

## SHP PRO® CONTROL PANEL



### General

The SHP-Pro is a microprocessor based, compact, cost-effective, conventional fire alarm and fire suppression releasing control panel. The panel is easily configured using configuration dip-switches provided on the SHP-Pro main board to operate in any of the following operating modes.

- Mode 1 – Clean Agent Release Operation
- Mode 2 – Clean Agent and Sprinkler Operation
- Mode 3 – Sprinkler Operation (Preaction/Deluge)
- Mode 4 – Industrial Releasing (CO<sub>2</sub>, Micromist®, Foam and Deluge Sprinkler)

By default, the panel is shipped from the factory configured for clean agent suppression system operation.

### Approvals

- Underwriters Laboratories (UL)
- Factory Mutual (FM)
- California State Fire Marshal (CSFM)
- City of New York
- California Office of Statewide Health Planning and Development (OSHPD)
- Hong Kong

*For exact certification listings, please reference the respective agency web site.*

### Features

- Ten system status LEDs (AC Normal, Alarm, PreDischarge, Release, Supervisory, Trouble, Panel Silenced, Abort, Release Disabled, Ground Fault)
- General Alarm, Supervisory and Trouble relays
- Dip-switch panel configuration
- Seven segment system status and diagnostic LED
- Local sounder (piezo) with distinct event tones
- Reset and Silence switches
- Disable switch for audible, releasing and relays (hardware disconnect)
- Alarm and Trouble silence resound (after 18 hrs.)
- Five selectable abort types
- Gentex or System Sensor sync protocol
- Twenty event history buffer
- Audibles selectable for slow, fast, continuous operation
- Integral 24 VDC power supply, 1A standby/4A alarm
- 120/240 VAC at 50/60 Hz power input
- Resettable and non-resettable 24 VDC power output
- Battery and ground fault supervision
- 7 – 40 AH battery charging capacity
- Carbon steel enclosure, red or gray finish, 21”H x 14.35”W x 4”D, surface or flush mountable
- Lockable door with viewing window
- Enclosure can hold up to two 18 AH batteries
- Two Class B detect circuits capable of sequential, cross-zone, or single detector release operation.
- Maximum 25 detectors per detect circuit, 50 total.
- Detect circuits are compatible with select System Sensor or Hochiki conventional detectors and bases
- Detect circuits are compatible with linear heat detection cable or contact closure type devices
- Three Class B input circuits for monitoring closed contact devices
- Three Class B audible circuits for NAC devices, rated 2A per circuit
- Agent Release circuit, six ARMs/IRMs maximum, any combination
- Solenoid circuit, one 24V or two 12V solenoids. See Fike document 06-186 for compatible devices.

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## Applicable Standards

The SHP-Pro has been designed to comply with the following standards:

- NFPA 12 Carbon Dioxide
- NFPA 12A Halon 1301 Extinguishing Systems
- NFPA 13 Installation of Sprinkler Systems
- NFPA 15 Water Spray Fixed Systems
- NFPA 16 Foam-water Sprinkler and Foam-Water Spray Systems
- NFPA 70 National Electric Code
- NFPA 72 National Fire Alarm and Signaling Code
- NFPA 2001 Clean Agent Fire Extinguishing Systems

## Ordering

Part Number	Description
10-063-1-R-1	SHP PRO, 120V, all modes, red
10-063-1-G-1	SHP PRO, 120V, all modes, gray
10-063-1-R-2	SHP PRO, 240V, all modes, red
10-063-1-G-2	SHP PRO, 240V, all modes, gray
10-063-2-R-1	SHP PRO, 120V, sprinkler only, red
10-063-2-G-1	SHP PRO, 120V, sprinkler only, gray
10-063-2-R-2	SHP PRO, 240V, sprinkler only, red
10-063-2-G-2	SHP PRO, 240V, sprinkler only, gray
10-2450	Class A input module
10-2448	Class A output module
10-2204	CRM4 relay module

## Main Board Specifications

Environment	
Operating Temp:	32 - 120°F (0 - 49°C)
Humidity:	93% RH max.
Main Board	
Power Input:	120VAC, 50/60 Hz, 2.6 A, 250 VA 240VAC, 50/60 Hz, 1.5 A, 250 VA
System Power:	4.135 A @ 24 VDC
Current Draw:	0.135 A @ 24 VDC, standby <sup>1</sup>
Battery Charging:	24 VDC nominal 40 AH battery maximum 8 A @ 27 VDC max. supply current 1.5 A @ 27 VDC max. charge current

<sup>1</sup> Includes power to activate P2 trouble relay and max. number of two-wire detectors connected to the Detect circuits.

