SIEMENS

Installation Instructions
Model MOM-2
Optional Card Cage Module

OPERATION

The Model MOM-2 Card Cage board (See Figure 1) provides the MXL/MXL-IQ with two card slots for optional modules. Each MOM-2 has space for one full-width optional module or two half-width optional modules. The MOM-2 comes with two card guides for mounting one full-width module. The half-width modules come with the necessary extra card guides for mounting them.

The MOM-2 provides two power connector receptacles, two power connection terminal blocks, and two data connector receptacles. A 24 VDC cable that provides the main power used by the optional modules and an 8-wire ribbon cable for connection of 5 VDC and data lines are provided with the MOM-2 installation kit.

INSTALLATION

Unpack the MOM-2 and its attached back-plate. Inspect it, looking for such things as connectors not properly installed, dirt, and packing material on the board.

The MME-3 enclosure has three locations for the MOM-2 (or for OMM-1s, OMM-2s, or MOM-4s). However, when a TSP-40 printer is installed in a system, it decreases the number of MOM-2s to a maximum of two modules in a system.

The MSE-2 and MSE-3L enclosures each have one location for the MOM-2.

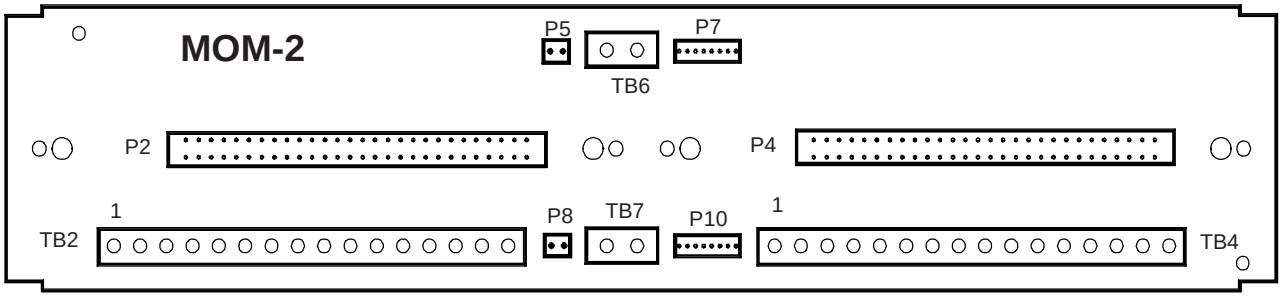

Figure 1
MOM-2 Card Cage

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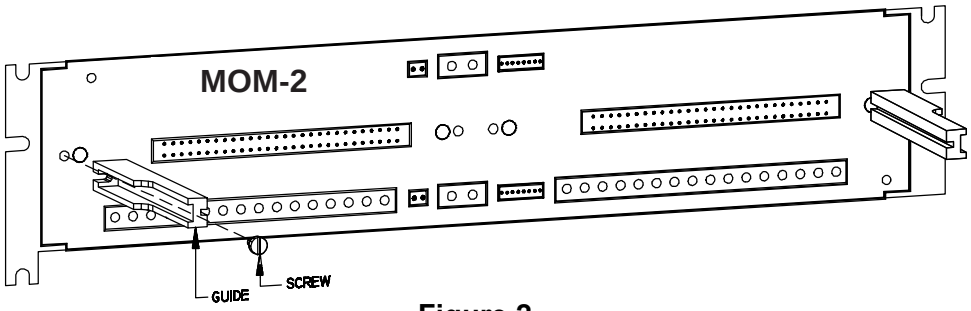

Figure 2
Installing the Card Guides in the MOM-2

The installation kit for the MOM-2 includes the following items:

Three #10 nuts
Two card guides
Two 2-wire cables
One 8-conductor ribbon cable
Four #6 x 7/16 screws
Two #6 x 5/16 screws

To install the card guides (See Figure 2):

Install the two card guides included in the package using the #6 x 7/16 screws provided.

