

Isolated Communications Module

The Isolated Communication Expansion Module adds either RS-232 or RS-485 to the CAN based MicroLynx motion control system. This second communication port is fully independent and optically isolated from I/O and input power ground.

This second port could be used to communicate to an operator interface or for system diagnostics while the system is in use.



Electrical Specifications

RS-232 Receiver

Input Voltage Range	±30 Volts
Input Threshold Low	0.4 Volts
Input Threshold High	2.4 Volts
Input Resistance	3 to 7 k Ω

RS-232 Transmitter

Output Voltage Swing	±5 Volts
Output Resistance	300 Ω
Output Short Circuit Duration	Continuous

RS-485 Receiver

Input Voltage Range	-8 to +12.5 Volts
Input Differential Threshold	±200 Millivolts
Input Resistance	96 k Ω

Driver

Differential Output (R=50 W)	2 Volts
Output Voltage Range	-8 to +12.5 Volts

RS-232 Expansion Module		
Pin #	Connector Option	
	8 Position Phoenix	10 Pin Header
1	CGND	N.C.
2	RS-232 RX	RS-232 TX
3	RS-232 TX	RS-232 RX
4	N.C.	N.C.
5	N.C.	CGND
6	N.C.	N.C.
7	N.C.	N.C.
8	N.C.	N.C.
9		N.C.
10		N.C.

Table 11.9: RS-232 Pinout

RS-485 Expansion Module		
Pin #	Connector Option	
	8 Position Phoenix	10 Pin Header
1	N.C.	N.C.
2	N.C.	N.C.
3	N.C.	N.C.
4	RS-485 RX-	N.C.
5	RS-485 RX+	CGND
6	RS-485 TX-	RS-485 RX+
7	CGND	RS-485 RX-
8	RS-485 TX+	RS-485 TX-
9		RS-485 TX+
10		CGND

Table 11.10: RS-485 Pinout

The RS-232 Communications Module

The RS-232 Communications Expansion Module, which allows for use of the RS-232 interface, can only be used with the CAN bus version of the MicroLYNX. This expansion board may only be used in slot 1 of the MicroLYNX and is automatically recognized; no configuration is needed.

This expansion board uses MicroLYNX COMM 2 and can be used to simultaneously communicate with the MicroLYNX via RS-232, while communicating via the CAN bus. This is useful in requesting and displaying system status information from and to a PC or terminal.



NOTE! Since the RS-232 Expansion Module uses MicroLYNX COMM 2, it cannot be used in conjunction with the RS-485 Expansion Module. Only one of the two interfaces can be used with the CAN bus version of the MicroLYNX.

Table 11.9 and Figure 11.14 illustrate the pin configuration and connection of the RS-232 Expansion Module.

