IntelliKnight® Model 5820XL Addressable Fire Alarm Control System

The IntelliKnight System is the easy way to make the most of fire alarm technology.

IntelliKnight 5820XL is the first fire alarm system to provide you with revolutionary value and performance in addressable sensing technology. The 5820XL FACP offers exclusive, built-in digital communication, distributed intelligent power, a modular design and an expanded, easy to use interface. Powerful features such as drift compensation and maintenance alert are delivered in this powerful FACP from Silent Knight.

For more information about the 5820XL system, or to locate your nearest source, please call 1-800-446-6444, or in Minnesota, call 763-493-6435.

Description

5820XL performs drift compensation and calibration checks on each of the sensors in the system.

The basic 5820XL system can be expanded by adding modules such as 5860 remote annunciator, 5815XL signalling line circuit expander, 5824 serial/parallel printer interface module (for printing system reports), and 5895XL intelligent power module. 5820XL also features a powerful built-in dual line fire communicator that allows for reporting of all system activity to a remote monitoring location.

Features

- Up to 508 addressable points
- Uses standard wire—no shielded or twisted pair required
- Built-in digital communicator
- Central station reporting by point or by zone
- Built-in synchronization for appliances from AMSECO®, Gentex®, Faraday, System Sensor, and Wheelock®
- Flexput™ I/O circuits
- Supports Class B (Style 4) and Class A (Style 6) configuration for SLC, SBUS, and Flexput circuits
- Distributed, intelligent power
- Drift compensation
- 13 pre-programmed output cadences (including ANSI-3.41) and 4 programmable outputs
- Built-in annunciator with 80-character LCD display
- RS-485 bus provides communication to system accessories
- Built-in RS-232 and USB interface for programming via PC
- Built-in Form C trouble relay rated at 2.5 amps at 27.4 VDC

- Improvements in SKSS software deliver five times faster uploads/downloads
- Two built-in Form C programmable relays rated at 2.5 amps at 27.4 VDC.
- Supports sounder bases
- 6 amp power supply and maximum charging capacity of 35 amp hours (An additional cabinet enclosure is required for batteries in excess of 18 amp hours)
- Programmable date setting for Daylight Saving Time
- Plex-1 door option combines a dead front cabinet door with a clear window, limiting access to the panel while providing single button operation of the reset and silence functions

Electrical Specifications

Primary AC:
 120 VRMS at 50/60 Hz, 2.5A or
 240 VRMS at 50/60 Hz, 1.4A

Total Accessory Load: 6A @ 27.4 VDC, power-limited

Standby Current:	215 mA
Alarm Current:	385 mA

Flexput Circuits: Six programmable circuits which can be programmed individually as:

 Notification circuits: 3A @ 27.4 VDC per circuit, power-limited

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

 Initiation Circuits: 100 mA @ 27.4 VDC per circuit, power limited

Mechanical Specifications

Flush Mount Dimensions:
  14.5"W x 24.75"H x 3.9"D
  (36.8 W x 62.9 H x 9.8 D cm)

Model 5820XL

Overall Dimensions:
  16.2"W x 26.4"H x 4.2"D
  (40.6 W x 67 H x 11.8 D cm)

Weight: 28 lbs. (12.8 kg)

Color: Red

Battery Charging Capacity: 7.0-35 AH

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

Telephone Requirements:

FCC Part 15 and Part 68 approved

Type of Jack: RJ31X (two required)

SILENT KNIGHT
by Honeywell

IntelliKnight Model 5820XL
Addressable Fire Alarm Control Panel

Indicator Lights

General Alarm (Red): Flashes when in alarm; solid when alarm silenced

Supervisory (Yellow): Flashes when a supervisory condition exists; solid when supervisory silenced

System Troubles (Yellow): Flashes when a trouble condition exists; solid when trouble 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

System Application

5820XL has one built-in signalling line circuit (SLC) which supports 127 devices. Three additional loops can be added using the 5815XL SLC expanders to increase overall capacity to 508 devices.

The 5820XL SLC loops support multiple device types, including:

- Addressable photoelectric smoke detector
- Addressable ionization smoke detector
- Addressable heat sensor
- Addressable duct smoke detector
- Contact module
- Relay output module
- Addressable notification module

The following advanced sensor capabilities are available with 5820XL:

- Automatic drift compensation
- Maintenance alert
- Built-in sensor test to comply with NFPA 72 calibration testing requirements

5820XL features a 6 amp power supply and maximum battery charging capacity of 35 amp hours. An additional cabinet enclosure (PN RBB) is required for batteries in excess of 18 amp hours.

