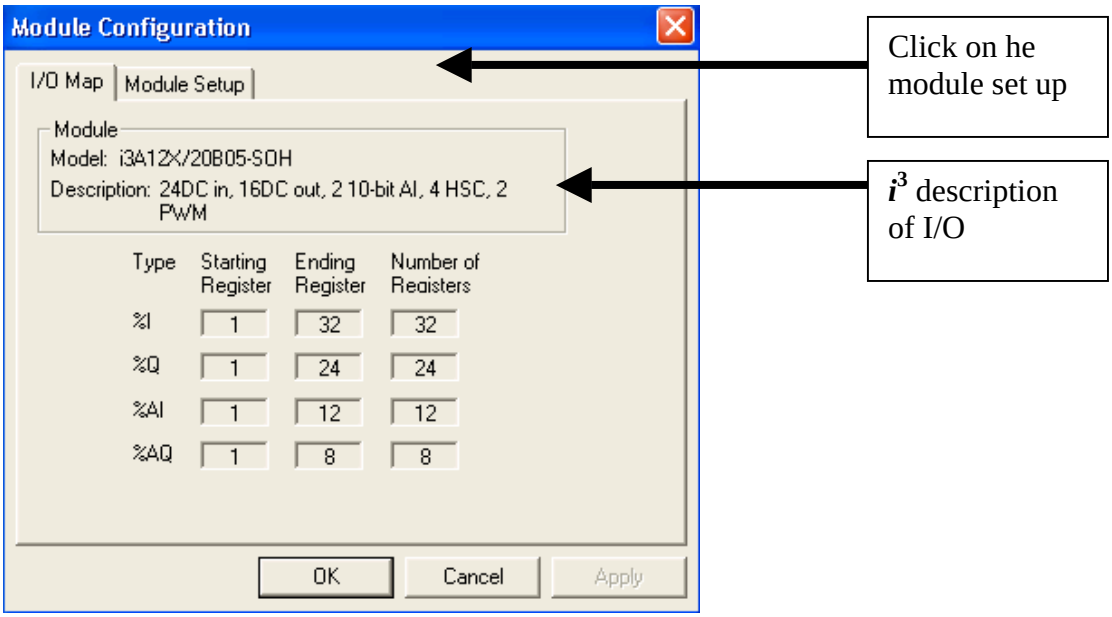
Figure 2: Position of JP1

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

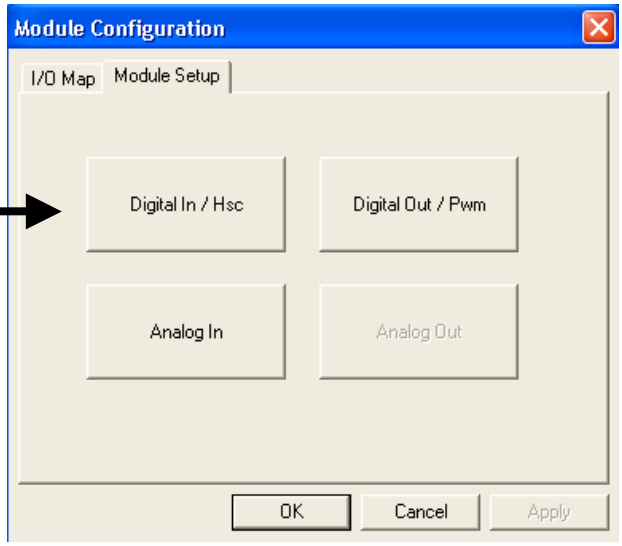
When the ***i***^{3} is in 24V pull up mode a 24V signal is required to drive an input ON. When in 0V common mode the input will be activated when the connection between 0V and the input has been closed. These also depend on whether the software has been set to active high or active low.

