LUME20

Room Pressure Monitor
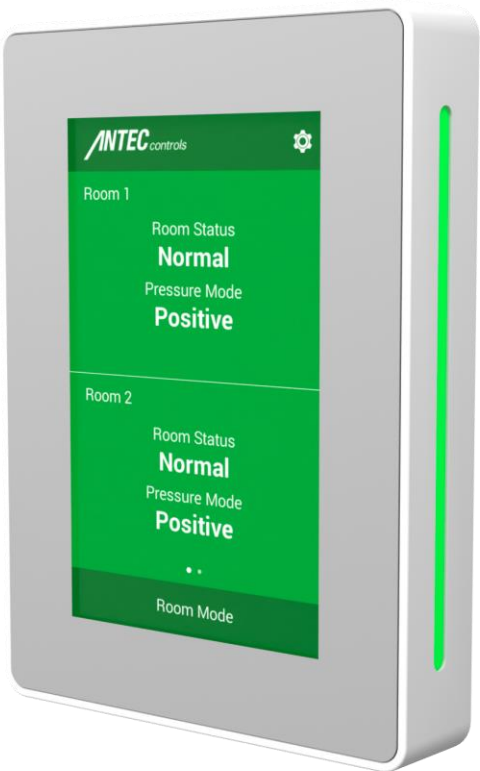
TABLE OF CONTENTS

INTRODUCTION

General

In this manual, you will find information regarding:

- LUME20 technical specifications
- LUME20 mechanical and electrical installation
- LUME20 interface navigation and configuration
- LUME Assistant software navigation and operation

Product Overview

LUME20 is designed to provide ease of use pressure monitoring.

The Home screen provides monitoring information in a simple format displaying information including Room Status and Pressure Mode.

Upon swiping the screen to the left, room pressure measurement is visually available.

Some of the key LUME20 features include:

- 4.3 in. (109 mm) capacitive touchscreen display
- Password protected menus
- Configurable audible and visual alarms
- Interface with analog pressure sensor
- Native BACnet MS/TP
- Setup Wizard provides fast, intuitive start-up
- Easy to use software to copy and paste configurations
- LED sidebars offer 180° viewing of current room status

General Installation Information

1. A qualified person must perform installation and electrical wiring in accordance with all applicable codes and standards, including fire-rated construction practices.
2. Do not damage electrical wiring and other hidden utilities while installing this device.
3. Disconnect power at the service panel before performing wiring or maintenance on this device.
4. Intended for indoor installation only, in areas with Pollution Degree 2.
5. Not designed for use in industrial, farming or humid environments.
6. Not designed for use in residential environments and may not have adequate protection to radio interference.
7. Not designed to operate in a construction environment. Use in these environments may lead to excess or unintended wear, reducing product life and/or performance.
8. The manufacturer assumes no responsibility for personal injury or property damage resulting from improper handling, installation, service or operation of the product.

 CAUTION

This mark indicates an important point for the proper function of LUME20 and its accessories. Pay close attention to all caution points throughout this manual.

For local area support, please contact your local Antec Controls Representative.

For more information visit
www.AntecControls.com

Technical Specifications

Environmental (Operating)	32°F to 130°F (0°C to 55°C), 5% to 95% R.H. (Non-Condensing)	
Environmental (Storage)	-22°F to 158°F (-30°C to 70°C), 0% to 95% R.H. (Non-Condensing)	
Input Power	24 VAC ±10%, 50/60 Hz, 21 VA Max (excluding external loads), Class 2	
Inputs	4 Universal Inputs	Binary Input (Contact Closure)
		Analog Input (0 – 10 VDC)
		Thermistor Input (10k Type 2)
	3 RJ45 Network Ports	
Outputs	1 Analog Output (0 – 10 VDC, Max: 10 mA)	
	2 Binary Outputs, Non-Isolated Contact Closure (Max: 24 VAC, 500 mA)	
Indicators	Touchscreen Display, 4.3 in. (109 mm) TFT, Speaker	
Housing	UL 94V-0, PC-ABS Plastic	
BACnet	Device Type	B-AAC
	Communication Type	MS/TP (RS-485)
	Communication Speed	9600, 19200, 38400, 76800
	Certification	BTL
	Control Priority Order	1. BACnet 2. Normal operation

GETTING STARTED WITH LUME20

In the Box
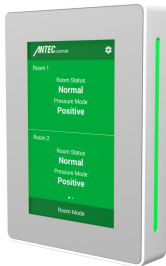
Room Pressure Monitor (LUME20)

Component	Quantity	Description
Room Pressure Monitor (LUME20)	1	Single LUME20

[Optional] Differential Pressure Sensor (SDPT)

Component	Quantity	Description
Differential Pressure Sensor	1 (single room monitoring) 2 (dual room monitoring) 3 (triple room monitoring)	Single SDPT

[Optional] Stainless Steel Sensor Plate

Component	Quantity	Description
Stainless Steel Sensor Plate	2 (single room monitoring) 4 (dual room monitoring) 6 (triple room monitoring)	Stainless Steel Plate used as a pressure sensor inlet
Mounting Hardware Packet	2 (single room monitoring) 4 (dual room monitoring) 6 (triple room monitoring)	Packet containing two screws for J-Box mounting of Sensor Plate
Kink Resistant Air Tubing - 96 in. (2.44 m)	1 (single room monitoring) 2 (dual room monitoring) 3 (triple room monitoring)	Air pressure tubing to connect between Sensor Plate and Room Pressure Sensor

OR

[Optional] ABS Sensor Plate

Component	Quantity	Description
ABS Sensor Plate	2 (single room monitoring) 4 (dual room monitoring) 6 (triple room monitoring)	ABS plate used as pressure sensor inlet
Mounting Hardware Packet	2 (single room monitoring) 4 (dual room monitoring) 6 (triple room monitoring)	Packet containing two screws and two drywall anchors for wall mounting of Sensor Plate
Kink Resistant Air Tubing - 96 in. (2.44 m)	1 (single room monitoring) 2 (dual room monitoring) 3 (triple room monitoring)	Air pressure tubing to connect between Sensor Plate and Room Pressure Sensor

⚠ CAUTION

Please ensure you have all the components before proceeding. Inspect all components for shipping damage. Do not install any components that appear damaged. Contact your local Antec Controls Representative for replacements.
For the latest information and videos please visit www.AntecControls.com.

LUME ACCESSORIES

Differential Pressure Sensor (SDPT)

The SDPT is a room pressure sensor that is used to measure pressure.

Overview

See the SDPT product submittal on AntecControls.com for Specifications, Dimensions and Configurations.

Options

1. Differential Pressure Sensor

Model: SDPT
Features: • 2 – 10 VDC outputs for pressure reading.
            • -0.25 to +0.25 in.w.c. (-60 to 60 Pa)
            • LED light used to display status
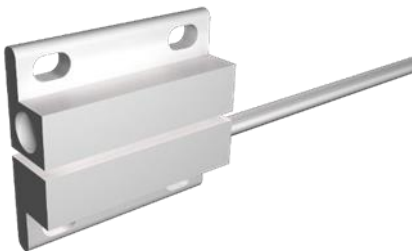   • Accurate to 3% of reading

Door Contact Switch (DCS)

Door Contact Switches can be wired into the binary input(s) to detect when the door(s) are open.

Overview

See the DCS product submittal on AntecControls.com for Specifications, Dimensions and Configurations.

Options

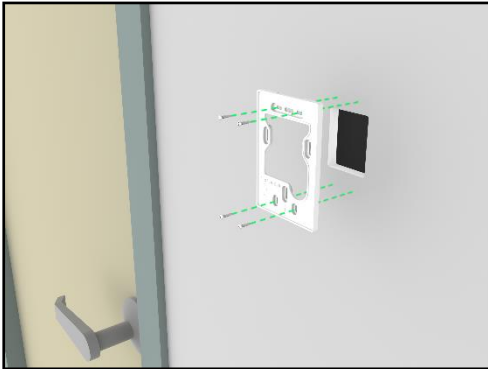| **1. Surface Mount**	**2. Flush Mount**

MECHANICAL INSTALLATION

It is recommended to mount LUME20 at approximately 5 feet (1. 5 m) from the floor. This will allow the interface to be at an appropriate height for use during setup and during normal operation.

Installation and Mounting Instructions

Touchscreen Installation Instructions

Option A

Mount LUME20 directly on dry wall.

STEP 1

Mark an appropriate mounting location for the monitor.

STEP 2

Using a jigsaw, cut four lines to cut-out a rectangle (minimum 2.0 in. W X 2.5 in. H, 50.8 mm W X 63.5 mm H).

NOTE: Ensure the cut-out sizes are not bigger than the size of the back plate (3.4 in. W x 4.9 in. H, 86.4 mm W X 124.5 mm H).

STEP 3

Drill 4 mounting holes according to the provided template in Appendix A.

STEP 4

Make sure that the anchors are flush to the wall and then mount the backplate on the drywall using four #6 drywall screws with anchors.

STEP 5

Attach LUME20 on the backplate installed on the dry wall.

Option B

Mount LUME20 using an EU Wall box.

STEP 1

Using the provided instructions, mount the EU Wall box at the suggested height from the floor.
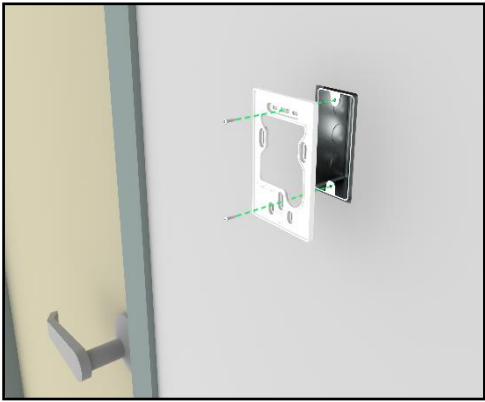
STEP 2

Remove the two unused screws from both sides.

