



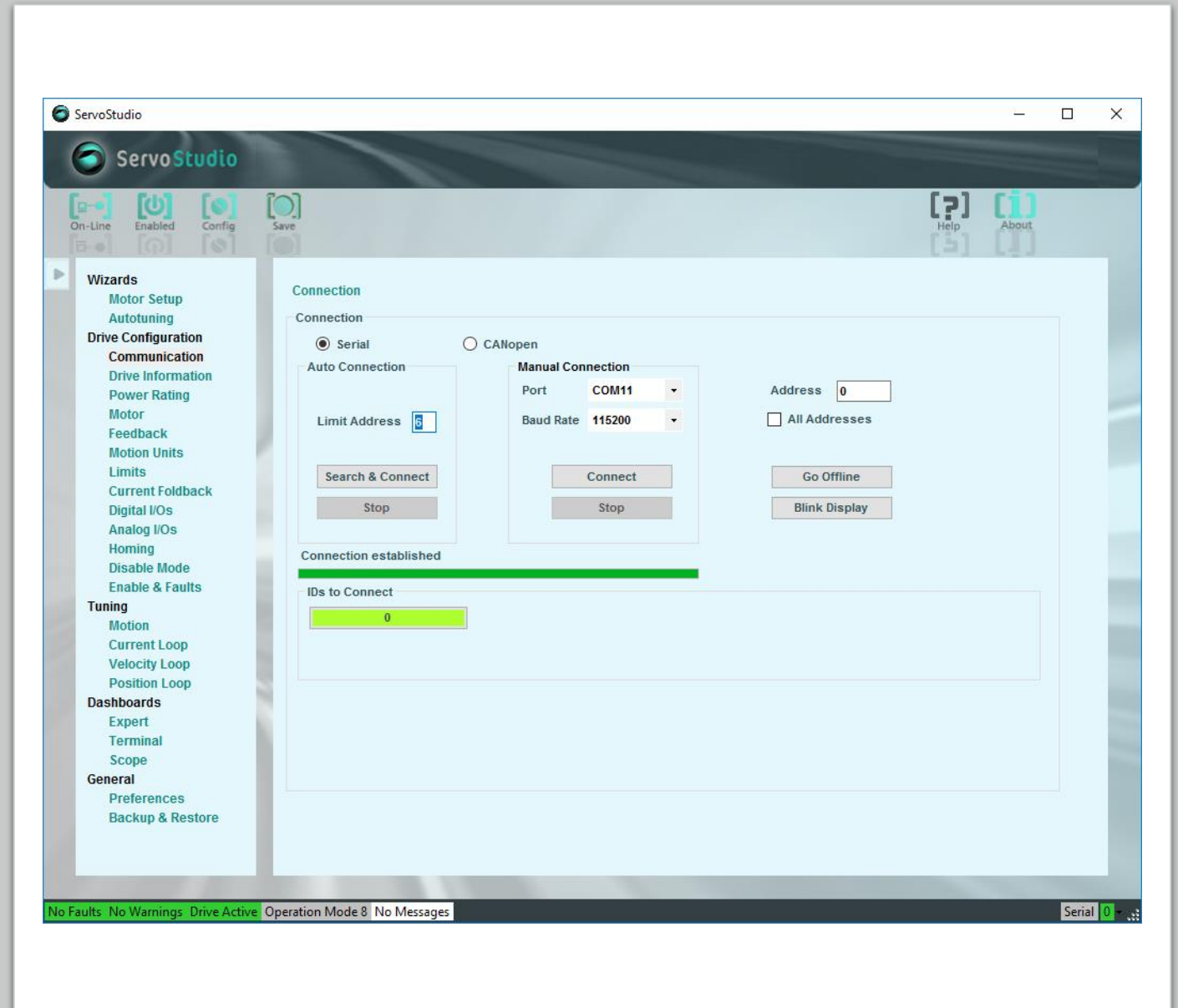
ServoStudio

Getting to Know  
Servo Studio

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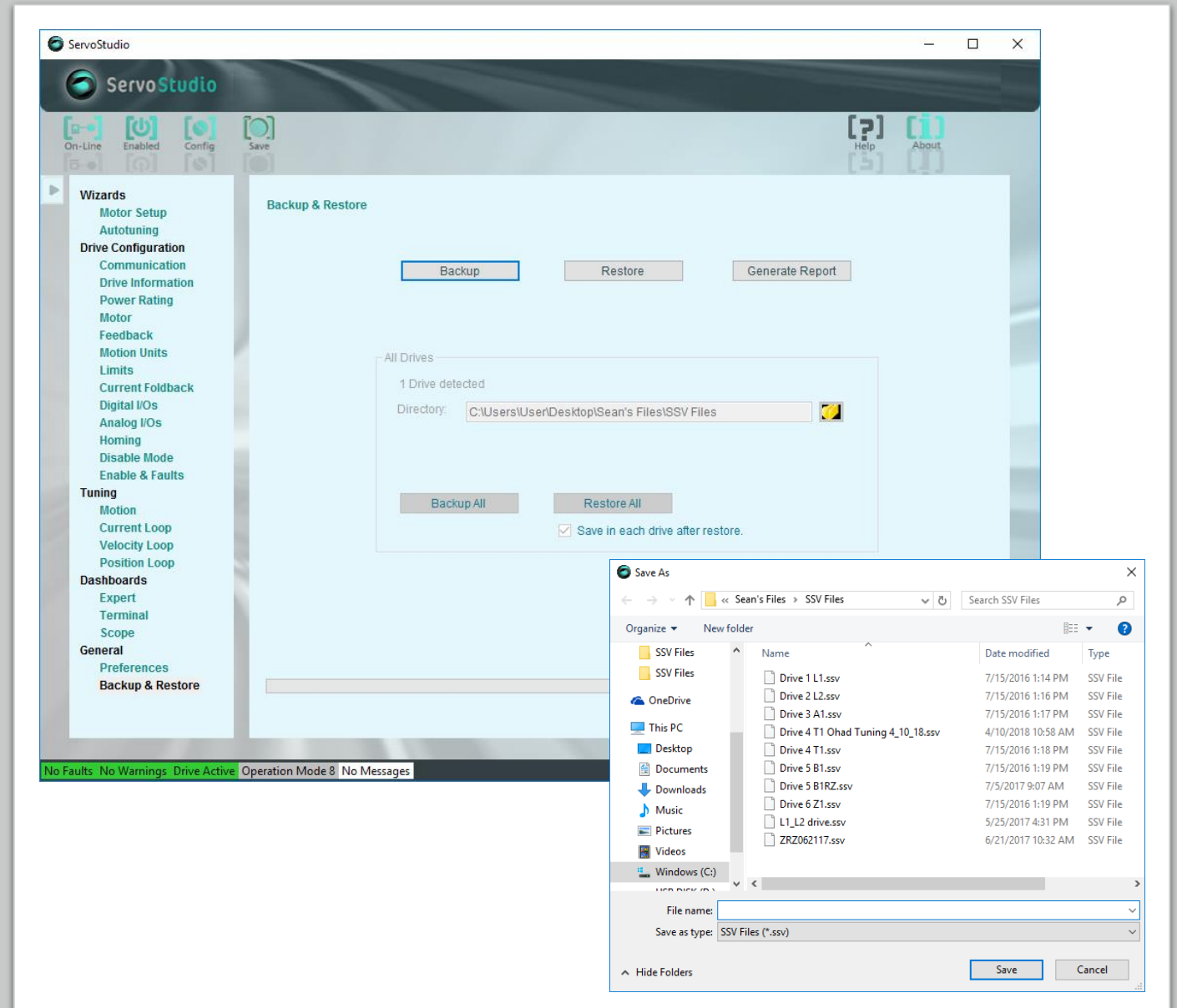
# How to Connect to a Servo Drive

- Connect the mini USB cable from the computer to port C1 on the servo drive you are working on
- Open communication tab
- Press the Search & Connect Button, this will automatically search for the drive



