Installation of Security Contact Points on MedSelect Dispensing Modules

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For use when installing security devices on any MedSelect® modules

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1. Security Contact Kit

The Security Kit includes all the necessary hardware to install contact points and wiring for use by an externally connected security system to monitor the open-door, open-drawer, and electronic lock status of MedSelect dispensing modules. The following modules are covered: Unit Dose Module (UDM), Supply Cabinet Module (SCM), Drawer Module (DM), Compact Drawer Module (CDM), Mini Drawer Module (MDM), and External Lock Module (ELM).

MedSelect strongly recommends that you coordinate installation of the security kit between MedSelect service representatives and representatives from the security system manufacturer. A MedSelect representative must be present to access MedSelect System modules.

Kit installation does not require drilling of any holes or soldering.

1.1 Kit Identification

The following kits and modules are associated with this modification:

Module Name and P/N	Field Upgrade Kit P/N	Description
UDM 00-101463-000A	19-040126-000A	KIT, SECURITY, UDM & SCM
UDM 00-101640-000A	19-040126-000A	KIT, SECURITY, UDM & SCM
DM 00-101604-000A	19-040126-000B	KIT, SECURITY, DM/CDM/MDM
CDM 00-101607-000A	19-040126-000B	KIT, SECURITY, DM/CDM/MDM
MDM 00-101605-000A	19-040126-000B	KIT, SECURITY, DM/CDM/MDM
SCM 00-101611-000A/B	19-040126-000A	KIT, SECURITY, UDM & SCM
ELM 00-101463-000A/B	19-040126-000C	KIT, SECURITY, ELM

The following DMs and UDMs **do not** have security kits available:

- 00-101470-000A-F (DM)
- 00-101603-000A-G (DM)
- 00-101468-000A-D (MDM)
- 00-101462-000A-E (UDM)

1.2 Common Installation Details

Kit Extra Parts: A sufficient number of parts may be included in the kits to accommodate modifications to more than one type of module. Therefore, extra parts may be present after a modification. These parts may be discarded or returned to MedSelect.

Cable Dressing and Routing: Use good judgement in tying cables so that they do not interfere with moving parts such as shelves in the UDM. Always follow the recommended routing of cables in the procedures below. For external cable runs, follow general MedSelect guideline practices in aesthetics, safety, security, etc.

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Terminal Board: A terminal board is used internally in each module as the connection point between the external security system and internal module alarm contacts. The same terminal board is used throughout all modifications, except for the ELM modification. The ELM has a special style of terminal board to fit compactly inside the ELM assembly without interfering with any moving lock mechanisms. All terminal boards allow for a resistor connection for those security systems that require current sensing.

In all cases (except ELM—see **ELM Modification**), connect cable wires to the terminal before mounting the terminal board. This simplifies the installation. Double-backed adhesive tape is used to mount a terminal board in all installations except for one UDM version (00-101640-000A). This UDM has two factory installed standoffs for mounting the terminal board. Refer to the referenced figures for recommended terminal board mounting locations within a module cabinet for each installation.

Always clean the metal surface with denatured alcohol before attaching the adhesive backed terminal board.

Cable Labeling: Cable wires attached to kit supplied switches are each identified by their corresponding attached switch contact.

2. UDM and SCM Modification

This modification covers two versions of the UDM (00-101463-000A and 00-101640-000A). The two UDM versions can be distinguished from each other by the door switch. The door switch in version 00-101463-000A is a rocker type switch with an actuating lever. UDM version 00-101640-000A uses a plunger type door switch. The UDM versions can also be distinguished by their part number. This part number can be found on the serial number label on the inside door panel.

The UDM uses a 3-wire cable for SPDT contacts. One end connects to the door switch, and the other end connects to the supplied terminal board. In UDM 00-101463-000A, a second kit supplied switch is stacked onto the UDM existing door switch. The plunger switch for UDM version 00-101640-000A is used as it exists and is not supplied in the kit. The existing plunger switch already has an extra pole for use as a security contact. In this case, only a cable needs to be added to the spare contacts of the switch.

