MSSTB05/10-R Quick Setup Guide

MOONS' moving in better ways

Requirements

To begin, make sure you have the following equipment:

- A compatible stepper motor
- A small flat blade screwdriver for tightening the connectors (included)
- A PC running Microsoft Windows XP / Vista / Windows 7/ Windows 8(32-bit or 64-bit)operation system
- ***STB Configurator*** software (available from MOONS' website)
- For MSSTB05-R drive, a RS-485 daisy chain communication cable is included in the package. It is used for connection with the next drive in the RS-485 network. It can also be used for connection with PC for drive configuration.

TIP: When connecting the first drive in the RS-485 network with the RS-485 port on the PC or controller, you can cut the daisy chain cable into two: one half is used for connection with the RS-485 port on the PC or controller, the other half can be used for connection with termination resistor, which can be put at the end of the network.

- For MSSTB10-R drive, a network cable is included in the package. It is used for connection with the next drive in the RS-485 network. It can also be used for connection with PC for drive configuration.

TIP: When connecting the first drive in the RS-485 network with the RS-485 port on the PC or controller, you can cut the network cable into two: one half is used for connection with the RS-485 port on the PC or controller, the other half can be used for connection with termination resistor, which can be put at the end of the network.

- For more detailed information, please refer to the MSSTB drive's hardware manual.

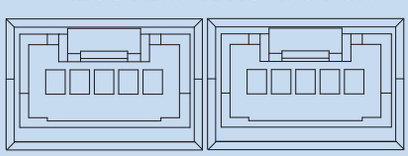
Step 1

a) Download and install the ***STB Configurator*** software

b) Launch the software by clicking Start / Programs / MOONS' / STB Configurator

c) Connect the drive to your PC using the appropriate communication cable

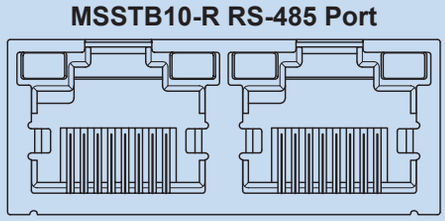
MSSTB05-R RS-485 Port



1 5 1 5

PIN	Signal	Wire Color
1	RX+	BLK
2	RX-	BRN
3	TX+	RED
4	TX-	ORN
5	GND	YEL

MSSTB10-R RS-485 Port



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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

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RS-485 four-wire connection:

Drive	Connection
RX+	Connect to host's TX+
RX-	Connect to host's TX-
TX+	Connect to host's RX+
TX-	Connect to host's RX-
GND	Connect to host's GND

RS-485 two-wire connection:

Drive	Connection
RX+	Connect to host's +
RX-	Connect to host's -
TX+	Connect to host's +
TX-	Connect to host's -
GND	Connect to host's GND

NOTE: The RS-485 port on the drive is isolated from internal circuitry of the drive. So the GND of each drive's RS-485 port must be connected together. The first drive's GND of the RS-485 port must be connected to the GND of RS-485 port on the host PC or controller.

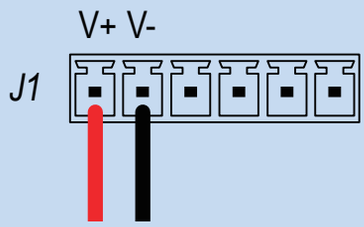
Step 2

a) Wire the drive to DC power source

(NOTE: DO NOT apply power until all connections to the drive have been made)

MSSTB05 accepts DC voltage range from 24 – 48VDC

MSSTB10 accepts DC voltage range from 24 – 70VDC

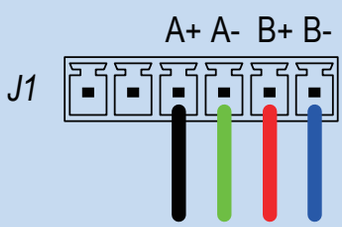


b) Ensure a proper earth ground connection by using the screw on the left side of the chassis.