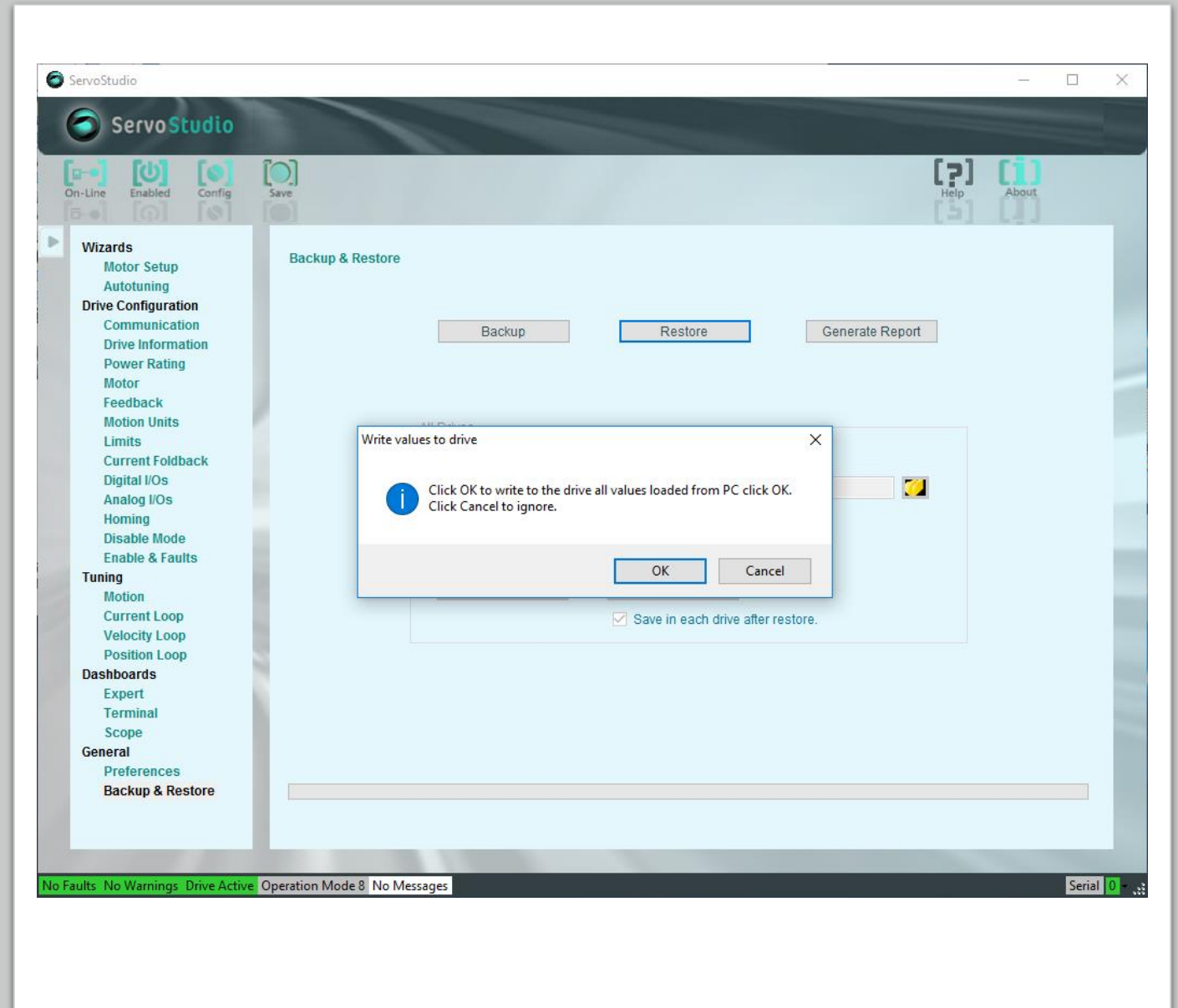
# How to Backup a Servo Drive

- Click on Backup & Restore under General to bring up the Backup & Restore page
- Press Backup to backup your drives SSV files to your computer
- A new window will open for you to be able to select the name and location of where you want to save your files to



