

LDC Optical Coupler Modules

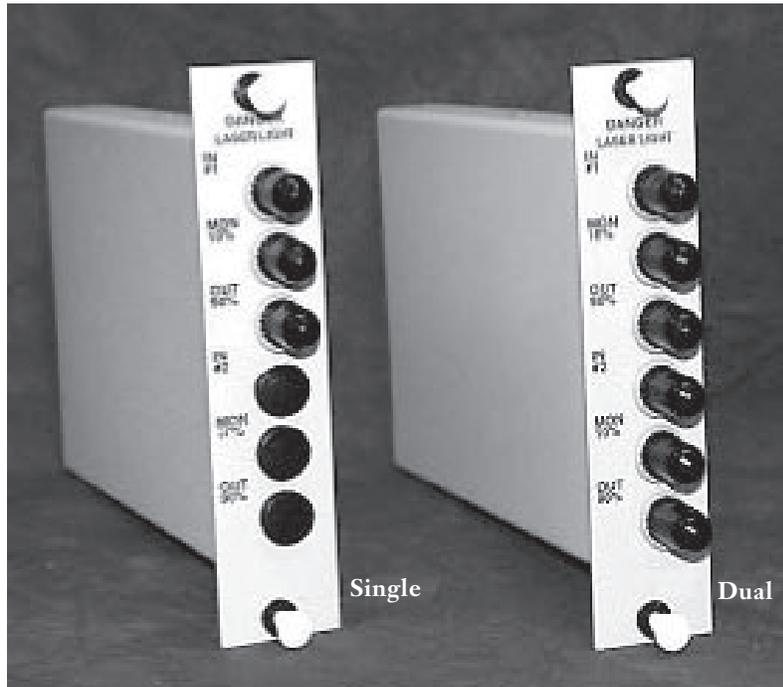


Figure 1

1. General

1.1 This instruction describes the installation of Optical Coupler Modules manufactured by Corning Cable Systems into an LDC-CMH-072 (LDC Connector Module Housing).

1.2 This document is being reissued to include updated corporate information.

2. Description

2.1 Module Identification: The Optical Coupler Module may be a 50/50 splitter module or a 90/10 monitor module with one or two optical circuits (Figure 1). A single-path module will have one **input** port and two **output** ports; a dual module will have two **inputs** and four **outputs**.

2.2 Light Paths: In each type of module, the optical signal goes into an **INPUT** port, and the power is divided between two **OUTPUT** ports. For a dual module, such as the 90/10 monitor

module, there are light paths for both *send* and *receive* circuits (Figure 2). There are two **outputs** for each of the two **inputs**. Each are on separate circuits, for a total of six connector ports.