Step 3

Warning - If you are using a non-MOONS' motor, DO NOT connect the motor until you have configured the drive for your motor. Refer to Step 6.

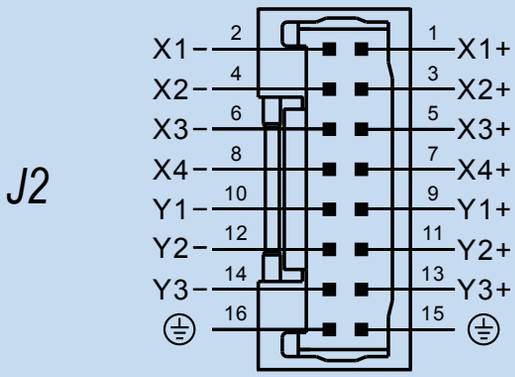
For MOONS' stepper motor, please connect black, green, red, blue wires to drive's A+, A-, B+ and B- correspondingly.



If using a non-MOONS' motor, please refer to your motor specs for wiring information.

Step 4

Connect the digital inputs & outputs (I/O)



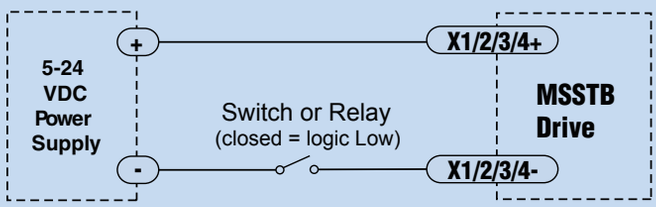
Four digital inputs:

X1, X2: optically isolated, differential, 5-24VDC, minimum pulse width 250ns, maximum pulse frequency 2MHz

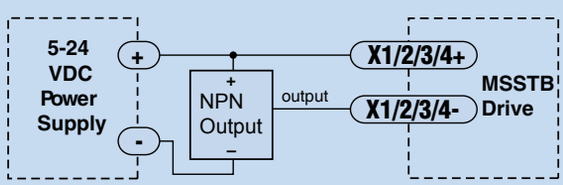
X3, X4: optically isolated, differential, 5-24VDC, minimum pulse width 50μs, maximum pulse frequency 10KHz

Three digital outputs:

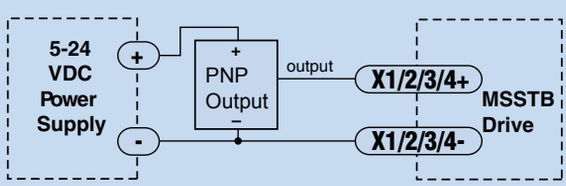
Y1, Y2, Y3: optically isolated, Darlington output, Sinking or Sourcing output, maximum 30V/100mA



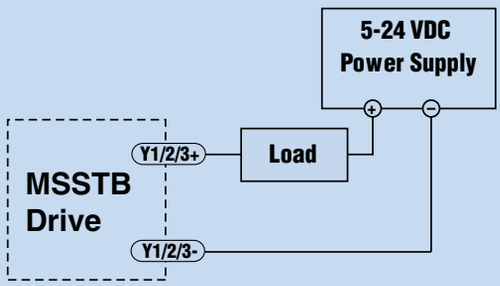
Connecting the inputs to a Switch or Relay



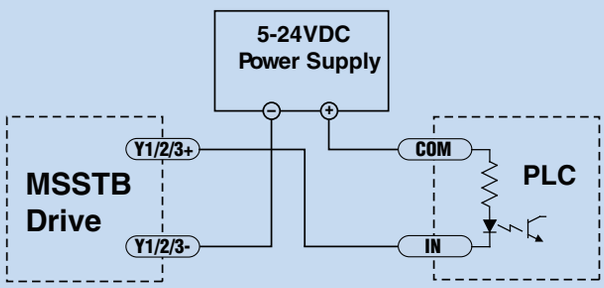
Connecting the inputs to a NPN type output



