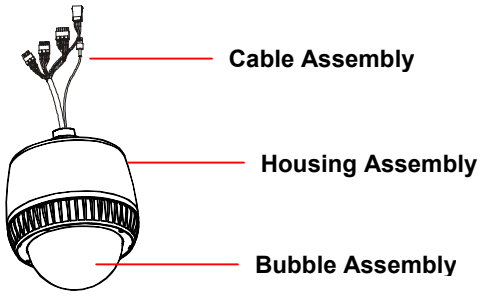
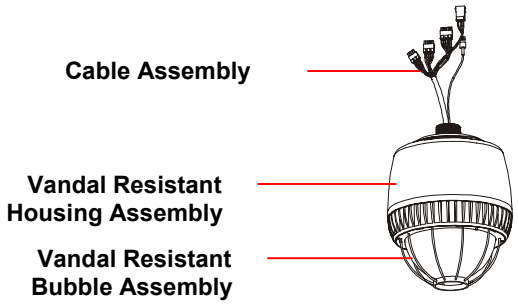
SpeedDome® Ultra Camera Dome Outdoor Housing

Heater Operating Instructions

RHODUL–03/04 Outdoor Housing



RHODUL–03VR/04VR Outdoor Housing



Contents

About this Guide

These instructions explain the operation of the heaters for the outdoor housing. The following documents provide more information about the outdoor housing.

- SpeedDome Ultra Outdoor Housing Installation and Service Guide, 8200-0184-10
- SpeedDome Ultra Vandal Resistant Outdoor Housing Installation and Service Guide, 8200-0184-11

Refer to your controller/matrix switcher instructions for specific information about activating the outputs/auxiliaries that control the heaters.

If you need assistance...

Contact your Sales Representative.

About the Outdoor Housing

The RHODUL-03/04 series outdoor housing is used to attach the SpeedDome Ultra camera dome to an outdoor mounting structure. It provides four alarm inputs and one alarm output. Heater control is available to prevent condensation from forming on the bubble.

The heater automatically turns on when the temperature inside the housing drops below 18°C (64°F). The heater automatically turns off when the temperature inside the housing reaches 23°C (73°F) if Output/ Auxiliary 3 or 4 have not been turned on.

The heaters can be manually turned on using the Output/Auxiliary 3 and 4. Refer to your controller/matrix switcher instructions for more information about controlling outputs/auxiliaries.

CAUTION: Domes installed in a Manchester environment do not support latching Auxiliary 4. Only cycled High/Low mode is available. Attempting to use Auxiliary 4 results in turning off Auxiliary 3.

Manual Operating Modes

Two manual operating modes are available for the heater:

- Cycled High/Low mode for trapped fog or light condensation
- Continuous High mode for frost or ice accumulation

Both modes will run for a period of 3 hours and 23 minutes (3.4 hours) unless manually turned off using the appropriate Output/Auxiliary Off command.

Operating in Cycled High/Low Mode

Use cycled high/low mode to reduce internal trapped fog or small amounts of condensation on the housing bubble. By turning on Output/Auxiliary 3, cycled high/low mode operates the heaters at two temperature ranges (high and low modes) for 23-minute cycles for a period of 3.4 hours unless manually turned off.

Using the Heater to Clear Fog or Light Condensation

1. Select the outdoor dome whose heater needs to be turned on.
2. Follow the instructions for your controller to activate Output/Auxiliary 3.
   For example, enter **3** and press **Output On**.

Cycled High/Low Mode remains active for 3.4 hours unless manually turned off.

Operating in Continuous High Mode

Use the continuous high mode to temporarily raise the temperature to accelerate the removal of frost or ice that has accumulated on the housing bubble. By turning on Output/Auxiliary 4, continuous high mode operates the heaters at the high temperature range for a period of 3.4 hours unless manually turned off.

IMPORTANT! Domes installed in a Manchester environment do not support latching Auxiliary 4. Only cycled High/Low mode is available. Attempting to use Auxiliary 4 results in turning off Auxiliary 3.

Using the Heater to Clear Frost or Ice Accumulation

IMPORTANT! Do not perform this procedure on domes used with the Manchester protocol.

