SIEMENS

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Installation Instructions
Document No. 545-461
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Power Open Processor/Open Processor

CAUTION:
The Power Open Processor/Open Processor MMI and MMI/Modem ports cannot be connected to a public telephone network without an authorized modem.

Connecting such equipment to a public telecommunications network in a European Community Member State is in violation of the national law implementing Directive 91/263/EEC on the approximation of the laws of the Member States concerning telecommunication terminal equipment, including the mutual recognition of their conformity.

Product Description

The Open Processor or Power Open Processor attaches to the mounting rails, Module Bus (M-Bus) rails, and Communications Bus (C-Bus). The Power Open Processor/Open Processor contains the main processor, memory, and communications for the Modular Building Controller (MBC) or the Remote Building Controller (RBC).

Product Numbers

562-040   *APOGEE Power Open Processor/ BACnet* uses the EALN port to communicate on a BACnet/IP ALN.

562-001   *APOGEE Power Open Processor/ Protocol 2* uses the ALN port to communicate on a P2 ALN. A firmware change allows you to use the Ethernet ALN (EALN) port in place of the P2 ALN.

562-002   *APOGEE Power Open Processor/ Ethernet* uses the EALN port to communicate on an Ethernet ALN. A firmware change allows you to use the ALN port in place of the EALN port to communicate on a P2 ALN.

545-730   *APOGEE Open Processor/Protocol 2*, 8 MB total memory (4 MB flash, 4 MB RAM) with Firmware 2.*x* (repaired only).

545-726   *APOGEE Open Processor/Stand-alone*, 6 MB total memory (4 MB flash, 2 MB RAM) with Firmware 2.*x* (repaired only).

545-719   *APOGEE Open Processor/Protocol 2*, 4 MB memory with Firmware 2.*x* (repaired only).

545-718   *APOGEE Open Processor/Protocol 2*, 3 MB memory with Firmware 2.*x* (repaired only).

545-720   *APOGEE Open Processor/Stand-alone*, 3 MB memory with Firmware 2.*x* (repaired only).

545-715   *Open Processor/Protocol 2*, 4 MB memory with Firmware 1.*x* (repaired only).

545-716   *Open Processor/Protocol 2*, 3 MB memory with Firmware 1.*x.*

545-717   Open Processor/Stand-alone, 3 MB memory with Firmware 1.*x.*

565-300 Series
Open Processor pre-APOGEE drivers. See the pre-APOGEE *Open Processor Drivers Application Manual* (125-3140) for additional requirements.

Accessories

545-712   MMI extension Cable. See *Installation Instructions* (545-407).

549-510   Modem Cable.

Warning/Caution Notation

WARNING   Personal injury or property damage may occur if you do not follow a procedure as specified.

CAUTION: Equipment damage or loss of data may occur if you do not follow a procedure as specified.

Required Tools

None

Expected Installation Time

7 minutes

Prerequisites

- MBC or RBC mounted and AC power connected.
- All wiring terminated.
- CE Compliance requirements met, if needed.
- Power Module installed.
- Termination blocks installed, if any.
- Ethernet port installed, if any.
- Authorized modem installed if connection to a public telephone network is required.

Depending on the type of installation, other prerequisites may have to be completed.

For Installations Requiring CE Compliance

WARNING ⚠ This is a class A product. In a domestic environment this product may cause radio interference, in which case the user may be required to take adequate measures.

Products intended for sale in the European Economic Area (EEA) must bear the CE mark.

See *APOGEE Wiring Guidelines for Field Panels and Equipment Controllers* (125-3002) for CE compliance wiring requirements.

Installation

There are two options for installation:

- Installing a Power Open Processor/Open Processor in a new MBC/RBC.
- Installing an additional Power Open Processor/Open Processor in an existing MBC/RBC.

Select the appropriate option for your installation.

Installing a Power Open Processor/Open Processor in a New MBC/RBC

NOTE: Power Open Processors can be installed or removed while the MBC/RBC is powered.

1. Switch the MBC/RBC power switch OFF.

   NOTE: Insert or remove the Open Processor only when the power switch is OFF.

2. Remove the temporary cover (card with attached pre-wired ALN or FLN connectors) that is wrapped around the mounting rails, M-Bus rails, and C-Bus (See Figure 1). Do not remove the connectors at this time.