Flexput circuits on 5820XL control can be individually programmed to function as notification circuits, auxiliary power outputs, or initiation circuits that support both 2- and 4-wire smoke detectors.

The 5820XL system operates on non-twisted, unshielded cable when wired in compliance with standard wiring practices as called out in the National Electric Code 760-51 specifications for power-limited fire protective signalling cables. No special wiring is required. 5820XL provides 13 preset notification cadence patterns (including ANSI 3.41) and four user programmable selections for fire alarm notification.

Two programmable general purpose Form C relay outputs are provided on 5820XL.

Additionally, the IntelliKnight system features a built-in walk test and auto-programming. Its innovative, dead-front cabinet design allows for flush or surface mounting. System maintenance is easy to perform.

User Interface

The 5820XL built-in 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 1000 events for viewing from the built-in or remote annunciator. System operation can be initiated with a mechanical firefighter's key or a valid 4- to 7-digit operator's code.

Programming

The IntelliKnight system offers several options to simplify and speed up programming. The JumpStart® feature minimizes programming

required to start a new system. The built-in keypad and 5860 remote annunciator give on-site access to all programming. You can also program remotely using the 5660 Silent Knight Software Suite, which is Windows®-based software.

Built-In Digital Communicator

5820XL features a built-in UL listed digital communicator for remote reporting of system activity and system programming. The communicator has the ability to seize two telephone lines to report alarms and troubles to a monitoring facility. The communicator supervises two phone lines and will activate a trouble signal if a line failure is sustained for more than 45 seconds. Other communication features include: retry if communication fails, two phone number capability, download phone number capability and Touch-Tone or rotary dialing. The communicator is compatible with SIA and Ademco Contact ID. The format is selectable by account number.
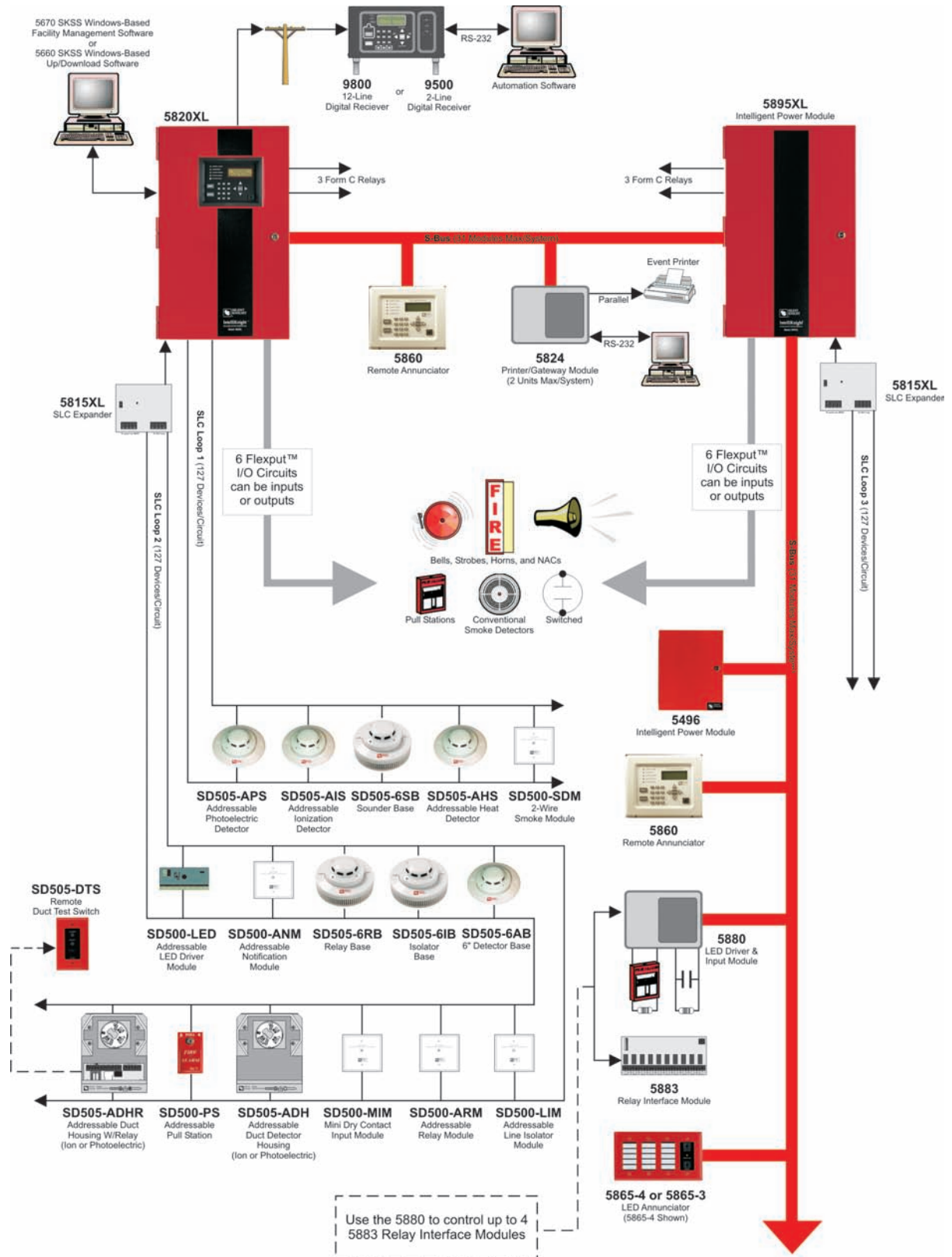

