SD500-SDM Installation Instructions

The SD500-SDM two-wire smoke module allows you to connect a loop of conventional detectors to a Silent Knight addressable fire alarm control panel (FACP). Each loop can then be assigned an address on the FACP.

Specifications

Specification Parameter		Rating
2-Wire Smoke Detector Loop Current:	Standby:	2 mA max.
	Alarm:	100 mA max.
Operating Voltage:	SLC	32 VDC
	Aux Power	24 VDC
SLC Current for battery calculation:	Alarm:	.55 mA
	Standby:	.55 mA
Operating Temperature:		32° - 120° F (0° - 49° C)
Humidity:		10-85% RH
Max. SLC Loop Resistance:		50 Ω
Max. 2-wire Conventional Smoke Loop Resistance		50 Ω
Dimensions:	Length:	4-7/8"
	Width:	4-7/8"
	Depth:	7/8"
For indoor use only		

Compatibility

The SD500-SDM is compatible with all Silent Knight addressable FACPs.

Wiring

Note: *Installation and wiring of this device must be done in accordance with NFPA 72 and local ordinances.*

Important! *All wiring is supervised and power limited.*

Connecting the SD500-SDM to the SLC Loop

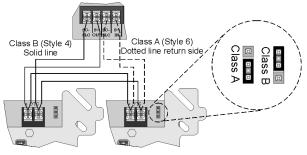The SD500-SDM connections to the 5815XL internal and external are the same. Wire as shown in Figure 1.

Figure 1: SLC Wiring

Smoke Detector Connections

This section contain instructions on how to connect a 2-wire conventional smoke detector loop to the SD500-SDM for either Class B (Style B), or Class A (Style D).

Class B (Style B) Wiring

Wire Class B (Style B) conventional smoke detector loop to the SD500-SDM as shown in Figure 2. Place the jumper block in the Class B
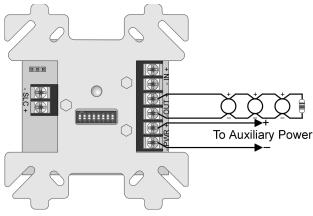
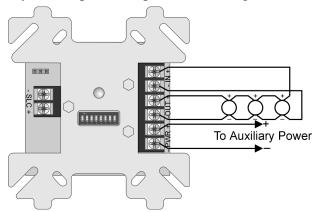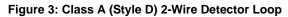(Style B) supervision position (see Figure 4).

Figure 2: Class B (Style B) 2-Wire Detector Loop

Note: Auxiliary power is supplied by a Regulated UL listed power supply for Fire Protective Signalling Systems.

Class A (Style D) Wiring

Wire Class A (Style D) conventional smoke detector loop to the SD500-SDM as shown in Figure 3. Place the jumper block in the Class A (Style D) supervision position (see Figure 4).
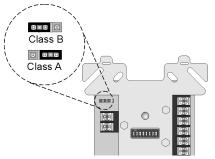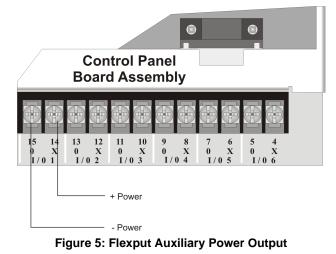

Figure 3: Class A (Style D) 2-Wire Detector Loop

Figure 4: Supervision Selection Jumper

Auxiliary Power Using

Flexput™ Circuits

The SD500-SDM can use aux power from any 24 VDC source. The following describes how to use the Flexput circuits as the auxiliary power source:

1. Connect the aux power wires to the Flexput terminals using "X" terminals as positive and "O" terminals as negative power. See Figure 5.

Figure 5: Flexput Auxiliary Power Output

2. Configure the auxiliary power output for constant output through programming. Refer to the FACP installation manual form more information.

For More Information

This document is for quick reference. For more information, refer to the FACP installation manual.