STEP 3

Mount the back plate on the wall box using the two screws removed from the wall box in Step 2.

STEP 4

Attach LUME20 on the backplate that was installed in Step 3.

Option C

Mount LUME20 using a standard single-gang electrical box.

STEP 1

Using the provided instructions, mount the standard single-gang electrical box at the suggested height from the floor.

STEP 2

Mount the back plate to the box using two #8-32 screws.

STEP 3

Attach LUME20 on the backplate that was installed in Step 2.

Pressure Sensor Installation Instructions

Selecting a Location for Installation

There are three components that are to be installed for each space that requires pressure monitoring:

1. A sensor plate inside the room
2. A sensor plate outside the room
3. An SDPT differential pressure sensor

Begin by determining installation locations for each of these components.

1. The best installation location for the sensor plates is typically above a doorway. When determining the location for the sensor plates:
    a. Ensure that nothing can be placed in front of the pressure sensor, blocking its ability to measure the room pressure accurately.
    b. Be wary of diffuser placement in relation to the sensor. Turbulent airflow passing over the sensor plate can cause unstable pressure readings.
2. The Differential Pressure Sensor (SDPT) can be mounted in the plenum space either in the room or in the reference space. Important notes:
    a. The sensor must be placed in a location where the ninety-six inches (96 in., 2.44 m) of total pressure tubing provided with the SDPT can reach both pressure plates.
    b. The sensor should be easily accessible for wiring and setup.

CAUTION

Incorrect placement can affect the sensor's readings.

Once the installation locations have been selected, the sensor plates can be mounted using the following steps.
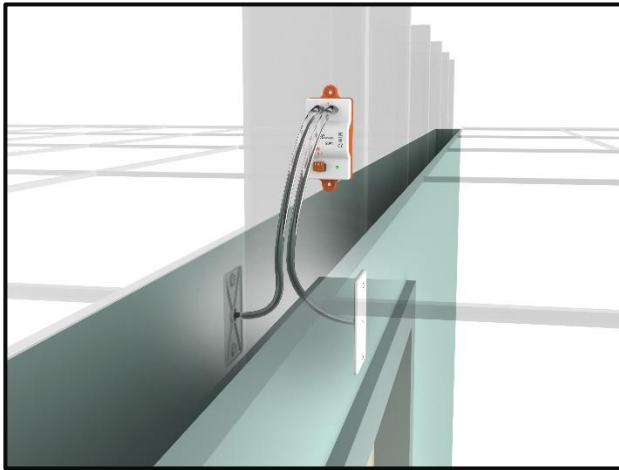
Prior to mounting the sensor plates, cut the ninety-six inches (96 in., 2.44 m) clear tubing to the required length for the distance from each plate to the sensor. E.g., if the plate for the isolation room is five feet (5 ft, 1.52 m) from the SDPT and the plate for the corridor is three feet (3 ft, 0.91 m), cut the provided tubing into one five-foot (5 ft, 1.52 m) and one three-foot (3 ft, 0.91 m) length.

To mount the ABS sensor plate directly to the wall:
1. Cut a one-inch (1 in., 25.4 mm) hole for the tubing to pass through.
2. Use the sensor plate to mark the holes for the anchors (anchors require 3/16 in., 4.8 mm drill). Drill hole and install the provided anchors.
3. Push the clear tubing onto the pickup on the back of the sensor plate.
4. Run the tubing through the one-inch (1 in., 25.4 mm) hole in the wall and mount the sensor plate to the surface using the provided screws.
5. Connect the tubing to the SDPT.
   a. Monitored space to high pressure port.
   b. Reference space to low pressure port.

To mount the stainless steel sensor plate directly to a single gang electrical box:
1. Knockout a hole for the tubing to pass through.
2. Push the clear tubing onto the pickup on the back of the sensor plate.
3. Connect the tubing to the SDPT.
   a. Monitored space to high pressure port.
   b. Reference space to low pressure port.

CAUTION

Make note if the tubing is reversed when installed. If the corridor is connected to the high pressure port on the SDPT, the reading can be reversed during setup.

Do not extend the pressure tubing past the provided length of ninety-six inches (96 in., 2.44 mm). **Extending the tubing past this length can result in degradation of the pressure reading.**

Do not connect tubing from the SPDT to any other pressure measurement devices or other SDPT sensors.

Do not tee off the tubing to connect to any additional devices.

ELECTRICAL INSTALLATION

Sample Wiring Diagrams
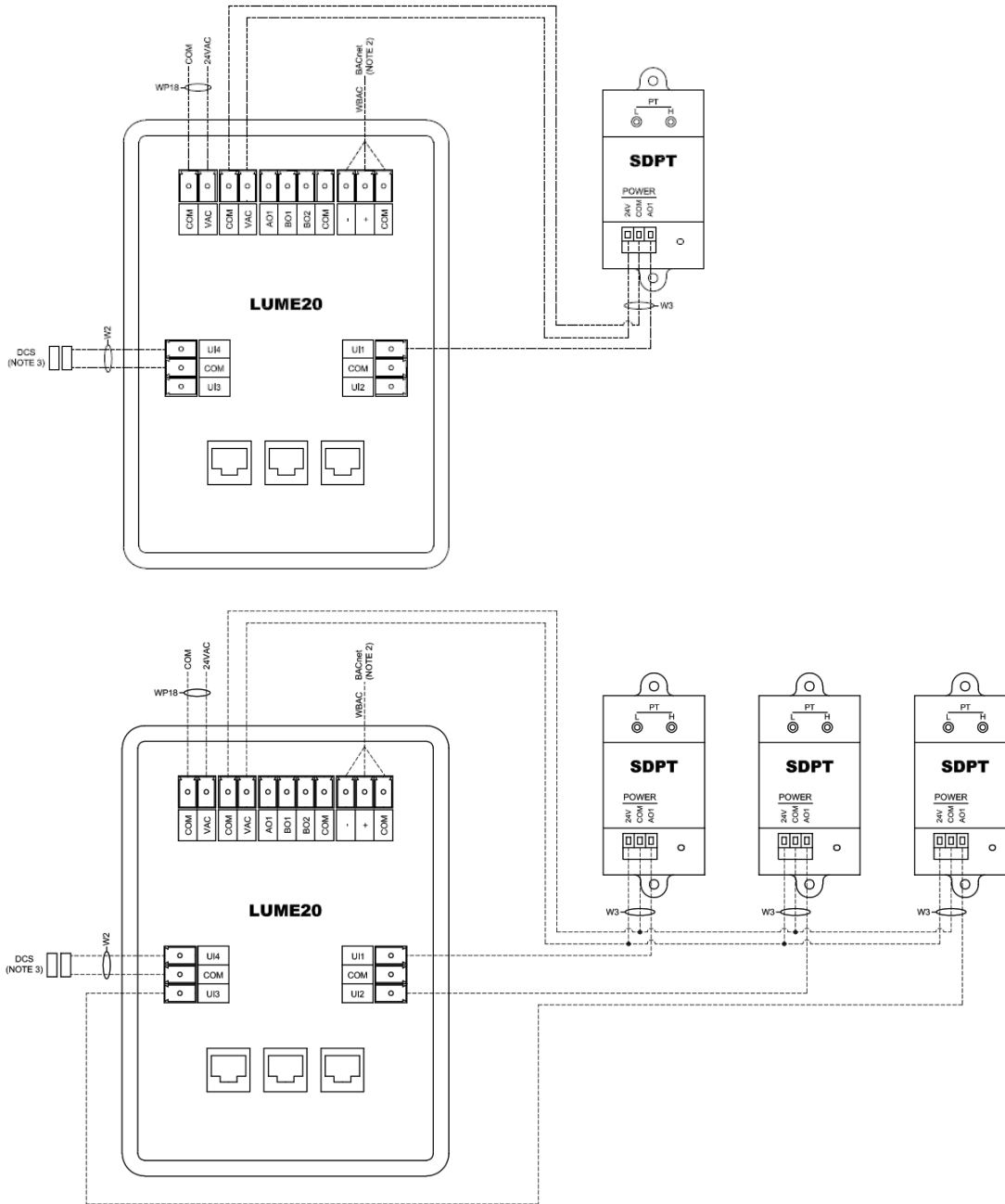
NOTES:

1. For Typical Network Wiring Diagrams, see BACnet MS/TP Network section.
2. All wire connections to the LUME20 screw connection terminals must be between 16-26 AWG wire.
3. Current and voltage drop should be taken into consideration when selecting wire gauge.
   Wiring above may not reflect those required for your project. Refer to your Antec Controls Wiring Diagram Package for typical wiring recommendations.

BACnet MS/TP Network

What is BACnet?

BACnet MS/TP is a communication protocol for communication between LUME20 and the building automation network. BACnet communication allows the end user to verify rooms are operating as expected and set up trends to monitor safety and any alarms that occur.

LUME20 requires a connection to BACnet to transmit its information to the Building Management System (BMS).

Network Addressing

When configuring LUME20, the user needs to assign the unique addressing for the device.

On any BACnet MS/TP network:

- MAC Address can be between 0 and 127 and must be unique to the MS/TP segment.
- Device Instance can be between 0 and 4,194,303 and must be unique to the facility.
- Baud Rate can be 9,600, 19,200, 38,400 or 76,800 and must match that of the Router/System Controller for the MS/TP segment.