Approvals

NFPA 13, NFPA 15, NFPA 16, NFPA 72: Central Station; Remote Signalling; Local Protective Signalling Systems; Auxiliary Protected Premises Unit; & Water Deluge Releasing Service. Suitable for automatic, manual, waterflow, sprinkler supervisory (DACT non-coded) signalling services.

Other Approvals: UL Listed; CSFM 7170-0559: 135; MEA 429-92-E Vol. VI; FM Approved

IntelliKnight Model 5820XL
Addressable Fire Alarm Control Panel

5670 SKSS Windows-Based
Facility Management Software
or
5660 SKSS Windows-Based
Up/Download Software

RS-232

9800
12-Line
Digital Reciever

or

9500
2-Line
Digital Receiver

Automation Software

5820XL

3 Form C Relays

5895XL
Intelligent Power Module

3 Form C Relays

S-Bus 127 Modules Max/System

Event Printer

Parallel

5860
Remote Annunciator

5824
Printer/Gateway Module
(2 Units Max/System)

RS-232

5815XL
SLC Expander

SLC Loop 1 (127 Devices/Circuit)

SLC Loop 2 (127 Devices/Circuit)

5815XL
SLC Expander

SLC Loop 3 (127 Devices/Circuit)

6 Flexput™
I/O Circuits
can be inputs
or outputs

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I/O Circuits
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S-Bus 127 Modules Max/System

FIRE

Bells, Strobes, Horns, and NACs

Pull Stations   Conventional   Switched
                 Smoke Detectors

5496
Intelligent Power Module

SD505-APS
Addressable
Photoelectric
Detector

SD505-AIS
Addressable
Ionization
Detector

SD505-6SB
Sounder Base

SD505-AHS
Addressable Heat
Detector

SD500-SDM
2-Wire
Smoke Module

5860
Remote Annunciator

SD505-DTS
Remote
Duct Test Switch

SD500-LED
Addressable
LED Driver
Module

SD500-ANM
Addressable
Notification
Module

SD505-6RB
Relay Base

SD505-6IB
Isolator
Base

SD505-6AB
6" Detector Base

5880
LED Driver &
Input Module

5883
Relay Interface Module

SD505-ADHR
Addressable Duct
Housing W/Relay
(Ion or Photoelectric)

SD500-PS
Addressable
Pull Station

SD505-ADH
Addressable
Duct Detector
Housing
(Ion or Photoelectric)

SD500-MIM
Mini Dry Contact
Input Module

SD500-ARM
Addressable
Relay Module

SD500-LIM
Addressable
Line Isolator
Module

5865-4 or 5865-3
LED Annunciator
(5865-4 Shown)

Use the 5880 to control up to 4
5883 Relay Interface Modules

IntelliKnight 5820XL Addressable Fire Alarm Control Panel and Compatible Devices

SLC Detectors

5820XL devices feature a low profile design and EEprom addressing. EEprom addressing prevents water intrusion problems via the back of the sensor and eliminates mechanical failures related to decade switches.

