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## KMS & KBS BELL SERIES INSTALLATION INSTRUCTIONS

### **IMPORTANT**

#### **Please Read Carefully and Save**

This instruction manual contains important information about the installation and operation of bells. Purchasers who install bells for use by others must leave this manual or a copy of it with the user.

System Sensor supplies bells for nearly all sprinkler/fire alarm/burglar applications.

These instructions apply to all System Sensor bells in the series. Read all instructions carefully before beginning. Follow only those instructions that apply to the model you are installing.

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### **CAUTION**

**DO NOT USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES.**

**DO NOT LEAVE ANY UNUSED WIRES EXPOSED.**

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### **GENERAL DESCRIPTION**

The National Fire Protection Association has published codes, standards, and recommended practices for the installation and use of the above appliances. It is recommended that the installer be familiar with these requirements, with local codes, and any special requirements of the authority having jurisdiction.

These bells are intended to be connected to alarm indicating circuits of UL listed fire alarm control panels. Terminal connections are polarized to enable supervision of the installation wiring. The KMS bells require 24 VDC and the KBS bells require 120 VAC.

Before installing any alarm device, be thoroughly familiar with:

NFPA 72:       *Installation, Maintenance, and Use of Protective Signaling Systems*  
NFPA 13:       *Installation of Sprinkler Systems*  
NFPA 13A:      *Inspection, Testing, and Maintenance of Sprinkler Systems*, specifically Chapters 4 and 5

Other applicable NFPA standards, local codes, and the requirements of the authority having jurisdiction.

Failure to follow these directions may result in failure of the device to report an alarm condition. System Sensor is not responsible for devices that have been improperly installed, tested, or maintained.

### **INSTALLATION**

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#### **WARNING**

High voltage. Electrocution Hazard. Do not handle live AC wiring or work on a device to which AC power is applied. Doing so may result in severe injury or death.

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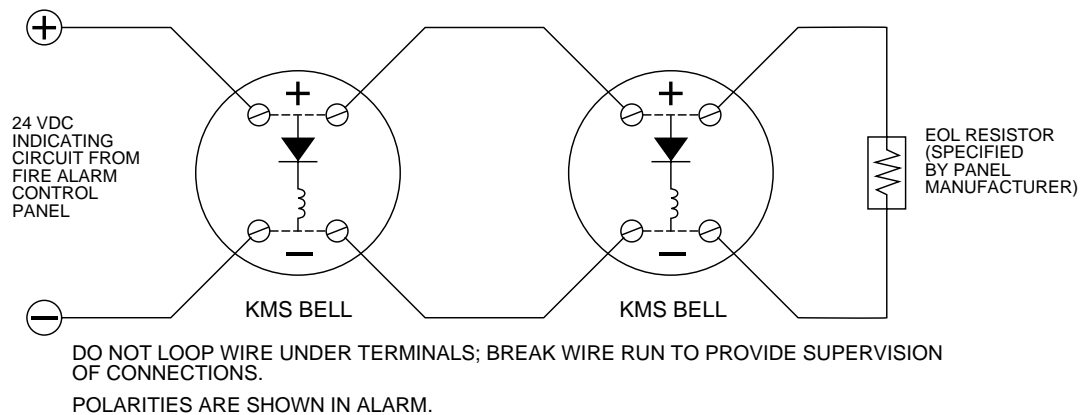
**CAUTION:** Do not loop wire under terminals. Break wire runs to provide supervision of connections.

1. Remove the gong.

2. Wire the bell in the circuit. See Figure 1. (Note polarity markings on bells.)

NOTE: Terminals on bells are designed to accept 14 GA wire. When using a 10 or 12 GA wire use Panduit terminal PV106LF or equivalent for connection of power leads.

3. Mount bell mechanism on 4" square electrical box with the striker facing down. See Figures 2 – 5.
4. Replace the gong.
5. The top of the bell must be mounted a minimum of 90" above the floor, or within 6" of the ceiling.