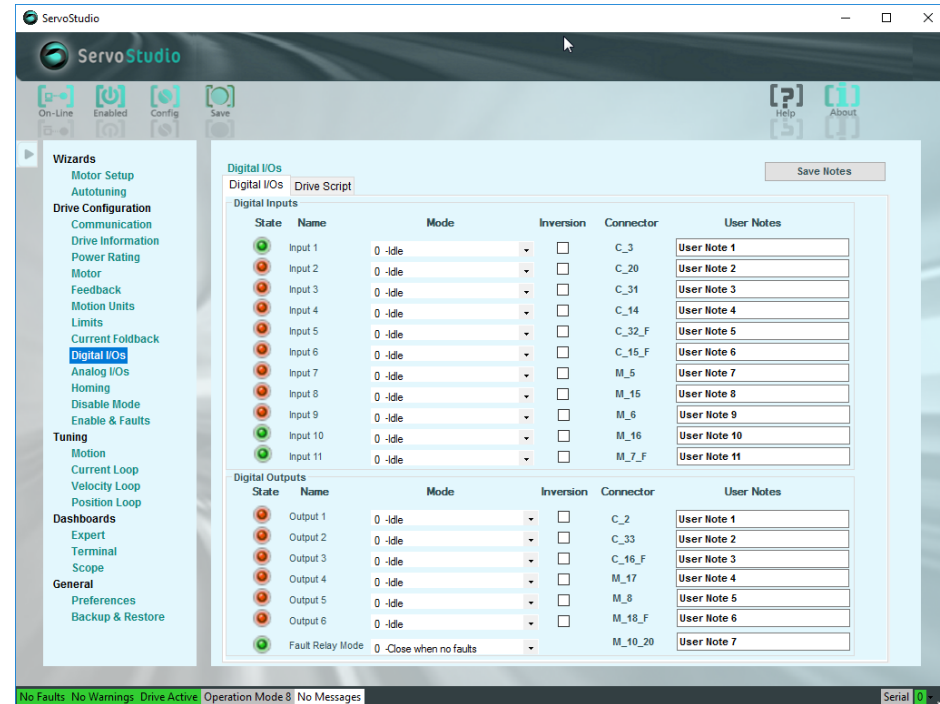
# How to Restore a Servo Drive

- Click on Backup & Restore under General to bring up the Backup & Restore page
- Press Restore to transfer SSV files from your computer to the Servo Drive
- A new window will open for you to be able to select the SSV file you want to send to the drive
- Select the file, then press open
- Select OK to write the values to the drive
- Select Yes to All for all warnings
- Press save at the top, then cycle power to the drive for the settings to take effect



# Digital Inputs & Outputs

- Click on Digital I/O's under Drive Configuration
- Here you can check to see if a drive is getting an input or an output
- If the input or output is high (on) the state indicator next to the input or output number will change from Red to Green



- L1  
 5 – Main Estop  
 6 - Remote Estop  
 7 – LPS Sensor  
 15 – Saw Motor Aux  
 16 – On/Off Key Switch
- L2  
 5 – EDS Sensor  
 6 – Vacuum Contactor Aux  
 7 – LPS2 Sensor  
 15 – Si1 Door Interlock  
 16 – Conveyor Contactor Aux

## I/O Legend

- |                        |                    |
|------------------------|--------------------|
| A1                     | B1                 |
| 8 – CR12 Green Light   | 8 – CR4 Inkjet     |
| 17 – CR8 Sweeper       | 17 – CR3 Conveyor  |
| 18 – CR11 Yellow Light | 18 – CR2 Vacuum    |
| T1                     | Z1                 |
| 8 – CR6 L2 Pusher      | 17 – CR1 Saw Motor |
| 17 – CR10 Red Light    |                    |
| 18 – CR5 L1 Pusher     |                    |

