



## **PLC-5 802.4 MAP/OSI Carrierband Modem**

Cat. No. 1785-O5CB/A

### Installation Data

#### **To The Installer**

This installation data explains how to install the PLC-5 802.4 MAP/OSI Carrierband Modem (cat. no. 1785-O5CB/A).

This publication contains the following sections:

- What This Package Contains
- Important User Information
- Overview of the PLC-5 802.4 MAP/OSI Carrierband Modem
- Preventing Electrostatic Discharge (ESD)
- Installing the Modem
- Specifications

#### **What This Package Contains**

When you receive your modem, check to be sure your package contains the following:

- one 1785-O5CB/A carrierband modem
- one 90-degree male/female “F” connector (use is optional)
- one ESD grounding wrist strap

## Important User Information

Because of the variety of uses for the products described in this publication, those responsible for the application and use of this control equipment must satisfy themselves that all necessary steps have been taken to assure that each application and use meets all performance and safety requirements, including any applicable laws, regulations, codes and standards.

The illustrations, charts, sample programs and layout examples shown in this guide are intended solely for purposes of example. Since there are many variables and requirements associated with any particular installation, Allen-Bradley does not assume responsibility or liability (to include intellectual property liability) for actual use based upon the examples shown in this publication.

Allen-Bradley Publication SGI-1.1, "Safety Guidelines for the Application, Installation and Maintenance of Solid State Control" (available from your local Allen-Bradley office) describes some important differences between solid-state equipment and electromechanical devices which should be taken into consideration when applying products such as those described in this publication.

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**WARNING:** With any complex communication system, you need to identify potential application-related communication problems so that if a problem occurs, the results will be predictable. These problems include the possibility of:

- Unexpected loss of communication
- Erroneous or incomplete data being supplied to the network and passed on to your application

There may be other potential problems associated with your particular application.

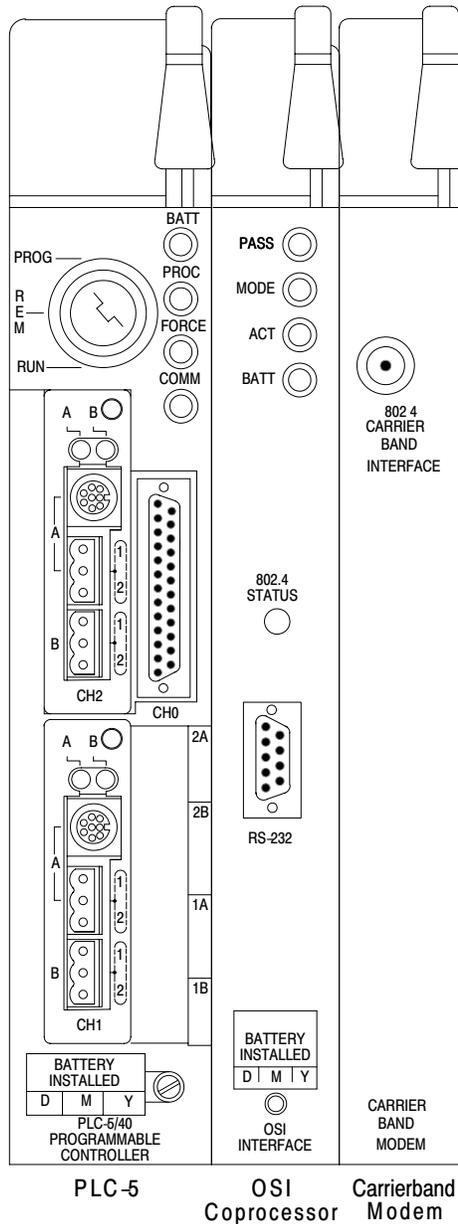
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## Overview of the PLC-5 802.4 MAP/OSI Carrierband Modem

The PLC-5 802.4 MAP/OSI Carrierband Modem provides the interface between your carrierband cable system, and your PLC-5 and OSI

coprocessor. The modem provides the physical layer interface without interfering with other backplane communication.

Your modem is designed to plug into the 1771-I/O rack. It is installed in the slot to the immediate right of the coprocessor.



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When the OSI coprocessor is attached to the PLC-5, only PLC-5 modems may be installed into this slot. If another module is installed into this slot, damage to the PLC-5 could result. To make sure only PLC-5 modems can be inserted into this slot, you must install keying bands into the 1771-I/O

chassis before installing the modem. Refer to the installation procedure for instructions on how to install these keying bands.

## Preventing Electrostatic Discharge (ESD)

**Important:** Read this section before you handle the modem, the OSI coprocessor, or the 1771-I/O chassis.

Electrostatic Discharge (ESD) may occur whenever you handle the modem, the coprocessor, or the 1771-I/O chassis. ESD can degrade the performance of or cause permanent damage to the coprocessor and modem. To help prevent ESD, handle all modules at a static-safe workstation. If a static-safe workstation is not available, follow these guidelines:

- Touch a grounded object before handling any module. Remain in contact with this grounded object while handling the modules.
- Place the modules in a static-safe bag when they are not installed in the 1771-I/O chassis.
- Wear the grounding wrist strap. Follow the instructions provided with the wrist strap.