2.1 UDM 00-101463-000A

Install the security kit 19-040126-000A in UDM version 00-101463-000A. The kit items listed below apply to this UDM installation. The supplied cable is already soldered to the supplied switch, and FIND 6 is already applied to FIND 5.

FIND NO.	PART DISCRIPTION	QTY	PART NO.
1	CABLE PLUS SWITCH	1	49-014572-000A
5	TERMINAL BOARD	1	29-003104-004A
6	TAPE, ACR	0.10FT	89-000327-0068
7	SCREW, 02-0.62	2	29-004656-000A
13	CABLE TIE	5	11-007615-000A

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Proceed as follows to install the kit:

1. Power down the IB Module
2. Take out top shelf of the UDM to obtain access to the door switch (see the *MedSelect Systems Service Guide* TM-MEDSVC-000A for details).

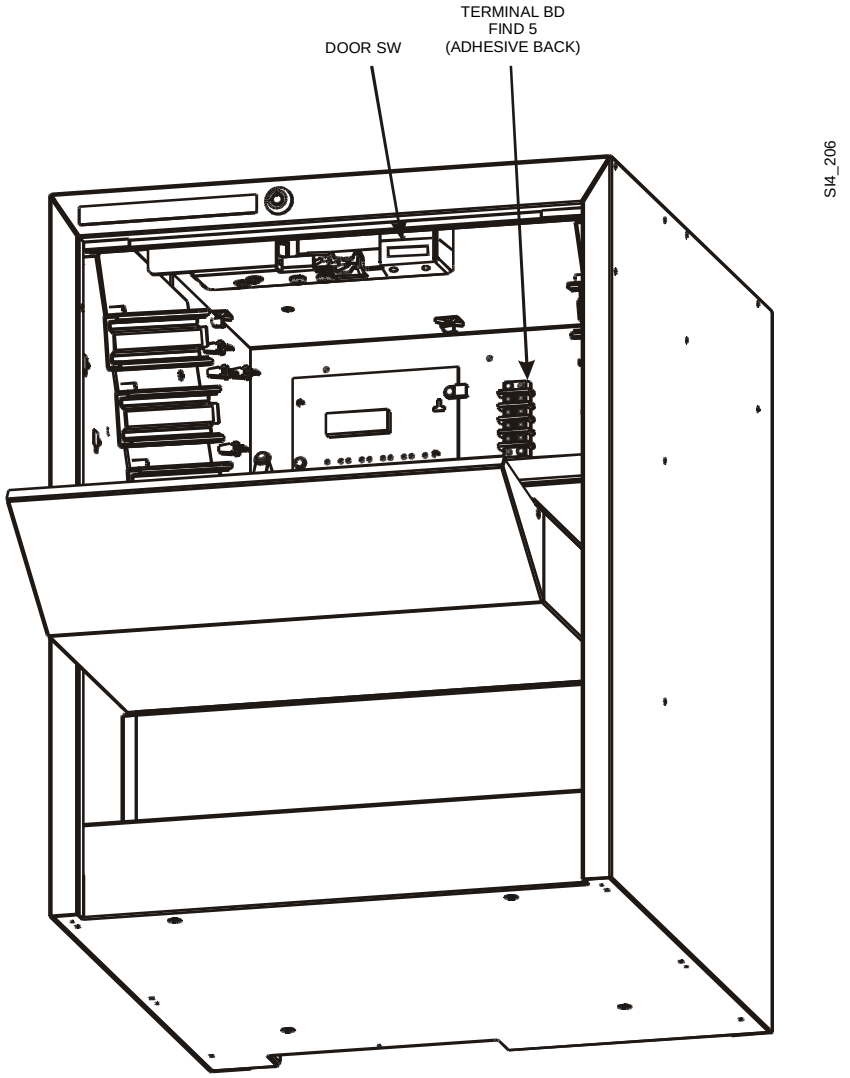

Figure 2-1 UDM 00-101463-000A Modification

Note

The wire spade ends of the provided cable (FIND 1) are labeled with the corresponding C, NO, and NC contact connections.