Typical BACnet Wiring
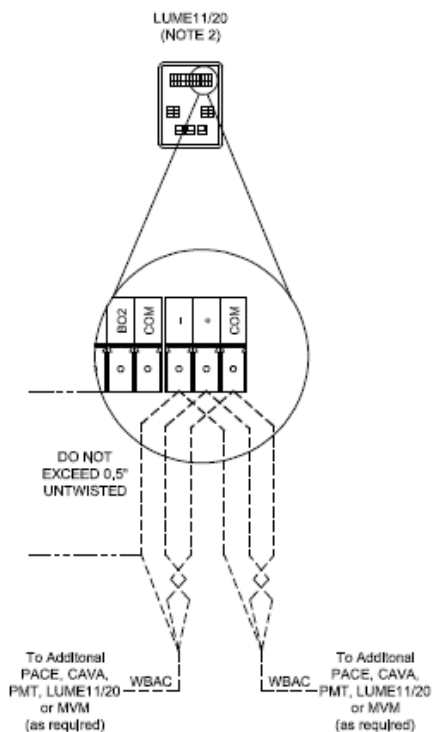
BACnet Points

See LUME20 Product Submittal at AntecControls.com for BACnet Points List.

Physical Connection

BACnet consists of a three-wire network architecture. Daisy chain the +, - and COM connections of all devices on the network segment. A BACnet MS/TP segment has a limit of:

- Maximum of 32 devices
- Maximum length of 1050 ft. (320 m) for the whole segment

When using shielded cable, ground the shield at one end of the network segment only. Connect the shield of the cable entering a device to that of the cable exiting the device.

Terminate the MS/TP network segment at each end of the network segment by connecting a 120-ohm resistor between the + and – terminals. Remove the termination resistor or disable any network terminations on all devices when adding devices to an existing network segment.

Wiring Requirements

Refer to your Antec Controls Wiring Diagram Package for typical wiring requirements and recommendations.

⚠️ **CAUTION**

When using non-isolated power supplies (i.e. A transformer with the secondary common connected to ground), do not reverse 24VAC polarity on any device, as it is critical to the network health.

DISPLAY NAVIGATION

Initial Setup

When LUME20 is first powered on, it will prompt the user to step through a Setup Wizard to help configure the device. At any point in the device setup, the user can return to previous selections in the menu via the Next/Previous buttons. Any value not initially configured in the Setup Wizard can be configured through the Settings menu during normal operation. To begin the Setup Wizard, enter the password 1-6-6-4. The following menus will be displayed:

Please enter password to continue.

Units

Units

in.w.c

Number of Rooms

Number of Rooms

1

Previous | Next

Monitored Sensor 1

Pressure Sensor Name

Sensor 1

Input Port

UI1

Voltage Range Min.

2.0 | VDC

Voltage Range Max.

10.0 | VDC

Pressure Range Min.

-0.2500 | in.w.c

Pressure Range Max.

0.2500 | in.w.c

Previous | Next

Monitored Room 1

Room Name

Room 1

Monitored Sensor

Sensor 1 ⌄

Pressure Mode

Positive ⌄

Low Pressure Alarm

0.0100   in.w.c   ON ▢

High Pressure Alarm

0.0500   in.w.c   ON ▢

Room Modes

Mode 1 (Default)

Normal

Color   Alarms

🟩 Green ⌄   ON ▢

Sidebar Type

Solid ⌄

Mode 2

Setback

Color   Alarms

🟦 Blue ⌄   ▢ OFF

Sidebar Type

Solid ⌄

Door Switch

Door Switch   ON ▢

Input Name

Door Switch

Input Port

UI4 ⌄

Alarm Enable   ON ▢

Delay

60   seconds

Caution During Delay   ON ▢

BACnet

BACnet   ON ▢

Device Name

LUME

MAC Address

1

Device Instance

158001

Baud Rate

38400 ⌄

Settings Password

Settings Password
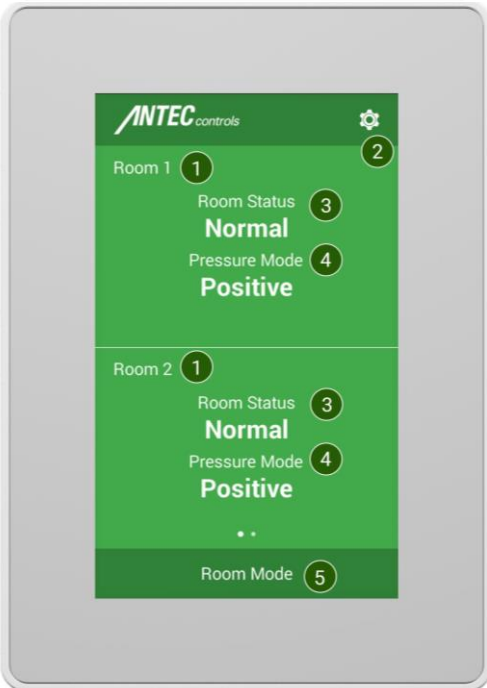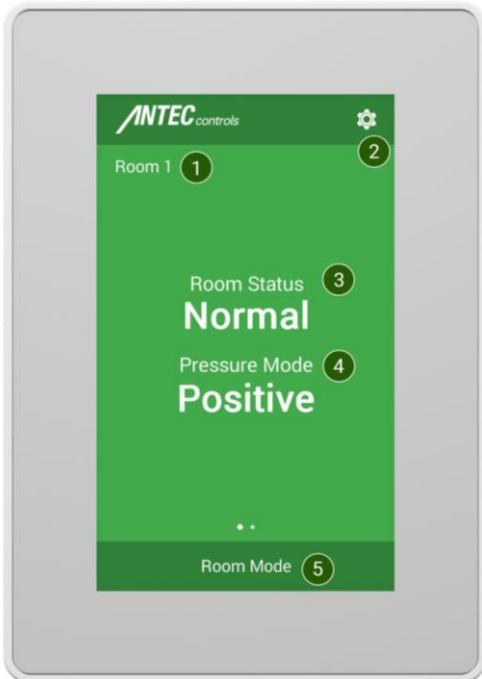
1664

⚠ CAUTION

For security purposes, the settings password should be changed prior to completing the Setup Wizard.

Home Screen

The Home Screen displays once the Setup Wizard has been completed or after a configuration file has been loaded using LUME Assistant.

The Home Screen provides the user with a clear indication of the pressure mode, room status and pressure reading.

Normal Operation

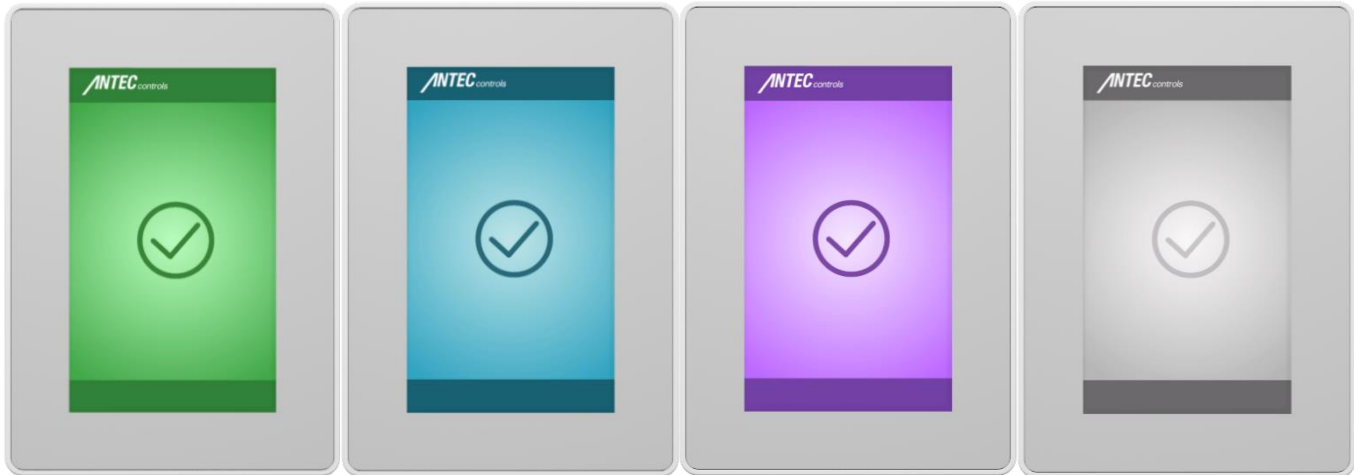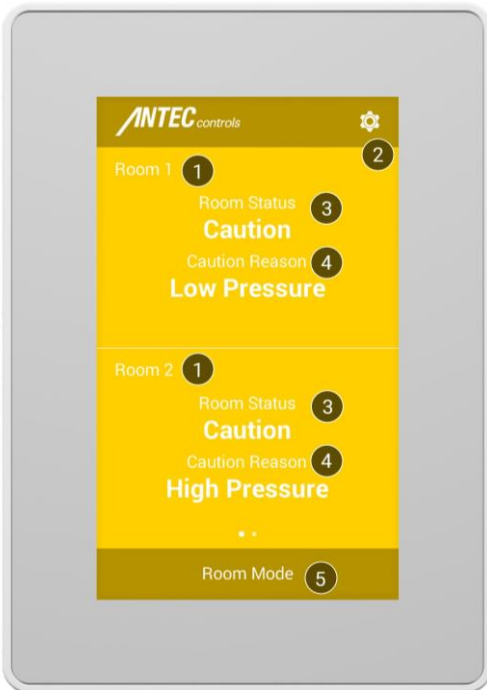|	Display Component	Description
1	Room Name	The current name of the room is displayed. This is configurable through the Monitored Room menu.
2	Settings Button	Allows access to settings. This is password protected.
3	Room Status	Displays the name of the current room mode. Room modes are named Normal or Setback by default and are configurable through the Room Modes menu.
4	Pressure Mode	Indicates whether the room is in Negative or Positive pressure mode.
5	Room Mode	Allows the user to override the room mode. This is password protected. Default Password: **1-2-3-4**. **NOTE:** Any overrides done locally through the touchscreen will follow mode priority.

