2.6.3 Interconnect I/O Cable Installation

An Interconnect I/O Cable (Figure 2-6) is used to connect each VIM to a VIM Marshalled Termination Assembly when remote I/O termination is employed. The cable-to-module connector (J1) is installed at the rack slot location of a VIM. It is assumed that as part of the site preparation procedure all tagged Interconnect I/O Cables have been routed and pulled into their respective cabinets and are ready for connection. An Unterminated I/O Cable is installed similarly at the rack, however, terminations in the marshalling cabinet are user-supplied .

VIM Marshalled Termination Assemblies should already be installed in the marshalling cabinet (see section 2.6.1) and be ready for cable connection. Refer to Figures 2-1 and 2-6 and the following procedure:

1. Note the following on the cable's molded J1 connector.

    - The lower face area of J1 has a "pin mounting hole" located above a captive mounting screw. This hole engages one of the rack panel's alignment pins.
    - The top edge of J1 will rest in the groove of the backplane's extruded spacer as illustrated by a detail in Figure 2-1.

2. Consult user's or system integrator's documentation and note the MODULNET node address (if applicable), rack address number (1-16), and slot number assigned to the VIM. J1 will be installed at this location.

3. Install J1 at its assigned location as follows:

    1) Angle the top edge of the molded connector toward the backplane's extruded spacer and insert its tip in the spacer's groove.

    2) Slide the connector in the groove until it is vertically and horizontally aligned with the appropriate pin (slot #).

    3) Carefully lower the molded connector and engage the alignment pin with the connector's pin mounting hole. Firmly push down to seat the connector on the pin. When the connector is properly seated, the pin will be flush with or project slightly above the face of the connector.

    4) Secure the connector to the rack panel with its captive mounting screw which is automatically aligned with its panel mounting hole.

    5) Get two labels from the bag of VIM labels. Record on each label the appropriate numbers noted in the above step 2 (Figure 1-1). Attach one label each to the molded J1 and the P2 connectors.

4. Key cable connector P2.

    Get the P/N 16056-435 Cable Keying Kit set aside in step 2 of section 2.6.1. The kit contains keying pins and an instruction. Refer to Figure 2-6 for the assigned keying pattern and install the pins as described in the supplied instruction.