3. Connect the cable (FIND 1) ends to three of the terminal lugs on the provided terminal board (FIND 5).

4. Replace the existing two door switch screws with the two longer kit supplied screws (FIND 7) and stack provided switch (part of FIND 1) below the existing door switch.
5. Route cable with attached terminal board to rear of UDM cabinet. Route along same path as existing cabling. Extra cable length should be bundled and secured to existing cables.
6. Attach terminal board to back panel of cabinet using adhesive backing and tie wires against existing cabling along top panel with provided cable ties (FIND 13). The approximate location of the terminal board is shown in Figure 2-1. Arrange the terminal board and cable as necessary to prevent the cable from hanging or drooping.
7. Guide the external security cable through the 1/4" hole in the rear panel of the UDM. Route the cable up to the terminal board and make connections.
8. Secure the external security cable along the inside of the rear panel to existing cabling with cable ties. There are strain relief cable tie down points near the 1/4" entrance hole (lower right area of panel) that can be used for the external cable.
9. Replace the UDM shelf.
10. For routing and dressing of the external security cable run, refer to page 1, **Common Installation Details**.

2.2 UDM 00-101640-000A

Install the security kit 19-040126-000A in UDM version 00-101640-000A. The kit items listed below apply to this UDM installation. The cable is connected to the spare contacts of the existing plunger type door switch during installation. FIND 6 is already applied to FIND 5.

FIND NO.	PART DISCRIPTION	QTY	PART NO.
2	CABLE (ONLY)	1	49-014574-000A
5	TERMINAL BOARD	1	29-003104-004A
6	TAPE, ACR	0.10FT	89-000327-0068
8	SCREW, 06-32X0.5	2	01-025007-0150
13	CABLE TIE	5	11-007615-000A

Proceed as follows to install the kit:

1. Power down IB Module.
2. Take out top shelf of the UDM to obtain access to the door switch (see the *MedSelect Systems Service Guide* TM-MEDSVC-000A for details).

Note

The wire spade ends of the provided cable (FIND 2) are labeled with the corresponding C, NO, and NC contact connections.

3. Connect the cable (FIND 2) spade ends to three of the terminal lugs on the provided terminal board (FIND 5).

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4. Connect the quick-connect ends of the cable to the spare contacts of the existing door switch. Be sure that the labeled contacts of the cable match the contact designations on the switch.
5. Route cable with its attached terminal board to the rear of the UDM cabinet. Route new cables along same path as existing cabling. Extra cable length should be bundled and secured to existing cables.
6. Attach the terminal board to standoffs on the inside back panel of the cabinet using provided screws (FIND 8). Tie wires against existing cabling along top panel with provided cable ties (FIND 13). The location of the terminal board is shown in Figure 2-2. Arrange terminal board and cable as necessary to prevent the cable from hanging or drooping.
7. Guide the external security cable through the 1/4" hole in the rear panel (lower right area of panel) of the UDM, route the cable up to the terminal board, and make connections.
8. Secure the external security cable along the inside of the rear panel to existing cabling with cable ties. There are strain relief cable tie down points near the 1/4" entrance hole that can be used for the external cable.
9. Replace the UDM shelf.
10. For routing and dressing of the external security cable run, refer to page 1, **Common Installation Details**.