Screen Saver

After a configurable inactivity timeout, the home screen will dim and display a screen saver. The screen saver displays a checkmark with the color of the current room mode to indicate that the room is operating normally. The LED sidebars will continue to display the light color of the current room mode for 180˚ viewing of the current room status while the screen saver is active. Tapping on the touchscreen will reset the inactivity timeout and display the Home Screen in normal operation. The screen saver and screen dimming can be disabled in the User Preferences menu.

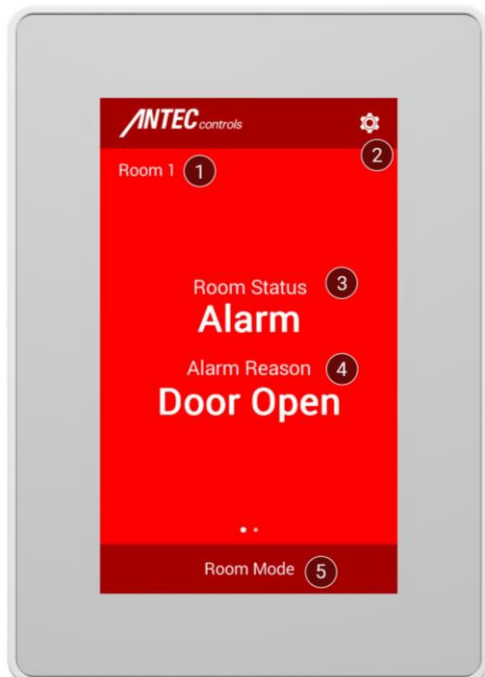**NOTE:** The screen saver will never display when there is an alarm or caution active.

Caution Active

	Display Component	Description
1	Room Name	The current name of the room is displayed. This is configurable through the Monitored Rooms menu.
2	Settings Button	Allows access to settings. This is password protected.
3	Room Status	Displays Caution to indicate there is a caution active.
4	Caution Reason	Displays the type of caution that is active. Options: 1. Door Open 2. Low Pressure 3. High Pressure 4. Binary Input (Configurable display message, see Binary Inputs)
5	Room Mode	Allows the user to override the room mode. This is password protected. Default Password: **1-2-3-4**. **NOTE:** Any overrides done locally through the touchscreen will follow mode priority.

Alarm Active

|	Display Component	Description
1	Room Name	The current name of the room is displayed. This is configurable through the Monitored Room menu.
2	Settings Button	Allows access to settings. This is password protected.
3	Room Status	Displays Alarm to indicate there is an alarm active.
4	Alarm Reason	Displays the type of alarm that is active. Options: 1. Door Open 2. Low Pressure 3. High Pressure 4. Binary Input (Configurable display message, see Binary Inputs)
5	Room Mode	Allows the user to override the room mode. This is password protected. Default Password: **1-2-3-4**. **NOTE:** Any overrides done locally through the touchscreen will follow mode priority.

Alarm Silence

Silence Screen

If an alarm activates, the display will turn red and the audible alarm will activate. The Silence Screen allows users to temporarily mute the audible alarm for a configurable number of minutes. The mute duration defaults to a five-minute delay and can be adjusted in the User Preferences menu.
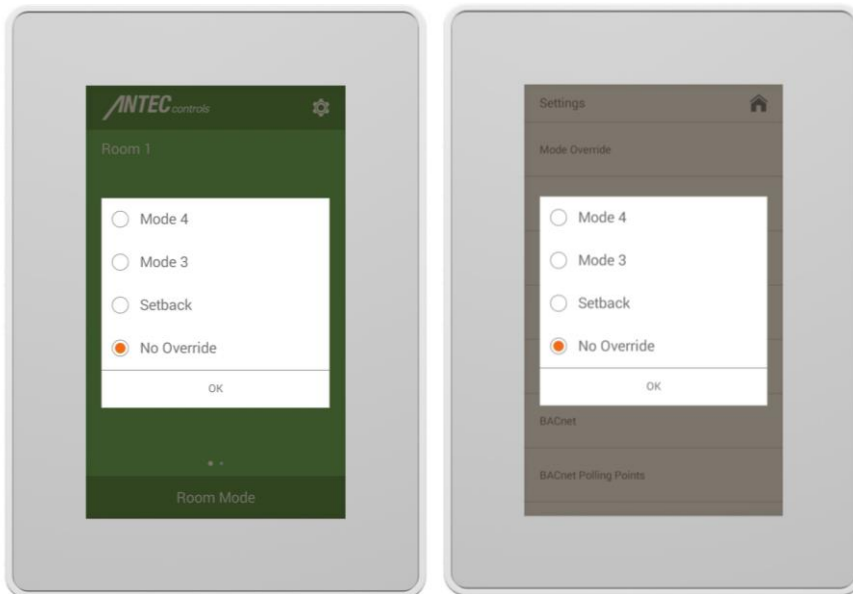
SETTINGS

The settings are accessible through the Home Screen and are password protected (see Home Screen section). These menus allow the user to change any configurable options.
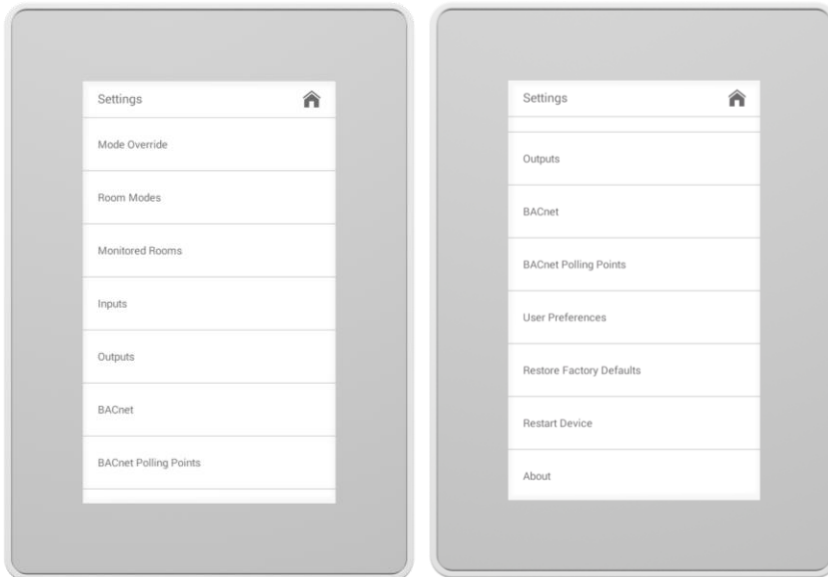
Mode Override

Allows the user to override the room mode. The default room mode cannot be triggered from this menu. This menu can also be accessed from the bottom of the Home Screen.

NOTE: Any overrides done locally through the touchscreen will follow mode priority.

Room Modes

This section details available settings for room modes including adding or removing a mode.

Room Mode & Override Priority

Up to four room modes can be added per LUME20. The priority of the room modes is static from lowest to highest where Mode 1 is the lowest priority (default) and Mode 4 is the highest priority.

Modes can be triggered by a binary input switch, a Mode Override through the interface, or a BACnet override. Since Mode 1 is the default room mode, it cannot be triggered by a binary input or through the Mode Override menu. When there are no triggers active for any other mode, LUME20 will go to the default mode (Mode 1).

BACnet overrides to MV3 (Room Mode Override) will follow mode priority in the same way as a trigger from a binary input or Mode Override through the interface. BACnet overrides to MV2 (Room Mode) will ignore room mode priority and force LUME20 into whichever mode is overridden. BACnet overrides to MV2 (Room Mode) take priority over any triggers from binary inputs, Mode Overrides through the interface, or overrides to MV3 (Room Mode Override).

Adding a Room Mode

To add a room mode, click the Add Mode button at the bottom of the Room Modes menu.