1. Mount the long screws.
2. Make sure that the locating pin on the guide is seated in the hole on the MOM-2.
3. Tighten the screw.

Repeat this process for the remaining card guide. The MOM-2 is now ready to accept the optional modules. If the system does not require the installation of any half-width modules, install the two #6 x 5/16 screws in the center holes where the additional card guides would be placed.

Remove all system power before installation, first battery and then AC.
(To power up, connect the AC first, then the battery.)

MOUNTING

(Refer to Figures 3, 4, and 5.)

To mount the MOM-2 card cage:

The MOM-2 mounts ***vertically*** in the ***MME-3*** enclosure under the MMB or the PSR as shown in Figure 3.

The MOM-2 mounts ***horizontally*** in the ***MSE-2*** enclosure as shown in Figure 4.

The MOM-2 mounts ***vertically*** in the ***MSE-3L*** enclosure as shown in Figure 5.

To mount the MOM-2 in an MME-3 enclosure:

1. Hold the MOM-2 so that terminal block TB4 is at the top right-hand position. (See Figure 1 for the location of TB4.)
2. Place the module on the mounting studs of the MBR-MP mounting plate in the left-hand position as shown in Figure 3.
3. Fasten the MOM-2 in position with the three No. 10 nuts provided, as shown in Figure 3.
4. To mount any other MOM-2 modules used in the system, repeat the above steps. Use the center or right-hand position for the additional modules as needed.

To mount the MOM-2 in an MSE-2 enclosure:

1. Hold the MOM-2 so that terminal blocks TB2 and TB4 are on the bottom. (See Figure 4.)
2. Place the module horizontally on the mounting studs near the center of the enclosure as shown in Figure 4.
3. Fasten the MOM-2 in position with two of the No. 10 nuts provided, as shown in Figure 4. Discard the remaining nut.