Two-Wire Smoke Detectors

Table 1 lists two-wire smoke detectors that are compatible with the fire control panel. The table is organized by manufacturer. The columns show the number of detectors per loop that can be used.

	SD500-SDM
Identifier	24H
Operating Voltage Range	18.5–27.4 VDC

Note: *The maximum number of smoke detectors per zone is determined by both the current draw and the impedance of the smoke detector. If too many smoke detectors are used on any zone, false alarms could occur.*

Do not mix different models of detectors on any zone; false alarms could occur.

Do not mix detectors of different models unless the system is specifically intended to be installed in that configuration.

Control unit Smoke Reset Time must be programmed for a number greater than or equal to the maximum reset time of the smoke detector.

Table 1: Compatible Two-Wire Smoke Detectors

Manufacturer	Model Name or Number (Base model name or number in parentheses.)	Compatibility ID		# per Loop
		Head	Base	
Apollo	55000-350 (45681-200)	55000-350	45681-200	24 / loop
	55000-250 (45681-200)	55000-250	45681-200	24 / loop
	55000-225	55000-225	45681-255, 256,	15 / loop
	55000-226	55000-226		15/ loop
	55000-227	55000-227	45681-200, 220 230, 232, 251, 252	15 / loop
	55000-325	55000-325		15 / loop
	55000-328	5500-328		15 / loop
	55000-326	55000-326		15 / loop
	55000-327	55000-327		15 / loop
ESL	429C (S10A)	N/A	S10A	30 / loop
	429CRT (S11A)	N/A	S11A	30 / loop
	429CST (S11A)	N/A	S11A	30 / loop
	429CT (S10A)	N/A	S10A	30 / loop
	609U01-11	S10	S00	40 / loop
	609U02-11	S10	S00/S03	40 / loop
	611U (601U or 602U)	S10	S00/S03	40 / loop
	611UD (601U or 602U)	S10	S00/S03	40 / loop
	611UT (601U or 602U)	S10	S00/S03	40 / loop
	612U (601U or 602U)	S10	S00/S03	40 / loop
	612UD (601U or 602U)	S10	S00/S03	40 / loop
	711U (701E or 701U)	N/A	S10A	25 / loop
	712U (701E or 701U)	N/A	S10A	25 / loop
	713-5U (702E or 701U)	N/A	S10A	25 / loop
	713-6U (702E or 701U)	N/A	S10A	25 / loop
	721-U (S10A)	N/A	S10A	30 / loop
	721-UT (S10A)	N/A	S10A	30 / loop
Falcon	525	FDT1	N/A	17 / loop
	525T	FDT1	N/A	17 / loop

Table 1: Compatible Two-Wire Smoke Detectors

Manufacturer	Model Name or Number *(Base model name or number in parentheses.)*	Compatibility ID		# per Loop
		Head	Base	
Hochiki	SIH-24F (HS-224D OR HSD-224)	HD-3	HB-5	25 / loop
	SLK-24F (HS-224D)	HD-3	HB-5	25 / loop
	SLK-24FH (HS-224D)	HD-3	HB-5	25 / loop
System Sensor	1400	A	N/A	20 / loop
	1451 (B401B)	A	A	20 / loop
	2100	A	N/A	20 / loop
	2100T	A	N/A	20 / loop
	2151	A	N/A	16 / loop
	2151T	A	N/A	16 / loop
	2300T	A	N/A	20 / loop
	2300	A	N/A	20 / loop
	2300TB	A	N/A	20 / loop
	2400	A	N/A	20 / loop
	2400 (DH400)	A	N/A	20 / loop
	2400AIT	A	N/A	20 / loop
	2400AT	A	N/A	20 / loop
	2400TH	A	N/A	20 / loop
	2451 (B401B)	A	N/A	20 / loop
	2451DH (DH 400)	A	N/A	20 / loop
	2451TH (B401B)	A	N/A	20 / loop
	2W-B	A	N/A	20 / loop
	2WT-B	A	N/A	20 / loop
	2WTR-B	A	N/A	20 / loop