



# SM120X RELAY / POWER SUPPLY MODULE

READ INSTRUCTIONS CAREFULLY AND COMPLETELY BEFORE INSTALLING.

**Electrical Rating:** 120V AC 60 HZ 0.08 AMP

**Contact Rating:** 10 AMPS @ 120 VAC  
NON INDUCTIVE  
5 AMPS @ 30 VDC



**DC Output:** 5 MA Max. (CURRENT LIMITED)

## DESCRIPTION:

**This module is only activated by a smoke alarm interconnect signal.**

The relay portion of this module can be used to activate auxiliary warning devices such as external bells and sirens, hallway or stairwell lighting. It provides isolated, (no internal connection to 120 volts AC) normally open, and normally closed contacts.

The power supply portion can be used to connect spot type heat detectors (**Rate of rise or combined rate of rise and fixed temperature only**) and manual pull stations with interconnected multiple station alarms.

**WARNING!** Alarm and module wiring must conform to the electrical codes and local codes in your area. In USA, it includes Article 760 of the U.S. National Electrical Code, and NFPA No. 72-2.

All wiring should be performed by a licensed electrician. The module should be installed in a UL listed junction box that has sufficient volume for proper installation. The electrical circuit used to power the alarms and the module must be a 120 volt ac 60hz circuit which cannot be turned off by a switch or a ground fault interrupter, **it must be on 24 hours a day. Since this module is 120 volt AC powered, it will not function during an AC power failure**, even if it is being used with the model 1275, 1275CA, 1285, 1285CA, PE120, PE120CA, PI 2000, PI2000CA, KN-COSM-IB, KN-COSM-IBCA, HD135F, and HD135FCA, alarms which have battery backup power.

**IMPORTANT:** Whenever alarms and modules are interconnected they must be powered from a single circuit. When wiring the module remote from the alarm use CSA listed #18 AWG wire or larger as required by codes in your area. **Do not use more than 1000 feet of wire** between the first and last device in the multi station system.

## INSTALLATION INSTRUCTIONS:

This module should be installed in a UL listed junction box. All connections should be made by a qualified electrician in accordance with the requirements of the national electrical code and/or any other local codes having jurisdiction in your area.

**Turn off the main power to the circuit.** If you are also installing smoke alarms, heat alarms, or CO alarms, wire them according to their specific owner's manual. Refer to the typical installation diagrams (Figures 1-4) included in this manual for your specific application.

### Connections on the Relay /Power Supply Module:

Black Wire	AC Hot
White Wire	AC Neutral
Red Wire	Interconnect Signal
Blue Wire	Common Contact
Yellow Wire	Normally Closed Contact
Orange Wire	Normally Open Contact
Gray Wire	9-Volt DC Output (5MA Max.)

After all connections are made, place the module inside a UL listed junction box, where the alarm is installed, or in a remote location and use the appropriate electrical box cover.

**CAUTION:** The model SM120X should not be used to connect groups of alarms to a fire alarm panel or to interconnect groups of fire alarms together.

Residential alarms do not latch in the alarm condition and they are self-resetting. If an alarm connected to a module has the test button pushed or the alarm momentarily activates, it will activate the module for as long as the unit is in alarm. If more than one alarm is connected to the module and the module is tied to a control panel there will be no way of knowing which unit caused the alarm.

The model SM120X module is for use with the following interconnectable models: Smoke Alarms: 1235, 1235CA, 1275, 1275CA, 1285, 1285CA, PE120, PE120CA, PI2000, and PI2000CA, CO/ Smoke Combo alarms: KN-COSM-IB and KN-COSM-IBCA, and Heat Alarms, HD135F, and HD135FCA, all with red interconnect wires. Each module is equivalent to one interconnect alarm, reduce the maximum number of interconnect devices by one for each module used. Do not exceed the total number of devices allowable in the interconnect system, refer to the individual alarm owners manual for the maximum number of units allowed when interconnecting. Do not exceed the temperature or humidity limits of +40°F (4,4°C) to 100°F (37,8°C) and 90% relative humidity for either the relay module or the alarms.

**NOTE:** Only the Smoke portion of the: KN-COSM-IB and KN-COSM-IBCA combo alarms will activate this module. If CO alarm models, KN-COB-IC, KN-COP-IC are included in the interconnect system, they will not activate the SM120X module.