3. Remove the C-Bus cover from the lowest available slot and discard (see Figure 2).

4. Remove any remaining M-Bus protective tape from the M-Bus rails (see Figure 2).

5. If there is a warning label over the C-Bus card on the back of the Power Open Processor/Open Processor, remove it (see Figure 4).

6. Remove the protective cap from the C-Bus card edge (see Figure 4).

7. Align the Power Open Processor/Open Processor with the slot number printed on the mounting rail (see Figure 2).

8. Align the Power Open Processor/Open Processor mounting guides with the right-hand edge of the M-Bus rail (see Figure 2).

9. Push firmly on the free end of the Open Processor so that the C-Bus card edge and M-Bus connector mate with the C-Bus connector and M-Bus rail (see Figure 2). You will hear a "click" when the Power Open Processor/Open Processor is properly attached to the mounting rail.

10. If the Power Open Processor/Open Processor needs repositioning, pull the metal latch. Pull the Power Open Processor/Open Processor forward from the C-Bus connector (see Figure 2) and repeat Steps 7 through 9.

11. Remove the pre-wired FLN connectors from the temporary cover and plug them into the corresponding ports on the left side of the Power Open Processor/Open Processor. These ports are labeled FLN 1, FLN 2, and FLN 3 (see Figure 3). The screws for the connector should be pointing down.

12. Do one of the following. If you are installing an:

    a. *Open Processor/Protocol 2,* plug the ALN connector into the corresponding port on the right side labeled BLN + – S (see Figure 4). The screws for the connector should be pointing down.

    b. *Power Open Processor/Protocol 2,* plug the ALN connector into the corresponding (right-hand) port labeled BLN. The screws for the connector should be pointing down.

c. *Power Open Processor/Ethernet or Power Open Processor/BACnet,* plug one end of the RJ-45 cable into the Ethernet jack box, and the other end into the corresponding (right-hand) Power Open Processor port labeled EALN.

d. *For smoke control applications over Etherne,* You must connect to the Ethernet ALN or BACnet/IP ALN through an Ethernet switch UL Listed for Fire Signaling. The panel and the switch must be installed in the same room.

13. Discard the temporary connector cover.

⚠ **WARNING: Open Processor/Protocol 2 or Controller Module - Lithium Battery**
Only qualified service personnel or an authorized Siemens Building Technologies, Inc. representative can enable the Open Processor/Protocol 2 or Controller Module lithium battery.

Improper installation of battery or use of a different battery may cause an explosion.

14. Enable the Power Open Processor/Open Processor battery by removing the piece of Mylar that separates the battery from its holder.

