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Applied Motion Products TSM34Q-C-IP Integrated Stepper Motor User Guide

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Applied Motion Products TSM34Q-C-IP Integrated Stepper Motor

Requirements

- A 24-70VDC power supply.
- A 12-48VDC auxiliary power supply (optional, for keep-alive function).
- A small flat blade screwdriver for tightening the connectors (included).
- A PC running Microsoft Windows XP, or Windows7/8/10.
- Software: Step-Servo Quick Tuner, version 3.0.16.0725 or later.
- A programming cable (included with CANopen, RS-232 and RS-485 units only). For RS-232 models, we recommend using a USB-serial adapter, model 3004-235 from Applied Motion Products. For RS-485 and CANopen models, please use the Applied Motion 8500-003 USB-serial adapter with screw terminal connectors.
- For Ethernet models, you'll need an Ethernet cable (CAT5e or CAT6).

Step1

- Visit **www.applied-motion.com/products/software** to download the Step-Servo Quick Tuner software.
- Install the Step-Servo Quick Tuner software on your PC.
- Connect the drive to the PC using the appropriate programming cable.

For C models and Q models with RS-232 a programming cable is provided with each unit. Connect the larger

connector (DB9) of the cable to the PC serial communication port, and the smaller side to the TSM34 motor (white 5 pin connector).

For Q models with RS-485 a programming cable is provided with each unit.
Please refer to "Communication Wiring" on back page for more details.

For for Ethernet models a user-supplied standard (RJ45) Ethernet cable is required, Cat 5e or 6 recommended. Please plug the cable into the COM1 connector on the motor for configuration. The COM2 connector on the motor can be used to "daisy chain" this drive to another motor's COM1 port.
For a direct connection between the PC and TSM34, set the static IP address of the PC to 10.10.10.11. For more details on Ethernet connections see the TSM34 hardware manual.


Step2
Connect the Power Supply

- Connect the main power supply "+" terminal to the motor's "+" terminal and the power supply "-" terminal to the motor's "-" terminal using 16 to 20-gauge wire.
- Optional (for keep alive): Connect the auxiliary power supply "+" terminal to the motor's "AUX +" terminal and the power supply "-" terminal to the motor's "AUX -" terminal.

Be careful not to reverse the "+" and "-" wires. Reversing the connection may blow the internal fuse and void the warranty.

If a regulated power supply is being used, there may be a problem with regeneration that can be solved with the use of an Applied Motion RC880 Regeneration Clamp. See Applied Motion website or the TSM34Q/C/IP Hardware Manual for more information.
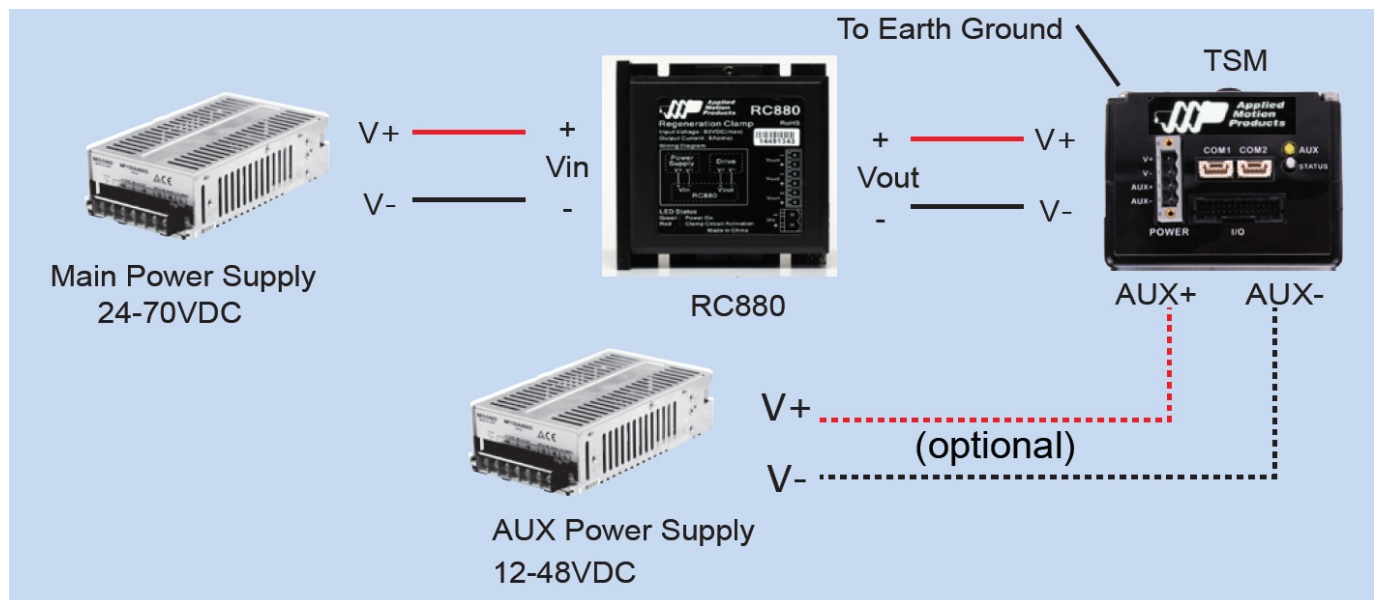
NOTE: When using the optional auxiliary power supply, the main power must be applied prior to the auxiliary power.