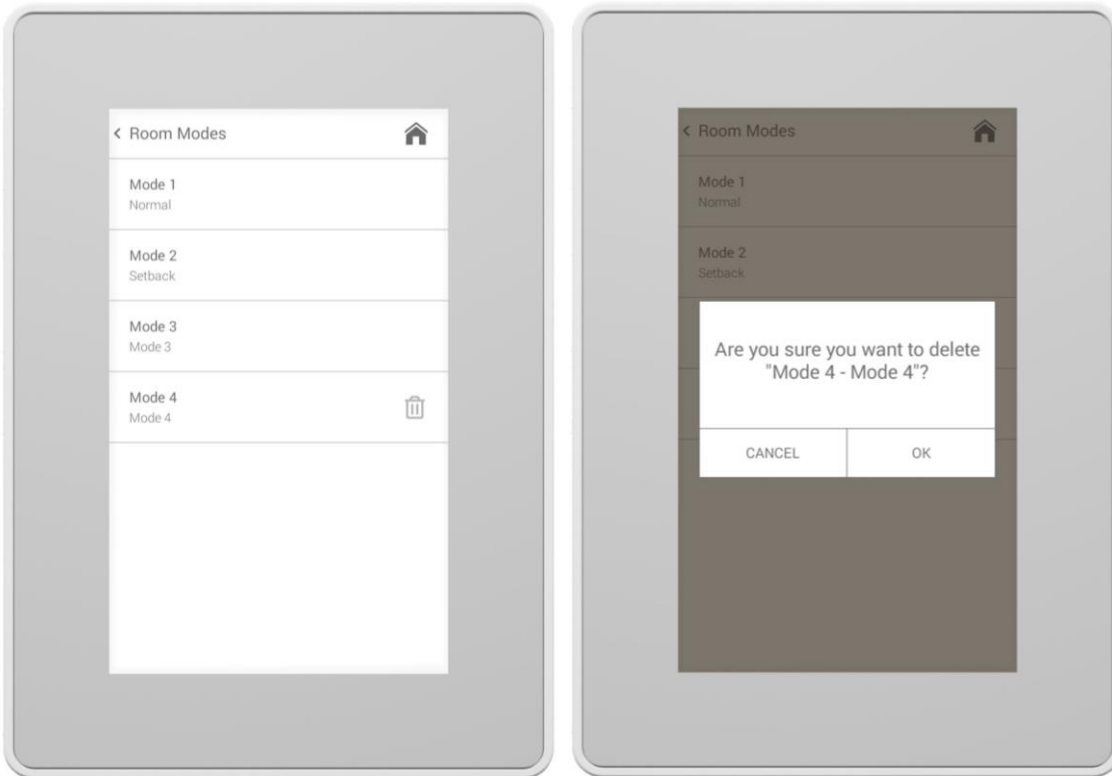**NOTE:** A maximum of four room modes can be configured per LUME20.
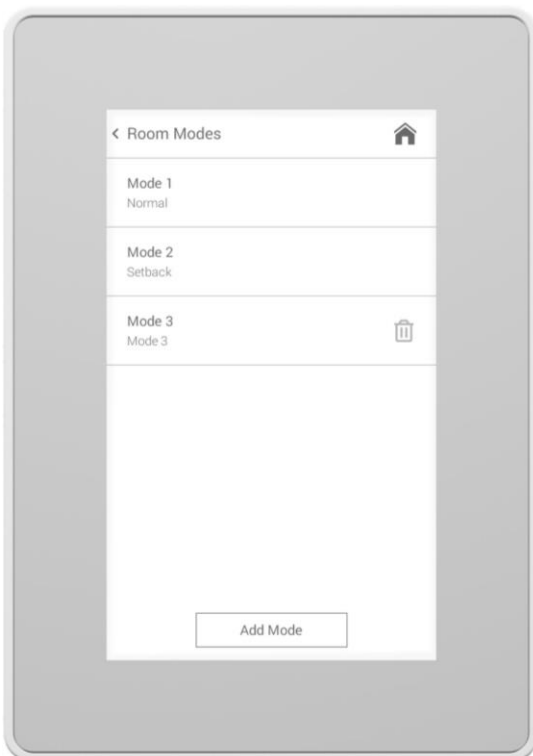
Removing a Room Mode

Only the last configured room mode can be removed. To remove the last room mode, click the trash bin icon on the right side. When clicked, a popup will appear to confirm removal.

NOTE: A minimum of two room modes can be configured per LUME20.

Room Mode - Settings

This section details all the available options for each room mode.

| Menu Items	Available Options/Range	Default Value	Description
Mode Name	19 Characters	Mode 1: Normal Mode 2: Setback	Assign the name to the mode. **NOTE:** During normal operation, this name is shown as the Room Status on the Home Screen.
Alarm	On Off	Mode 1: On Mode 2: Off	Allow any alarms or cautions to trigger when the mode is active.
Color	Green Blue Purple Gray	Mode 1: Green Mode 2: Blue Mode 3: Purple Mode 4: Gray	Adjust the color of Home Screen when the mode is active.
Sidebar Type	Off Solid Blink	Solid	Adjust the sidebar behavior when the mode is active.

Monitored Rooms

This section details available settings for the monitored rooms including adding or removing a monitored room and setting up pressure alarms and cautions.

Adding a Monitored Room

To add a monitored room, click the Add Room button at the bottom of the Monitored Rooms menu.

NOTE: A maximum of three monitored rooms can be configured per LUME20.
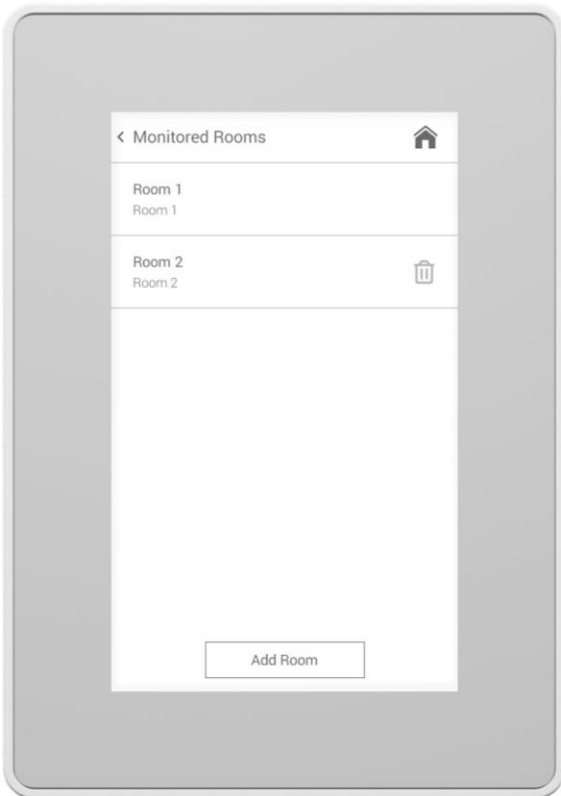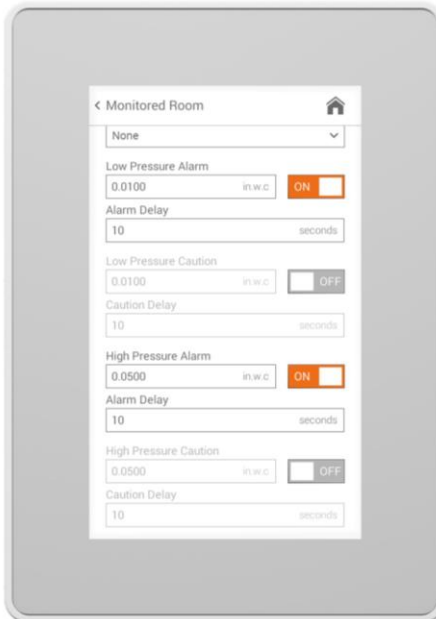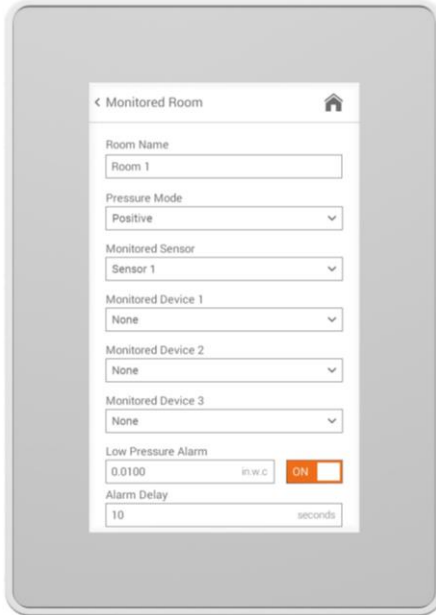
Removing a Monitored Room

Only the last configured monitored room can be removed. To remove the last monitored room, click the trash bin icon on the right side. When clicked, a popup will appear to confirm removal.
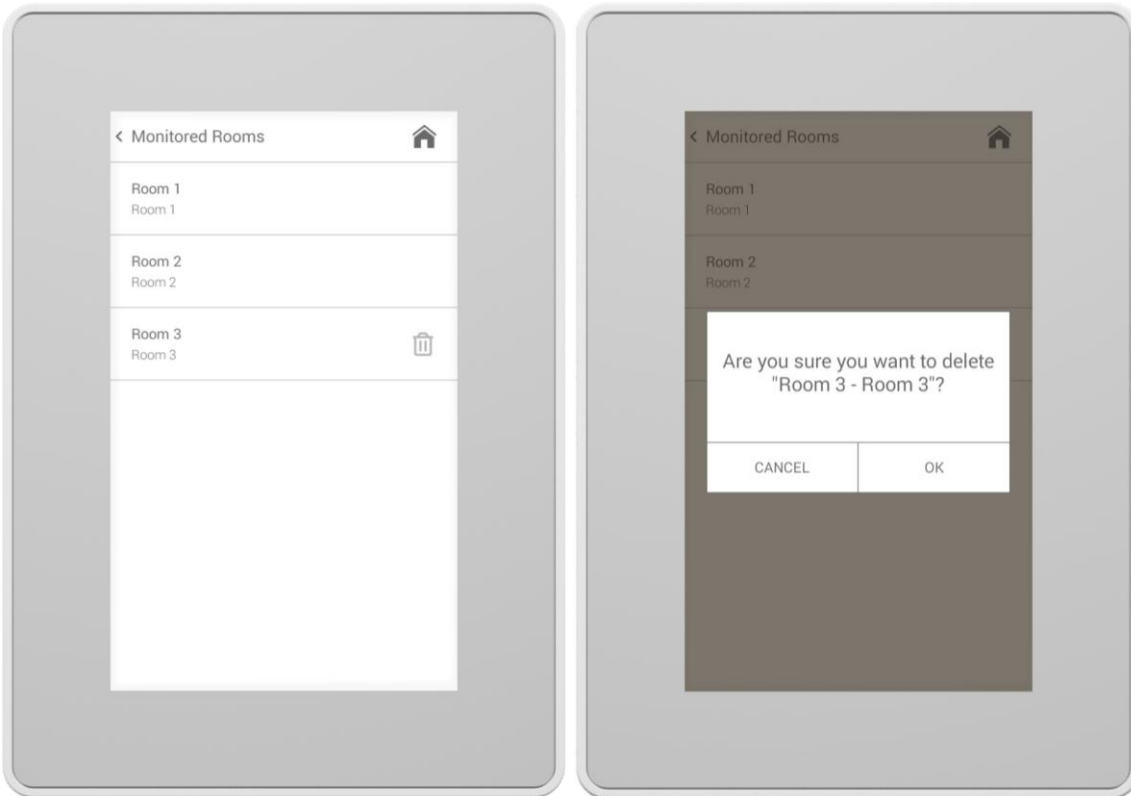
Monitored Room - Settings

This section details all the available options for each monitored room.