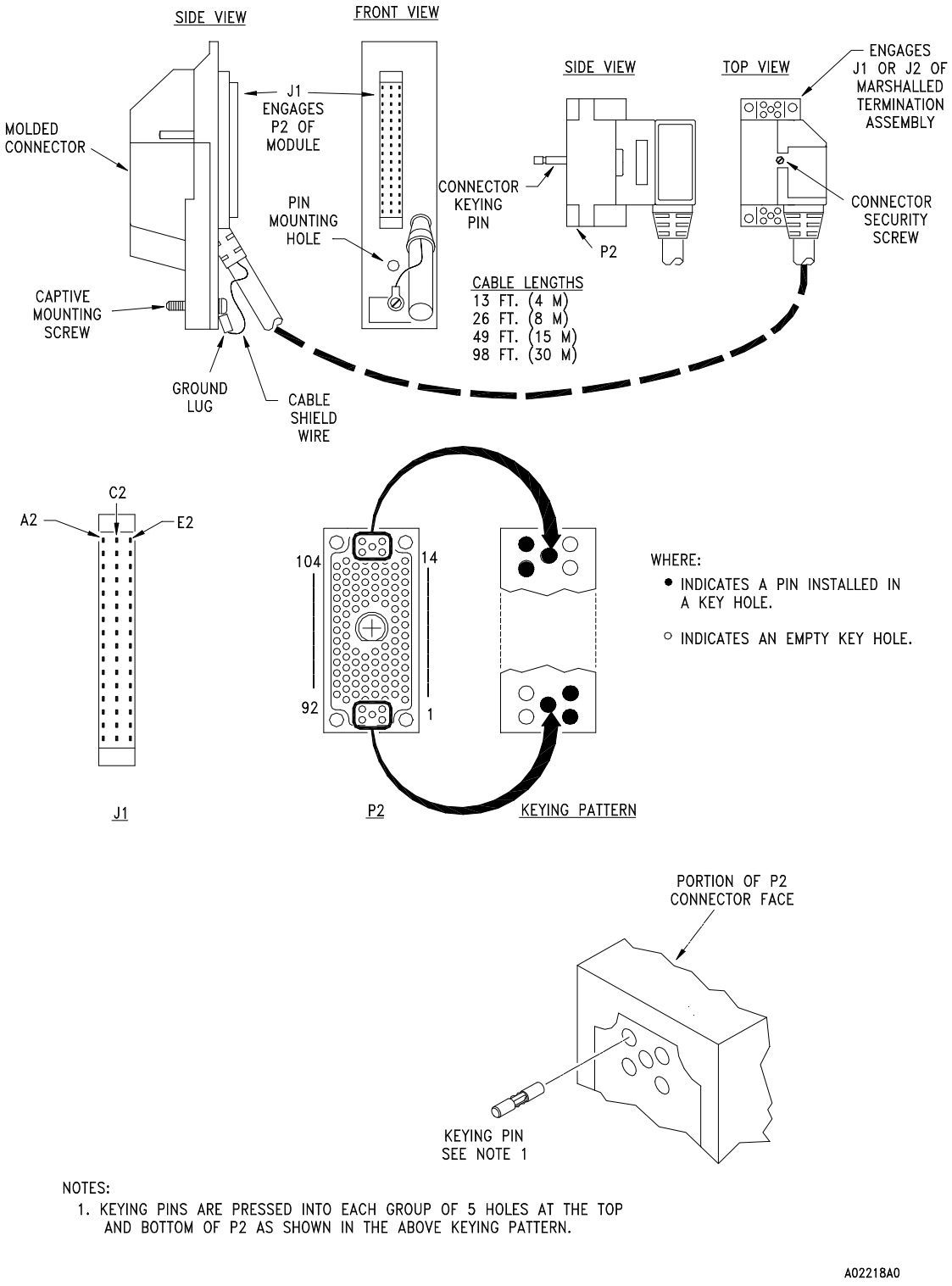


FIGURE 2-6 Interconnect I/O Cable Keying

5. Connect the free end of the I/O Cable Assembly to its respective I/O termination assembly. Perform either of the following, depending upon cable type:

    1) Interconnect I/O Cable Assembly (P2 installed)

        a) Connect cable connector P2 (Figure 2-6) to the "A" (J1) connector on the Marshalled Termination Assembly (Figure 1-1). A keying pin projecting from the face of P2 ensures correct mating.

        b) Press P2 firmly onto J1. Torque the securing screw on the top of P2's connector shell to 50 inch-pounds maximum.

    OR

    2) Unterminated I/O Cable Assembly (P2 not installed)

        Refer to Table 2-4 for color code and function of each unterminated wire. Refer to user wiring diagrams to make the proper cable connections to the termination assembly.

6. On redundant VIMs only, connect the redundant I/O Cable as described in step 5 above.

2.7 VIM INSTALLATION

Modules are shipped individually packaged in protective, sealed, static shielding bags. Refer to section 2.4.4 for module handling considerations. Section 2.7.1 describes keying a rack slot. Section 2.7.2 describes installing the module in the rack.

Each rack slot and each module must be keyed to prevent accidental installation of a module into an incompatible slot which may impair system performance. *Keying is highly recommended;* see Figure 2-7.

- Modules are keyed at the factory. The keying pattern is unique to each module type (e.g. ACM, CCM, CDM). See Figure 2-7 for the VIM keying pattern.

- A factory assembled rack is keyed at the factory. A user-assembled rack is keyed by the user according to the module type assigned to each slot. This keying pattern complements the module's keying pattern. Stop plugs are supplied with the rack.

- When adding a module to a rack, be sure to key the rack slot.

IMPORTANT

All signal and power cables should be labeled for correct reconnection.