Relays:	Non-programmable Form C, SPDT DC: 2 A @ 30 VDC (pf=.35) AC: 0.5 A @ 250 VAC (pf=.35) Non-supervised
Detect Inputs Circuits:	25 conventional detectors per circuit max.; linear heat detection cable; or contact closure type devices listed for fire alarm use. Class B or Class A with optional module Voltage: 19.9 – 27.5 VDC Current: 360 mA max. Max. wire resistance: <ul style="list-style-type: none"> <li>• 20Ω detectors</li> <li>• 440Ω linear heat detection cable or contact closure</li> </ul> Sequential, cross-zone or single detector release operation Power-limited and supervised
Contact Closure Input Circuits:	Contact closure inputs Class B or Class A with optional module Voltage: 5 VDC max. Current: 0.5 mA maximum 100Ω max. wire resistance Power-limited and supervised
Resettable and Continuous Aux:	24 VDC nominal (19.8 – 27.3 VDC) 2 A max. current (special) Power-limited and supervised
Audible Circuits:	Output: 24 VDC nominal, 27.9 VDC max. (16-33 RMS max.) Current: 2 A max., regulated Power-limited and supervised Class B or Class A with optional module
Agent Release:	Voltage: 24 VDC nominal Current: 2 A max. 35Ω max. wire resistance Class B or Class A with optional module Power-limited and supervised 6 ARM III or IRM max., any combination 20.4 VDC min. at last releasing device under all conditions (FM)
Solenoid:	Voltage: 24 VDC nominal Current: 2 A max. Class B or Class A with optional module Refer to Fike document 06-186 for compatible devices 20.4 VDC min. at last releasing device under all conditions (FM)

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## Enclosure Specifications

Enclosure	
Material:	18 gauge carbon steel
Finish:	Red (RAL 3001) or gray (RAL 7035) baked on paint
Weight:	15 lbs. (6.4 kg) empty enclosure
Mounting:	Semi-flush or surface mount using mounting holes provided
Knockouts:	½" and ¾" on all sides
Door:	Removable with 180 degree swing
Component Mounting:	Threaded press-studs provided for component installation in back-box

## Optional Components

The SHP-Pro main board contains the circuits required for a complete system suitable for most applications. The following optional Modules, which plug into the main board, can be added to increase the functionality of the SHP-Pro.

- Class-A Input Module (P/N 10-2450) – when installed allows the SHP-Pro’s five initiating device circuits to be wired Class A
- Class-A Output Module (P/N 10-2448) – when installed allows the SHP-Pro’s three notification appliance circuits and the two releasing circuits to be wired Class A.
- CRM4 Relay Module (P/N 10-2204) – when installed adds four SPDT dry contact relays to the SHP-Pro. Two CRM4s can be mounted to the main board.

## Optional Component Specifications

Class A Input Module	
Current Draw:	0.0 A
Detect	Voltage: 19.9 – 27.5 VDC
	Current: 360 mA max.
Max. wire resistance:	• 20Ω detectors
	• 440Ω linear heat detection cable or contact closure
	Power-limited and supervised
Contact Closure	Contact closure inputs
Input Circuits:	Voltage: 5 VDC max.
	Current: 0.5 mA maximum
	100Ω max. wire resistance
	Power-limited and supervised

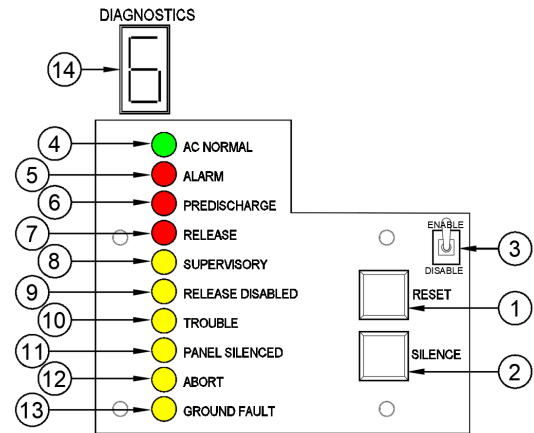
Class A Output Module	
Current Draw:	0.0 A
Audible Circuits:	Output: 24 VDC nominal, 27.9 VDC max. (16-33 RMS max.)
	Current: 2 A max., regulated
	Power-limited and supervised
Agent Release:	Voltage: 24 VDC nominal
	Current: 2 A max.
	35Ω max. wire resistance
	Power-limited and supervised
	6 ARM III or IRM max., any combination
Solenoid:	Voltage: 24 VDC nominal
	Current: 2 A max.
	Refer to Fike document 06-186 for compatible devices