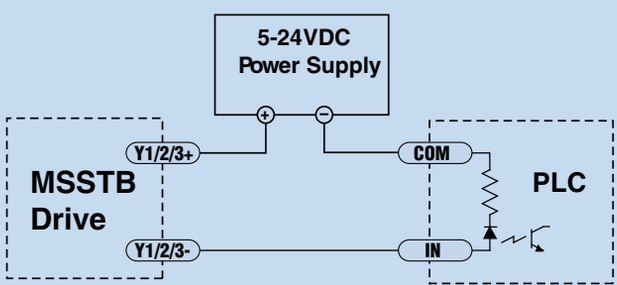
Connecting the inputs to a PNP type output



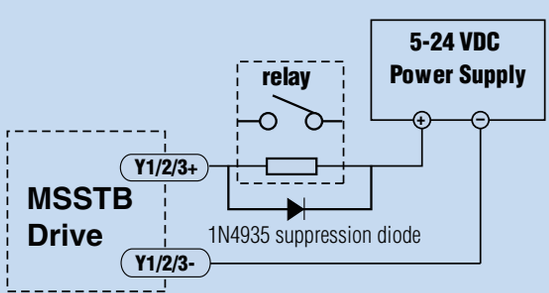
Connecting a sinking output



Connecting a sinking output with PLC's input



Connecting a sourcing output with PLC's input

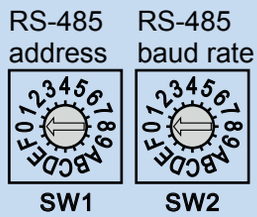


Driving a relay

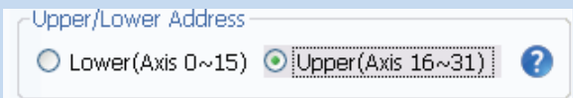
Step 5

a) Set drive's RS-485 address by rotary switch SW1

b) Set drive's RS-485 baud rate by rotary switch SW2



SW1 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 ***STB Configurator*** software.



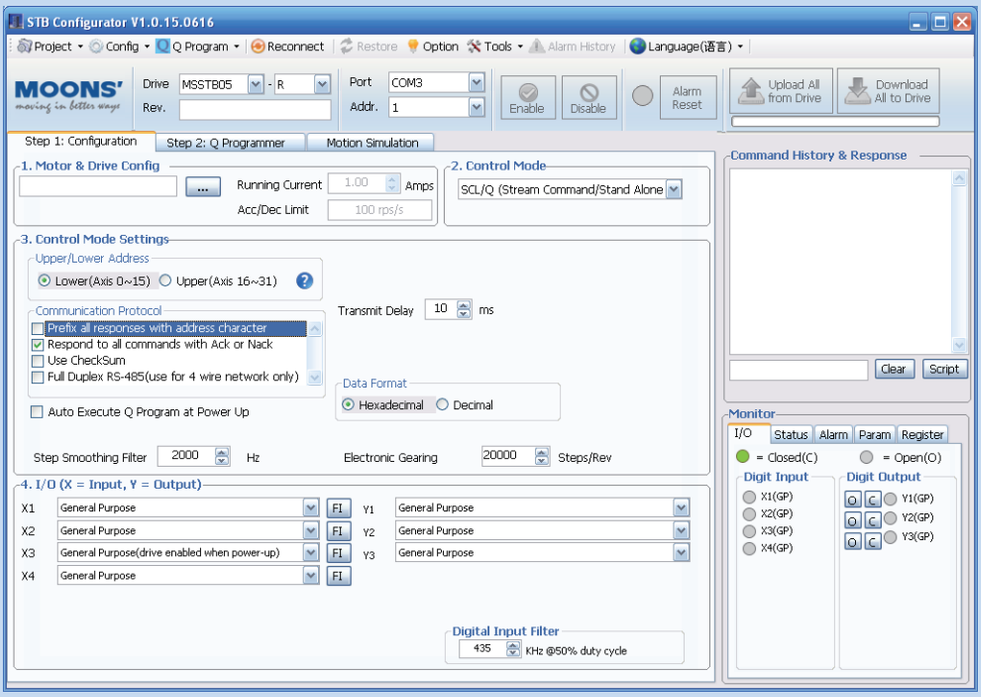
Upper/Lower addr	SW1 position	SCL addr	Upper/Lower addr	SW1 position	SCL addr
Lower(Axis 0~15)	0	0	Upper(Axis 16~31)	0	@
	1	1		1	!
	2	2		2	"
	3	3		3	#
	4	4		4	$
	5	5		5	%
	6	6		6	&
	7	7		7	'
	8	8		8	(
	9	9		9	)
	A	:		A	*
	B	;		B	+
	C	<		C	,
	D	=		D	-
	E	>		E	.
	F	?		F	/