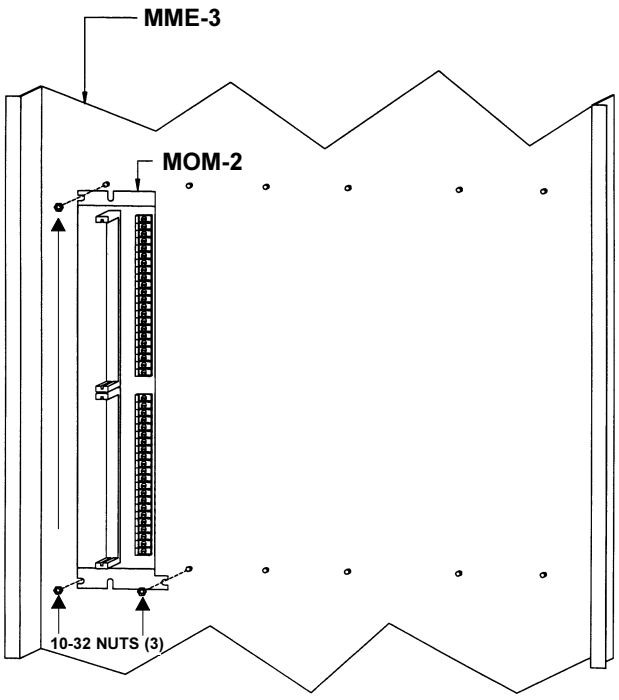

Figure 3
Mounting the MOM-2 in an MME-3 Enclosure

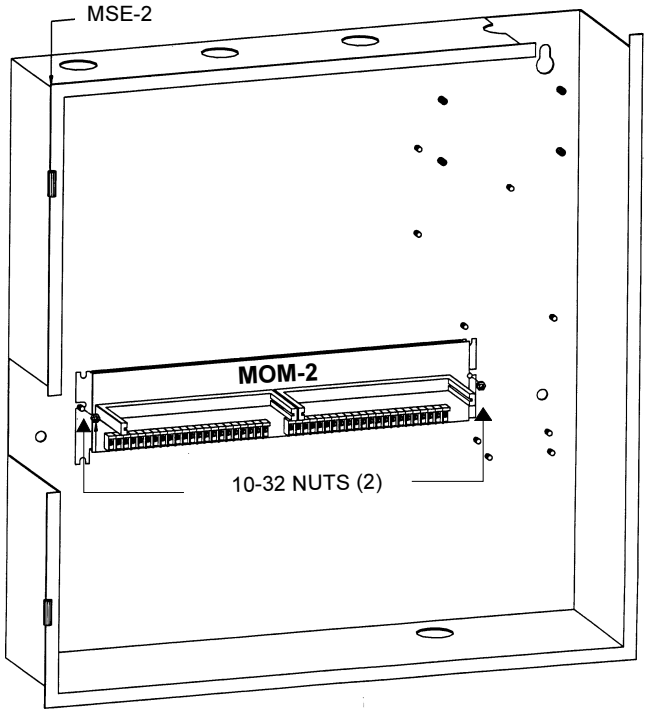

Figure 4
Mounting the MOM-2 in an MSE-2 Enclosure

To mount the MOM-2 in an MSE-3L enclosure:

1. Hold the MOM-2 so that terminal blocks TB2 and TB4 are on the left.
2. Place the module vertically on the mounting studs near the top left of the enclosure as shown in Figure 5.
3. Fasten the MOM-2 in position with the No. 10 flatwashers, lockwashers, and nuts provided.

Electrical Installation

There are two inputs that connect the MOM-2 with the MMB or SMB. These inputs provide all the necessary power and data lines to support the optional modules.

The first input is an 8-conductor ribbon cable. Attach the cable to P6 on the MMB or SMB, making sure that the locking rib on the cable connector engages the locking tab on P6. Attach the other end of the cable to P7 on the MOM-2, again making sure that the locking rib of the cable engages the locking tab on P7. This cable supplies 5 VDC and communication between the MMB or SMB and the MOM-2.

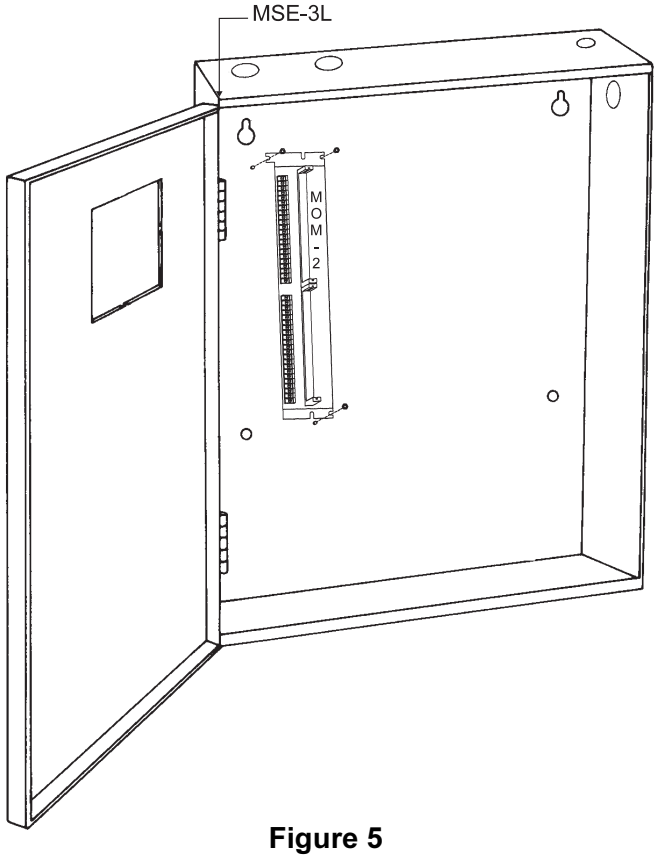

Figure 5
Mounting the MOM-2 in an MSE-3L Enclosure

The second input feeds 24 VDC full wave unfiltered DC to the MOM-2. This input connects to either P8 (MMB-1 or SMB-1 only) or TB6. A 2-wire cable is provided for backward compatability with the MMB-1 or SMB-1. Connect one end of the cable to P3 on the MMB-1 or SMB-1, making sure the cable rib and board tab lock. Attach the other end of the cable to P8 on the MOM-2 in the same way. This is the main power used by the optional modules.