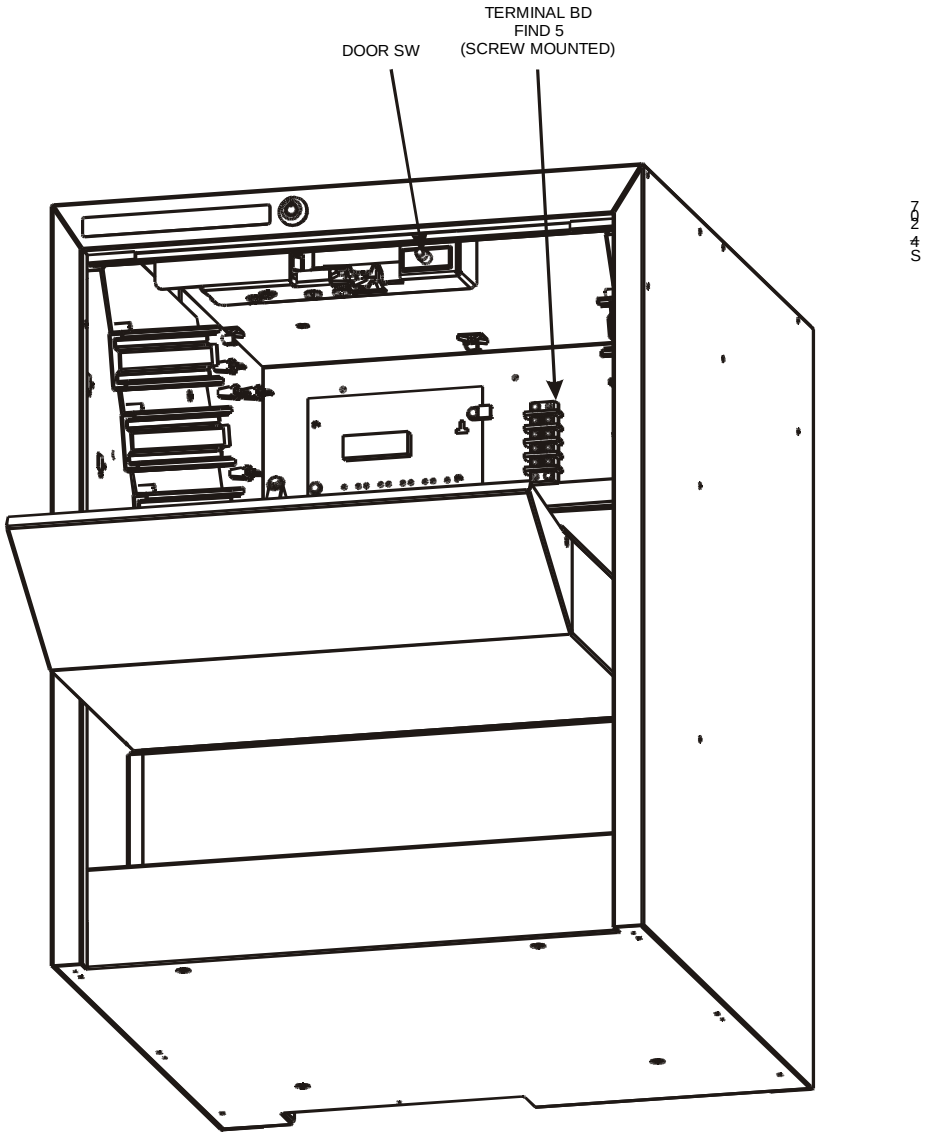

Figure 2-2 UDM 00-101640-000A Modification

2.3 SCM

Install the security kit 19-040126-000A in the SCM. The kit items listed below apply to the SCM installation. The cable is connected to the spare contacts of the existing plunger type door switch during installation. FIND 6 is already applied to FIND 5.

FIND NO.	PART DISCRIPTION	QTY	PART NO.
2	CABLE (ONLY)	1	49-014572-000A
5	TERMINAL BOARD	1	29-003104-004A
6	TAPE, ACR	0.10FT	89-000327-0068
13	CABLE TIE	5	11-007615-000A

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Proceed as follows to install the kit:

1. Power down the IB Module.
2. Take out the top shelf and latch cover (also called the false ceiling) to obtain access to door switch (see the *MedSelect Systems Service Guide* TM-MEDSVC-000A for details).

Note

The wire spade ends of the provided cable (FIND 2) are labeled with the corresponding C, NO, and NC contact connections.

