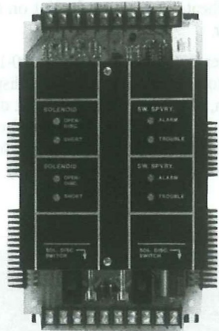


been approved by Factory Mutual Research Corporation for actuation of FM Solenoid Groups A, B, D, E, F and G.

Option GG (RS-91D), is available for those applications which require operation of the Star Model D deluge valve. This model contains two (2) release circuits and two (2) Class B supervisory circuits, and requires one (1) module space in the system enclosure. Option GG (RS-91D) is the only model which has been FM Approved for operation of the Star Model D deluge valve, FM Solenoid Group C.



Solenoid monitor and release module with Class B supervisory circuits. (Options G & GG)

Intrinsically Safe Detection Circuits (Options H, J, & K)

The 2000 Series can be provided with intrinsically safe Class B detection circuits for those areas that are classified as hazardous. The voltage and current in the detection circuits will be limited to values which are incapable of causing an explosion in a Division 1 area. Protectowire Linear Heat Detector and/or other non-energy storing initiating devices may be used in these areas. Three FM Approved options are currently offered for the 2000 Series Control Panels:

Option H utilizes a shunt diode barrier and has been FM Approved for NEC Classes I, II, and III, Division 1, Groups A, B, C, D, E, F and G. This option permits the use of the Protectowire alarm point location meter (Option A) but requires that the system ground fault detection circuit be disabled.

Option J is used exclusively with TRI-Wire detection zones and provides two shunt diode barriers per zone. This option is FM Approved for NEC Classes I, II, and III, Division 1, Groups C, D, E, F and G. Option J is compatible with the Protectowire Alarm Point Location Meter (Option A), but requires that the system ground fault detection circuit be disabled.

Option K incorporates a DC isolator as part of the detection circuit. This method is FM Approved for NEC Classes I, II, and III, Division 1, Groups A, B, C, D, E, F and G. The use of Option K permits the utilization of the system ground fault detection circuit for all other non-isolated system circuits, but is not compatible with the Protectowire Alarm Point Location Meter (Option A).

Note: Option K is not FM Approved for use with TRI-Wire detection zones (Option X).

Battery Charging Meters (Option P)

Battery Charging Meters (Option P) consist of a DC volt meter and DC amp meter which provide a numerical indication of the system's

battery condition. These meters provide an accurate display of both the charging current draw and the battery standby voltage level. Option P is side wall mounted inside the enclosure, and may be viewed only when the enclosure door is opened.

Audible Alarm Circuits (Options T & U)

Each 2000 Series Control Panel contains two standard Class B (Styles W & Y) general alarm circuits which are contained on the main control board. These audible circuits may be wired in a Class A (Styles X & Z) configuration when Option T is ordered.

Additional audible alarm circuits may be added to the system by utilizing AE-91 Audible Expander Modules (Option U). Each module provides one (1) audible alarm signaling circuit which may be wired in either a Class A (Styles X & Z) or Class B (Styles W & Y) configuration. These plug-in modules may be provided in a latching or non-latching mode and will also accept up to four (4) inputs for selective activation by zone or groups of zones. Option U requires half a module space in the system enclosure, and the total circuit load may not exceed 1.0 amp.

Zone Voting Module (Option V)

The ZV-91 Zone Voting Module (Option V) is designed to offer selective/multiple circuit activation from a variety of initiating circuits, depending on the operational logic to be achieved upon system operation.

The ZV-91 contains a programmable resistor network which will accept up to 16 input signals. The 16 inputs are arranged into four (4) groups of four (4) with each group capable of providing a designated output signal (total 4). When used in a voting zone format, the module inputs can be selectively programmed to provide an output signal upon activation of any two or three of the 16 inputs. When a cross-zoned configuration is required, the module will accept a maximum of eight (8) inputs or zones, and can provide up to a maximum of four (4) separate outputs.

The module provides excellent system versatility in control function logic. Typical application examples are: actuation of selected relays from the operation of two or more independent initiating circuits; activating an AE-91 Audible Expander Module from a number of select initiating device circuits; and cross-zoning of initiating device circuits and/or supervisory circuits. The ZV-91 is designed for mounting on the sidewall of the enclosure, and does not require a designated module space when sizing the system enclosure.

Auxiliary Power Supply (Option W)

The PS-91 Auxiliary Power Supply (Option W) is a step-down transformer and bridge rectifier designed to increase the system power of any 2000 Series Control Panel. The PS-91 supplies additional full wave rectified power for detection zones, solenoid release circuits, auxiliary audible circuits, alarm relays, or other high power demand devices which may exceed the capacity of the system's main power supply.

The unit is completely supervised. Should the PS-91 fail, a trouble signal illuminates the on-board trouble LED, and allows the battery back-up source to supply the panel with the necessary power. The PS-91 operates on primary AC power of 120VAC, 50-60Hz at 1.75 amps maximum, and provides 5.0 amps of DC power under alarm conditions.

Dual Temperature Detection Zones for use with Protectowire TRI-Wire™ Linear Heat Detector (Options X & XX)

Option X, Class B (Style B)

Option X consists of a ZC-95 plug-in zone module, which provides two (2) independent Class B (Style B) dual input detection zones