NOTE: If the active room mode has alarms turned off, the alarms and cautions configured below will not activate.
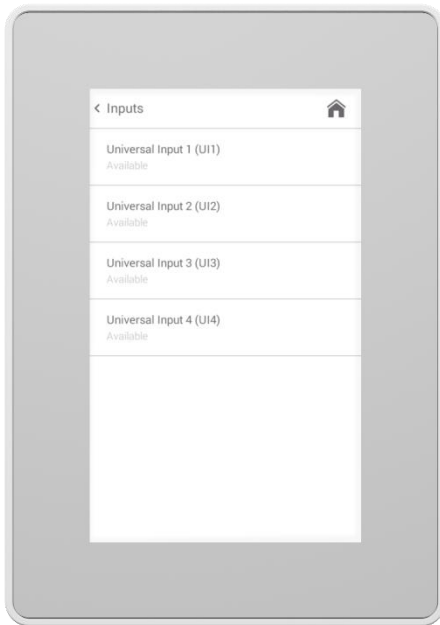
Menu Items	Available Options/Range	Default Value	Description
Room Name	19 Characters	Room 1	Adjust the room name. **NOTE:** This name will display in the BACnet object name for points associated with the room.
Pressure Mode	Positive Negative	Positive	Adjust the pressure mode of the monitored room.
Monitored Sensor	All configured pressure inputs or None	Sensor on UI1 (from Setup Wizard)	Adjust the sensor for the room. **NOTE:** If 'None' is selected, the pressure reading on the home screen will display as '–'.
Monitored Device 1/ Monitored Device 2/ Monitored Device 3	All configured Analog Inputs (excluding pressure inputs), all configured BACnet Polling Points or None	None	Add additional environmental readings to be displayed on the Home Screen. To remove a reading from home screen display, select 'None'. **NOTE:** Analog Inputs must be configured in the Inputs menu and BACnet Polling Points must be configured in the BACnet Polling Points menu before they can be selected here.
Low Pressure Alarm	On Off	On	Set the activation point for the Low Pressure Alarm as well as the time delay. The Low Pressure Alarm is used to indicate if the room is too close to neutral. i.e. not pressurized enough. **NOTE:** If a door open alarm or door open caution is active, this alarm will be paused.
Activation Point	-1.0 to +1.0 in.w.c (-249.1 to +249.1 Pa)	+0.01 in.w.c. (+2.5 Pa)	
Delay	0 to 100,000 seconds	10 seconds	
High Pressure Alarm	On Off	On	Set the activation point for the High Pressure Alarm as well as the time delay. The High Pressure Alarm is used to indicate if the room is too negative or positive (depending on Pressure Mode). i.e. over pressurized. **NOTE:** If a door open alarm or door open caution is active, this alarm will be paused.
Activation Point	-1.0 to +1.0 in.w.c (-249.1 to +249.1 Pa)	+0.05 in.w.c. (+2.5 Pa)	
Delay	0 to 100,000 seconds	10 seconds	
Low Pressure Caution	On Off	Off	Set the activation point for the Low Pressure Caution, as well as the time delay. **NOTE:** If a door open alarm or door open caution is active, this caution will be paused.
Activation Point	-1.0 to +1.0 in.w.c (-249.1 to +249.1 Pa)		
Delay	0 to 100,000 seconds		
High Pressure Caution	On Off	Off	Set the activation point for the High Pressure Caution, as well as the time delay. **NOTE:** If a door open alarm or door open caution is active, this caution will be paused.
Activation Point	-1.0 to +1.0 in.w.c (-249.1 to +249.1 Pa)		
Delay	0 to 100,000 seconds		

Inputs

This section details configuration instructions and available settings for Universal Inputs, which can be configured as Analog Inputs, Thermistor Inputs or Binary Inputs. Configured inputs will display the input name below the Universal Input header in the Inputs menu. Inputs that are not configured for a specific usage (i.e., Input Type set to 'None') will display 'Available'.

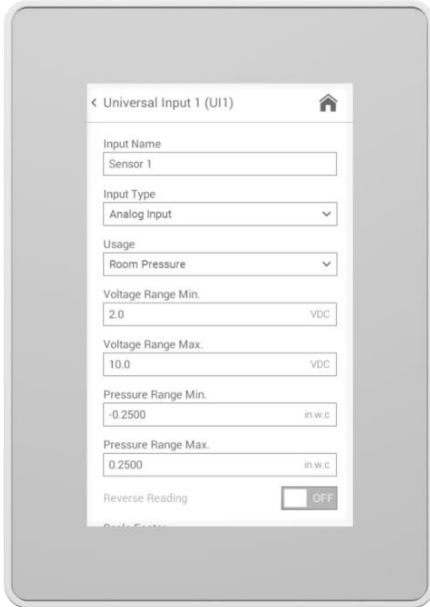**NOTE:** A maximum of four Universal Inputs can be configured per LUME20.

	Menu Items	Available Options/Range	Description
	Input Name	19 Characters	Adjust the input name. **NOTE:** This name will display in the BACnet object name.
	Input Type	Analog Input Binary Input Thermistor None	Adjust the input type of the Universal Input. Select 'None' to set the input as not configured.
	Usage	Analog Input	Room Pressure Temperature Relative Humidity Gas Concentration ACH
		Thermistor	Temperature
		Binary Input	Door Mode Switch Trigger Alarm Trigger Caution

Screen shows:
< Inputs

Universal Input 1 (UI1)
Available

Universal Input 2 (UI2)
Available

Universal Input 3 (UI3)
Available

Universal Input 4 (UI4)
Available

Analog Input – Room Pressure

Room Pressure is used for monitoring pressure differential between a room and an adjacent space. When this input is set as the monitored sensor for the room, the pressure reading is displayed on the Home Screen.

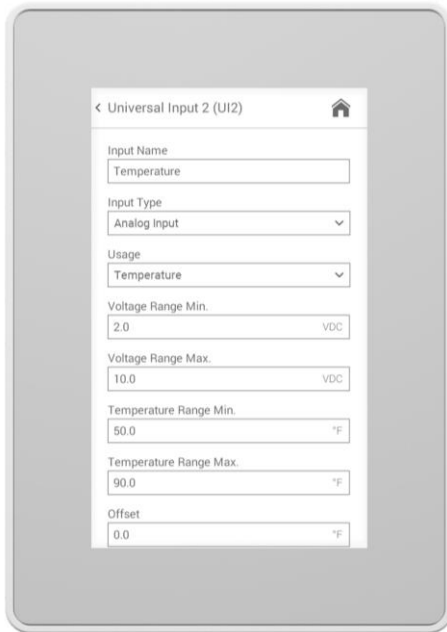The following settings are available if the Usage is **Room Pressure**.

Menu Items	Available Options/Range	Default Value	Description
Voltage Range Min.	0 to 10 VDC	2 VDC	Set the minimum value for the voltage range. The voltage entered here must match the minimum voltage for the device providing the signal to LUME20.
Voltage Range Max.	0 to 10 VDC	10 VDC	Set the maximum value for the voltage range. The voltage entered here must match the maximum voltage for the device providing the signal to LUME20.
Pressure Range Min.	-1.0 to +1.0 in.w.c (-249.1 to +249.1 Pa)	-0.25 in.w.c. (-62.2 Pa)	Set the minimum value for the pressure range. The pressure entered here must match the minimum pressure for the device providing the signal to LUME20.
Pressure Range Max.	-1.0 to +1.0 in.w.c (-249.1 to +249.1 Pa)	+0.25 in.w.c. (+62.2 Pa)	Set the maximum value for the pressure range. The pressure entered here must match the maximum pressure for the device providing the signal to LUME20.
Reverse Reading	On Off	Off	Reverse the direction of the sensor reading if the pressure sensor was installed backwards.
Scale Factor	0.5 to 2.0	1.0	Adjust the room pressure reading to match a reading taken by a manometer. E.g., if a balancer's reading is 10% higher than the LUME20 reading, set the scale factor to 1.1.
Offset (Applied after Scale Factor)	-0.05 to +0.05 in.w.c. (-12.4 to +12.4 Pa)	0 in.w.c. (0 Pa)	Applies a fixed offset to the pressure reading. DO NOT use this value as the primary adjustment method to the room pressure reading. Use only if required when performing a calibration at two or more pressure readings.
Sensor Averaging	5 to 60 seconds	10 seconds	Adjust the sensor averaging time. The sensor averaging time is also the refresh rate of the pressure reading on Home Screen when set as the monitored sensor.
Current Value	Read only value		The current pressure sensor value with scale factor, offset and reverse reading applied. This reading matches the value displayed on the Home Screen when set as the monitored sensor.
Current Voltage	Read only value		The current voltage being read by LUME20 from the pressure sensor.