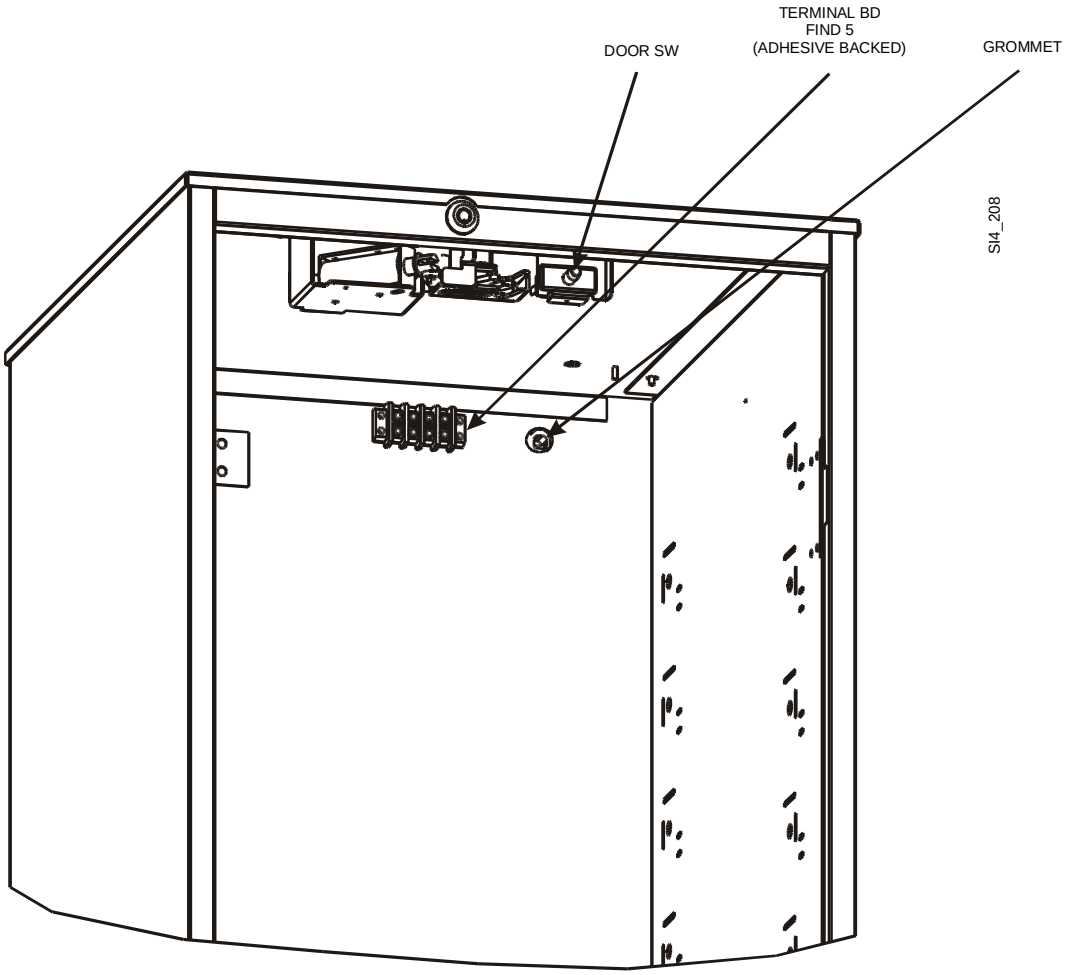

Figure 2-3 SCM Modification

3. Connect the cable (FIND 2) spade ends to three of the terminal lugs on the provided terminal board (FIND 5).

4. Connect the quick-connect ends of the cable to the spare contacts of the existing door switch. Be sure that the labeled contacts of cable match the contact designations on the switch.
5. Route the cable with its attached terminal board to the rear of the SCM cabinet. Route cables along same path as the existing cabling. Extra cable length should be bundled and secured to existing cables.
6. Using adhesive backed tape (FIND 6), attach the terminal board to the inside of the back panel of the cabinet (above the latch cover when the cover is in place). Tie wires against existing cabling along top panel with provided cable ties (FIND 13). The approximate location of the terminal board is shown in Figure 2-3. Arrange terminal board and cable as necessary so that the cable does not hang or droop.
7. Guide the external security cable through the same pop-out grommet in the rear panel used for the SCM. Route the cable to the terminal board and make connections.
8. Reinstall the latch cover.
9. For routing and dressing of the external security cable run, refer to page 1, **Common Installation Details**.

3. DM/CDM/MDM Modification

These modules use a 2-wire cable for NO contacts. These contacts are pre-existing reed type switches on the controller board for each drawer assembly. All reed switches are wired in series so that any open drawer is detected. All contacts are closed when all drawers are closed and open when any one drawer is open. The connection cannot, however, detect which drawer or how many drawers are open. The cable connects between J8 (small rectangular type) of the distribution board and the kit supplied terminal board.