# Enable and Fault's

- Click on Enable & Faults under drive configuration
- Here you can see if the drive that you are connected to has any faults or if it is not enabled
- You are able to clear the faults from this screen and also enable the software in the drive
- If you do have a fault code, you are able to click on the fault and it will open the help section

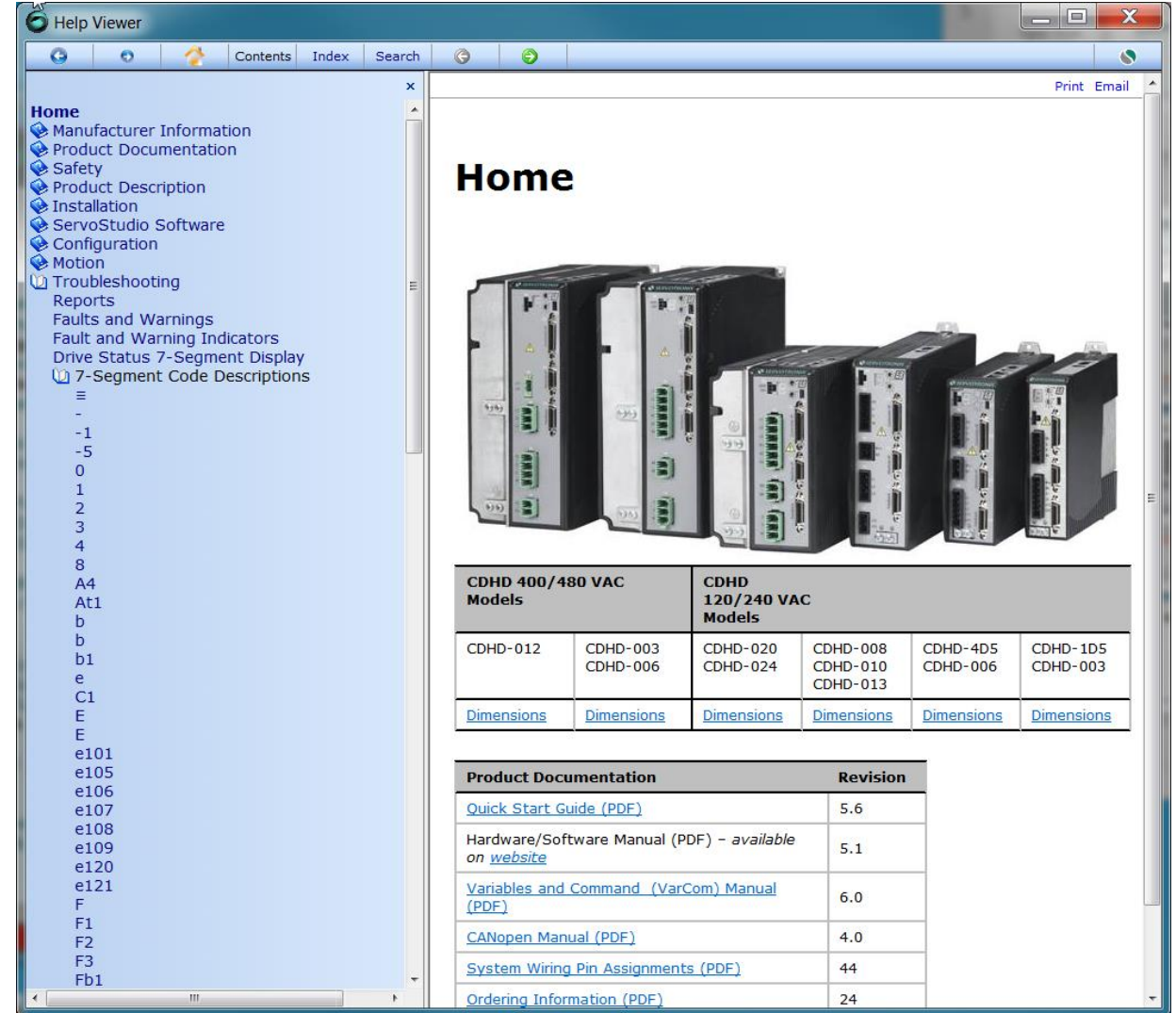
The screenshot shows the ServoStudio software interface. The main window is titled "Enable & Faults". On the left, there is a sidebar with a tree view containing sections: "Wizards" (Motor Setup, Autotuning, Drive Configuration, Communication, Drive Information, Power Rating, Motor, Feedback, Motion Units, Limits, Current Foldback, Digital I/Os, Analog I/Os, Homing, Disable Mode, **Enable & Faults**), "Tuning" (Motion, Current Loop, Velocity Loop, Position Loop), "Dashboards" (Expert, Terminal, Scope), and "General" (Preferences, Backup & Restore). The main area displays a logic diagram for enabling the drive. It features a "Clear Faults" button, a "Software Enable" button with an "Enable" sub-button, and a "Remote Enable" button. These are connected via "And" gates to a "Ready" button, which is then connected via another "And" gate to an "Active" button. A checkbox labeled "Software Enable on Power-Up" is present. Below the diagram is a table titled "Faults & Warnings" with a "Fault History" tab. The table has columns: "Icon", "Display", "Fault Name", "Description", and "Action Required".