Step3
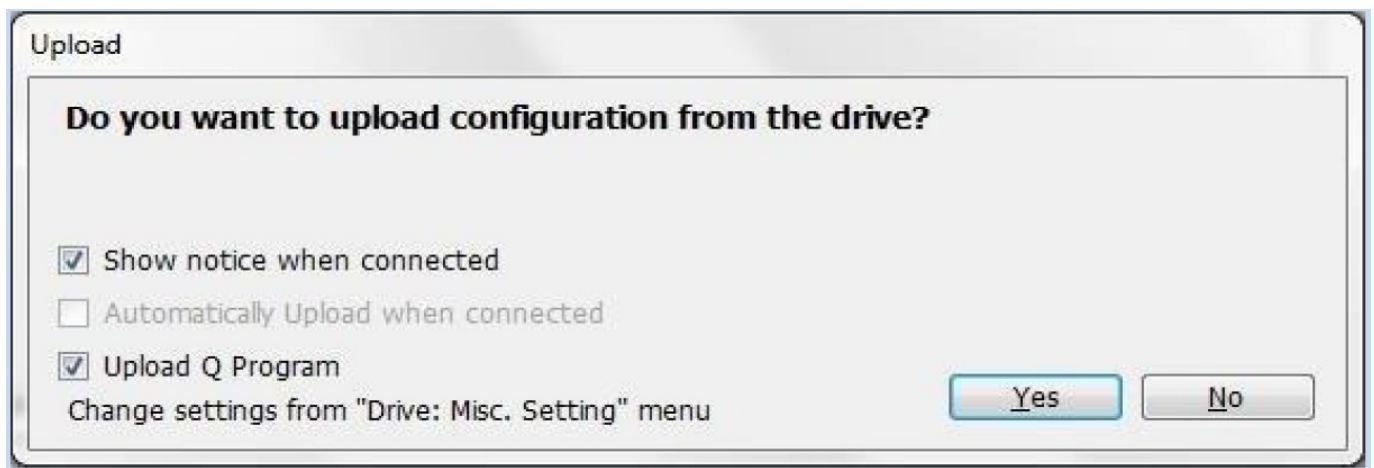**Configure TSM34 with Step-Servo Quick Tuner software.**

- Open the Step-Servo Quick Tuner software on your PC.
- Select communication port for the motor.
- Apply power to the TSM34. If using the optional auxiliary power supply, the main power supply must be applied first.
- Connect to the motor

For Ethernet models, click PING and ensure that a response is received before clicking Connect

NOTE: If your Ethernet motor does not communicate, you might need to reset the IP address to the default of 10.10.10.10. You can do this by powering down the motor, then powering it up with the Ethernet cable UNPLUGGED. Plug in the cable 5 seconds after power up and click Connect.

For serial communication models, the software should automatically identify the motor model number upon power up and display the 'Upload' panel:

Upload

Do you want to upload configuration from the drive?

☑ Show notice when connected

☐ Automatically Upload when connected

☑ Upload Q Program
Change settings from "Drive: Misc. Setting" menu

[Yes] [No]

- Click "yes" to upload the drive configuration

- Begin configuring the motor according to your application requirements, See the software help file for details.

- When ready to test your configuration, click Download All to Drive.

Communication Wiring:

RS-232 Communication
All TSM34Q/C/IP products come with a communication cable. Make sure the wiring distance between the TSM34 and the PC is less than 1.5m.
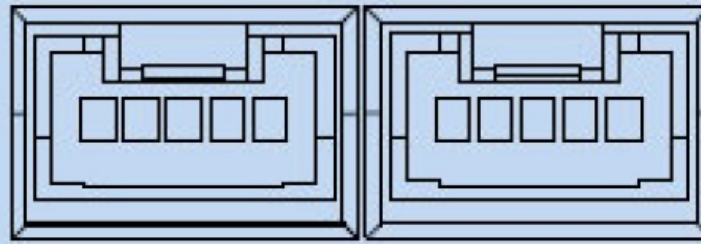
RS-485 Communication
Part no. 8500-003 is a recommended USB to RS-422/485 converter. It supports either the half-duplex (2-wire) RS-485 network, or the full-duplex (4-wire) RS-422 network.

Ethernet Communication
Standard RJ45 port is used, Shielded twisted pair cable (CAT5e or CAT6) is recommended.

COM1   COM2

PIN	COM1 Signal	COM2 Signal	Cable Color
1	RS-232 TX	N/C	Black
2	RS-232 RX	N/C	Brown
3	CAN H	CAN H	Red
4	CAN L	CAN L	Orange
5	GND	GND	Yellow

USB to RS-422/485 Converter

2-Wire Connection: 4-Wire Connection:

DB9 Male (PIN)	Converter Output	Drive	DB9 Male (PIN)	Converter Output	Drive
1	T/R+	RX+	1	TX+	RX+
2	T/R-	RX-	2	TX-	RX-
1	T/R+	TX+	3	RX+	TX+
2	T/R-	TX-	4	RX-	TX-
5	GND	GND	5	GND	GND

If you have any questions or comments, please call Applied Motion Products Customer Support:(800) 525-1609, or visit us online at **www.applied-motion.com**

18645 Madrone Parkway
Morgan Hill, CA 95037, USA
1-800-525-1609
Tel (831) 761-6555
www.applied-motion.com

Documents / Resources

Applied Motion Products TSM34Q-C-IP Integrated Stepper Motor [pdf] User Guide
TSM34Q-C-IP Integrated Stepper Motor, TSM34Q-C-IP, Integrated Stepper Motor, Stepper Motor, Motor

References

- ☞ **B2B Applied Motion**
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