

Expansion Module Kit



Figure 1. Expansion Module Kit

The Expansion Module Kit facilitates affordable expansion as a supplementary component to the APOGEE™ Automation System. The true modularity and flexibility of the Modular Building Controller (MBC) and Remote Building Controller (RBC) is enhanced by these snap-in modules to provide more point capacity for larger mechanical equipment control. The kit allows further customization of each control panel with the exact hardware and program for the application. For example, the Expansion Module Kit facilitates:

- Controlling high point density motor control centers,
- Interfacing with other building systems for fire and lighting,
- Synchronizing the control of large multi-chiller central plants and thermal storage systems, and
- Coordinating large status and monitoring panels.

Features

- Modular hardware allows complete flexibility in matching equipment to initial control requirements while providing for future expansion.
- Uses the same snap-in modular design as the Point Termination Modules for simple installation and servicing.
- Communication among expansion panels takes place over the internal Module Bus (M-Bus) reducing unnecessary building network communication traffic.
- Field panels expanded with the Expansion Module are viewed by the MBC/RBC Open Processor as one control panel minimizing the number of additional nodes on the Building Level Network.

Hardware

Each module consists of two pieces: the electronic point module and the termination block which provides the wire connections. The termination block resides on a mounting rail and can be installed without tools before the electronic point module. The snap-in design of the modules allows them to be added or replaced without re-terminating wires.

The Expansion Module Kit consists of the following two major components which expand the point capacity of a new or existing MBC and RBC:

Primary Module

Mounts in the MBC or RBC containing the Open Processor, considered the primary panel. Together with the Expansion Module, the Primary Module transmits the Module Bus signal from panel to panel.

Expansion Module

Mounts in remote MBC or RBC field panels and differs from a primary panel in that a Open Processor is not required within the expansion panels. Together with the Primary Module, the Expansion Module transmits the Module Bus signal from the expansion panel to the primary panel.

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When inserted in a MBC or RBC, the Primary Module allows the Open Processor, the main processor, to scan point modules located in accompanying expansion panels. The signal of the Module Bus, which allows communication between the Point Termination Modules and the Open Processor, is transmitted among field panels via the Primary and Expansion Modules while electrically isolating the individual panels. The Open Processor processes the points in the expansion panels as if they were residing on one continuous M-Bus. The processor scans all points at 62.5K bps.

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