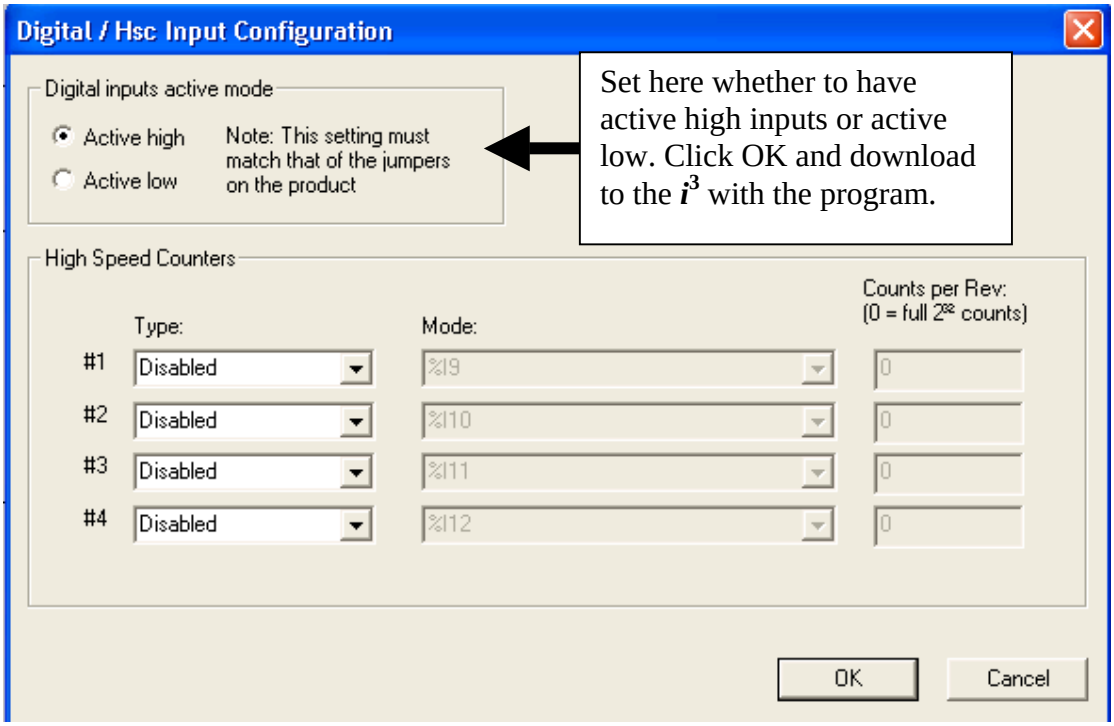
Setting the inputs in the i³ configuration software





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.

IMO Precision Controls Limited
1000 North Circular Road
Staples Corner, London
NW2 7JP United Kingdom
Tel: +44 (0)20 8452 6444
Fax: +44 (0)20 8450 2274
Email: imo@imopc.com
Web: www.imopc.com

IMO Jeambrun Automation SAS
165 Rue Jean Jaures,
94700 Maisons Alfort
Paris, France
Tel: +33 (0)1 45 13 47 05
Fax: +33 (0)1 45 13 47 37
Email: info@imopc.fr
Web: www.imopc.fr

IMO Deutschland
Für weitere Einzelheiten zu IMO Agenten und Distributoren in Ihrer Nähe schreiben. Sie bitte ein E-mail an folgende Adresse:
imo@imopc.com

IMO Italia
Viale A. Volta 127/a
50131 Firenze, Italia
Tel: +39 800 783281
Fax: +39 800 783282
Email: info@imopc.it
Web: www.imopc.it

IMO Canada
Unit 10, Whitmore Road
Woodbridge, Ontario.
L4L 8G4 Cananda
Tel: +1 905 265 9844
Fax: +1 905 265 1749
Email: imocanada@imopc.com

PANEL

- Cam Switches
- Din Terminals
- Drives
- Enclosures
- Fieldbus remote I/O
- Isolators & Switch Fuses
- MCB & RCD
- Motor Circuit Breakers
- Motor Control Gear
- Panel Meters
- Relays
- Signal Conditioning
- Sockets
- Timers
- Transformers & Power Supplies

MACHINE

- Drives
- Intelligent Terminals/HMI
- Limit Switches
- Photoelectric Switches
- PLCs
- Proximity Switches
- Temperature Controls

PROCESS

- Data Acquisition & Control
- Drives
- Intelligent Terminals/HMI
- Limit Switches
- Photoelectric Switches
- Proximity Switches
- PLCs
- Signal Conditioning
- Temperature Controls

SAFETY

- Lightguards
- Safety Limit Switches
- Safety Relays

IMO JAGUAR DRIVES

- Jaguar VXM 0.37-500kW
- Jaguar VXSM 0.37-7.5kW
- Jaguar CUB 0.37-2.2kW

PCB EMECH

- Audible devices
- Chip-on-Board
- Device programmers
- LEDs & 7 seg. displays
- PCB Terminal blocks
- Relays - automotive
- Relays - power
- Relays - signal
- Switches

All IMO products are tried, tested and approved to relevant international quality standards

nqa. ISO 9001 Registered UKAS QUALITY MANAGEMENT 016

3 YEAR GUARANTEE

5 YEAR GUARANTEE