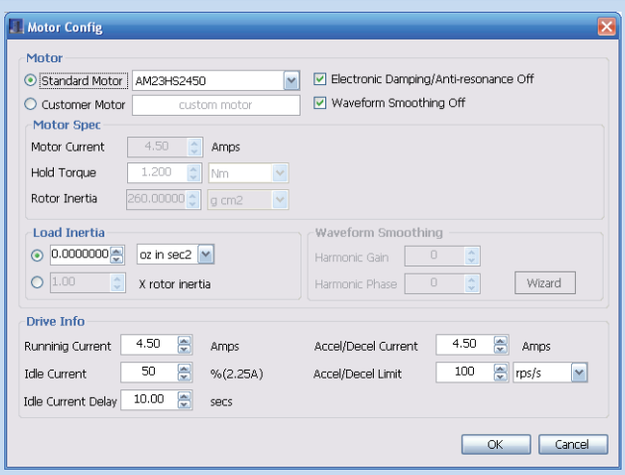
SW2 position	Baud Rate (bps)
0	9600
1	19200
2	38400
3	57600
4	115200
5-F	Reserved

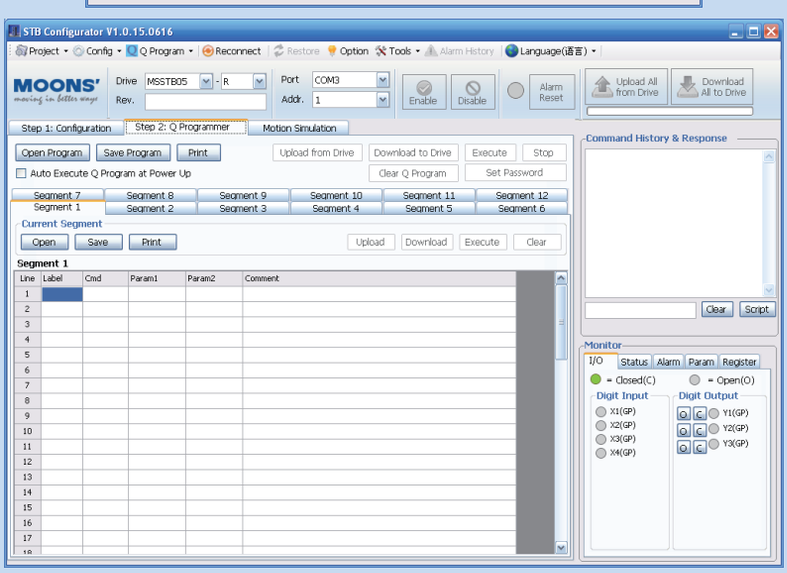
Step 6

a) Apply power to the drive

b) Use ***STB Configurator*** software to configure drive and motor parameters, set control mode and I/O function etc. This software can also be used to edit and download Q program to your drive. Motion simulation and status monitor are also included.







If you have any questions or comments, please call MOONS' Customer Support:
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