![Honeywell SILENT KNIGHT logo]

6820

Addressable Fire Alarm Control Panel

The 6820 is an addressable fi re alarm control panel (FACP) and is a direct replacement for the 5820XL FACP. The 6820 can be configured to achieve a point capacity of 1110 points and connect up to 17 panels in a single communications link.

The 6820 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 capabilities, 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).

A 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 additional cellular options available.

The 6820 system can be enhanced by adding modules such as the 6860 remote annunciator which also has four programmable function buttons to help automate tasks and reduce time spent at the panel.

SWIFT® wireless compatibility provides options for wireless detection through a Class A mesh network. It is ideal for hard-to-wire locations, 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 6820 compatible devices.

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The 6820 also has a form-C trouble relay, 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 6820 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.

FEATURES & BENEFITS

- Capable of providing up to 1110 points for enhanced design flexibility. Additional Signal Line Circuits can be added until maximum point levels are reached
- Built-in USB interface for convenient and quick programming

- Connect up to 17 panels on one site with convenient single-point access using the SK-NIC Network Interface Card. Connected panels can have mixed compatible FACP models
- Convenient field-upgradeable firmware

- Built-in dual path POTS and IP communications with optional cellular models available for reliable backup reporting
- 6860 annunciator with a 4 x 40 large display
- JumpStart® auto programming reduces installation time

- Programmable date setting for automatic and convenient Daylight Saving Time changes
- Four user-programmable buttons minimize time spent executing complex or routine tasks

- 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 6820 has one built-in signaling line circuit (SLC) which supports multiple devices. Additional points can be added using the 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 limited by point count. (See the Manual for additional information.)

The 6820 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 6820 built-in 4 x 20 annunciator with 80 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 6820 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 6820 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**

ORDERING INFORMATION

6820: Addressable Fire Alarm Control Panel. (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 or 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. Its compact size allows mounting inside the annunciator, or in an accessory cabinet.

6820 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(-WHITE, -IV, -BL): 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

CHSCRL/CHSCWL: 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

SPSCRL/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

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

MISC. ACCESSORIES

SK-NIC: Network Interface Card. Provides a common communications link for the 6820.

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 for 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.

6820 Technical Specifications

PHYSICAL

Overall Dimensions: 16.36" W x 26.37" H x 3.91" D
Shipping Weight: 32 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

6820 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.

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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