Icon	Display	Fault Name	Description	Action Required
✘				
✘	r8	A/B Out of Range	Feedback analog signal is out of range; this fault is related to resolver and sine encoder feedback; the drive checks that the amplitudes of the sine and cosine signals are correct based on the calculation $\sin^2 + \cos^2 = 1$	Check the amplitudes of the sine and cosine signals
i		No SW enable		
i		Fault exists		

At the bottom of the window, a status bar shows: "Faults No Warnings Drive Inactive Operation Mode 8 No Messages" and "Serial 0".

# Help

- To access help, press the [?] button at the top right of the Servo Studio window
- This will open the Help Viewer window
- To see the drive fault codes, expand Troubleshooting in the left navigation window
- Expand the 7-Segment Code Descriptions
- This will list all of the fault codes



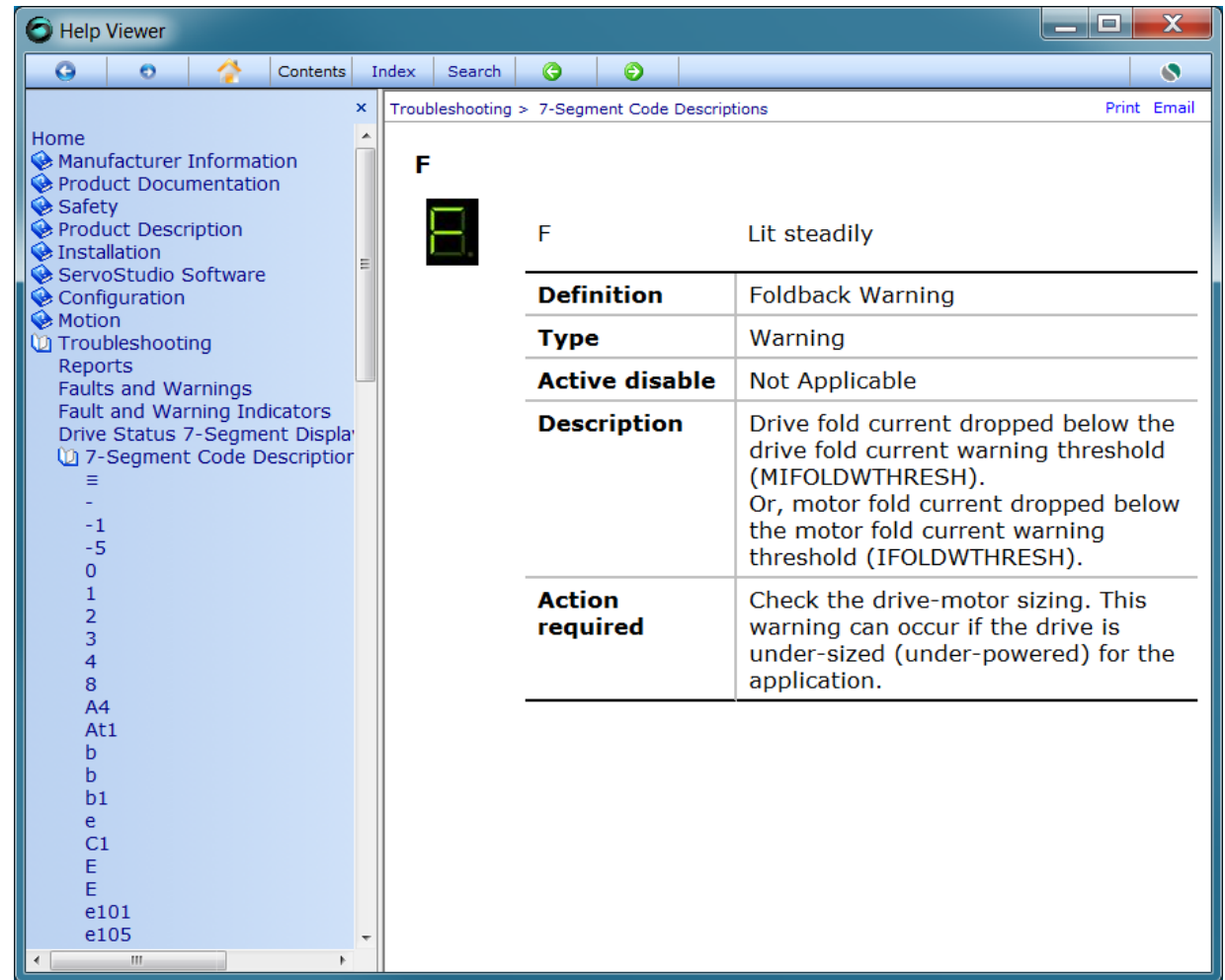
The screenshot shows the Help Viewer application window. The left-hand navigation pane is expanded to '7-Segment Code Descriptions', listing various fault codes from -1 to Fb1. The main content area displays the 'Home' page, which includes an image of several CDHD drive units. Below the image are two tables of drive models and their dimensions, and a 'Product Documentation' section with links to various manuals and their revision numbers.