Even though the connector is keyed, it can be inserted incorrectly into the distribution board. Be sure that the connector is oriented correctly before making a connection (see Figure 3-1).

Install the security kit 19-040126-000B. The kit items listed below apply to the DM/CDM/MDM installation. FIND 6 is already applied to FIND 5.

FIND NO.	PART DISCRIPTION	QTY	PART NO.
3	CABLE PLUS CONN	1	49-014571-000A
5	TERMINAL BOARD	1	29-003104-0004A
6	TAPE, ACR	0.10FT	89-000327-0068
13	CABLE TIE	5	11-007615-000A

Required Special Tools:

- Security bit (19-038759-000K) with 1/4" driver

Proceed as follows to install the kit:

1. Power down and take out the bottom drawer assembly to obtain access to distribution board (a security bit is required—see the *MedSelect Systems Service Guide* TM-MEDSVC-000A for details).

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2. Refer to Figure 3-1 and connect the cable connector to J8 of the distribution board.
3. Connect the spade ends of the cable to the terminal board.
4. Attach the terminal board (FIND 5) to the back panel of the cabinet using adhesive backed tape (FIND 6) as shown in Figure 3-1. Arrange the terminal board and cable as necessary so that the cable does not hang or droop.
5. Guide the external security cable through 1/4" hole (to upper right of distribution board) in the rear panel of the module. Route the cable to the terminal board and make connections.
6. Secure the external security cable along the inside of the rear panel with cable ties.
7. Reinstall the drawer assembly.
8. For routing and dressing of the external security cable run, refer to page 1, **Common Installation Details**.

