ENGINEERING SPECIFICATIONS
SENSAPHONE® 1400

I. General

The Automatic dialer shall be a self-contained microprocessor controlled system capable of monitoring up to 4 alarm zones, sound level and AC power. The system shall be configured for operation by the user by means of the built-in keypad. The system shall allow limited access to programming remotely by touch-tone telephone. The system shall have one on-board relay output. Input zones shall be compatible with normally open / normally closed contacts, 2.8k / 10k temperature sensors and 4 / 20 mA transducers.

Upon detection of any alarm or status change, the system shall commence dialing telephone numbers and deliver a voice message identifying and describing the alarm condition(s). The alarm message shall be delivered in digitized human voice using messages recorded by the user. The system will continue to call telephone numbers in succession until a positive acknowledgment of the alarm message is received. Acknowledgment is accomplished by depressing tone keys from the called telephone, or by calling the system back within a programmed time period. The alarm may also be acknowledged using the local keypad. In addition, the system shall be able to receive incoming telephone calls. Upon answering, the system shall recite a status report and allow access to remote operation and programming.

The system shall be FCC and DOC registered for direct connection to the telephone network. The system shall have a one year warranty from the manufacturer. The system shall be a Sensaphone® 1400 by Sensaphone.

II. I/O Zone Attributes and Features

A. Zones

The system shall come standard with 4 zones capable of being configured as follows:

1. N.O./N.C. dry contact
2. 2.8K Temperature sensor (-109° to 115° F; -85° to 57° C)
3. 10K Temperature sensor (-87° to 168° F; -66° to 76° C)
4. 4–20mA (range of scale -10,000 to 10,000)

The system shall have the following built-in monitoring features:

1. AC power failure detection
2. High sound level detection (w/optional external microphone)
3. Temperature with pre-wired 2.8k weatherproof temperature sensor on zone 1.

All monitored zones, including built-in monitoring features, shall allow local keypad programming of pertinent operational data including, but not limited to:

1. Zone type (NO/NC, 2.8k / 10k temperature sensor, and 4/20 mA transducer)
2. High and Low limits (temperature 4/20 mA)
3. Zone recognition time (0 seconds to 540 minutes)
4. Enable/disable for each zone to dialout for alarm

B. Output

The system shall have one built-in SPDT form C 2A 125VAC relay output. The output may be programmed to switch automatically or manually.

III. Communications Features

A. Telephone Specifications

The system shall connect to a standard 2-wire telephone line using pulse or tone, with loop start only. The system shall recognize ringer frequencies from 16 to 60 Hz. No leased or dedicated lines shall be required. The system shall also be capable of being used on the same telephone line as other answering devices. Call progress detection shall ensure that the alarm dialout is not hindered by no answers or busy signals.

B. Telephone Numbers

The system shall be capable of dialing up to 8 telephone numbers, 48 digits each. The system shall allow local keypad programming of the following telephone dialing information:

1. Dialing method (Pulse or tone)
2. Message repetitions (1 to 10)
3. Maximum number of calls (0 to 255)
4. Call delay time (0 seconds to 60 minutes)
5. Intercall delay time (1 second to 60 minutes)

C. Voice Messages

The System shall have the ability to record, store and reproduce voice messages and to use those messages to articulate the location and status of the monitored zones. In absence of user-recorded voice messages, the system shall articulate zone status using the internally resident vocabulary. All digitized speech message data shall be stored in nonvolatile memory. There shall be one recorded identification message for the system, and one recorded alarm message for each zone. Message length shall be 5 seconds per zone and 8 seconds for the identification message.

D. Beeper/Pager Dialout

The system shall be capable of intelligently dialing out to a numeric beeper or pager. The dialing sequence shall be programmable such that the pager number is dialed, the system waits for the telephone to be answered, and then sends the programmed ID number along with the zone number that is in alarm.

E. Line Seizure Feature

The system automatically seizes control of the phone line to make an alarm phone call when the alarm occurs. All other calls, including current calls, will disconnect and all extensions will be disabled. Extensions will remain cut off until the alarm is acknowledged.

IV. Programming

A. Local Programming

The System shall contain an integral, sealed keypad for the purpose of locally programming all system data. Programming is assisted by synthesized voice guidance.

B. Remote Programming

The system shall be remotely programmable using a standard touch-tone telephone. The following parameters may be remotely programmed:

1. Enable and disable zones, power monitoring, and sound monitoring
2. Recite/Set High and Low alarm limits
3. Recite/Set telephone numbers
4. Record/Play custom voice messages
5. Recite/Set the relay output
6. Activate the microphone for listen-in
7. Recite status report
8. Recite alarm history

V. Remote Operation Features

A. Status Report

The system shall allow the user to call into the unit at any time using any standard telephone to obtain a full status report of all monitored zones and listen-in to on-site sounds. The status report shall be articulated using the resident voice-synthesized English vocabulary, in combination with digitized user-recorded voice messages.

B. Acknowledgment

An alarm on any monitored zone may be acknowledged remotely by pressing tones on a touch-tone telephone keypad or by calling the system back within a specified time period. An alarm may also be acknowledged locally using the built-in keypad.

VI. Enclosure and Environmental

A. Enclosure

The system shall be housed in a NEMA-4X plastic ABS enclosure with either a latched clear cover or opaque cover and shall be internally constructed to facilitate field upgrades, repair, and maintenance.

B. Power

The system shall be provided with a UL listed 9V DC power transformer that the user may plug into a 115V AC outlet, ±10%, 60Hz.

C. Local Visual Indication

Each zone shall have a corresponding LED that will indicate the alarm and acknowledgment status of each zone.

D. Battery Backup

The system shall have a built-in 6V 1.3 AH sealed lead-acid rechargeable battery. This battery shall support approximately 24 hours of continued system operation in the absence of AC power.

E. Electrical Protection

Power and telephone connection shall have internal spike and surge protection using metal oxide varistors. Zones shall be protected with metal oxide varistors and fast acting diode clamps.

F. Additional Electrical Surge Protection

Additional Power and Telephone line surge protection shall be available from the manufacturer. When so installed, the system shall be fully warranted against any damage caused by transient surges entering the system through Power or Telephone lines.

G. Environmental

The system shall function over an operating range of 32° F–122° F (0º–50º C) at up to 0–90% RH, non-condensing.

H. Maintenance

The system manufacturer shall have in-house service facilities and technical assistance available during normal business hours (EST).

Specifications subject to change without notice.

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