1. Select the outdoor dome whose heater needs to be turned on.
2. Follow the instructions for your controller to activate Output/Auxiliary 4. For example, enter **4** and press **Output On**.

Continuous High Mode remains active for 3 .4 hours unless manually turned off.

Command Priority

If both commands to control the heaters are issued in sequence, the first command will run to completion (3.4 hours), and then the second command will run.

For example, the command to run the heaters on continuous high mode is issued (Output/Auxiliary 4 On). Five minutes later, the command to run cycled high/low mode is issued (Output/Auxiliary 3 On). The heaters will run on continuous high for 3.4 hours. After that time, the cycled high/low mode starts and runs for 3.4 hours.

Manually Turning Off Heaters

1. Select the outdoor dome whose heater needs to be turned off.
2. Follow the instructions for your controller to deactivate the appropriate output.
   For example, enter **3** and press **Output Off** to turn off the heaters running in cycled high/low mode.

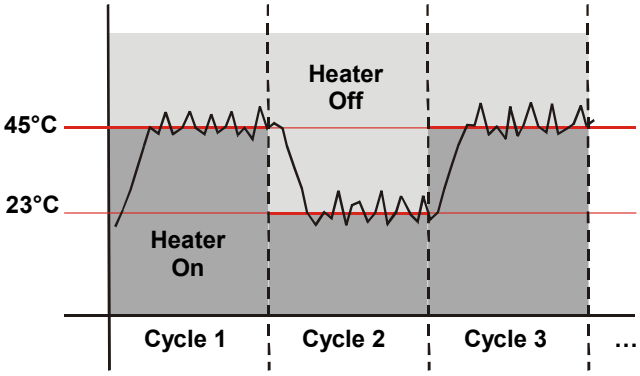
Understanding Heater Operating Modes

This section explains the operating differences between the cycled high/low mode and continuous high mode.

How Cycled High/Low Mode Operates

Activating Output/Auxiliary 3 turns on the heaters in cycled high/low mode. High mode heats to 45°C (113°F) ±3°. This is called the ***high boundary***. Low mode heats to 23°C (73°F) ±3°. This is called the ***low boundary***. Figure 1 provides a graphical view of the heating cycles.

Figure 1: Cycled Modes/Temperature Graph



During Cycle 1 (high mode), the heater remains on as long as the temperature is less than 45°C. Whenever the temperature exceeds the high boundary, the heater automatically turns off. The light area in the graph represents when the heater if off. When temperature drops below 45°C, the heater turns on. The dark area in the graph represents when the heater is on. This cycle continues for 23 minutes or the heater is manually turned off (Output/Auxiliary 3 Off).

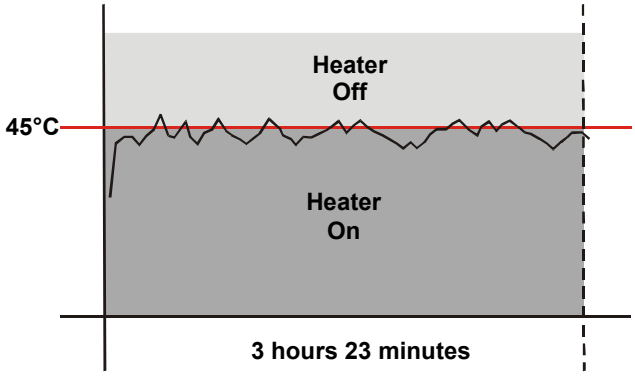
During Cycle 2 (low mode), the heater turns on only when the temperature drops below 23°C. This may take several minutes as represented by the temperature line. Once the temperature drops below 23°C, the heater turns on. When the temperature rises above 23°C, the heater turns off. This cycle continues for 23 minutes or the heater is manually turned off (Output/Auxiliary 3 Off).

Cycle 3 repeats high mode. The high mode/low mode cycling continues for 3.4 hours, unless it is manually turned off. After that time, the heater automatically turns off regardless of the temperature, and remains off until manually turned on.

How Continuous High Mode Operates

For those protocols supporting it, activating Output/Auxiliary 4 turns on the heaters in continuous high mode. Continuous high mode heats up to 45°C (113°F) ±3°. The heater remains on for 3.4 hours, unless the temperature rises above 45°C or it is manually turned off. Figure 2 provides a graphical view of the heating cycles.

