Lexium Motion Module

Developer's Kit LMM-KIT1

In the box

The Lexium Motion Module Developer's Kit contains everything necessary to begin developing LMM applications. Items included are

1 **Lexium Motion Module**

2 **1-axis Development Board**

3 **USB to Serial Converter**

4 **NEMA 17 (42mm) motor + encoder**

5 **24 VDC Power Supply**

QR-LMM1

Prerequisites

In addition to the included components, setup also requires a PC running Windows 7 or greater.

Starting up

1. Connect the components shown in Figure 1. The individual components come pre-wired for ease of setup. A getting started Tutorial on interfacing RS-422/485 communications is located at: http://j.mp/rs422-getting-started, or by scanning the QR code near the bottom of this page

2. Connect the enable input. The "Enable" input must be at a level in relation to the Input Reference that results in current flow. See Figure 2 for interface options.

   NOTE: The default, disconnected state of the enable input is "disabled." Motion will not occur if this input is left floating and an error 14 will assert.

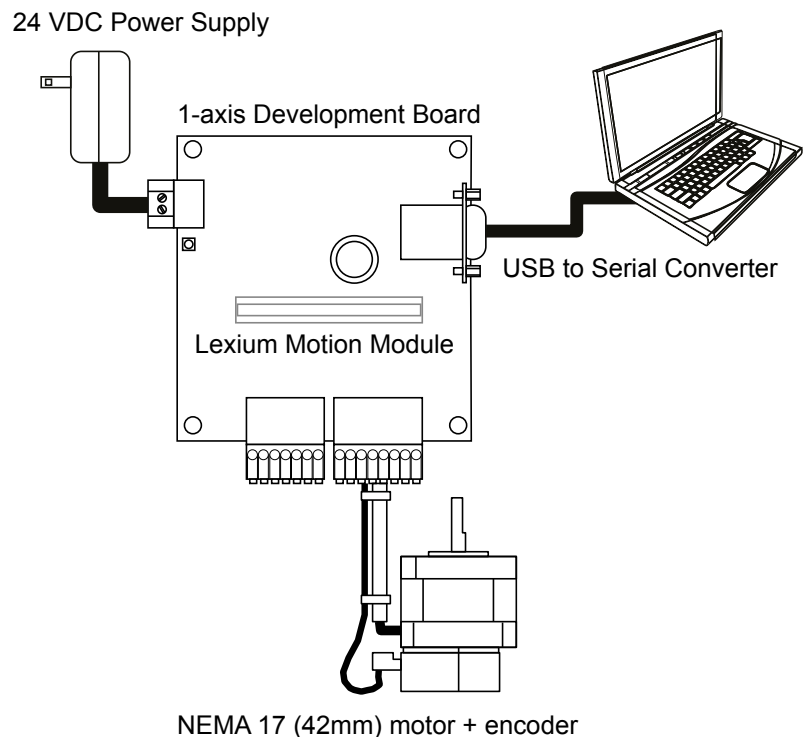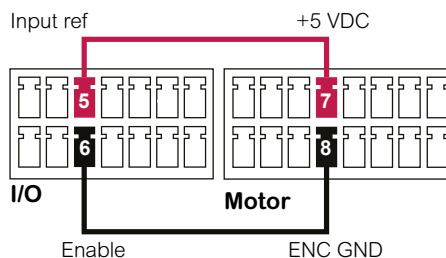3. Download and Install and open SEM Terminal. Located: http://j.mp/sem-terminal.

Resources

CONNECTING RS-422/485 Communications

http://j.mp/int-lmm1 Interface Board Schematic

24 VDC Power Supply

1-axis Development Board

USB to Serial Converter

Lexium Motion Module

NEMA 17 (42mm) motor + encoder

Figure 1: Connect LMM Developer's Kit components

Enable input
always enabled, sinking

Input ref   +5 VDC

I/O   Motor

Enable   ENC GND

Enable input
switched enable, sourcing

Input ref

+5 to +24V

I/O

Enable

Figure 2: Connect the enable input

Establish communications

1. Double click the COM port:BAUD rate (1:9600) field of the status bar (1). This will open the Terminal Preferences dialog.

2. Select the COM port (2) your communications adapter is installed on.

3. Verify that the Lexium MDrive default BAUD rate, 9600 kbps, is selected (3)

4. Click the button labeled "Set" (4). The dialog will close.

5. Double-click "Port Closed" (5) on the status bar, it should change to "Port Open" (6)

6. Key in the sequence, CTRL+C (7) or cycle power on the Lexium MDrive.

7. You should see the sign-on message "Copyright © 2010-2016 Schneider Electric Motion USA" (8) appear within the Terminal1 tab, along with the ">" prompt.
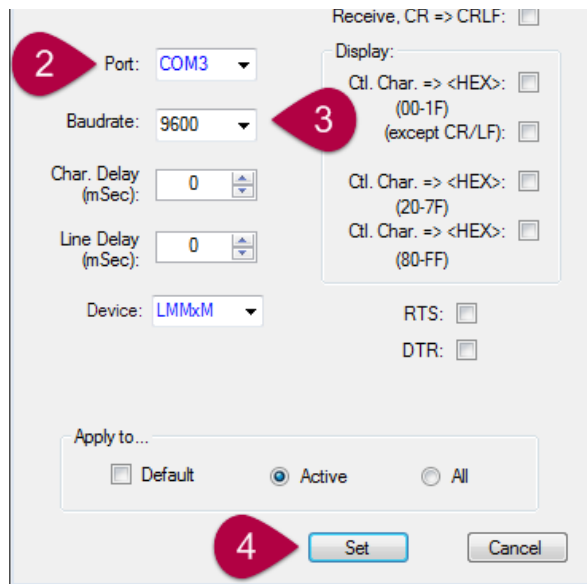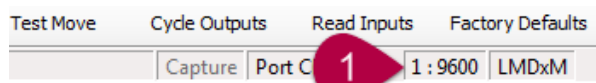
First Motion

Relative

In the terminal window, type in:
MR 51200<enter>
The motor will take 51200 microsteps, or 1 revolution in the clockwise direction when looking at the motor face.

Absolute

Type in:
MA 0<enter>
This will cause the motor to make an absolute position move to position 0, which should be 1 revolution counter clockwise from the current position.
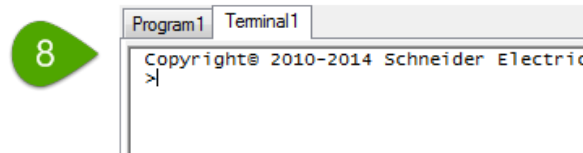
Slew @ velocity

Type in:
SL 51200<enter>
This will cause the motor to slew in a clockwise direction at 51200 microsteps/sec (1rev/sec)

SL 0 <Enter>

This will cause the motor to stop rotating

Congratulations! You have just completed your first moves with the Lexium Motion Module (LMM). For more information on the LMM and on the MCode programming language, see the web site at motion. schneider-electric.com

Intelligent motion systems

Schneider Electric

Schneider Electric Motion USA

370 North Main Street
Marlborough, CT 06447
Phone: (860) 295-6102
Fax: (860) 295-6107
www.motion.schneider-electric.com