SD505-APS
Addressable photoelectric smoke detector.

SD505-AIS
Addressable ionization smoke detector.

SD505-AHS
Absolute temperature heat detector that goes into alarm immediately if the temperature exceeds the programmable trip point. Trip point range from 135ºF–150ºF(0ºC–37ºC).

SD505-6AB
Six inch base for use with detector heads SD505-APS, SD505-AIS, and SD505-AHS.

SD505-4AB
Four inch base for use with detector heads SD505-APS, SD505-AIS, and SD505-AHS.

SD505-6SB
Six-inch sounder base for use with existing sensor and base. Operates in single and multi-station modes and/or as a system sounder. Requires 2 additional wires for power.

SD505-6IB
Six-inch isolator base for use with existing base and the SD505-APS, SD505-AIS, and SD505-AHS sensors. Provides isolation for style 7 circuits.

SD505-6RB
Six-inch relay base for use with existing sensor and base. Provides one Form C contact.

SD505-ADH
Duct housing that detects smoke in HVAC ducts.

SD505-ADHR
Duct detector base with relay. Provides Form C alarm contact. For use with SD505-APS and SD505-AIS sensors. Compatible with SD505-DTS remote test switch.

SD500-PS/SD500-PSDA
SD500-PS is a single action pull station and SD500-PSDA is a dual action pull station.

SLC Modules

SD500-AIM
Dry contact input module for use with normally open dry contacts. It features an indicator LED to show alarm status.

SD500-MIM
Mini dry contact input module is a small version of the SD500-AIM. For use with pull stations and other normally open dry contact inputs.

SD500-ANM
Addressable notification module providing a single Class A or Class B notification circuit on the SLC.

SD500-ARM
Addressable relay module. Features 2 Form C output relays. Provides indicator LED to show output status.

SD500-SDM
Two-wire detector input module. Allows for the connection of conventional 2-wire detectors on the SLC loop. Requires two additional wires for power.

SD500-LIM
A short circuit isolator module for SLC devices. When a short occurs on the SLC loop, it is detected as a trouble, but all SLC devices protected by the isolator module continue to operate.

SD500-LED
An LED driver module capable of driving 80 LEDs. Use up to 40 modules per SLC loop and up to 100 SD500-LED modules per system.

S-BUS Accessories

5860/R Remote Fire Annunciator
Features the same 80 character backlit LCD display keypad and firefighter's keyswitch as the 5820XL. 5860 is gray and 5860R is red.

5815XL Signal Line Circuit Expander
The SLC expander is used to add more addressable devices to the IntelliKnight system. 5820XL supports three 5815XLs. Each 5815XL can support 127 devices.

5895XL Intelligent Power Module
Adds 6 amps of power, 6 Flexput I/O circuits and 2 Form C relay circuits to a 5820XL system.

5496 Intelligent Power Module
A 6 amp notification power expander that provides four power-limited notification appliance circuit outputs.

5880 LED/IO Module
Features 40 LED outputs, 8 normally open dry contact inputs, and one piezo output.

5865-3 and 5865-4 Remote LED Annunciator
Features 30 programmable LED (15 red and 15 yellow) outputs, and a piezo sounder. The 5865-4 adds a silence and reset switch to the package.

5883 Relay Board
Features 10 general purpose Form C relays. Used with 5880 module.

5824 Serial/Parallel Printer Interface Module
Provides one parallel and one RS-232 serial port for connecting a printer to the 5820XL. Use to print a real-time log of system events, detector status reports, and event history. Interfaces with building control system.

Miscellaneous Accessories

5660 Silent Knight Software Suite (SKSS)
User-friendly Windows software for remote programming of 5820XLs using a PC. Upload and view panel account information, event history, and detector status.

5670 Silent Knight Software Suite (SKSS)
Powerful end-user facility management software allows viewing of detector status and event history via modem or direct connection.

Plex-1
Dead front cabinet door with clear window to limit access to the FACP.

RBB
Remote battery box accessory cabinet. Use if backup batteries are too large to fit into FACP cabinet. Dimensions: 16" W x 10" H x 6" D (406 mm W x 254 mm H x 152 mm D)

SD505-DTS
Remote test switch. Used with SD505-ADHR. Provides remote key operated test function and annunciation of detector alarm.