CDHD 400/480 VAC Models		CDHD 120/240 VAC Models			
CDHD-012	CDHD-003 CDHD-006	CDHD-020 CDHD-024	CDHD-008 CDHD-010 CDHD-013	CDHD-4D5 CDHD-006	CDHD-1D5 CDHD-003
<a href="#">Dimensions</a>	<a href="#">Dimensions</a>	<a href="#">Dimensions</a>	<a href="#">Dimensions</a>	<a href="#">Dimensions</a>	<a href="#">Dimensions</a>

Product Documentation	Revision
<a href="#">Quick Start Guide (PDF)</a>	5.6
Hardware/Software Manual (PDF) - available on <a href="#">website</a>	5.1
<a href="#">Variables and Command (VarCom) Manual (PDF)</a>	6.0
<a href="#">CANopen Manual (PDF)</a>	4.0
<a href="#">System Wiring Pin Assignments (PDF)</a>	44
<a href="#">Ordering Information (PDF)</a>	24

# Help

- Once you click on a fault code, it will give you a definition of the code and also required actions
- If the fault code is longer than one character, the display fault code in the help window will display the same sequence as the drive so you can confirm that you are looking at the correct fault code



The screenshot shows a 'Help Viewer' window with a navigation pane on the left and a main content area on the right. The navigation pane lists various help topics, with '7-Segment Code Descriptions' selected. The main content area displays the details for fault code 'F', including a 7-segment display icon showing the letter 'F', a table of properties, and a description of the fault.

<b>Definition</b>	Foldback Warning
<b>Type</b>	Warning
<b>Active disable</b>	Not Applicable
<b>Description</b>	Drive fold current dropped below the drive fold current warning threshold (MIFOLDWTHRESH). Or, motor fold current dropped below the motor fold current warning threshold (IFOLDWTHRESH).
<b>Action required</b>	Check the drive-motor sizing. This warning can occur if the drive is under-sized (under-powered) for the application.