



6820EVS

Emergency Voice System and Fire Alarm Control Panel

The 6820EVS is a fire alarm control panel (FACP) and emergency mass notification system conveniently integrated and housed in one panel, and meets the requirements for mass notification as described in UL 2572. The 6820EVS is a direct replacement for the 5820XL-EVS panel. The 6820EVS can be configured to achieve an overall point capacity of up to 1110 points and connect up to 17 panels in a single communications link.

The 6820EVS has one built-in signaling line circuit (SLC), which can support 159 (SK) System Sensor® sensors and 159 SK modules or 127 (SD) Hochiki® devices per loop. To increase point capability, additional SLC loops can be added using the 6815 SLC expander for SK devices or the 5815XL expander for SD devices, increasing the point capacity to a maximum of 1110 points for SK devices and 635 points for SD devices. Three additional SLCs are needed to reach 1110 points (SK devices). Four additional SLCs are needed to reach 635 points (SD devices).

The common communications and annunciation link allows up to 17 panels to be connected via copper or fiber optic cable. A designated panel is configured as the communicator for all panels in the link for convenient single-point communications. It also has a built-in, dual-line POTs and IP communicator with optional cellular reporting available.

The emergency communication system operations include an onboard supervised microphone, and all-call and non-active call buttons can quickly select all active or all non-active output groups. The system also allows for ECS messages to take priority over fire.

SWIFT® wireless compatibility provides options for wireless detection through a Class A mesh network. It is ideal for hard-to-wire locations,



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buildings where new wiring is not allowed, or to provide an easy install fire system for new construction projects. SWIFT devices can be combined with other hard-wired 6820EVS compatible devices.

The 6820EVS has a form-C trouble relay, and two programmable form-C relays, along with powerful features such as drift compensation, pre-trouble maintenance alert, a built-in sensor test to comply with NFPA 72 calibration testing requirements, and calibration trouble alert. The 6820EVS supports a variety of devices, including the 6860, 5860, and 6855 remote annunciators, 5824 serial parallel printer interface module (for printing system reports), the 5496 NAC expander, 5895XL power module, and SK or SD devices.

The panel also has four user-programmable buttons which are ideal for programming simple, complex, and routine tasks.

FEATURES & BENEFITS

- Up to 1110 points for greater design flexibility. Additional SLCs can be added until maximum point levels are reached
- Connect up to 17 panels on one site with convenient single-point access; compatible with mixed FACP models
- 15 recordable one minute messages can be mapped to eight different EVS buttons
- Built-in USB interface for convenient programming
- Convenient field-upgradeable firmware
- Built-in annunciator with a large 160 character, 4 x40 LCD display
- Four user-programmable buttons minimize time spent executing complex or routine tasks
- 16 built-in speaker group switches; expandable to 32
- JumpStart® auto programming feature for easy programming
- Built-in dual path POTs and IP communications with optional cellular models available for reliable backup reporting
- Programmable date setting for automatic and Daylight Saving Time changes
- Flexput® circuits can be individually programmed to function as notification circuits, auxiliary power outputs, or initiating circuits that support both 2- and 4- wire smoke detectors

SIGNAL LINE CIRCUIT (SLC)

The 6815 signal line circuit (SLC) supports multiple device types of SK protocol, while the 5815XL signal line circuit (SLC) supports multiple device types of SD protocol. You cannot mix SD and SK SLC devices on a FACP.

The 6820EVS has one built-in signaling line circuit (SLC) which supports multiple devices. Additional points can be added using up to three 6815 SLC expanders to increase overall capacity to 1,110 maximum points (SK devices) or by adding up to four 5815XL SLC expanders to reach 635 maximum points (SD devices). The number of SLCs which can be used within one system is only limited by point count. (See the Manual for additional information.)

The 6820EVS SLC loops support multiple device types, maintenance alerts, and a built-in sensor test to comply with NFPA 72 calibration testing requirements.