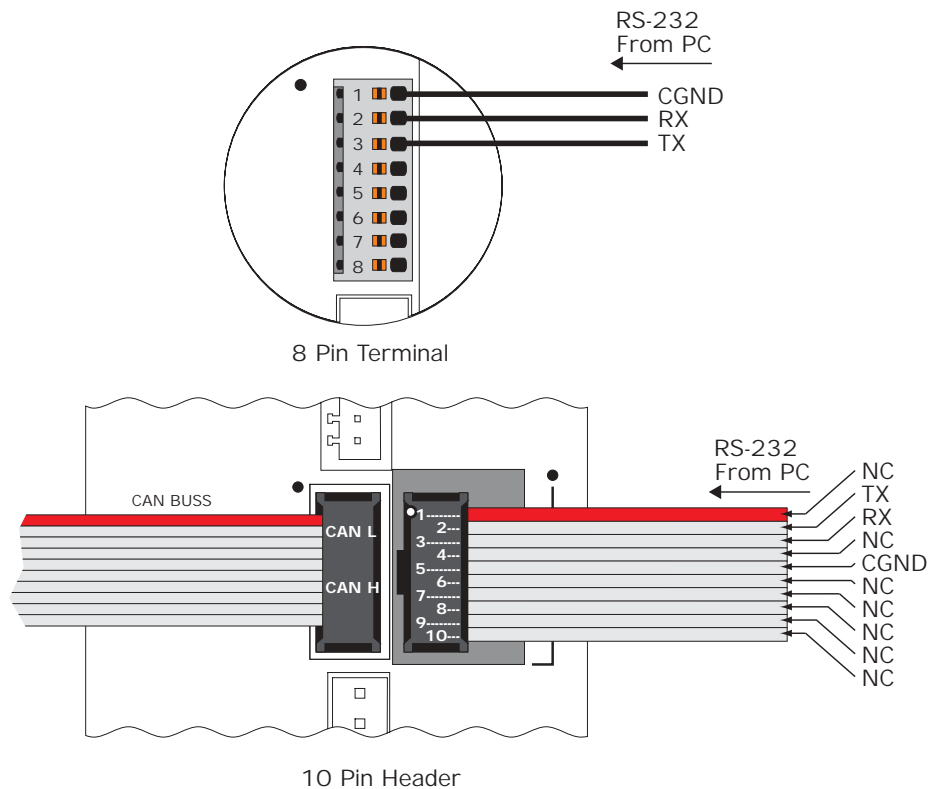


Figure 11.14: Connecting the RS-232 Expansion Module

The RS-485 Communications Module

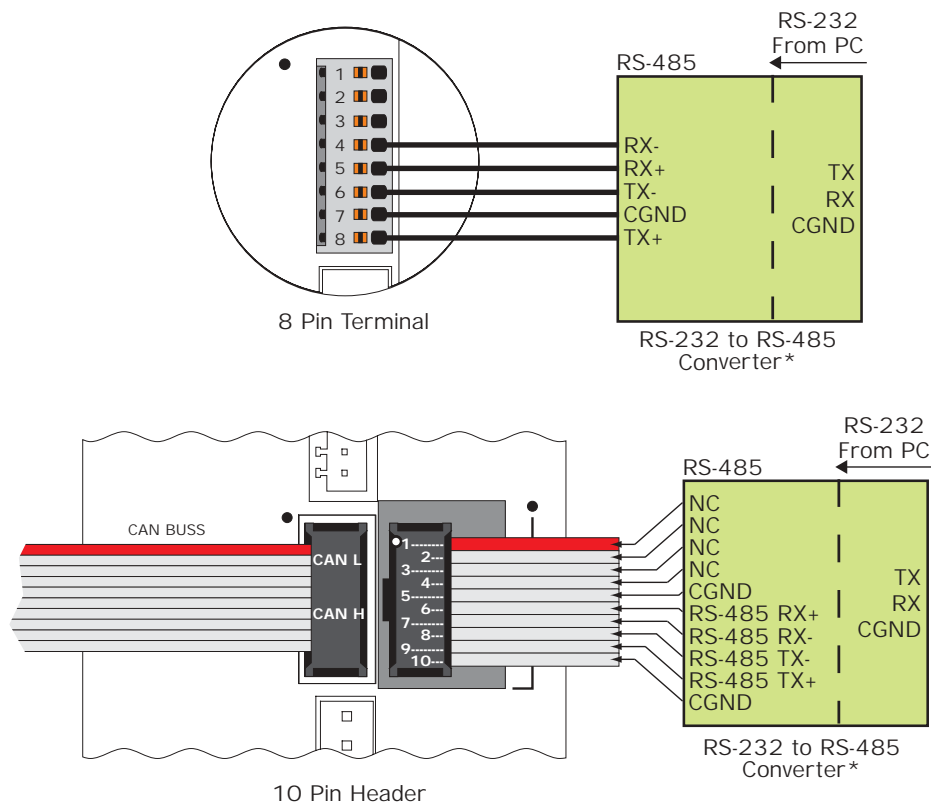
The RS-485 Communications Expansion Module allows for use of the RS-485 interface on the CAN bus version of the MicroLYNX only. This expansion module may only be used in slot 1 of the MicroLYNX and is automatically recognized; no configuration is needed.