Analog Input – Temperature

Temperature inputs are used to monitor temperature readings such as room temperature or discharge air temperature.

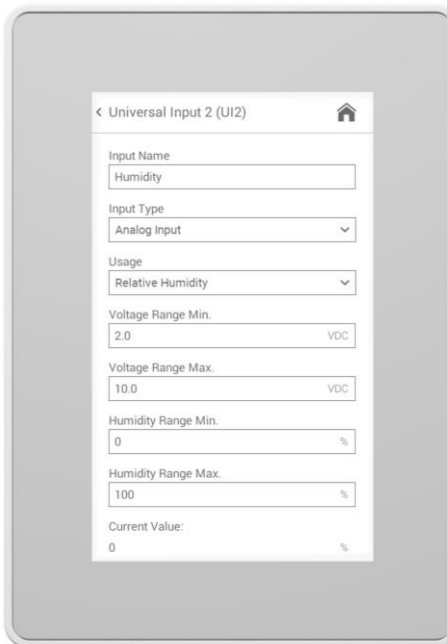The following settings are available if the Analog Input Usage is **Temperature**.

Menu Items	Available Options/Range	Default Value	Description
Voltage Range Min.	0 to 10 VDC	0 VDC	Set the minimum value for the voltage range. The voltage entered here must match the minimum voltage for the device providing the signal to LUME20.
Voltage Range Max.	0 to 10 VDC	10 VDC	Set the maximum value for the voltage range. The voltage entered here must match the maximum voltage for the device providing the signal to LUME20.
Temperature Range Min.	-40 to 250°F (-40 to 121°C)	50°F (10°C)	Set the minimum value for the temperature range. The temperature entered here must match the minimum temperature for the device providing the signal to LUME20.
Temperature Range Max.	-40 to 250°F (-40 to 121°C)	90°F (32°C)	Set the maximum value for the temperature range. The temperature entered here must match the maximum temperature for the device providing the signal to LUME20.
Offset	-50 to 50°F (-28 to 28°C)	0°F (0°C)	Applies a fixed offset to the temperature reading.
Current Value	Read only value		The current temperature reading with offset applied. This reading matches the value displayed on the Home Screen when set as one of the Monitored Devices in the Monitored Rooms menu.
Current Voltage	Read only value		The current voltage being read by LUME20 from the temperature sensor.

Analog Input – Relative Humidity

Humidity inputs are used to monitor a humidity reading either in a room or in the duct.

The following settings are available if the Usage is **Relative Humidity**.

Menu Items	Available Options/Range	Default Value	Description
Voltage Range Min.	0 to 10 VDC	0 VDC	Set the minimum value for the voltage range. The voltage entered here must match the minimum voltage for the device providing the signal to LUME20.
Voltage Range Max.	0 to 10 VDC	10 VDC	Set the maximum value for the voltage range. The voltage entered here must match the maximum voltage for the device providing the signal to LUME20.
Humidity Range Min.	0 to 100%	0%	Set the minimum value for the humidity range. The humidity entered here must match the minimum humidity for the device providing the signal to LUME20.
Humidity Range Max.	0 to 100%	100%	Set the maximum value for the humidity range. The humidity entered here must match the maximum humidity for the device providing the signal to LUME20.
Current Value	Read only value		The current humidity reading. This reading matches the value displayed on the Home Screen when set as one of the Monitored Devices in the Monitored Rooms menu.
Current Voltage	Read only value		The current voltage being read by LUME20 from the humidity sensor.

Analog Input – Gas Concentration

Gas concentration inputs are used for monitoring indoor air quality sensor measurements such as CO_2 or VOC concentration.

The following settings are available if the Usage is **Gas Concentration**.
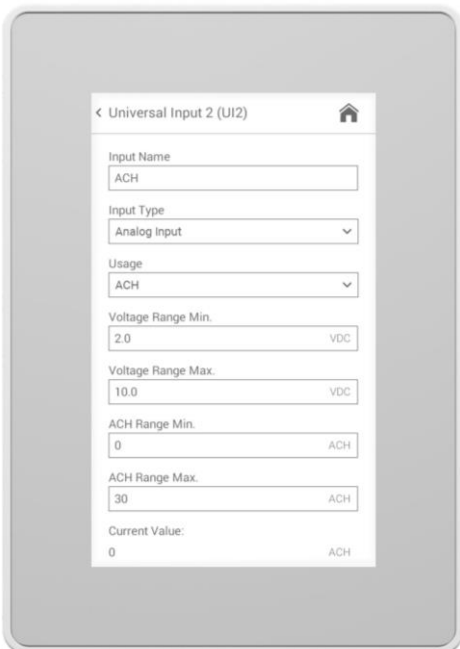
Menu Items	Available Options/Range	Default Value	Description
Voltage Range Min.	0 to 10 VDC	0 VDC	Set the minimum value for the voltage range. The voltage entered here must match the minimum voltage for the device providing the signal to LUME20.
Voltage Range Max.	0 to 10 VDC	10 VDC	Set the maximum value for the voltage range. The voltage entered here must match the maximum voltage for the device providing the signal to LUME20.
Gas Concentration Range Min.	0 to 100,000 ppm	0 ppm	Set the minimum value for the gas concentration range. The ppm entered here must match the minimum ppm for the device providing the signal to LUME20.
Gas Concentration Range Max.	0 to 100,000 ppm	2000 ppm	Set the maximum value for the gas concentration range. The ppm entered here must match the maximum ppm for the device providing the signal to LUME20.
Current Value	Read only value		The current gas concentration reading. This reading matches the value displayed on the Home Screen when set as one of the Monitored Devices in the Monitored Rooms menu.
Current Voltage	Read only value		The current voltage being read by LUME20 from the sensor.

Analog Input – ACH

ACH inputs are used for monitoring a signal that represents the current Air Changes per Hour (ACH) for a space.

The following settings are available if the Usage is **ACH**.

Menu Items	Available Options/Range	Default Value	Description
Voltage Range Min.	0 to 10 VDC	0 VDC	Set the minimum value for the voltage range. The voltage entered here must match the minimum voltage for the device providing the signal to LUME20.
Voltage Range Max.	0 to 10 VDC	10 VDC	Set the maximum value for the voltage range. The voltage entered here must match the maximum voltage for the device providing the signal to LUME20.
ACH Range Min.	0 to 100 ACH	0 ACH	Set the minimum value for the ACH range. The ACH entered here must match the minimum ACH for the device providing the signal to LUME20.
ACH Range Max.	0 to 100 ACH	30 ACH	Set the maximum value for the ACH range. The ACH entered here must match the maximum ACH for the device providing the signal to LUME20.
Current Value	Read only value		The current ACH reading. This reading matches the value displayed on the Home Screen when set as one of the Monitored Devices in the Monitored Rooms menu.
Current Voltage	Read only value		The current voltage being read by LUME20from the ACH signal.

Thermistor – Temperature

Temperature inputs are used to monitor temperature readings such as room temperature or discharge air temperature.

The following settings are available if the Thermistor Usage is **Temperature**.
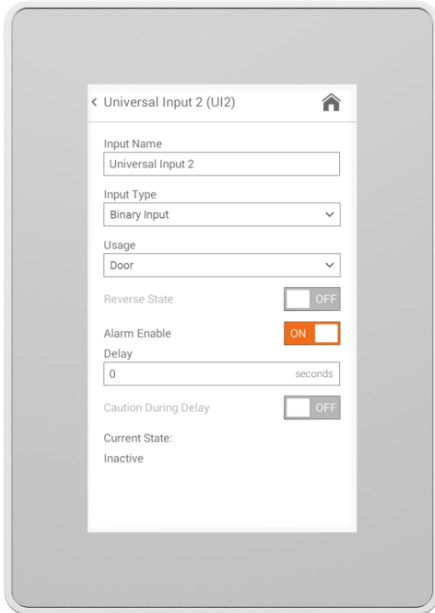
Menu Items	Available Options/Range	Default Value	Description
Offset	-50 to 50°F (-28 to 28°C)	0°F (0°C)	Applies a fixed offset to the temperature reading.
Current Value	Read only value		The current temperature reading with offset applied. This reading matches the value displayed on the Home Screen when set as one of the Monitored Devices in the Monitored Rooms menu. **NOTE:** The thermistor table used to calculate the temperature value is for a 10k Type 2 thermistor.
Current Resistance	Read only value		The current resistance being read by LUME20 from the thermistor input.

< Universal Input 2 (UI2)

Input Name
Temperature

Input Type
Thermistor

Offset
0.0   °F

Current Value:
0.0   °F

Current Resistance:
0.0   kΩ

Binary Input – Door

Door Contact Switches are used for monitoring whether a door is open or closed. If a door open alarm or a door open caution is active, pressure alarms and pressure cautions will be paused.