INDICATOR LIGHTS

- **General Alarm (Red):** Flashes if in alarm; solid when alarm is silenced
- **Supervisory (Yellow):** Flashes if a supervisory condition exists; solid when supervisory is silenced
- **System Troubles (Yellow):** Flashes if a trouble condition exists; solid when trouble is silenced
- **System Silenced (Yellow):** On when an alarm, trouble or supervisory condition has been silenced but not yet cleared
- **System Power (Green):** Flashes for AC failure; solid when power systems are normal

USER INTERFACE

The 6820EVS built-in 4 x 40 annunciator with 160 character LCD display and large easy-to-use tactile touchpad can be used for system operation, programming and maintenance. It has five LEDs for

alarm, supervisory, system trouble, system silenced and system power. System operations include silencing alarms and troubles, resetting alarms and the display of alarm troubles and memory. The system's non-volatile event history buffer stores 1,000 events for viewing from the built-in or remote annunciator. System operations can be initiated with a mechanical firefighter's key or a valid 4- to 7-digit operator's code.

PROGRAMMING

The 6820EVS system offers several options to simplify and speed-up programming. JumpStart® AutoProgramming minimizes programming required to start a new system. The built-in keypad, or the 6860, 5860 or 6855 remote annunciators give you on-site access to current system programming. Programming can also be accomplished using the Windows®-based Honeywell Fire Software Suite (HFSS) program.

SOFTWARE TOOLS

SKST: Silent Knight Selection Tool provides the installer or design architect with a Windows® software system configuration tool to create a detailed Bill of Material (BOM) and battery calculations.

HFSS: Honeywell Fire Software Suite provides communication and panel programming, detector status, event history and additional data. Requires a PC running Microsoft® Windows®.

ADDITIONAL INFORMATION

Twisted-unshielded pair wire is recommended. The 6820EVS also has 13 preset notification cadence patterns (including ANSI 3.41).

AGENCY LISTINGS AND APPROVALS

NFPA 13, NFPA 15, NFPA 16, NFPA 70, NFPA 72: Central station; remote Signaling; Local Protective Signaling Systems; Auxiliary Protected Premises Unit; Water Deluge releasing service.

Suitable for automatic, manual, waterflow, sprinkler supervisory (DACT non-coded) signaling services.

UL Listed: S2766

CSFM 7165-0559:0500

FDNY COA# 6249

FM approved

UL listed for Continuous or ANSI 520Hz speaker tones that meet NFPA 72 Low Frequency Signal Requirements for Sleeping Areas when used with the EVS-INT50W or EVS-100W amplifiers and compatible speakers

ORDERING INFORMATION

6820EVS: Emergency Communication System with FACP. (Red cabinet).

COMPATIBLE ANNUNCIATORS

6860: 4x40 LCD remote fire annunciator (4 lines and up to 160 characters) per system; four programmable buttons

5860: 4x20 LCD remote fire annunciator. 5860 is gray; 5860R is red

6855: 4x20 LCD remote fire annunciator

5865-3 / 5865-4: LED annunciators can display up to 30 LEDs (15 red and 15 yellow). The 5865-4 has key switches for silence and reset, and a system trouble LED.

5880: The 5880 LED / IO module has 40 programmable LED outputs and eight supervised dry contact inputs which are useful for custom applications. You can use up to eight 5880 modules on one control panel for maximum flexibility.

6820EVS COMPATIBLE DEVICES AND ACCESSORIES

See the data sheets listed below for a complete listing of the SK, SD or SWIFT devices.

53623: SK Devices Data Sheet

53624: SD Devices Data Sheet

350614, 350616 & 350618: SWIFT wireless devices

For a complete and current listing of compatible devices and accessories, visit

www.silentknight.com

Important: You cannot mix SK and SD devices in the same fire alarm system.