The power source on the MOM-2 is limited to 2A max by the MMB-1 or SMB-1. Under maximum load conditions, the optional modules must never draw more than 2A from this connection.

When the 24 VDC is provided by either the MMB-2/-3 or SMB-2, use TB6 on the MOM-2 to connect the power. The wire for this connection is not supplied (See the *MMB-2 Installation Instructions,* P/N 315-095097, the *MMB-3 Installation Instructions,* P/N 315-048860 or the *SMB-2 Installation Instructions,* P/N 315-095931.)

When the system includes an MMB-2/-3 or SMB-2, the maximum load current for the MOM-2 is 6A when using an MPS-6 and 12 amps when using an MPS-12. However, the 6A must be reduced by the amount of current being used by the CZM-1, PS-5A/-5N7, and NAC outputs. Thus, if the full 1A available to the CZM-1 and PS-5A/-5N7, and the 3A available to the NAC outputs are used, derate the MOM-2 current to 2 amps (or, if an MPS-12 is used, derate the MOM-2 current to 8A).

When the 24 VDC is provided by PSR-1, use TB6 on the MOM-2 to connect the power. The wire for this connection is not supplied (See the *PSR-1 Installation Instructions,* P/N 315-090911, for terminal connections).

When the system includes a PSR-1, the maximum load current for the MOM-2 is 6A when using an MPS-6 and 12 amps when using an MPS-12. However, the 6A must be reduced by the amount of current being used by the CZM-1 and PS-5A/-5N7 output. Thus, if the full 2A available to the CZM-1 and PS-5A/-5N7 are used, derate the MOM-2 current to 4A (or, if an MPS-12 is used, derate the MOM-2 current to 10A).

Depending on the optional modules installed, additional power may be available for alarm notification appliances. See Table 1 for the maximum current required by each module under full load conditions.

Determine which optional plug-in modules are used in your CSG-M configuration. Depending on the optional modules used, determine the outstanding power by using Table 1 (See the **EXAMPLE).** This power can be used for notification appliances.

TABLE 1
MAXIMUM MODULE LOAD CURRENTS

ALD-2I	105mA + 1.1mA per device
CMI-300	96mA
CRM-4	75mA (4 relays energized)
CSM-4	34mA (no alarm notification appliances connected)
CZM-4	720mA max (with 4 zones in alarm)
NIM-1R	0mA
REP-1	150mA
XLD-1	395mA (120 devices in alarm)

NOTE:
When a CSM-4 is used, you may add notification appliances to it if the maximum load current to the MOM-2 does not exceed 2 amps (MMB-1 or SMB-1) or with an MMB-2/-3, SMB-2, or PSR-1, 6 amps (MPS-6) or 12 amps (MPS-12). Include the total alarm current on each CSM-4 notification appliance circuit when performing the calculations.

EXAMPLE:
With: one CRM-4 and one CSM-4
Total load current = 0.075 + 0.034 = 0.109A

With MPS-6:
Remaining Available Current =
2.0 - 0.109 = 1.891A (MMB-1 or SMB-1)
6.0 - 0.109 = 5.891A (PSR-1 / MMB-2/-3 / SMB-2) with no CZM-1, PS-5A/-5N7, or NAC load

With MPS-12:
Remaining Available Current =
2.0 - 0.109 = 1.891 (MMB-1 or SMB-1)
12.0 - 0.109 = 11.891 (PSR-1 / MMB-2/-3 / SMB-2) with no CZM-1, PS-5A/-5N7, or NAC load

The remaining current may be used for alarm notification appliances.