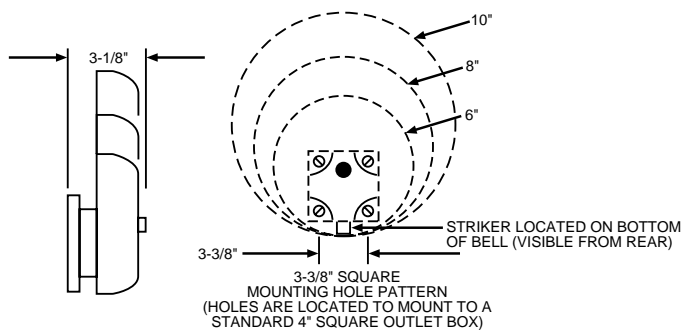
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Wire KBS 120 VAC powered bells per control panel manufacturer's instructions.

Figure 1. Typical KMS Bell Wiring Diagram (shown in alarm condition)

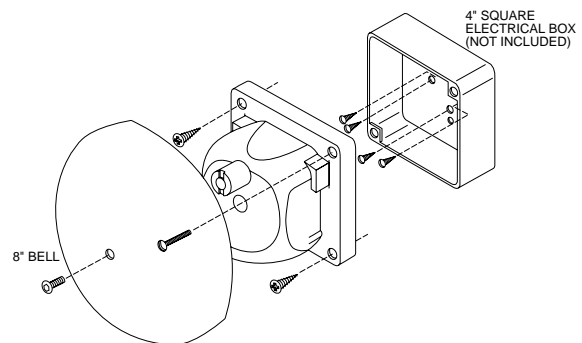
## BASIC MECHANISM AND GONGS

## SURFACE INSTALLATION



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Figure 2.

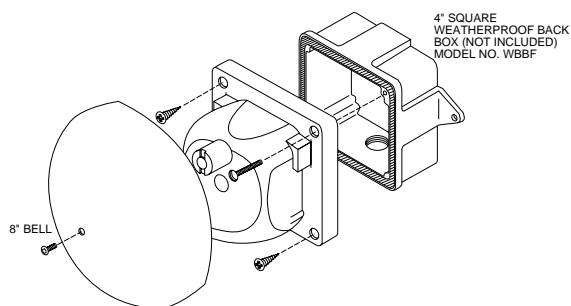


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Figure 3.

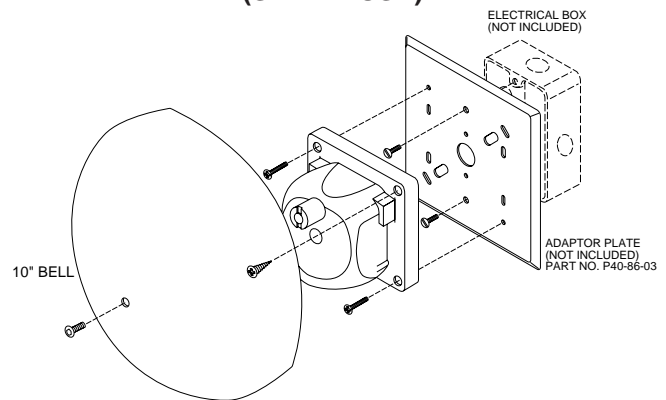
## WEATHERPROOF INSTALLATION

## CONCEALED CONDUIT INSTALLATION (SEMI-FLUSH)



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Figure 4.



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Figure 5.

## **AUDIBILITY RATING (dBA at 10 ft)**

### **UL Spherical Sound Measurement**

Sound level measurements are made in accordance with UL Standard 464. The sound power output is measured in a reverberant room. Bell shall be capable of providing a sound output equivalent to not less than 75 dBA.

### **Indoor Measurement**

Sound level in the indoor installation may vary depending upon the placement, spacing, and type of walls, etc.

