SM120X
RELAY / POWER SUPPLY MODULE

READ INSTRUCTIONS CAREFULLY AND COMPLETELY BEFORE INSTALLING.

Electrical Rating: 120V AC 60 HZ 0.03 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),** flow switches and manual pull stations with interconnected multiple station alarms.

⚠ **WARNING:** The alarm and module wiring shall be in accordance with codes having jurisdiction in your area. **The electrical circuit used to power the alarms and the module must be a 120 V AC 60 Hz circuit which cannot be turned off by a switch or a ground fault interrupter. It must be on 24 hours a day.** This module is 120 volt AC powered. It will not function during an AC power failure, even if it is being used with alarms which have battery backup power.

⚠ **WARNING:** This Relay Module cannot be operated from power derived from a square wave, modified square wave or modified sine wave inverters. These types of inverters and e sometimes used to supply power to the structure in off grid installations, such as solar or wind derived power sources. These power sources can produce high peak voltages that will damage the relay module. Some engine driven backup power generators may also produce poor quality power that can damage the relay module.

IMPORTANT: Whenever alarms and modules are interconnected they must be powered from a single circuit. When wiring the module remote from the alarm use UL/ETL/CSA listed #18 AWG wire or larger as required by codes in your area. **Do not use more than 1000 feet (305 m) of wire between the first and last device in the multi station system.**

INSTALLATION INSTRUCTIONS: This relay module must be installed in a UL/ETL/CSA listed junction box that has sufficient volume for proper installation. All connections should be made by a qualified electrician. The multiple station interconnect wiring to the alarms must be run in the same raceway or cable as the AC power wiring. In addition, the resistance of the interconnect wiring shall be a maximum of 10 ohms.

Turn off the main power to the circuit. If you are also installing smoke alarms, heat alarms, CO alarms, or other AC devices, wire them according to their specific user guide. Refer to the typical installation diagrams (Figures 1-5) included in this guide 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 (5 mA Max.)**

After all connections are made, place the module inside a UL/ETL/CSA 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 for supervision of an alarm for life safety applications. If supervision of an area is necessary, a smoke detector connected to a fire alarm panel should be used.

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.

In the USA, the model SM120X can be interconnected with the following interconnectable models: Models which provide both remote smoke and CO alarms: 20SA10, 20SA10-V, 20SAR, 20SAR-W, 3050-VAS10-A, 3050-VASC10-A, 30CUA10, 30CUA10-V, 30CUAR, 30CUAR-V, 30CUAR-W, 900-CUAR, 900-CUAR-V, i12010S, i12010SCO, KN-COB-IC, KN-COPE-I, KN-COSM-I, KN-COSM-IB, KN-COSM-IBA, KN-SMFM-I, P4010ACLEDS, P4010ACLEDS-2, P4010ACLEDSCO, P4010ACLEDSCO-2, P4010ACS, P4010ACSAQ-WF, P4010ACSCO, P4010ACSCOAQ-WF, P4010ACSCO-W, P4010ACSCO-WF, P4010ACS-W, P4010ACS-WF, P4010LACS-W, RF-SM-ACDC, RGCUAR-RW, RGSAR-RW, SMACFEX, SMAC10YFEX, CUAFEX, CUAFEX-V, CUAC10YFEX, CUAC10YFEX-V, CUACFEX-VRF, SMACFEX-VRF, 20SAR-VRF, 30CUAR-VRF, SMAC9VFEX, MECOACFEX.

Models which provide remote smoke alarms, but not remote CO alarms: HD135F, i12020, i12020A, i12040, i12040A, i12060, i12060A, i12080, i12080A, i4618A, i4618AC, P12040, PE120, Pi2000, Pi2010.

