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Installation &
 Maintenance Manual
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AVAS

Audio/Visual Alarm System



Description

The Audio/Visual Alarm System is designed to give a visual and audible warning in cases where water temperature exceeds a pre-programmed setpoint. In addition, the alarm system can control an optional solenoid valve, shutting down the flow of water if necessary. The probe temperature is displayed on a bright 3-digit LED display, and access to the unit programming is done thru the password protected keypad on the front face. A keylock switch is provided to override the audible alarm.

Specifications

- Probe Range:** -58 to +302°F
- Input:** Thermistor (1000Ω @ 25°C)
- Accuracy:** ±1°
- Resolution:** ±1 Digit
- Supply Voltage:** 120 VAC
- Ambient Temperature:** 32 to +131°F
- Storage Temperature:** -4 to + 176°F
- Display:** 3-digit, Red, 1/2" High

Installation

The Alarm System comes with a standard 120 VAC pigtail. The controller uses a SPDT relay powering the horn, and light, as well as an optional normally closed solenoid valve. Please see Lawler Manufacturing, Inc. about approved solenoid valves to use with the alarm system so as not to overload the controller. Observe proper polarity when connecting to the terminal block on the back panel of the enclosure. The wiring diagram can be found on page 3.

Upon powering the unit up the solenoid valve will open allowing the flow of water. If the set point is exceeded, the valve will close, and the audible and visual alarms will come on. The audible alarm can be bypassed with the keylock switch. The unit will return to normal when the temperature goes below the sum of the set point and the high alarm minus the hysteresis.

Parameters

Code	Description	Range	Default
SP	Set Point	r1 to r2	120°F
r0	Hysteresis	1 to 20	2°F
r1	Lower Value Set Point	-50 to +150°F	-50°
r2	Upper Value Set Point	-50 to +302°F	200°F
d0	Heating or Cooling	Ht/Co	Co
d2	Time for Defrosting	0 to 59 Min	0 Min
d8	Interval between Defrost	1 to 24 Hrs	1 Hr
c0	Min. Stop Time	0 to 59 Min Load	0 Min
c1	Continuous Cycle Time	0 to 24 Hrs	0 Hrs
c2	On Time of Fault Cycle	0 to 999 Min	0 Min
c3	Off Time of Fault Cycle	0 to 999 Min	0 Min
A0	Alarm differential/hysteresis	1° to 20°	5° F
A1	Max alarm temp	1° to 20°	10° F
A2	Min alarm temp	1° to 20°	90° F
A7	Alarm time validation	0 to 99 Min	0 Min
P0	Temperature Scale	Option	0/F°
P1	Ambient Probe Adj.	-10 to +10°F	0°F
P4	Decimal Point	Option	No
H0	Factory Settings	Option	0
H4	Address	0 to 999	0
H5	Parameter Access Code	00 to 99	00
H6	Ambient Probe Type	Option	PTC
t0	Max Temp on Display	-50 to +302°F	200°F

The actual point of alarm is the sum of the set point and the "high alarm". The system will return to normal when the temperature reaches the sum of the set point and the "high alarm" minus the hysteresis.

Parameter Programming

Set Point (SP) is the only parameter the user can access without code protection

- Press **SET**. **SP** Text will appear on the display
- Press **SET** again. The real value is shown on the display.
- The value can be modified with the **UP** and **DOWN** arrows.
- Press **SET** to enter any new values.
- Press **SET** and **DOWN** at the same time to quit programming or wait one minute and the display will automatically exit programming mode.

The keyboard code can be reset to ZERO by turning off the controller and turning it on again while keeping the SET key depressed.

Access to all code protected parameters.

- Press **SET** for 8 seconds. The access code value 00 is shown on the display. (Unit comes with code set at 00 from factory).
- With the **UP** and **DOWN** arrows, code can be set to user needs.
- Press **SET** to enter the code. If code is correct, the

Warning: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

(Installer: California law requires that this warning be given to the consumer.)

For more information: www.oehha.org/prop65

first parameter label is shown on the display (**SP**).

- Move to the desired parameter with the **UP** and **DOWN** arrows.
- Press **SET** to view the value on the display.
- The value can be modified with the **UP** and **DOWN** arrows.
- Press **SET** to enter the value and exit to text parameter.
- Repeat until all necessary parameters are modified.
- Press **SET** and **DOWN** at the same time to quit programming or wait one minute and the display will automatically exit programming mode.

Display Messages

In normal operation, the probe temperature will be shown on the display. In case of alarm or error, the following messages will be shown: The alarm LED indicates and active alarm, it will flash if an alarm is cleared but alarm condition still exists.

- **ALH** = High Temp Alarm
- **ALL** = Low Temp Alarm
- **Er** = Memory Error
- **--** = Short-Circuit Probe Error
- **oo** = Open Probe Error

Alarm can be cleared by pressing the **DOWN** button. The alarm LED will flash while alarm condition persists but the alarm message will not be shown.



GUARANTEE

We guarantee the Lawler Mixing Valve to be free from defects in workmanship and material, and for a period of one year from date of purchase, will replace any parts found by us to be defective. We will not be

held responsible, however, for any labor incidental to, or for any damages caused by defective material. Each mixing valve is thoroughly inspected and tested under actual conditions at our factory.

AVAS Wiring Diagram