## **SPECIFICATIONS**

KMS Series:

Operating Voltage: 24 VDC Nominal  
21 VDC Minimum  
30 VDC Maximum  
Current: 110 ma

KBS Series:

Operating Voltage: 120 VAC  
Current: 45 ma

		<b>Reverberant Sound Output per UL 464 (dBA)</b>	<b>Free Field Sound Output Measured at 10' (dBA)</b>
<b>24 VDC KMS</b>			
KMS-6-24	(6", 24 VDC, P)	84	97
KMS-8-24	(8", 24 VDC, P)	87	102
KMS-10-24	(10", 24 VDC, P)	87	104
<b>120 VAC KBS</b>			
KBS-6-120	(6", 120 VAC, P)	81	95
KBS-8-120	(8", 120 VAC, P)	84	98
KBS-10-120	(10", 120 VAC, P)	84	102

P = Polarized

## **OPERATIONAL TESTING**

Always notify a central station monitoring the system before repairing, maintaining, or testing alarm devices.

Upon completion of initial installation, all bells shall be tested per NFPA 72G. Periodic testing should be performed at least annually. Test more often if required by the authority having jurisdiction. Under normal conditions, System Sensor bells should provide years of trouble-free service; however, after extended service, parts of the bell may become worn. In this case, bell should be replaced.

**Do not repair or replace any bell components in the field. If bell does not perform properly, replace the entire unit. Failure to follow this instruction may result in failure of the bell to report an alarm condition.**

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## LIMITATIONS OF ALARM DEVICES

System Sensor bells are designed to provide fire and security hazard warning.

1. Bells may not work or operate properly if sprinkler piping being monitored is plugged with pipe scale, mud, stones, or other foreign material. Sprinkler systems should be checked regularly for such blocking material following the instructions in Chapter 5 of NFPA Standard 13A.
2. **BELLS WILL NOT WORK WITHOUT POWER.** Since the bell gets its power from the fire or security panel monitoring the alarm system, if power is cut for any reason, the device will not provide the desired audible warning. Alarms generated by the activation of waterflow detectors may not be received by a central station if telephone or other communication lines to the detector are out of service, disabled, or open.
3. **BELLS MAY NOT BE HEARD.** The loudness of the alarm device meets or exceeds current Underwriters Laboratories' standards. However, the bell may not alert a sound sleeper or one who has recently used drugs or has been drinking alcoholic beverages. The sounding device may not be heard on a different floor from the person in hazard or if placed too far away to be heard over the ambient noise such as traffic, air conditioners, machinery, or music appliances that may prevent alert persons from hearing the alarm. **THE SOUNDER MAY NOT BE HEARD BY PERSONS WHO ARE HEARING IMPAIRED.**
4. Sprinkler systems and associated bells are not a substitute for insurance. Building owners should always insure property and lives being protected by sprinkler systems.
5. If valves controlling the water supply to a sprinkler system are closed, vane-type waterflow detectors will not work and bells will not sound. All valves controlling a sprinkler water supply should be sealed or locked in the normally open position. The normally open position should be monitored by a sprinkler supervisory switch.

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## THREE YEAR LIMITED WARRANTY

System Sensor warrants its enclosed KMS or KBS bell to be free from defects in materials and workmanship under normal use and service for a period of three years from date of manufacture. System Sensor makes no other express warranty for this piece of equipment. No agent, representative, dealer, or employee of the Company has the authority to increase or alter the obligations or limitations of this Warranty. The Company's obligation of this Warranty shall be limited to the repair or replacement of any part of the bell which is found to be defective in materials or workmanship under normal use and service during the three year period commencing with the date of manufacture. After phoning System Sensor's toll free number 800-SENSOR2 (736-7672) for a Return Authorization number, send defective units postage prepaid to:

System Sensor  
Repair Department  
RA # \_\_\_\_\_  
3825 Ohio Avenue  
St. Charles, IL 60174.

Please include a note describing the malfunction and suspected cause of failure. The Company shall not be obligated to repair or replace units which are found to be defective because of damage, unreasonable use, modifications, or alterations occurring after the date of manufacture. In no case shall the Company be liable for any consequential or incidental damages for breach of this or any other Warranty, expressed or implied whatsoever, even if the loss or damage is caused by the Company's negligence or fault. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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