Models which provide both remote smoke and CO alarms with a Strobe light and no audible notification: SL177i, SLED177i

In Canada, the model SM120X can be interconnected with the following interconnectable models: Models which provide both remote smoke and CO alarms:

Models which provide both remote smoke and CO alarms: i12010SCA, i12010SCOCA, KN-COSM-IBACA, KN-SMFM-I-CA, KN-COB-ICB-CA, KN-COSM-IBCA, KN-COB-IC-CA, KN-COSM-ICA, KN-COP-IC-CA, KN-COPE-ICA, P4010ACLEDSCA, P4010ACLEDSCOCA, P4010ACLEDSCA-2, P4010ACLEDSCOCA-2, P4010ACSCO-WCA, P4010ACSCOCA, P4010LACS-WCA, P4010ACSCA, P4010ACS-WCA, P4010ACSCO-WF-CA, P4010ACSAQ-WF-CA, P4010ACSCOAQ-WF-CA, 900-CUAR-VCA, 20SAR-CA, 20SA10-CA, 20SA10-VCA, 30CUAR-VCA, 30CUA10-VCA, 20SAR-WCA, 30CUAR-WCA, SMAC9VFEX-CA.

Models which provide remote smoke alarms, but not remote CO alarms: i12020CA, i12020ACA, i12040CA, i12040ACA, i12060CA, i12060ACA, i4618CA, i4618ACA, i4618AC-CA, P12040CA, Pi2000CA, Pi2010CA.

Models which provide both remote smoke and CO alarms with a Strobe light and no audible notification: SLED177iCA

IMPORTANT: While this module can be interconnected with all of the AC models listed above, including some CO-only models, only the smoke alarm portion of any smoke or combination smoke/CO model will activate this module.

If activation is required from the Carbon Monoxide Alarm portion of these alarms, use the CO120X module.

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 user guide for the maximum number of units allowed when interconnecting. Do not exceed the temperature or humidity limits of 4.4°C (40°F) to 37.8°C (100°F) (such as in garages and unfinished attics) and 95% relative humidity for either the relay module or the alarms.

ATTENTION: The wiring connecting the module to the triggering device (alarms, pull stations, flow switches etc.) is not supervised. Be sure to verify the operation of all the devices controlled by the module each time you test your alarms. Devices controlled by the module can be tested by pushing the test button on the controlling alarms and verifying that the controlled device responds in the desired manner. Verify this operation each time the test button on the alarm is pressed. Always follow testing frequency marked on the cover of the alarm.

Devices controlling the module can be tested by activating the device. Test alarms, pull stations, flow switch, spot type heat detectors, etc. after initial installation. Verify that all input devices sound all interconnected alarms or activate devices controlled by the module.

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 Kidde Canada, P.O. Box 40, Apsley, ON K0L 1A0 (1-800-880-6788). In USA, to Kidde 1016 Corporate Park Drive, Mebane, NC 27302 (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 a 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, 4 AND 5 show the typical installation of a relay / power supply module and a manual pull station, flow switch, or a spot type heat detector, interconnected with multi-ple station alarms. In all three of these configurations the connected device (manual pull station, flow switch 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, flow switch or the Heat detector must be rated for 120 volts in this application.

Images are representative only. Actual product may vary.