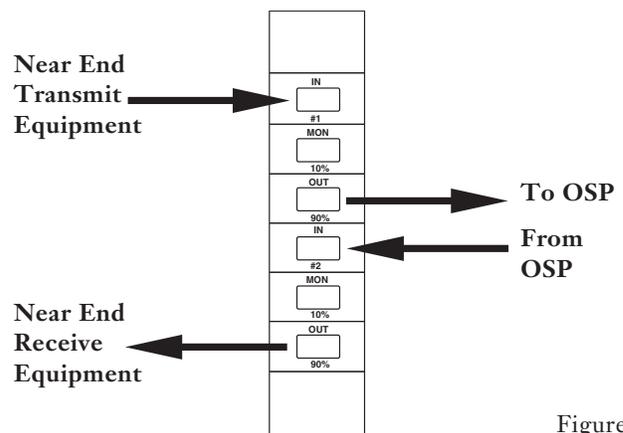


Figure 2

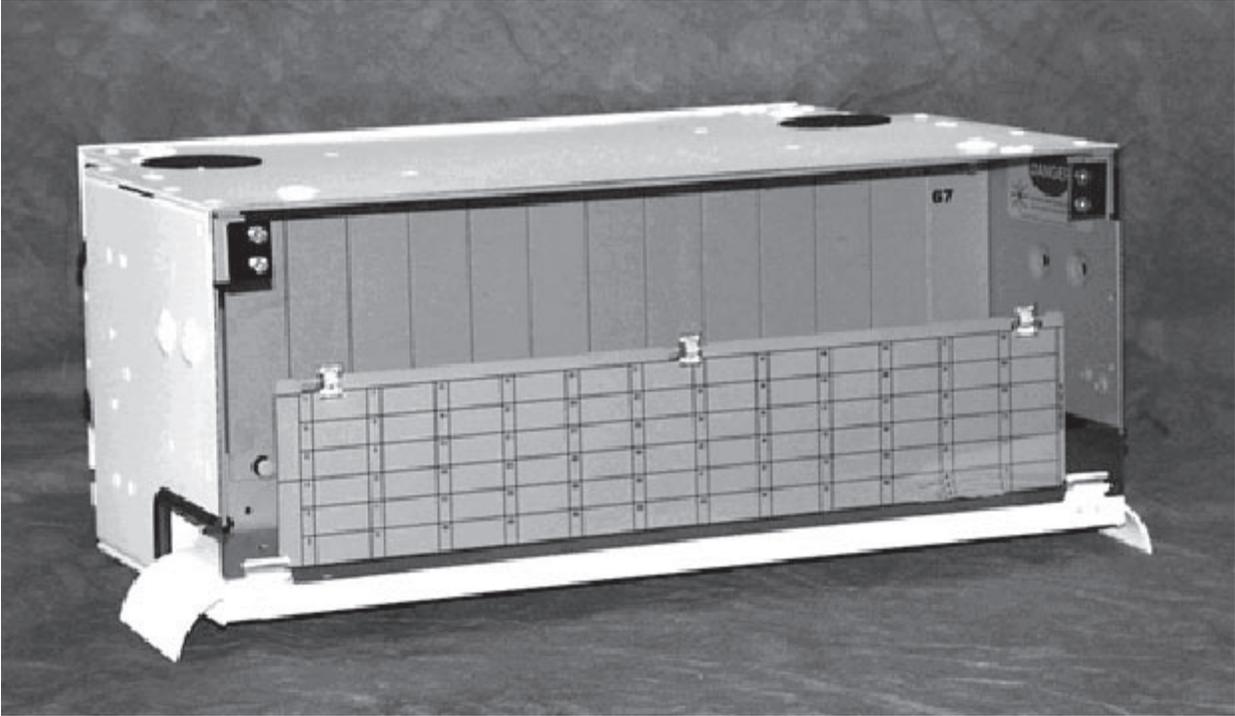


Figure 3

3. Planning Installation of Modules

3.1 Coupler modules will be used in two basic configurations. Configuration #1 is a **protected** interface with **primary** and **protect** optical interface circuits. Configuration #2 is a **non-protected** installation, where monitor modules do not have a corresponding **protect** Module.

3.2 Configuration #1 (Protected): In installations with six or fewer primary circuits, all of the coupler modules may be installed in one LDC-CMH-072 housing, or other LGX® Frame-compatible connector module housing (Figure 3). For a protected installation, install the first (*primary*) coupler module in slot #1 of the housing (Figure 4). The corresponding *protect* module would be installed in slot #7 (Figure 5). The next primary module would be installed in slot #2, and its complement in slot #8, and so forth.

3.3 Configuration #2 (Non-Protected): In this scenario, the modules for each separate optical circuit are installed side by side in the housing.



Figure 4



Figure 5

4. Module Installation

Remove the module from its packaging and locate the slot in the housing where it is to be installed. Insert the module into the housing, locating the attachment plungers with the mounting holes on the bulkhead panel. Secure by snapping the plungers in. Input and output jumpers can now be installed.

5. Jumper Connections

5.1 Configuration #1 (protected): Referring to Figure 2, connect the **transmit** jumper from the local transmission equipment to the top port on the coupler module, marked “IN #1” (Figure 6). Connect the next jumper to the third port from the top, marked “OUT 90%”. Connect this jumper to the Outside Plant (OSP) patch panel. This is the output fiber to the distant fiber optic terminal. Connect the third jumper to the port marked “IN #2”. This jumper connects to the “receive” path from the distant fiber optic terminal. Connect the fourth jumper to the bottom port, labeled “OUT 90%”. Route this jumper to the **receive** side of the local transmission equipment.

5.2 Configuration #2 (Non-Protected): Referring to Figure 2, connect the **transmit** jumper from the local transmission equipment to the top port on the local coupler module, marked “IN #1”. Connect the next jumper to

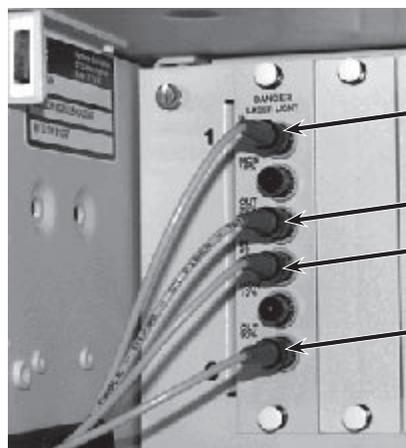


Figure 6

the third port from the top, marked “OUT 90%”. This jumper is routed to the remote module, and is connected to the “IN #1” port on that module. The receive fiber from the remote module is connected to the “IN #2” port on the local module. The bottom “OUT 90%” port on the local module is connected to the local transmission equipment. As stated before, the output fiber from the local module is connected to the “IN #1” port of the remote module. The third port from the top, labeled “OUT 90%”, is connected to the transmission equipment at the remote site. The fiber from the remote transmission equipment is connected to the “IN #2” port on the remote module. The bottom “OUT 90%” port is then connected to the fiber running to the local module. (That fiber is connected to the “IN #2” port on the local module).

6. Monitor Connections

Monitor ports (MON 10%) are connected to monitoring equipment as is required. If not in use, the dust caps should remain on the connectors. **For transmission rates of OC-48 or higher, optical terminator plugs must be installed on the monitor ports when not in use.**

Special Note:
Fiber Optic
Training
Program



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