## Installing the Modem

To install the modem into the 1771-I/O chassis, follow these steps:



**CAUTION:** Electrostatic discharge (ESD) can degrade the performance of and cause permanent damage to the OSI interface and modem. Before installing the modem, be sure to read “Preventing Electrostatic Discharge (ESD)” (above) for guidelines to help prevent damage caused by ESD.

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**CAUTION:** To guard against damage to the coprocessor or modem, always turn off the power to the 1771-I/O chassis before removing or inserting a module.

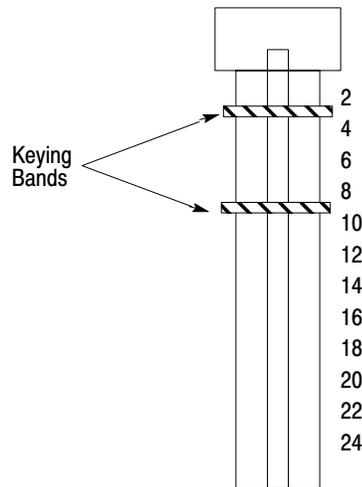
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1. Turn off power to the 1771-I/O chassis.

You need to insert keying bands into the I/O slot designated for the modem so that only the modem fits in this slot. The slot designated for the modem is the one to the immediate right of the OSI coprocessor.

**Important:** You received a key kit that contains the keying bands when you received your 1771-I/O chassis. If you do not have the keys, contact your local Allen-Bradley distributor or sales representative.

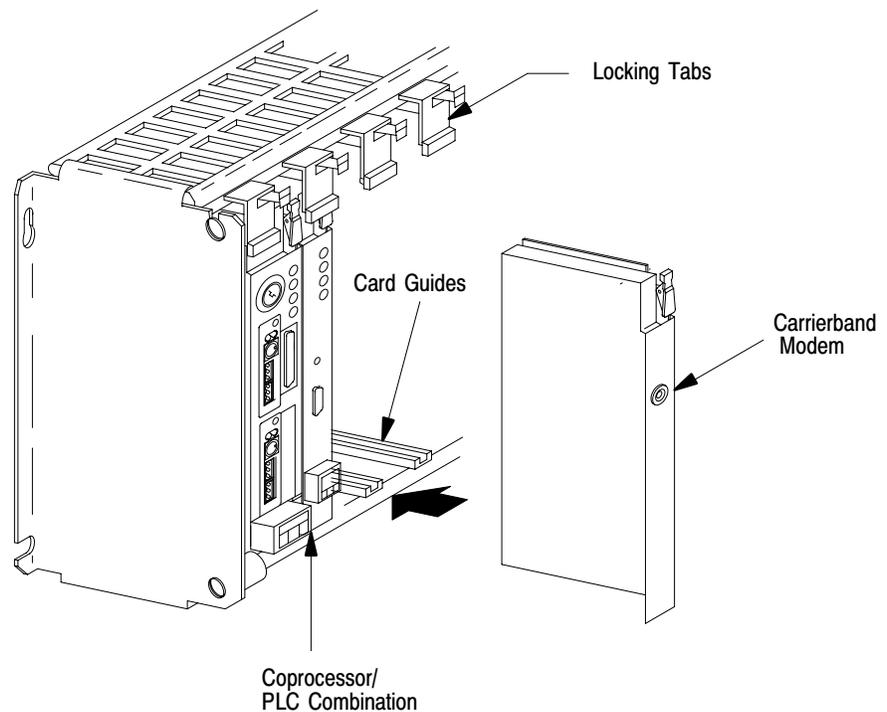
2. Insert the plastic keying bands into the appropriate slot in the chassis between positions 2 and 4, and positions 8 and 10.



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3. Insert the modem into its designated slot. Use the card guides on the top and bottom of the slot to guide the modem into position.

**Important:** The slot to the immediate right of the OSI coprocessor is reserved for the modem. When the OSI coprocessor is installed, only a PLC-5 modem may be installed into this slot.



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4. Snap the locking tab into place.
5. Plug the 802.4 carrierband cable into the modem and tighten the nut to 20 in-lbs. (Using the 90-degree connector you received in this package is optional.)
6. Turn on the power to the modem.

## Specifications

This section lists the operating specifications for the PLC-5 802.4 MAP/OSI Carrierband Modem.

<b>Power:</b>	
Power Requirements	+5V ± 5% @ ≤1.0 A
Total Power Dissipation	<6.0 W
<b>Operating Characteristics:</b>	
Power Output	+63 to +66 dBmV
Data Rate	5 Mbps
Output Transmitter Frequency Accuracy	±100 ppm (parts per million)
Receiver Sensitivity	+66 dBmV to +10 dBmV
Bit Error Rate	1 x 10 <sup>-9</sup> undetected bit error rate
	1 x 10 <sup>-8</sup> detected bit error rate
Maximum Noise Floor	-10 dBmV (2 to 15 MHz)
<b>Environmental:</b>	
Operating Temperature	32° to 140° F (0° to 60° C)
Storage Temperature	5° to 212° F (-15° to 100° C)
Humidity	5 to 90% (non-condensing)



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