SureMotion Pro Configuration Software

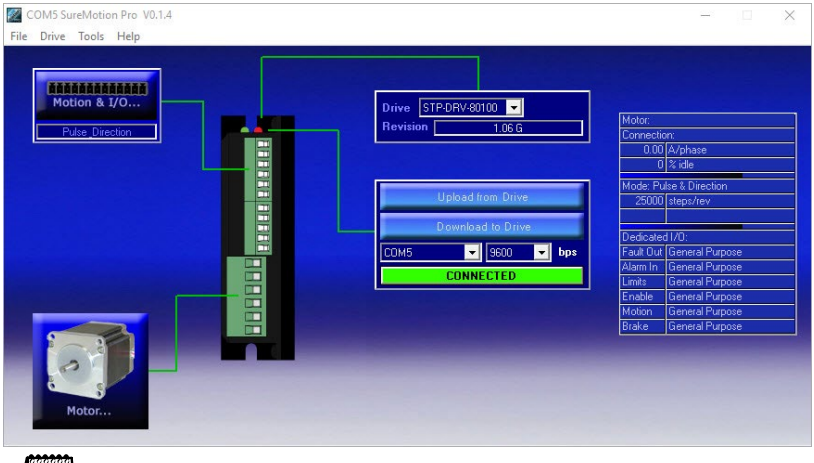
In This Chapter...

Sure**Motion™ Pro Software**

The *Sure*Step advanced drives STP-DRV-4850 & -80100 and advanced integrated motor/drives (STP-MTRD-17R, -23R, and -24R) are configured using *Sure*Motion Pro™ configuration software, which is available for download from the Automationdirect.com website.

Note: SureMotion Pro is the successor to SureStep Pro. Anything that could be done with SureStep Pro can still be done with SureMotion Pro.

The software is divided into two major sections, "Motion and I/O" and "Motor" configuration. There are also communication settings, drive selection, and drive status features.



Complete software instructions are included in the "Help" files within the software.

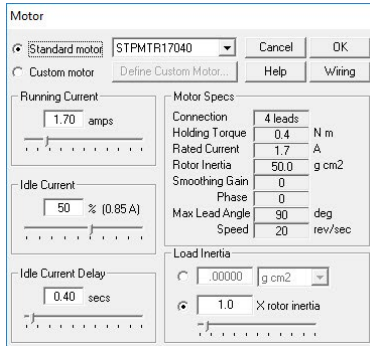
Communication

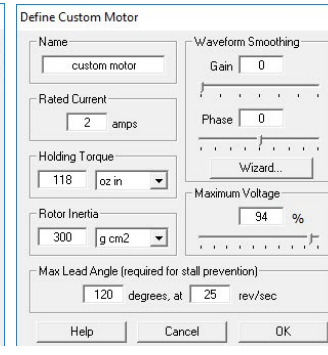
Upload and Download from/to the drive. When you connect to a drive, the Motor, Motion Mode, and Dedicated I/O settings that are currently in the drive will appear on the right of the screen (as will the Drive and Revision at the top of the screen). "Upload from Drive" to get all the configuration settings from the drive or "Download to Drive" to apply all the settings on the PC to the drive.

Motor Configuration

Clicking on the "Motor.." icon will bring up the motor configuration screen. You can choose a motor from the pull-down menu or enter a custom motor (you will need to enter that motor's specific information). If you know the inertia mismatch of the load, you should enter it. If the inertia mismatch is unknown, this entry can

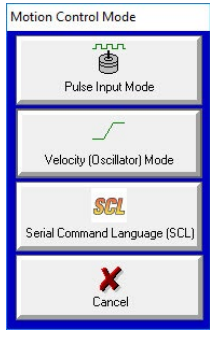
be left at 1. The idle current is default at 50%. Idle current should be used unless the application will require a constant high holding torque





Motion and I/O

Selecting this tab will allow you to set the drive's mode of operation.



- Pulse and Direction:
  Used with high-speed pulse inputs (CW/CCW, Pulse/Direction, Quadrature) generated from a PLC, encoder, etc.
- Velocity (Oscillator):
  Allows the drive to be speed controlled by an analog signal. The input is 0 – 5V and can be scaled to the desired maximum speed. Bidirectional motion can be attained by changing the Offset (under "Advanced Analog Settings") to a non-zero value. EX: Setting this value to 2500mV will command the drive to be at zero speed when 2.5V are present.
- Serial Command Language (SCL):
  Causes the drive to respond to serial commands. A PLC or PC can issue a variety of commands to enable simple motion, gearing/following, turn on the output, wait for an input, etc. See the "SCL Manual" under the *Sure*Motion Pro Help menu. Serial commands can be tested by selecting the "Drive" pull-down menu from the menu bar, and then selecting "SCL Terminal".

Drive Pull-down Menu

This software menu gives you several features to monitor and test the drive.

- Self-Test – Rotates the motor clockwise and counterclockwise. (Tests motor and cabling)
- Status Monitor – Shows the current Drive and I/O status.
- SCL Terminal – Allows SCL commands to be tested by typing them in. (HyperTerminal is NOT a good tool for serial commands, because the drive will "time-out" if you use HyperTerminal to enter strings. SCL Terminal will send the entire string at once.)
- Alarm History – Will read back the most recent drive faults
- Clear Alarm – Will clear the current drive fault.
- Restore Factory Defaults – resets the drive to "out of the box" status.
- Set Quick Decel Rate – Used when the drive encounters faults or overtravel limits.

If using SCL mode, and if testing is done with SCL terminal, make sure to disconnect software and turn power off to the drive for at least 10 seconds to clear the drive's communication buffer.

SCL terminal can be used to test SCL strings before programming your PLC. However, PLC communications will fail after using SCL Terminal unless the drive is powered down for at least 10 seconds before attempting PLC-to-drive communication.