This expansion board uses MicroLYNX COMM 2 and can be used to simultaneously communicate with the MicroLYNX via RS-485, while communicating via the CAN bus. This is useful in requesting and displaying system status information from and to a PC, terminal or machine interface such as the IMS HMI. It also allows for the use of multiple MicroLYNX Systems in a PARTY configuration without using additional CAN bus node positions, if the CAN interface is not required in all the MicroLYNX nodes.



NOTE! Since the RS-485 Expansion Module uses MicroLYNX COMM 2, it cannot be used in conjunction with the RS-232 Expansion Module. Only one of the two interfaces can be used with the CAN bus version of the MicroLYNX.

Table 11.10 and Figure 11.15 illustrate the pin configuration and connection of the RS-485 Expansion Module. For multi-drop connection information see *Section 7: The Communications Interface*.



* The recommended RS-232 to RS-485 Converter is IMS Part Number CV-3222. If your PC is equipped with an RS-485 board, no converter is necessary. Connect the RS-485 lines from the host PC directly to the MicroLYNX.

Figure 11.15: Connecting the RS-485 Expansion Module

Installing the Isolated Communications Module

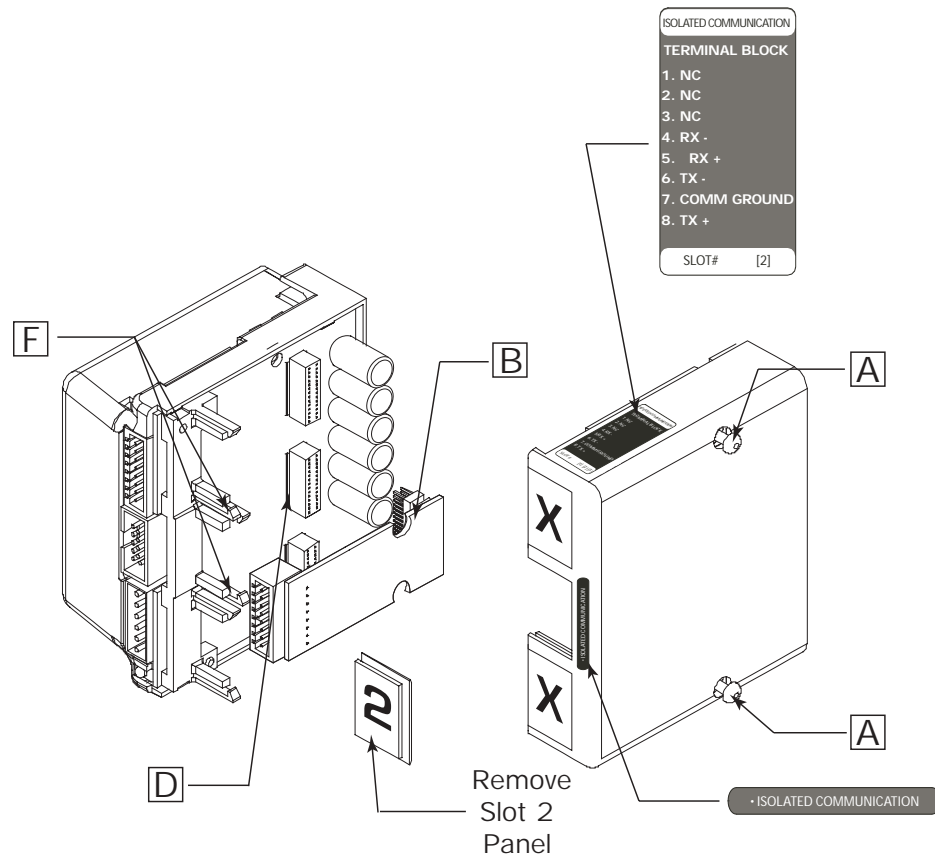


Figure 11.16: Installing the Isolated Communications Module

To Install the Module:

- 1) Remove the two retaining screws (A) from the cover.
- 2) Remove the blank panel from the #2 slot
- 3) Carefully press the Expansion Module (B) into place by plugging the 28 pin connector into the #2 receptacle and snapping it into place under the retaining clips (F).
- 4) Reinstall the MicroLYNX cover.
- 5) Affix the labels supplied with the Module as shown.