

Quick Reference

**MicroLYNX-4/7**  
High performance microstepping system



**Notes and Warnings**

Installation, configuration and maintenance must be carried out by qualified technicians only. You must have detailed information to be able to carry out this work. This information can be found in the user manual.

- Unexpected dangers may be encountered when working with this product!
- Incorrect use may destroy this product and connected components!

The user manual are not included, but may be obtained from the Internet at: <http://www.imshome.com/downloads/manuals.html>.

**Required for Setup\***

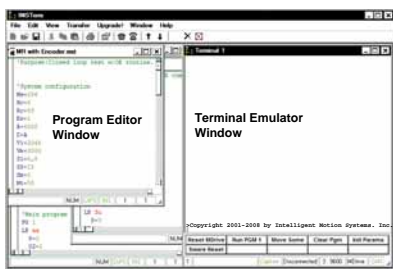
- PC running Microsoft® Windows XP Service Pack 2 or greater.
- IMS Terminal integrated program editor and terminal emulator (available online).
- +12 to +48 VDC, 2A (-4) or +24 to +75 VDC, 3.5A (-7) unregulated linear or switching power supply.
- RS-232 or RS-485 communications converter.
- Stepping motor appropriately sized for your MicroLYNX system.
- 22 AWG wire for logic and I/O, 18 AWG wire (-4) or 16 AWG wire (-7) for power supply. Shielded twisted pairs recommended.
- Basic hand tools: wire cutter/stripper, screw driver.

**Getting Started**

All documentation, software and resources are available online at: [http://www.imshome.com/products/mdrive\\_motor\\_driver.html](http://www.imshome.com/products/mdrive_motor_driver.html).

**Connecting Communications — RS-232 or RS-485**

1. Connect communications converter to MicroLYNX and PC (follow instructions supplied by manufacturer).
2. Install the communication converter drivers onto PC (supplied by manufacturer).
3. Install and open IMS Terminal.
4. From the "Edit" menu select "Preferences, click the "Comm Settings" tab.
5. Select the radio box labeled "uLynx", select the Comm port used by your communications device.
6. Apply power to MicroLYNX.
7. Within IMS Terminal, click into the Terminal Window (shown below).
8. Key in CTRL+C. The sign-on message: "Copyright 2001-2008 by Intelligent Motion Systems, Inc." should appear, verifying that communications is active.



**General Specifications**

Electrical Specifications		
Input Voltage (+V) Range*	MicroLYNX -4	+12 to +48 VDC
	<b>MicroLYNX-7</b>	<b>+24 to +75 VDC</b>
Max Power Supply Current	MicroLYNX -4	2.0 Amps
	<b>MicroLYNX-7</b>	<b>4.0 Amps</b>
Output Current (RMS)	MicroLYNX -4	3.0 Amps
	<b>MicroLYNX-7</b>	<b>5.0 Amps</b>
Output Current (Peak)	MicroLYNX -4	4.2 Amps
	<b>MicroLYNX-7</b>	<b>7.0 Amps</b>

\*Actual power supply current will depend on voltage and load.

Environmental Specifications	
Ambient Operating Temperature	0°C to +50°C
Storage Temperature	-20°C to +70°C
Humidity (non-condensing)	0 to 90%

I/O Specifications	
<b>General Purpose I/O - Number and Type*</b>	
I/O Points	6 I/O programmable as inputs or outputs (sinking or sourcing)
<b>General Purpose I/O - Electrical</b>	
Inputs	TTL up to +24 VDC
Outputs	Up to +24 VDC
Output Sink Current	350 mA
Pull-ups (individually switchable)	7.5 kΩ
Pull-up Voltage (internal)	+5 VDC
Pull-up Voltage (external)	+24 VDC
Protection (Sinking)	Over Temp, Short Circuit, Inductive Clamp
Isolated Ground	Common to all 6 I/O

\*I/O may be expanded through use of expansion modules available separately. Available modules: Isolated general purpose I/O, High speed differential I/O, Analog input and analog output.

Communications Specifications		
Protocol	COM Port 1	RS-232
	COM Port 2	RS-485
BAUD Rate		4.8 to 38.8 kbps
# of bits/character		8
Parity		None
Handshake		None
Error Checking		16 bit CRC (binary mode)
Modes		ASCII or binary
Isolated Ground		Common to COM 1 and COM 2

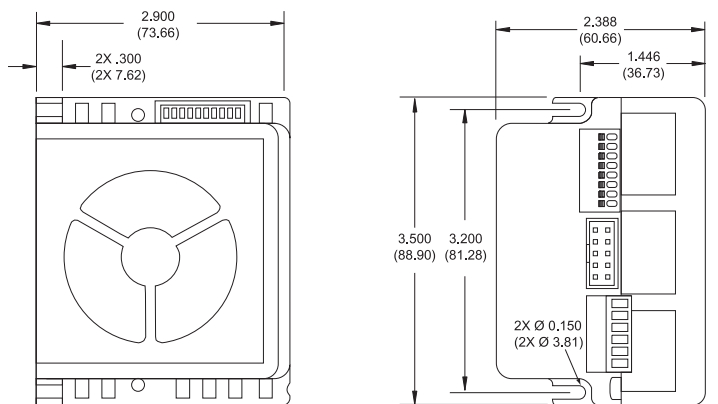
Motion Specifications	
<b>Microstep Resolution</b>	
Number of Resolutions	14