SK COMPATIBLE ADDRESSABLE DEVICES

SK-ACCLIMATE: Multi criteria photoelectric smoke detector with thermal 135°F fixed temperature
SK-BEAM: Reflected beam smoke detector without test feature
SK-BEAM-T: Reflected beam smoke detector with test feature
SK-CONTROL: Supervised control module
SK-CONTROL-6: Six circuit supervised control module
SK-DUCT: Photoelectric duct smoke detector with extended air speed range
SK-FIRE-CO: Four criteria fire and carbon monoxide detector
SK-HEAT: Fixed thermal detector (135°F)
SK-HEAT-W: Fixed thermal detector (135°F), white
SK-HEAT-ROR: Fixed rate of rise detector (135°F)
SK-HEAT-ROR-W: Fixed rate of rise detector (135°F), white
SK-HEAT-HT: Fixed high temperature thermal detector (190°F)
SK-HEAT-HT-W: Fixed high temperature thermal detector (190°F), white
SK-ISO: Fault isolator module
SK-MINIMON: Mini monitor module
SK-MONITOR: Monitor module
SK-MONITOR-2: Dual input monitor module
SK-MON-10: 10 input monitor module
SK-PHOTO: Photoelectric smoke detector
SK-PHOTO-W: Photoelectric smoke detector, white
SK-PHOTO-T: Photoelectric smoke detector with thermal (135°F fixed temperature)
SK-PHOTO-T-W: Photoelectric smoke detector with thermal (135°F fixed temperature), white
SK-PHOTOR: Photoelectric detector with remote test capability
SK-PHOTO-R-W: Photoelectric detector with remote test capability, white
SK-PULL-SA: Addressable single action pull station
SK-PULL-DA: Addressable dual action pull station
SK-RELAY: Addressable relay module
SK-RELAY-6: Addressable Six relay control module
SK-RELAYMON-2: Addressable Dual relay/monitor module
SK-ZONE: Addressable zone interface module
SK-ZONE-6: Six zone interface module
B300-6(-IV): 6" base for SK-W Series
B210LP: 6" mounting base
B501(-BL,-IV,-WHITE): 4" flangeless base
B501: 4" Flangeless mounting base
B200S(-IV,-WH): Intelligent sounder base
B200S: Intelligent sounder base
B200S-LF(-IV,-WH): Low-Frequency intelligent sounder base

B200S-LF: Low-frequency intelligent sounder base

B224RB(-IV,-WH): Relay base

B224RB: Relay base

B224BI(-IV,-WH): Isolator base

B224BI: Isolator base

SD COMPATIBLE ADDRESSABLE DEVICES

SD505-6AB: Addressable 6" base
SD505-6IB: Addressable 6" short circuit isolator base
SD505-6RB: Addressable 6" relay base
SD505-6SB: Addressable 6" sounder base
SD500-AIM: Addressable input module (switch input)
SD500-ANM: Addressable notification module
SD500-ARM: Addressable relay module
SD505-DTS-K: Remote test switch and LED indicator for the SD505-DUCTR
SD505-DUCT: Addressable Duct Smoke Detector.
SD505-DUCTR: Addressable Duct Detector housing with relay base.
SD505-HEAT: Absolute temperature heat detector. Trip point range from 135°F–150°F (0°C–37°C).
SD500-LIM: Addressable Line isolator module
SD500-MIM: Addressable Mini input monitor module (switch input)
SD505-PHOTO: Photoelectric smoke detector
SD500-PS/-PSDA: Addressable Single or dual action pull station
SD500-SDM: Addressable smoke detector module

AUDIBLE/VISIBLE DEVICES These AV devices are all 2-wire. Color: "R" indicates red; "W" denotes white. For a complete listing of Silent Knight AV devices go to www.silentknight.com.

CHSRL/CHSWL: Wall chime/strobe

CHSRL/CHSWL: Ceiling chime/strobe

CHRL/CHWL: Wall chime

HRL/HWL: Wall horn

P2RL/P2WL: Wall horn/strobe

PC2RL/PC2WL: Ceiling horn/strobe

SRL/SWL: Wall strobe

SCRL/SCWL: Ceiling strobe

SPSRL/SPSCWL: Ceiling speaker/strobe

SPSRL/SPSWL: Wall speaker/strobe

SPRL/SPWL: Wall speaker

SPCRL/SPCWL: Ceiling speaker

SWIFT WIRELESS DEVICES

SWIFT is only compatible with System Sensor (SK) devices. It is not compatible with Hochiki (SD) devices.