4. Refer to Figure 2-5. Press down on the Marshalled Termination Assembly and carefully pull it away from the DIN rail.

3.7.2 Replacement

Refer to the following procedure:

1. Refer to section 2.6 and install the replacement Marshalled Termination Assembly.

2. Reconnect the signal cables.

3. Install the VIM. See section 3.5.

3.8 INTERCONNECT I/O CABLE ASSEMBLY REMOVAL/REPLACEMENT

3.8.1 Removal

Refer to Figure 2-2 and the following procedure:

1. As necessary, take appropriate steps to shutdown the processes monitored or controlled by the field devices connected to the VIM Marshalled Termination Assembly.

2. Remove the associated VIM from its slot in the MODULRAC, SIXRAC, or UNIRAC. Place the VIM in a static shielded bag for protection.

3. Disconnect Interconnect I/O Cable Assembly connector P2 or individual connections from the termination assembly. All individual connections should be labeled for correct reconnection.

4. Loosen the captive mounting screws on the cable connector. Gently lift the bottom of the connector in an arc until the connector is free of its alignment pin. Pull the top of the cable connector from the grooved backplane spacer and lift it from the rack.

5. Remove the Interconnect I/O Cable Assembly from the cable tray or other cable routing equipment.

3.8.2 Replacement

Refer to Figure 2-2 and the following procedure:

1. Route the Interconnect I/O Cable Assembly between the MODULRAC, SIXRAC, or UNIRAC and the marshalling cabinet.

2. Label and key the replacement cable as described in section 2.6.3.

3. Reconnect replacement cable as described in section 2.8.2.

4. Install the VIM. See section 3.5.

3.9 RETURN OF EQUIPMENT WITHIN NORTH AMERICA

If an VIM needs to be returned for any reason, perform the following:

To Return Equipment

- Call the Repair Order Group at (215) 646-7400, ext 4RMA (4762) weekdays between 8:00 a.m. and 4:45 p.m. eastern time to obtain an RMA number. Mark the RMA number prominently on the outside of the shipment.

- When calling for an RMA number, provide the reason for the return. If returning equipment for repair, failure information (e.g. error code, failure symptom, installation environment) will be requested. Supply a purchase order number for repairs.

Material Safety Data Sheet

A Material Safety Data Sheet (MSDS) must be included with each item being returned that was stored or used anywhere hazardous materials were present.

Packaging

Package assembly in original shipping materials. Otherwise, package it for safe shipment or contact the factory for shipping recommendations. A module must be placed inside a static shielding bag to protect it from electrostatic discharge.

3.10 RETURN OF EQUIPMENT OUTSIDE OF NORTH AMERICA

Contact the appropriate Moore product support group listed in section 1.2 of this Instruction. Provide the reason for the return. For repairs, supply a purchase order number. Request equipment packaging and shipping instructions.

5.2 OPTIONS

Table 5-2 lists the available VIM options. A selection of the type and quantity of termination assemblies must be made by the user. When marshalling termination assemblies are selected, a selection from the list of Interconnect I/O Cables must also be made.

TABLE 5-2 VIM Options

PART NUMBER	DESCRIPTION
16187-1	VIM Local Termination Strip
16170-1	VIM Marshalled Termination Assembly
16805-5	VIM DIN Rail Marshalled Termination Assembly
16137-122	Marshalled Interconnect I/O Cable Assembly 5.7 ft. (1.75 m)
16137-114	Marshalled Interconnect I/O Cable Assembly 9.8 ft. (3 m)
16137-115	Marshalled Interconnect I/O Cable Assembly 26.2 ft. (8 m)
16137-116	Marshalled Interconnect I/O Cable Assembly 49.2 ft. (15 m)
16137-117	Marshalled Interconnect I/O Cable Assembly 98.4 ft. (30 m)
16137-118	Unterminated Interconnect I/O Cable Assembly 9.8 ft. (3 m)
16137-119	Unterminated Interconnect I/O Cable Assembly 26.2 ft. (8 m)
16137-120	Unterminated Interconnect I/O Cable Assembly 49.2 ft. (15 m)
16137-121	Unterminated Interconnect I/O Cable Assembly 98.4 ft. (30 m)

■