Available Microsteps Per Revolution						
400	800	1000	1600	2000	3200	5000
6400	10000	12800	25000	25600	50000	51200

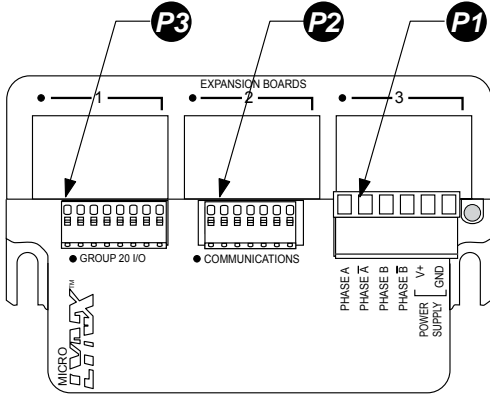
Software Specifications	
Program Storage Type/Size	Flash/8175 Bytes
User Program Labels and Variables	291
Party Mode Addresses	62

**Mechanical Specifications**

Dimensions in inches (mm)



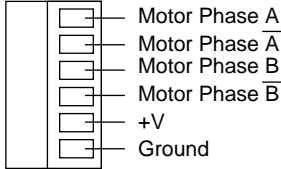
# MicroLYNX -4/7 Connectivity



Connector Style	Function
<b>P1</b> 6-pin terminal.....	DC power and motor
<b>P2</b> 7-pin terminal.....	Communications
<b>P2</b> 10-pin header.....	Communications
<b>P3</b> 8-pin terminal.....	I/O
<b>P3</b> 10-pin header.....	I/O

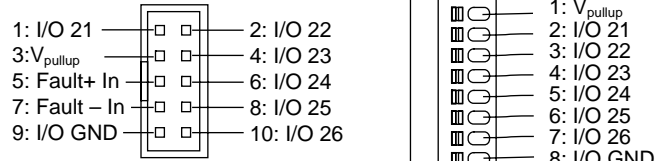
## **P1** Power and Motor

6-pin pluggable screw terminal



## **P3** I/O Points

10-pin header or 8-pin pluggable terminal

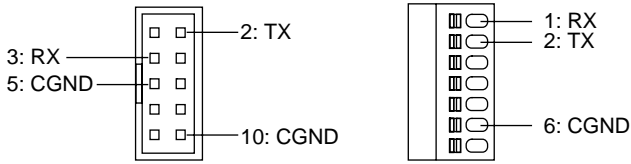


10-pin header

8-pin terminal

## **P2** RS-232 Communications

10-pin header or 7-pin pluggable terminal



10-pin header

7-pin terminal

The MicroLYNX communication interface is available with two connector options: a 7-pin pluggable terminal or 10-pin header. For interfacing to these connectors we recommend:

**7-pin terminal:**  
22 AWG shielded twisted pairs.

**10-pin header:**  
Ribbon cable: Digikey P/N MC10G-300-ND  
Connector shell: AMP P/N 3-1437026-4

The MicroLYNX I/O interface is available with two connector options: an 8-pin pluggable terminal or 10-pin header. For interfacing to these connectors we recommend:

**8-pin terminal**  
22 AWG shielded twisted pairs.

**10-pin header**  
Ribbon cable: Digikey P/N MC10G-300-ND  
Connector shell: AMP P/N 3-1437026-4

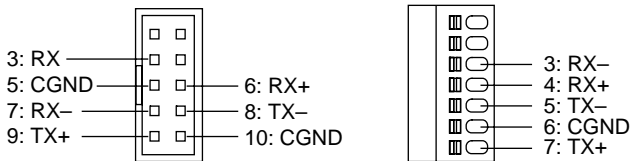
### I/O Switch Settings

The I/O internal 7.5 k pullup resistors may be switched in or out to set the I/O as sinking or sourcing.

The switch bank is located on the right side of the MicroLYNX with the front plate facing you.

## **P2** RS-485 Communications

10-pin header or 7-pin pluggable terminal



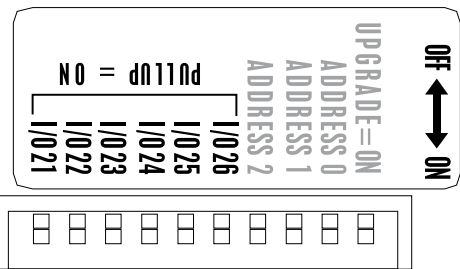
10-pin header

7-pin terminal

The MicroLYNX communication interface is available with two connector options: a 7-pin pluggable terminal or 10-pin header. For interfacing to these connectors we recommend:

**7-pin terminal**  
22 AWG shielded twisted pairs.

**10-pin header**  
Ribbon cable: Digikey P/N MC10G-300-ND  
Connector shell: AMP P/N 3-1437026-4



### Expansion Module Installation

Please see the expansion module quick reference or the MicroLYNX product manual for specifications and pin configuration.

Module	# allowed	Slots		
		1	2	3
Isolated I/O	3	Y	Y	Y
High speed differential I/O	2	N	Y	Y
12- channel I/O	1	Y	Y	N
Analog input/joystick	1	Y	Y	Y
Analog output	3	Y	Y	Y

