STF

STF-R/C/D/IP Quick Setup Guide

Applied Motion Products
A MOONS' COMPANY

Requirements

- A power supply
- A compatible stepper motor
- A small flat blade screwdriver for tightening the connectors (included)
- A PC running Windows XP/ Vista / Windows: 7/8/10/11 (32-bit or 64-bit) operating system
- Software: STF Configurator
- A programming cable (included with CANopen, RS-485 units). 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).
- I/O cable 3004-348 (optional)

Step 1 - Installing Software

a) Visit www.applied-motion.com/products/software to download the STF Configurator software.
b) Install the STF Configurator software on your PC.
c) Connect the drive to the PC's Communication port. See page 2 for more details

Step 2 - Wiring Power Supply

Connect the power supply's "+" terminal to the drive's "V+" terminal.
Connect the power supply's "-" terminal to the drive's "V-" terminal.
Note: Be careful not to reverse the "+" and "-" wires.
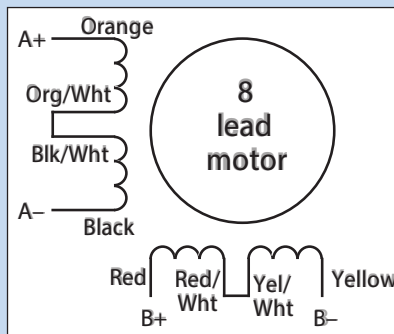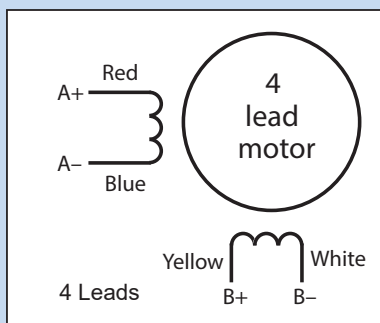Reversing the connection may blow the internal fuse and void the warranty.

   STF03 accepts DC voltage range from 12 – 48VDC
   STF05 accepts DC voltage range from 24 – 48VDC
   STF06 accepts DC voltage range from 12 – 48VDC
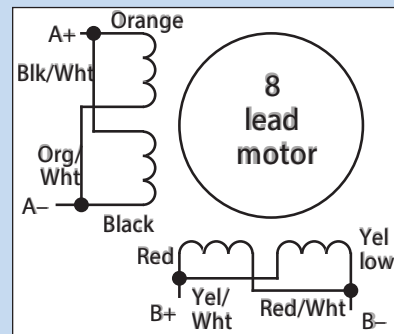   STF10 accepts DC voltage range from 24 – 70VDC
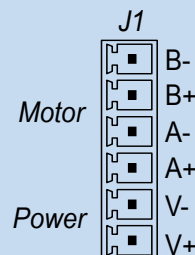
To ensure a proper earth ground connection, connect ground wire to the screw on the bottom side of the drive chassis.

J1
Motor — B-, B+, A-, A+
Power — V-, V+

Step 3 - Wiring the Motor

Connect the drive to the motor. Four lead motors can be connected in only one way, as shown left.
Eight lead motors can be connected in Series or Parallel, as shown below.
If using a non-Applied Motion Products motor, please refer to your motor specs for wiring information.

4 lead motor
A+ Red
A− Blue
B+ Yellow
B− White
4 Leads

8 lead motor
A+ Orange
Org/Wht
Blk/Wht
A− Black
Red — Red/Wht — Yel/Wht — Yellow
B+   B−
8 Leads Series Connected

8 lead motor
A+ Orange
Blk/Wht
Org/Wht
A− Black
Red — Yel/Wht — Red/Wht — Yellow
B+   B−
8 Leads Parallel Connected

Step 4 - Config the Drive

a) Run the STF Configurator software and select the right COM port in the software.

b) Apply power to the drive.

c) The software will recognize the drive & display the model & firmware version.
For Ethernet Drives, enter your drive's IP address and Ping to ensure a response before click on connect.
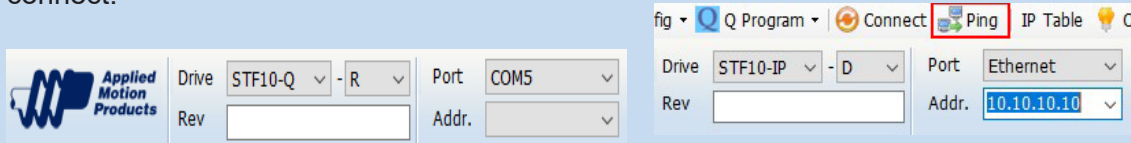
d) Click "Yes" to upload the drive configuration.

e) Config your stepper motor, for Applied motion motors, you can choose from the drop down list
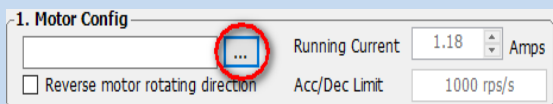
f) Configure the control mode setting, I/O function and etc.

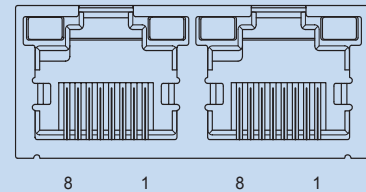g) When ready to test your configuration, click "Download All to Drive".
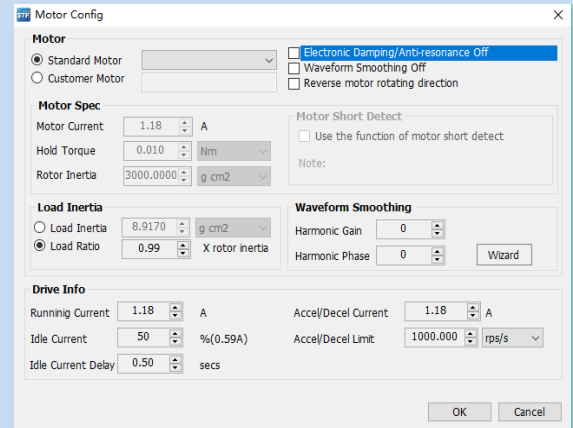
Step 5

RJ45 communication connector is used on all STF models

Ethernet Communication.

Shielded twisted pair cable (CAT5e or CAT6) is recommended. Set drive's IP address by rotary switch S1.

CANopen Communication

Use COM1 with RS-232 programming cable for drive configuration.

Set drive's CANopen address by rotary switch S1.
Set drive's CANopen baud rate by rotary switch S2.

PIN	COM1 Signal	COM2 Signal	Wire Color
1	CAN_H	CAN_H	ORG/WHT
2	CAN_L	CAN_L	ORG
3,7,8	GND	GND	GRN/WHT, BRN/WHT, BRN
4	RS-232_TX	NC	BLU
5	RS-232_RX	NC	BLU/WHT
6	NC	NC	GRN

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.

Set drive's RS-485 address by rotary switch S1.
Set drive's RS-485 baud rate by rotary switch S2.

S1 is used to set drive's RS-485 address, and the range is 0~F (0~15 in decimal). If you want to set the drive's RS-485 address range to 10~1F (16~31 in decimal), you need to configure it in STF Configurator software.

PIN	Signal	Wire Color
1	RX+	ORN/WHT
2	RX-	ORN
3	TX+	GRN/WHT
4.5	NC	BLU, BLU/WHT
6	TX-	GRN
7.8	GND	BRN/WHT, BRN