**ATTENTION:** The wiring connecting the module with the external devices is not supervised. Be sure to test the operation of all the devices controlling the module or controlled by the module. Devices controlled by the module can be tested by pushing the test button on the alarms and verifying that the controlled device responds in the desired manner.

Devices controlling the module can be tested by activating the device. Test pull stations and spot type heat detectors after initial installation and each time you test your alarms. Verify that the pull station and heat detectors sound all your interconnected alarms.

**ATTENTION: Only use spot type heat detectors incorporating a rate of rise feature**, as this type can be tested to validate operation. These detectors should be tested following the manufacturers recommended procedure. This procedure typically recommends using a hot air source (hand held hair dryer or heat gun) directed at the detector from approximately 1 foot away. This will activate the rate of rise portion of the detector and sound the interconnected alarms.

**CAUTION:** Remove the hot air source as soon as the alarms sound. This will prevent activating the fixed temperature portion of the heat detector. The fixed temperature element is a one-time device. Once activated it will not reset and the detector will have to be replaced.

**ADDITIONAL INSTALLATION INFORMATION:** (Figures 1 and 2) If the desired function is to switch off a device when the alarms sound, connect the yellow wire (NC) instead of the orange wire (NO) to the supply side of the device. Be sure not to exceed the relay contact ratings of the module. This module should not be used to control inductive loads with inrush currents that will exceed the maximum contact ratings.

## ONE YEAR LIMITED WARRANTY:

Kidde warrants to the Purchaser that the enclosed module will be free of defects in material, workmanship or design under normal use and service for a period of one year from the date of purchase. The obligation to Kidde under this warranty is limited to repairing or replacing any part which we find to be defective in material, workmanship, or design, free of charge, to the customer, upon sending the relay module with proof of date of purchase, postage and return postage prepaid, to Warranty Service dept. Kidde Safety, 1394 S. Third Street. Mebane, NC 27302 USA. (1-800-880-6788) This warranty shall not apply to the relay module if it has been damaged, modified, abused or altered after the date of purchase, or if it fails to operate due to improper maintenance or inadequate AC electrical power.

The liability of Kidde or any of its parent or subsidiary corporations arising from the sale of this accessory module or under the terms of this limited warranty shall not in any case exceed the cost of the replacement of the module and, in no case, shall Kidde or any of its parent or subsidiary corporations be liable for consequential loss or damages resulting from the failure of the relay module or for the breach of this or any other warranties, expressed or implied, even if the loss of damage is caused the company's negligence or fault.

Since some states/provinces do not allow limitations on the duration of an implied warranty or do not allow the exclusions or limitations of incidental or consequential damages the above limitations or exclusions may not apply to you. While this warranty gives you specific legal rights, you may also have other rights, which vary from state to state, or province to province. The above warranty may not be altered except in writing signed by both parties hereto.

**FIGURE 1** shows a typical installation of a relay / power supply module wired to switch on 120 volt device when the alarms sound. In this configuration the common switch contact (blue wire) is connected to the 120 volt supply. When the alarms sound the module detects the signal on the interconnect line (red wire) and activates the relay. As a result of this action, the orange wire (NO) supplies 120 volts to the device.

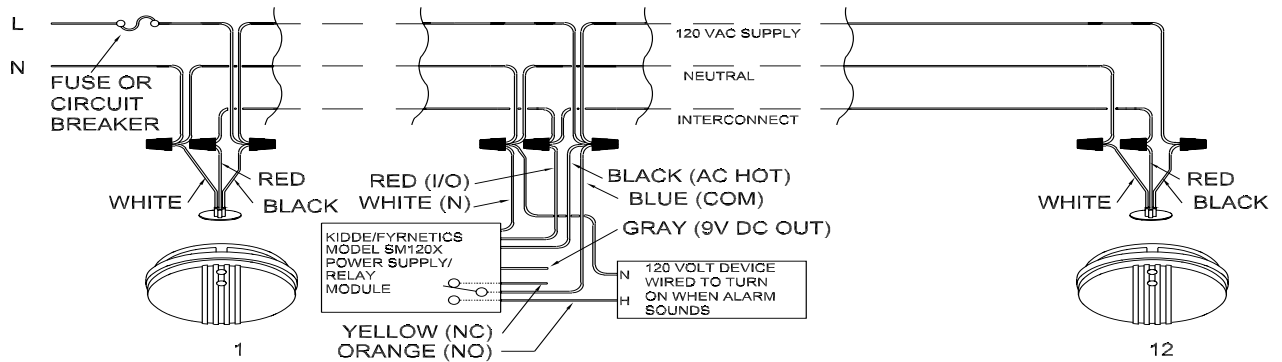
**FIGURE 2** shows a typical installation of a manual pull station and a relay / power supply module. In this configuration the module receives 120-volt power all the time. The 9-volt DC output (gray wire) is used to supply power to the pull station, and the relay portion is used to control a 120-volt device configured to switch on when the module is activated. The pull station switches the 9 volt signal from the module back into the interconnect line.