Figure 2: Continuous High Mode/Temperature Graph



Specifications

Electrical (combined dome and housing)

Input Voltage ..... 24 to 30 Vac, 50/60 Hz
UL Listed Class 2
Certified Limited Power Source

Design Tolerance..... 20 to 36 Vac, 50/60 Hz

Power Consumption ..... 80 W max.

Power On In-Rush current ..... 3 A

Surge Protection:

Video .....Series resistor of 3.9 ohms; low-capacitance Zener suppressor of 6.5V, 1500W, 500W, 10kA impulse-rated gas tube

Power Line.....TVS rated at 60V, 1.5 joules, 250A 8/20µs impulse, 500W, 10kA impulse-rated gas tube

RS-422 .....Series resistor of 3.3 ohms; TVS rated at 5.6V, 40A, 0.1 joules, 8/20µs impulse, 500W, 10kA impulse-rated gas tube

Manchester/
SensorNet..... Isolation transformer coupled 2000Vrms; PTC fuse protects transformer; TVS rated at 5.6V, 40A, 0.1 joules, 8/20µs impulse, 500W, 10kA impulse-rated gas tube

Alarm Input .....Series resistors of 33 ohms; TVS rated at 5.6V, 40A, 0.1 joules, 8/20µs impulse, 500W, 10kA impulse-rated gas tube

Auxiliary Output ..... 1000V Isolation Form 1-C relay

Environmental

Operating Temperature .....–40°C to 50°C (–40°F to 122°F)

Relative Humidity.....0 to 95% non-condensing

Storage Temperature.....–10°C to 50°C (–14°F to 122°F)

Wind loading..... Sustained winds of 240Km/hour (150 miles/hour) when properly installed and mounted (wall, pole, ceiling, and over-the-roof with proper support)

Mechanical

Height .....32.1 cm (12.6 in)

Diameter .....24.4 cm (9.6 in)

Weight:

Standard Outdoor Housing:

Without dome .....2.6 kg (5.7 lbs.)

With dome .....3.8 kg (8.4 lbs.)

Vandal Resistant Outdoor Housing:

Without dome..... 2.7 kg (6.17 lbs.)

With dome..... 3.9 kg (8.7 lbs.)

Mechanical connection..... 1.5 in NPT

Declarations

Regulatory Compliance

Emissions.....47 CFR, Part 15, Class A
ICES-003
EN55022 Class B
EN61000-3-2
EN61000-3-3
AS/NZS 3548, Class A
CISPR 22

Immunity EN50130-4

Safety.....UL1950
CSA C22.2 No. 950
EN60950
IEC 950

FCC COMPLIANCE: This equipment complies with Part 15 of the FCC rules for intentional radiators and Class A digital devices when installed and used in accordance with the instruction manual. Following these rules provides reasonable protection against harmful interference from equipment operated in a commercial area. This equipment should not be installed in a residential area as it can radiate radio frequency energy that could interfere with radio communications, a situation the user would have to fix at their own expense.

EQUIPMENT MODIFICATION CAUTION: Equipment changes or modifications not expressly approved by Sensormatic Electronics Corporation, the party responsible for FCC compliance, could void the user's authority to operate the equipment and could create a hazardous condition.

See “About the Outdoor Housing” on page 1.

Other Declarations

Thank you for using American Dynamics products. We support our products through an extensive and worldwide network of dealers. The dealer, through whom you originally purchased this product, is your point of contact if you have a need for service or support. Our dealers are fully empowered to provide the very best in customer service and support. Dealers should contact American Dynamics at (800) 507-6268 or (561) 912-6259 or on the web at www.americandynamics.net.

WARRANTY DISCLAIMER: Sensormatic Electronics Corporation makes no representation or warranty with respect to the contents hereof and specifically disclaims any implied warranties of merchantability or fitness for any particular purpose.

NOTICE: The information in this manual was current when published. The manufacturer reserves the right to revise and improve its products. All specifications are therefore subject to change without notice.

BSL 01/2004

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