15. Switch the MBC/RBC power switch ON.
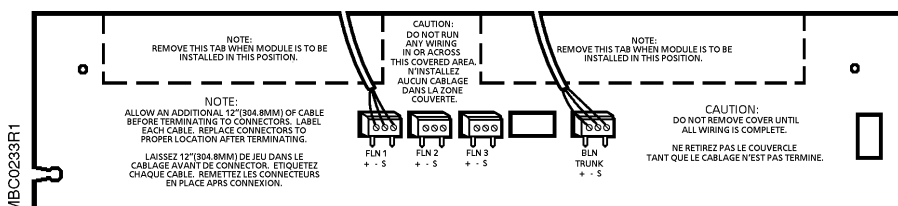
The installation is now complete.

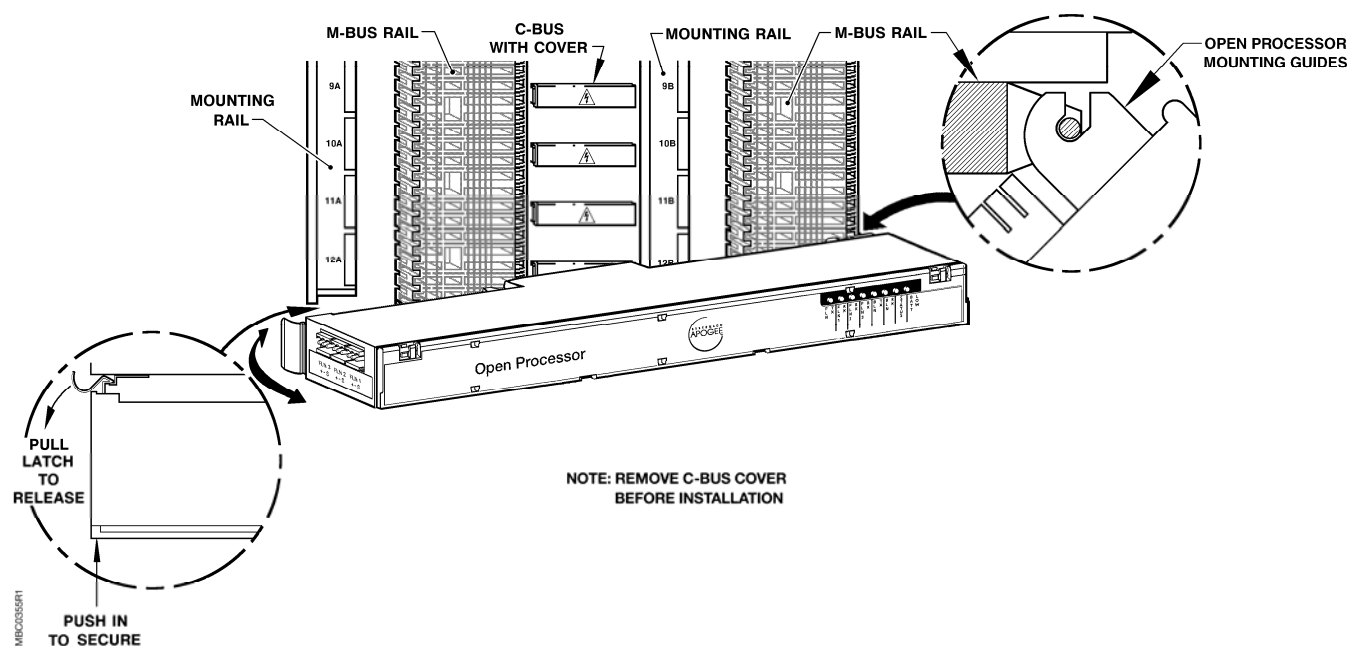**Figure 1. Temporary Cover with Pre-wired ALN and FLN Connectors Attached.**

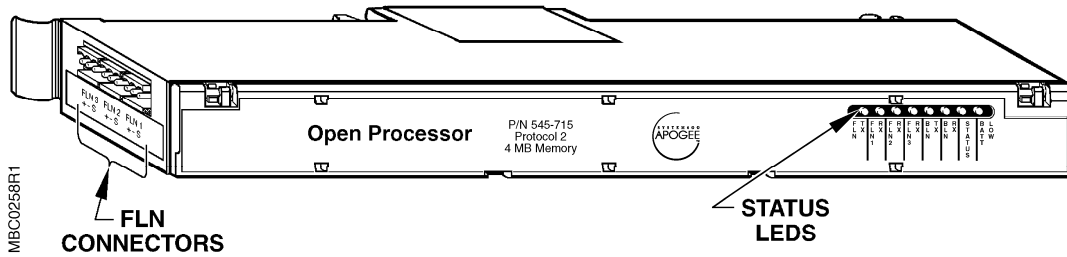**Figure 2. Installation of the Power Open Processor/Open Processor.**

MBC0258R1

Figure 3. Front View of the Open Processor/Protocol 2.
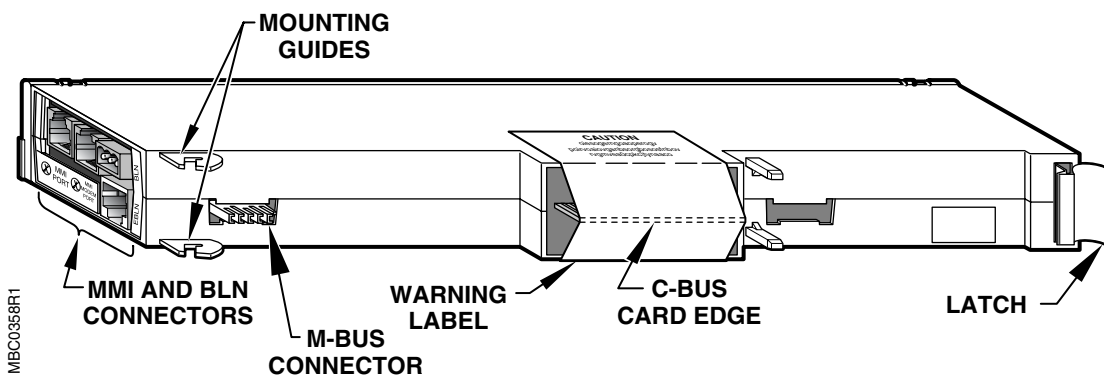