CRM4 Relay Module	
Current Draw:	0.0 A <sup>1</sup> (relays off)
Relays:	Programmable, function defined by dip-switch configuration
	Form C, SPDT
	DC: 2 A @ 30 VDC (pf=.35)
	AC: 0.5 A @ 250 VAC (pf=.35)
	Non-supervised

<sup>1</sup> 0.010 A per each active relay.

## Controls and Indicators

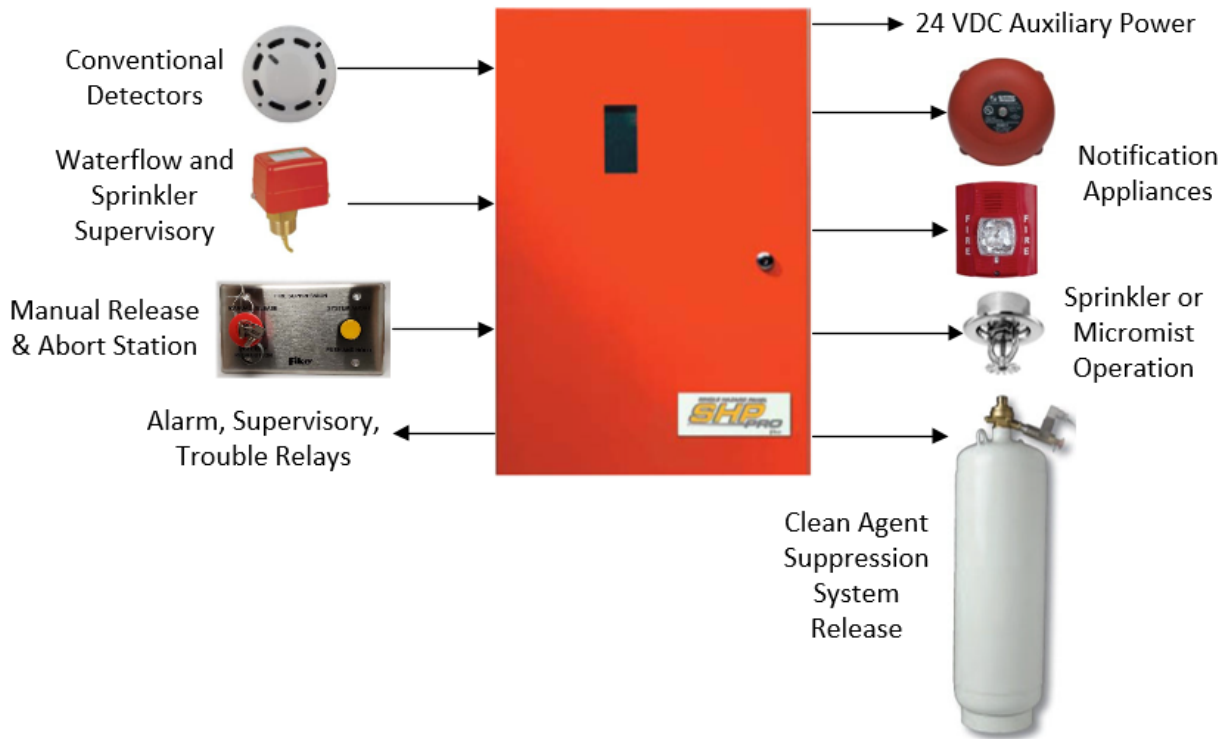
The SHP-Pro provides the following control switches and status LEDs.



- |                             |                                  |
|-----------------------------|----------------------------------|
| 1 – Reset Switch            | 8 – Supervisory LED (yellow)     |
| 2 – Silence Switch          | 9 – Release Disabled (yellow)    |
| 3 – Enable/Disable Switch   | 10 – Trouble LED (yellow)        |
| 4 – AC Normal LED (green)   | 11 – Panel Silenced LED (yellow) |
| 5 – Alarm LED (red)         | 12 – Abort LED (yellow)          |
| 6 – Pre-discharge LED (red) | 13 – Ground Fault LED (yellow)   |
| 7 – Release LED (red)       | 14 – Diagnostic LED (7 segment)  |

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## System Diagram



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