WSK-WGI: Wireless Gateway

WSK-PHOTO: Wireless Photoelectric smoke detector

WSK-PHOTO-T: Wireless Multi-criteria photoelectric smoke detector with thermal detection (135°F fixed temperature) and B510W 4" base

WSK-HEAT: Wireless Heat, (135°F fixed temperature) and B510W 4" base

WSK-HEAT-ROR: Wireless heat, ROR (135°F fixed temperature) and B510W 4" base

WSK-MONITOR: Wireless monitor module

WSK-RELAY: Wireless relay module

W-USB: SWIFT Tools USB transceiver used for communication with SWIFT devices

SBUS ACCESSORIES

6815: Each Single Line Circuit allows for an additional 159 SK modules and 159 SK sensors to be added to the system—up to 1,110 total points. Supports System Sensor SK devices only.

5815XL: Each Single Line Circuit provides an additional 127 SD devices to be added to the system—for a maximum of 635 points. Supports SD devices only.

5496: A 6 amp notification power expander with four power-limited notification appliance circuit outputs.

5883: Relay Interface. Provides 10 Form C relays.

5824: Serial/Parallel Printer Interface Module for printer connection.

5895XL: Power Supply with six Flexput™ circuits, and two Form C relays. Max. 16 per system.

5815RMK: Remote mounting kit. Dimensions 10 3/8"W x 10-3/16"H x 3"D

EVS ACCESSORIES

EVS-50W: 50 Watt Amplifier*

EVS-125W: 125 Watt Amplifier*

EVS-100W: 50/100 Watt Amplifier*

EVS-100WBU: External Backup Amplifier

EVS-INT50W: 50 Watt Internal Amplifier

EVS-CE4: Circuit Audio Expander

EVS-SW24: 24 Switch Expander

EVS-VCM: Voice Control Module

EVS-LOC: Local Operator Console**

*Support for up to four amplifiers; 500W maximum. Each amplifier has four built-in speaker circuits expandable to eight.

** Supports up to four EVS-LOCs

COMMUNICATION OPTIONS

CELL-CAB-SK: Cellular communicator, metal enclosure with lock/key*

CELL-MOD: Cellular communicator, plastic enclosure*

*Sole path, powered by panel.

IPGSM-4G: Dual path fire alarm communicator, cellular and/or IP (primary or backup, selectable)

SK-IP-2: Remote reporting via the Internet. Requires a VisorAlarm® receiver at the central station

6820EVS Technical Specifications

MISC. ACCESSORIES

SK-NIC: Network Interface Card. Provides a common communications link for the 6820EVS. (Panels cannot be linked together for peer-to-peer networking).

SK-NIC-KIT: Installation Accessory Kit

SK-FML: Fiber-Optic Multi Mode, transmitter and receiver

SK-FSL: Fiber-Optic Single Mode RBB: Remote battery box accessory cabinet or batteries that are too large to fit in the FACP cabinet. Dimensions: 16" W x 10" H x 6" D (406mm W x 254mm H x 152mm D).

SK-SCK: Seismic Compliance Kit used to securely fasten batteries to the fire panel.

PHYSICAL

Overall Dimensions: 21.59"W x 28.1"H x 5.05"D

Shipping Weight: 50 lbs.

Color: Red

ENVIRONMENTAL

Operating Temperature: 32°F to 120°F (0°C to 49°C)

Humidity: 0 to 93% relative humidity (non-condensing)

ELECTRICAL

6820EVS Primary AC: 120AC @ 60Hz, 3.3A Total Accessory Load: 6A @ 27.4VDC power-limited

Standby Current: 190mA

Alarm Current: 250mA

Battery Charging Capacity: 7 to 35AH

Battery Size: 18AH max. allowed in control panel cabinet. Larger capacity batteries can be housed in RBB accessory cabinet.

Six conductor wiring: 4 SBUS and 2 Voice Bus

FLEXPUT® CIRCUITS

Six programmable circuits which can be programmed individually as:

Notification Appliance Circuits: 3A @ 27.4VDC per circuit, power-limited (with a panel maximum current of 6A)

Auxiliary Power Circuits: 3A @ 27.4VDC per circuit, power-limited

Initiating Circuits (Circuits 5 and 6 Only): 100mA @ 27.4VDC per circuit, power limited

Supports Class B (Style 4) and Class A (Style 6) configuration for SLC, SBUS, and Flexput circuits

WIRING: See the product manual for wiring details

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