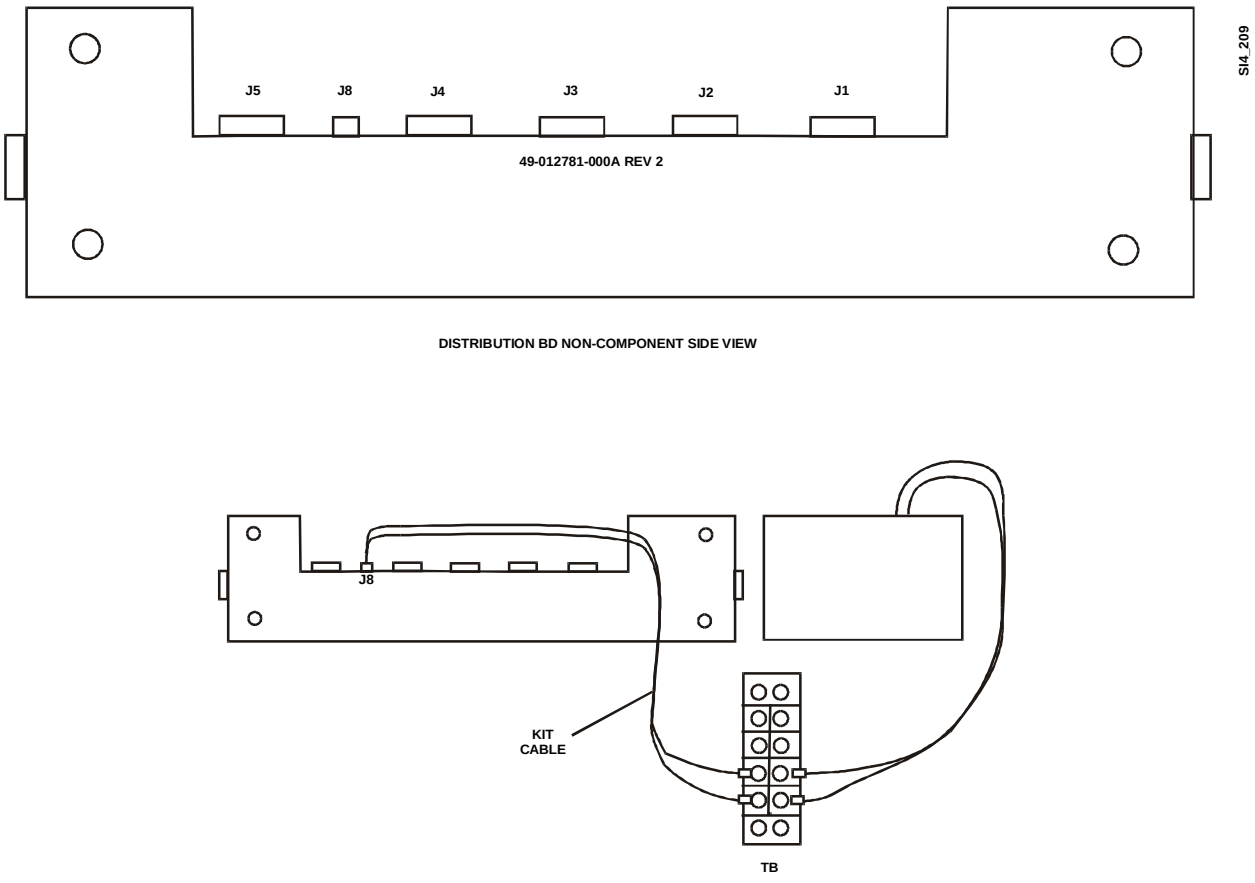

Figure 3-1 DM/CDM/MDM Modification

4. ELM Modification

This module uses a 3-wire cable for SPDT contacts. Use care when installing the internally mounted terminal board (see Figure 4-1).

Install the security kit 19-040126-000C in the ELM. The kit items listed below apply to the ELM installation. The cable is already connected to the provided lever switch for the modification. FIND 9 is already attached to FIND 10 with FIND 11.

FIND NO.	PART DISCRIPTION	QTY	PART NO.
4	CABLE PLUS SWITCH	1	49-014579-000A
9	TERMINAL BOARD	1	29-013485-000A
10	TERMINAL BRACKET	1	49-170004-000A
11	SCREW	2	01-026663-0150
12	HEX NUT	2	19-019198-015A
13	CABLE TIE	5	11-007615-000A

Required Special Tools:

- Security bit (19-038759-000K) and 1/4" driver

Proceed as follows to install the kit:

1. Power down and remove the cover from the lock assembly to obtain access to the internal assembly (see the *MedSelect Systems Installation Guide* TM-MEDINS-000A for details).
2. Remove the switch bracket by removing security screw (A) and two nuts (B1 and B2). Wire tie (C) should not be removed.

Note

Use care when removing or replacing bracket. The switches can be damaged from stress on terminals.

3. Move the latch (D) out of the way for the switches. Use the key or manually move the unlatch lever (E) to disengage the latch.
4. A second stacked switch may or may not be present. If two switches are present, remove the outside switch and discard (this is the switch with no wire connections). Keep the screws and nuts for later use.
5. Attach the supplied switch (FIND 4) to the switch bracket. Two extra nuts (FIND 12) are supplied and can be used if the originals are lost.

Note

If a second switch is not present, the supplied switch can be installed without removing the existing nuts and secured with the additional kit supplied nuts.

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Note

Use care when removing or replacing switch bracket. The switches can be damaged from cable stress on switch terminals.

6. Replace the switch bracket to its original position. Secure it with a nut (B2) only at this time.
7. Place the terminal board and bracket (FIND 9 and FIND 10) as shown in Figure 4-1. Push the terminal board flush against the ELM side (F) as illustrated. Then secure the terminal board with nut (B1) and screw (A).
8. Bring in the external security cable through the same pop-out grommet as the existing cable. The grommet must be removed in order to route the security cable through the grommet. Reinsert the grommet with both cables threaded though it.