FIGURE 1

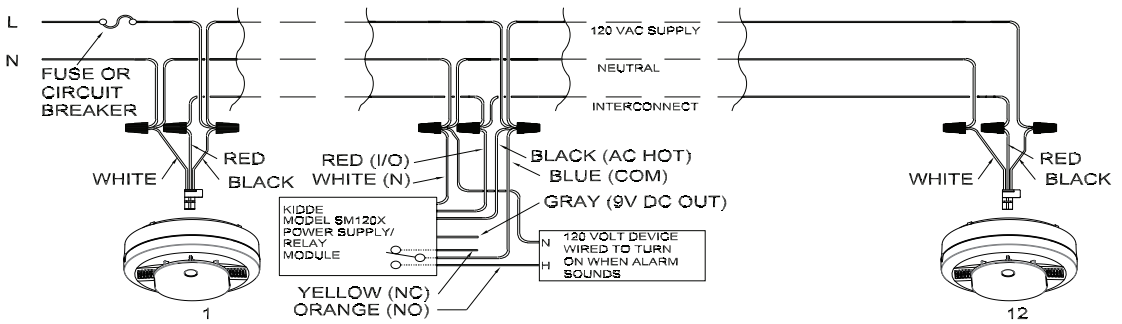

FIGURE 2

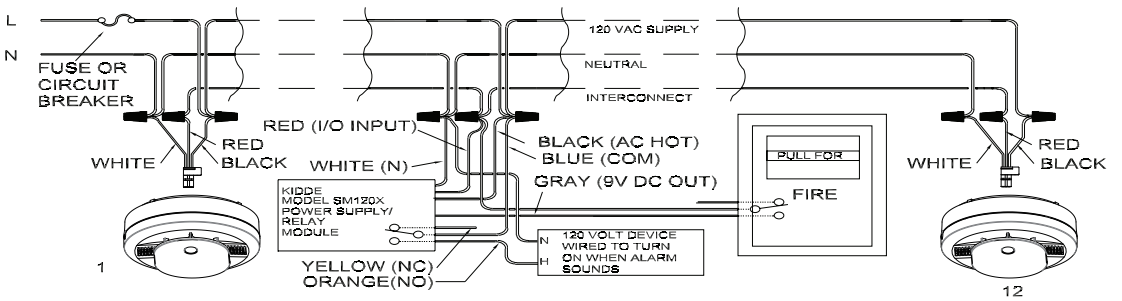

FIGURE 3

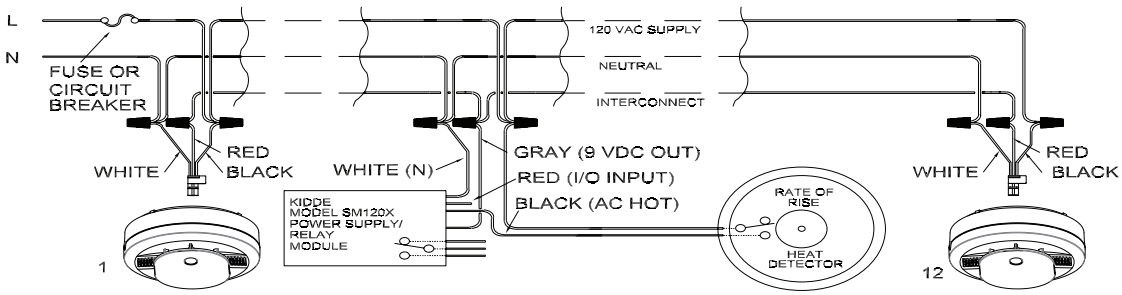

FIGURE 4

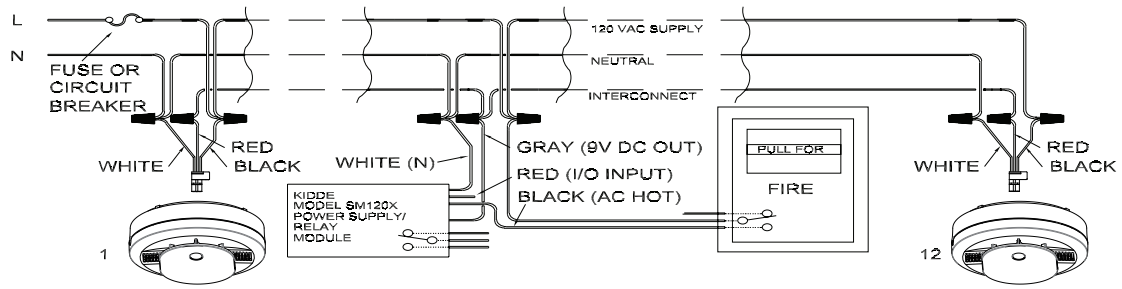

FIGURE 5