MBC0358R1

Figure 4. Rear View of the Power Open Processor.

Installing an Additional Power Open Processor/Open Processor in an Existing MBC/RBC

NOTE: Power Open Processors can be installed or removed while the MBC/RBC is powered. If you are installing a Power Open Processor, perform Steps 5 through 16 of this procedure only.

1. Prepare the MBC/RBC and related equipment for shutdown.

2. Notify appropriate building personnel that the panel will be shut down and tell them which equipment is going to be affected. Follow the necessary shutdown procedures to prevent damage to any equipment or personnel.

3. Ensure that all previously installed Open Processors have a good battery to prevent data loss. The BATT LOW LED indicates a low battery. If the light is glowing red, replace the battery before proceeding.

⚠ **CAUTION:**
To avoid equipment damage, do not install an Open Processor while the MBC/RBC panel is powered up.

4. Switch the MBC/RBC power switch OFF.

   NOTE: Insert or remove the Open Processor only when the power switch is OFF.

5. Remove the C-Bus cover from the lowest available slot and discard (see Figure 2).

6. Remove any remaining M-Bus protective tape from the M-Bus rails.

7. If there is a warning label over the C-Bus card on the back of the Power Open Processor/Open Processor, remove it (see Figure 4).

8. Remove the protective cap from the C-Bus card edge (see Figure 4).

9. Align the Power Open Processor/Open Processor with the slot number printed on the mounting rail (see Figure 2).

10. Align the Power Open Processor/Open Processor mounting guides with the right-hand edge of the M-Bus rail (see Figure 2).

11. Push firmly on the free end of the Power Open Processor/Open Processor so that its C-Bus card edge and M-Bus connector mate with the C-Bus connector and M-Bus rail (see Figure 2). You will hear a "click" when the Power Open Processor/Open Processor is properly attached to the mounting rail.

12. If the Power Open Processor/Open Processor needs repositioning, pull the metal latch. Pull the Power Open Processor/Open Processor forward from the C-Bus connector (see Figure 2) and repeat Steps 9 through 11.

13. Plug the pre-wired FLN connectors into the corresponding ports on the left side of the Power Open Processor/Open Processor. These ports are labeled FLN 1, FLN 2, and FLN 3 (see Figure 3). The screws for the connector should be pointing down.

14. Do one of the following. If you are installing:

   a. An *Open Processor/Protocol 2*, plug the ALN connector into the corresponding port on the right side labeled BLN + – S (see Figure 4). The screws for the connector should be pointing down.

   b. A *Power Open Processor/Protocol 2*, plug the ALN connector into the corresponding (right-hand) port labeled BLN. The screws for the connector should be pointing down.

   c. A *Power Open Processor/Ethernet* or *Power Open Processor/BACnet*, plug one end of the RJ-45 connector into the Ethernet jack box, and the other end into the corresponding (right-hand) Power Open Processor port labeled EALN.

   NOTE: **For smoke control applications over Ethernet:**
   You must connect to the Ethernet ALN or BACnet/IP ALN through an Ethernet switch UL Listed for Fire Signaling. The panel and the switch must be installed in the same room.

15. Discard the temporary connector cover.

⚠️ **WARNING: Open Processor/Protocol 2 or Controller Module - Lithium Battery**
Only qualified service personnel or an authorized Siemens Building Technologies, Inc. representative can enable the Open Processor/Protocol 2 or Controller Module lithium battery.

Improper installation of battery or use of a different battery may cause an explosion.

16. Enable the Power Open Processor/Open Processor battery by removing the piece of Mylar that separates the battery from its holder.

17. Switch the MBC/RBC power switch ON.

The installation is now complete.

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