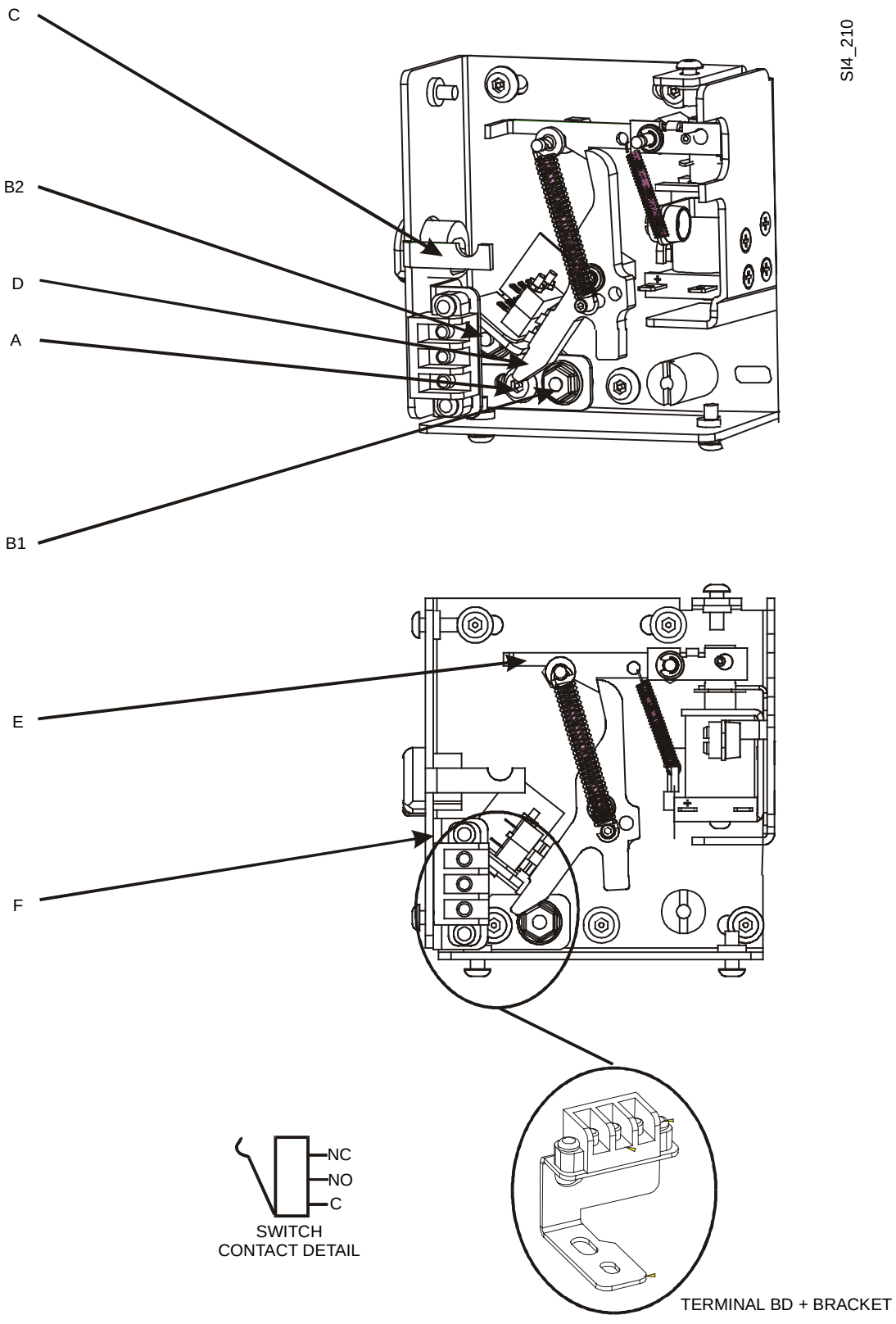

Figure 4-1 ELM Modification

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9. Make necessary connections to the terminal board from the switch and external security cable. The switch contact arrangement is shown in Figure 4-1.
10. Secure all cables neatly with cable ties (FIND 13) so that they clear the locking mechanism.
11. Cut any unused wires from the additional switch. Cut wires as close as possible to switch terminals. These wires could come in contact with the sheet metal body of the lock and result in an electrical short circuit.
12. Use the key to verify that the modification does not interfere with the latch and unlatch levers.
13. Reinstall the cover.
14. For routing and dressing of the external security cable run, refer to page 1, **Common Installation Details**.

5. Security Validity Test

The validity of an installation can be checked by a simple contact continuity test. Use a general purpose multimeter for this test. Check both normally open and closed contacts where applicable.