Activating the pull station will sound the alarms and activate the relay portion of the module. The common terminal of the switch contact (blue wire) is connected to the 120-volt supply. When the alarms sound or the pull station is activated the module detects the signal on the interconnect line (red wire) and activates the relay. As result of this action, the orange wire (NO) supplies 120 volts to the device.

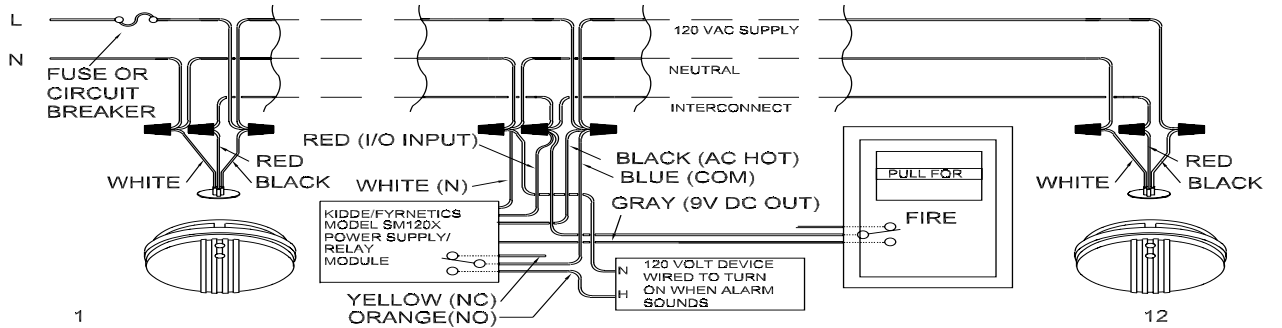
**FIGURE 3 and 4** show the typical installation of a relay / power supply module and a manual pull station or a spot type heat detector, interconnected with multiple station alarms. In both of these configurations the connected device (manual pull station or spot type heat detector) switches on the AC power to the module when the device is activated. The module then supplies the DC interconnect signal (gray wire) needed to activate all of the interconnected alarms.

**NOTE:** The switch contacts in the Pull Station or the Heat detector must be rated for 120 volts in this application.

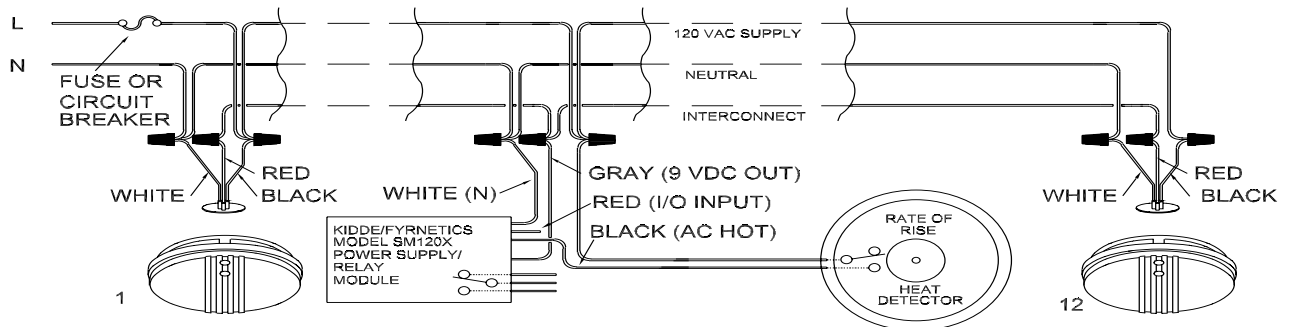
**FIGURE 1**



**FIGURE 2**



**FIGURE 3**



**FIGURE 4**

