

# STM23C/24C Quick Setup Guide



## Requirements

To begin, make sure you have the following equipment:

- A small flat blade screwdriver for tightening the connectors (included).
- A personal computer running Microsoft Windows 98, 2000, ME, NT, XP, Vista or 7.
- *ST Configurator™* software (available at [www.applied-motion.com](http://www.applied-motion.com)).
- 3 pin spring connector (included) for connecting to the CAN network.
- For more detailed information, please download and read the *STM23 Hardware Manual* or *STM24 Hardware Manual*, available at [www.applied-motion.com/support/manuals](http://www.applied-motion.com/support/manuals).

## Step 1 - Wiring

- Wire the drive to the DC power source.

**Do not apply power until Step 3.**

Note - the STM23C and STM24C accepts DC voltages from 12-70V. If using an external fuse, we recommend: STM23: 4 amp fast acting, STM24C: 5 amp fast acting.

See the *STM23* or *STM24 Hardware Manuals* for more information about power supply and fuse selection.

- Connect I/O, if required by your application.
- Connect to CAN network.

Applied Motion Products STM23C and STM24C drives use a three-pin spring connector, that conforms to the DR303 specification. The connector should be wired in a daisy-chain configuration with a 120 Ohm resistor used to terminate each end.

- Set BitRate, Node ID

CANOpen Bitrate - AMP CANOpen drives have three settings, one for Bit Rate and two for Node ID. The Bit Rate is configured using a ten-position switch. See Bit Rate table for the Bit Rate settings.

The Node ID is configured using a sixteen position switch to set up the lower four bits of the Node ID. The upper three bits of the Node ID are set using the *ST Configurator™*. Valid ranges for the Node ID are 0x01 through 0x7F. Node ID 0x00 is reserved in accordance to DS301 specification.

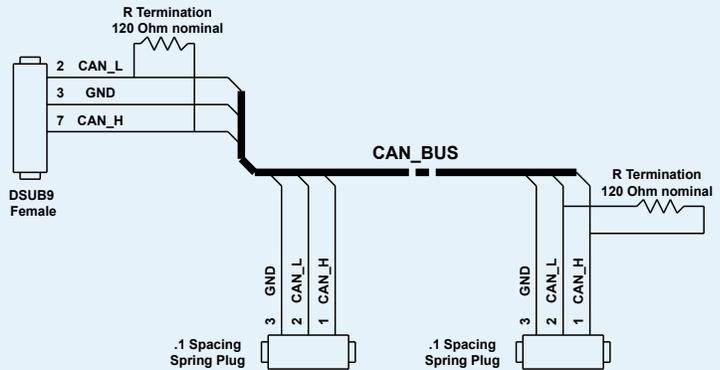
**Note: The Node ID and Bit Rate is captured only after a power cycle, or after a network reset command has been sent. Changing the switches while the drive is powered on will NOT change the Node ID until one of these conditions has also been met.**

- Connect the RS-232 programming cable.

POWER CONNECTIONS BIT RATE I/O CONNECTIONS



CANOpen RS232 NODE ID



Switch Setting	Resultant Bit Rate
0	1 Mbps
1	800kbps
2	500 kbps
3	250 kbps
4	125 kbps
5	50 kbps
6	20 kbps
7	12.5 kbps
8	n/a
9	n/a

Bit Rate Table



3 Pin Connector

## Step 2 - ST Configurator

- Download and install *ST Configurator™* software, available at [www.applied-motion.com](http://www.applied-motion.com).
- Launch the software by clicking Start/Programs/Applied Motion Products/ST Configurator
- If you have any questions or comments, please call Applied Motion Products Customer Support 800-525-1609 or visit us online [www.applied-motion.com](http://www.applied-motion.com).



## Step 3 Configuration

- Apply power to the drive.
- Use the *ST Configurator™* to set up the motor current, limit switches, encoder functionality (if applicable) and Node ID.
- The *ST Configurator™* includes a self test option (under the Drive menu) to verify that the STM23C or STM24C and power supply are correctly wired and configured.
- When configuration is complete, exit the *ST Configurator™*. The drive will automatically switch to CANOpen Mode.

The screenshot displays the ST Configurator software interface with several configuration windows open:

- Integrated Motor:** Shows settings for Running Current (3.00 amps), Load Inertia (.00000 g cm<sup>2</sup>), Accel/Decel Current (5 amps), Idle Current (50% (1.50 A)), and Idle Current Delay (0.40 secs).
- Velocity Control Mode:** Shows settings for Speed (10 rev/sec), Accel (100 rev/s/s), Decel (100 rev/s/s), and Analog Input Range (0 to 5V).
- Node ID Range:** Shows the Node ID Range (0x01 - 0x0F) and the Front Panel Node ID Switch (a circular dial with letters A-F and numbers 1-9).
- I/O Configuration:** Shows settings for I/O pins and their functions.
- Motor Selection:** A window showing a 3D model of a motor and a table of motor specifications.

Motor: STM-23S-2AN	
3 A/phase	
50 % idle	
Mode: Velocity Mode	
20000 steps/rev	
10.000 rev/sec @ 5V	
I/O:	
STEP	Run/Stop
DIR	Direction
EN	Change Speed
DUT	Tach 100 ppr
AIN	Speed

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](http://www.applied-motion.com).



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