

## Electrical Signaling

Electrical protective signaling systems are configurations of components used to produce alarm signals indicative of fire, smoke, sprinkler waterflow or other emergency and to produce supervisory signals indicative of conditions needing attention with respect to protection equipment or watch service. System configurations are classified according to where and how the signals are received. The categories are commonly designated as local, municipal, remote station, proprietary, emergency voice/alarm communication, emergency communication, and central station. Auxiliary systems are either local or proprietary systems interconnected with a municipal system.

This category presents the major system component categories and the integrated system configurations. The selection of components to form a hybrid system should be made only by those skilled in system design. Also, the suitability of any system application should be judged on the basis of the hazard(s) being protected.

### Local Protective Signaling

Local systems produce alarm and/or supervisory signals within the protected property, which may not be constantly attended. The systems are electrically supervised, include a secondary power supply having sufficient capacity to operate the system for 24 hours under maximum normal load and often are primarily for the purpose of providing occupant evacuation signals. Some local systems also provide for signaling to a constantly attended remote location.

The heart of a signaling system consists of a control unit to which are connected the initiating and signal indicating circuits. The control unit is usually in a separate enclosure, provides power to its external circuits, and often is of modular design to enable flexibility in obtaining multiple functions. In a coded signaling system, transmitters may be either separate from or integral to a control; they transmit to the control or from a control to remote receiving equipment. The equipment listed below, in conjunction with peripheral devices, may be used to form a complete system or a portion of a multizone system.

### Models B9512G, B9512G-E, B8512G & B8512G-E Control/Communicators

Programmable Fire Alarm Control Panels. Models B9512G, B9512G-E, B8512G & B8512G-E Control/Communicators using Firmware Version 3.01 equipped with Models B930, B925F, B926F, 1255RB, D1256RB or D1257RB command center (keypads) for annunciating, silencing and resetting trouble and alarm conditions. The controller board on all the controls has 8 initiating device circuits configured for (Class B) Style B wiring. For (Class A), Style D wiring, optional module D129 dual (Class A) Initiating Circuit Module must be connected. For 2-wire smoke detectors, optional module D125B powered Loop Interface Module must be connected. A total of 1.4A maximum at 10.2 to 13.9 V dc (continuous supply) is provided by the control for connected devices and outputs. Model D192G Bell Circuit Supervision Module connects to any of the controls to provide one (Class B) Style Y notification appliance circuit. The panel has one SDI2 bus and one SDI1 bus which can be configured as either an SDI or SDI2 bus. The following SDI2 modules (wired in parallel) can connect to the SDI2 bus: B942 Model keypad; B520 Auxiliary Power Supply module; B450 Conettix Plug-In Communicator Interface (allows communication over a cellular network through the SDI2 bus); B426 Conettix Ethernet Communication Module, a Conettix Plug-in cellular module (B440/B441/B442/B443 plugged into the control panel); B299 POPEX Module (module communicates to the control panel over the SDI2 bus, and provides support for up to 100 POPIT (Point Of Protection Input Transponder) devices); B208 Octo-input Module (this is an eight point supervised expansion device that connects to the control panel through the SDI2 bus and communicates back to the control panel all point status changes); B308 Octo-output Module (this is an eight point supervised expansion device that connects to the control panel through the SDI2 bus and provides eight independently controlled outputs); B930 ATM Style Alphanumeric Keypad and B925F or B926F Fire Keypad (annunciator). The following SDI modules can connect to the SDI bus: B600 Retrofit (ZONEX) module (it enables the use of ZONEX devices on the B9512G/B8512G control panel and allows for connection to a D8125 [D8125MUX, D8125INV] module for point expansion. The B9512G using a D8125 can use point of protection input transponder (POPIT) modules to provide a maximum of 238 off-board points. The B8512G using a D8125 provides up to 67 off board points. D9127 POPITs use the D8125 POPEX Module to report to the control panel. Each D8125 supports up to 119 POPIT points. Connection of two D8125 modules to the B9512G brings the total number of POPIT points to 238; D1255RB, D1256RB or D1257RB command center (keypads); D130 reversing relay module; and D8128D OctoPOPIT Eight point expander module. The controls only support 12 V dc rated field devices. The D9127U or D9127T POPIT Modules are used connect four-wire smoke detectors. The D125B Powered Loop Interface Module is used with 2-wire smoke detectors and D129 Dual "Class A" Initiation Circuit Module is used with 4-wire smoke detector. The control can utilize a network connection (on-board Ethernet port (B9512G and B8512G panels only), cellular module, B426 Conettix Ethernet Communication Module, or telephone module), or locally using the control panel's on-board Ethernet port or a USB port. The power supplies to the controls utilize a 12 V dc, 7 - 32 AH battery or a maximum of two batteries when using the D122(L) Battery Harness to provide 24 hour secondary (standby) power. All the equipment is suitable for operation in ambient temperatures from 32° to 120°F (0° to 49°C). The B9512G-E and B8512G-E control panels are designed for European installations. Controls can also be used as digital alarm communicator transmitters (see also **CENTRAL STATION and REMOTE STATION SIGNALING SYSTEMS listings**).

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