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Sure step™ STEPPING SYSTEMS **STP-USB485-4W**

USB TO SERIAL ADAPTER QUICK START GUIDE

Requirements:

To begin, make sure you have the following available:

- PC driver, available for download at: www.automationdirect.com/pn/STP-USB485-4W
- The USB cable supplied with your STP-USB485-4W.
- A personal computer running Windows 7 or later, 32 or 64 bit versions.
- A configuration cable to communicate to the drive.

For RS-232 connections:

You will also need a serial programming cable (included with RS-232 drives). Cable part number STP-232RJ11-CBL (9-pin d-sub connector to RJ11) is used with all SureStep products that have the RJ11 connector.

For RS-485 connections:

You can either use the screw terminals on the adapter or if connecting to an STP-MTRD drive you can use part number STP-485DB9-CBL-2 (9-pin d-sub to 5-pin STP-MTRD connector).

Step 1:

Connect the STP-USB485-4W to your computer's USB port using the 3 foot USB A to USB B cable that came with the STP-USB485-4W. If Windows recognizes the STP-USB485-4W and successfully installs the driver, skip Step 2. Otherwise, disconnect the adapter from your PC and proceed to Step 2.

Step 2:

Install driver software located here (www.automationdirect.com/pn/STP-USB485-4W) and follow the onscreen instructions.

Step 3:

After your PC has finished installing the STP-USB485-4W, use the Device Manager on your PC to set and/or note the COM port that your PC automatically assigned to the STP-USB485-4W. This is needed for port identification in Step 6. If you disconnect/disable all other COM ports on your PC, you can skip this step.

Step 4:

Disconnect the STP-USB485-4W from your PC. The STP-USB485-4W receives its power from your PC's USB port, and it is best practice to remove power from any hardware before configuring and wiring it.

Step 5:

Configure and wire the STP-USB485-4W for 4-wire RS-485 (recommended for STP-MTRD models when connected to SureMotion Pro software) or 2-wire RS-485 communications. If connecting to an STP-DRV drive then the serial cable included with the drive will work.

2-wire RS-485:

Set SW1 to ON and SW2, 3 and 4 to OFF. Use the pinout below to connect the STP-USB485-4W screw terminal connector and the SureStep drive's RS-485 connector (5-position screw terminal)

STP-USB485-4W	STP-MTRD Drive
Pin 1 (TX/RX-)	RX- and TX-
Pin 2 (TX/RX+)	RX+ and TX+
Pin 3	n/c
Pin 4	n/c
Pin 5	n/c
Pin 6 (GND)	GND

2-wire RS-232:

Set SW1 to OFF and SW2, 3, and 4 to ON. Use the 9-pin D-SUB connector on the STP-USB485-4W and the STP-232RJ11-CBL serial programming cable to connect to the drive.

RS-232
Pin 2 (RXD)
Pin 3 (TXD)
Pin 5 (GND)

4-wire RS-485:

Set SW1, 3, and 4 to ON and SW2 to OFF. Use the pinout below to connect the STP-USB485-4W screw terminal connector and the STP-MTRD drive's RS-485 connector (5-position screw terminal). It is best to use twisted pair cable to connect the drive and adapter (Category 5 cable is twisted pair). Use one twisted pair for the TX wires and another for the RX wires.

STP-USB485-4W	STP-MTRD Drive
Pin 1 (TX-)	RX-
Pin 2 (TX+)	RX+
Pin 3 (RX+)	TX+
Pin 4 (RX-)	TX-
Pin 5 (n/c)	n/c
Pin 6 (GND)	GND

Underneath the outer cover you can access the board. There are two versions of this board (pictured below). Both come set with the recommended configuration allowing RS-232 and RS-485 (2- or 4-wire) communication. If you are having trouble with your connection, you can check that board settings are set properly as shown below.
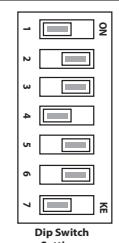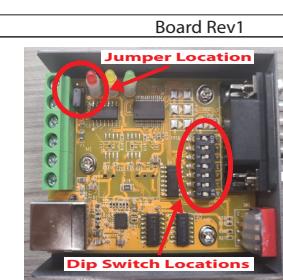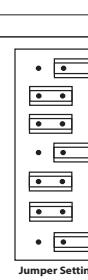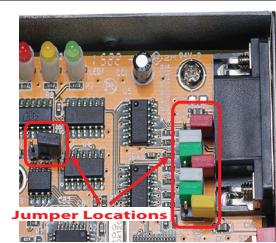
Step 6:

Reconnect the STP-USB485-4W to your PC's USB port and connect the STP-USB485-4W to the drive using the STP-485DB9-CBL-2. Launch the SureMotion Pro software on your PC and select the COM port to which the STP-USB485-4W is connected. Finally, power up the drive and begin communicating.

Additional Help and Support

- For product support, specifications, pricing and installation troubleshooting, a Hardware User Manual can be downloaded from the Online Documentation area of the AutomationDirect web site.

- For additional technical support and questions, call our Technical Support team @ 1-800-633-0405 or 770-844-4200.