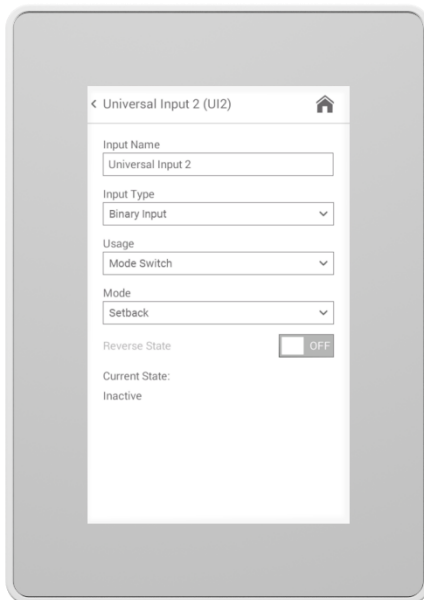The following settings are available if the Usage is **Door**.

Menu Items	Available Options/Range	Default Value	Description
Reverse State	On/Off	Off	Reverse when the physical state of the Universal Input sets the current state to Active.
Alarm Enable	On Off	On	When 'On' and the delay has elapsed, a Door Open Alarm will activate.
Delay	0 to 100,000 seconds	60 seconds	**NOTE:** When 'On' and the Door Open Alarm is active, no pressure alarms or pressure cautions will be displayed.
Caution During Delay	On Off	On	When 'On', a Door Open Caution will activate during the delay period. **NOTE:** When 'On' and the Door Open Caution is active, no pressure alarms or pressure cautions will be displayed.
Current State	Read only value		The current state (Active/Inactive) of the input with reverse state applied.

Binary Input – Mode Switch

Mode Switches are used to switch to the non-default room mode.

The following settings are available if the Usage is **Mode Switch**.

Menu Items	Available Options/Range	Default Value	Description
Mode	All configured modes except the default mode (Mode 1)	Mode 2 (Setback)	Set the mode that is activated when the binary input is in the active state.
Reverse State	On Off	Off	Reverse when the physical state of the Universal Input sets the current state to Active.
Current State	Read only value		The current state (Active/Inactive) of the input with reverse state applied.

Binary Input – Trigger Alarm or Trigger Caution

Trigger Alarm and Trigger Caution binary inputs are used to activate an alarm or caution when the state of the binary input is active. These may be used if there is a third-party device that outputs a binary signal for an alarm and the facility would like to have an audible or visual indication when it is active.

The following settings are available if the Usage is **Trigger Alarm** or **Trigger Caution**.
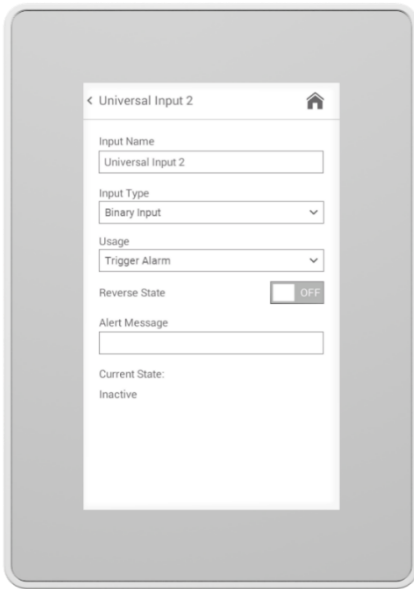
Menu Items	Available Options/Range	Default Value	Description
Reverse State	On Off	Off	Reverse when the physical state of the Universal Input sets the current state to Active.
Alert Message	19 Characters	Off	Set the Alarm Reason or Caution Reason shown on the Home Screen when the Alarm or Caution is active.
Current State	Read only value		The current state (Active/Inactive) of the input with reverse state applied.

< Universal Input 2

Input Name
Universal Input 2

Input Type
Binary Input

Usage
Trigger Alarm

Reverse State   OFF

Alert Message

Current State:
Inactive

Outputs

This section details configuration instructions and available settings for Analog Outputs and Binary Outputs. Configured outputs will display the output name below the output header in the Outputs menu. Outputs that are not configured for a specific usage (i.e. usage set to 'None') will display 'Available'.

NOTE: A maximum of one Analog Output and two Binary Outputs can be configured per LUME20.

Analog Output – Room Pressure

Used to output the current room pressure reading of a specific pressure input via an analog signal. Primarily used when a third-party device requires a room pressure reading from LUME20 for either monitoring or control purposes.

The following settings are available if the Usage is **Room Pressure.**

Menu Items	Available Options/Range	Default Value	Description
Output Name	19 Characters	Pressure Output	Adjust the output name. **NOTE:** This name will display in the BACnet object name.
Voltage Range Min.	0 to 10 VDC	2 VDC	Set the minimum value for the voltage range. The voltage entered here must match the minimum voltage for the device providing the signal to LUME20.
Voltage Range Max.	0 to 10 VDC	10 VDC	Set the maximum value for the voltage range. The voltage entered here must match the maximum voltage for the device providing the signal to LUME20.
Pressure Range Min.	-1.0 to +1.0 in.w.c (-249.1 to +249.1 Pa)	-0.25 in.w.c. (-62.2 Pa)	Set the minimum value for the pressure range. The pressure entered here must match the minimum pressure for the device providing the signal to LUME20.
Pressure Range Max.	-1.0 to +1.0 in.w.c (-249.1 to +249.1 Pa)	+0.25 in.w.c. (+62.2 Pa)	Set the maximum value for the pressure range. The pressure entered here must match the maximum pressure for the device providing the signal to LUME20.
Pressure Input	All configured pressure inputs or None	None	Adjust the sensor to use as the pressure value to output. When 'None' is selected, the AO will output the voltage that corresponds to 0 in.w.c. (0 Pa).
Current Value	Read only value		The current pressure sensor value with scale factor, offset and reverse reading applied. This reading matches the value displayed on the Home Screen when set as the monitored sensor.
Current Voltage	Read only value		The current voltage of the AO.

Binary Output – Alarm/Caution

Alarm/Caution outputs will activate the binary output when the selected Alarm/Caution type is triggered. This may be used for a hard-wired signal to a third-party alarming system or to trigger a visual indication in the room.

The following settings are available if the Usage is **Alarm/Caution**.
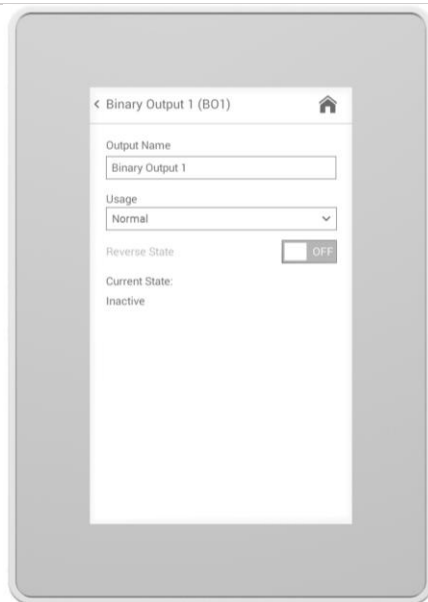
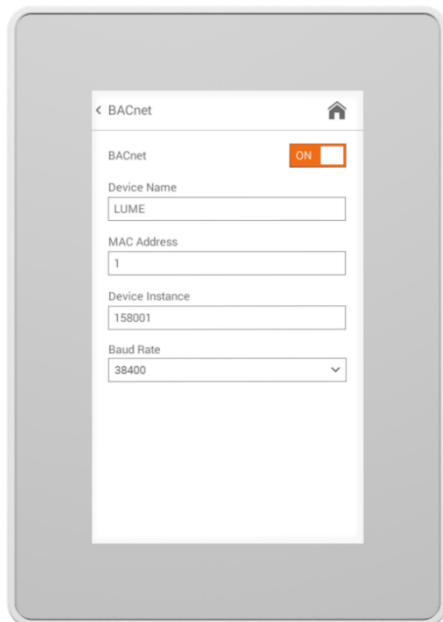| Menu Items	Available Options/Range	Default Value	Description
Output Name	19 Characters	Alarm Output/ Caution Output	Adjust the output name. **NOTE:** This name will display in the BACnet object name.
Alert Type	Low Pressure High Pressure Door Open Binary Input Any Alarm/Any Caution	Low Pressure	Sets the type of alarm/caution that will activate the binary output. When Any Alarm/Any Caution is selected, all types of alarm/caution will activate the binary output.
Reverse State	On Off	Off	Reverse when the physical state of the Universal Input sets the current state to Active.
Current State	Read only value		The current state (Active/Inactive) of the output with reverse state applied.

Binary Output – Normal

Normal outputs will activate the binary output when the there are no alarms and no cautions active. This may be used for a hard-wired signal to a third-party alarming system or to trigger a visual indication in the room.

The following settings are available if the Usage is **Normal**.

Menu Items	Available Options/Range	Default Value	Description
Output Name	19 Characters	Normal Output	Adjust the output name. **NOTE:** This name will display in the BACnet object name.
Reverse State	On Off	Off	Reverse when the physical state of the Universal Input sets the current state to Active.
Current State	Read only value		The current state (Active/Inactive) of the output with reverse state applied.

Binary Output – Door Status

Door Status outputs will activate the binary output when the current state of the door is open. A Door Binary Input must be configured for LUME20 to detect the door status.

The following settings are available if the Usage is **Door Status**.

Menu Items	Available Options/Range	Default Value	Description
Output Name	19 Characters	Normal Output	Adjust the output name. **NOTE:** This name will display in the BACnet object name.
Reverse State	On Off	Off	Reverse when the physical state of the Universal Input sets the current state to Active.
Current State	Read only value		The current state (Active/Inactive) of the output with reverse state applied.

Binary Output – Room Mode

Room Mode outputs will activate the binary output when LUME20 is in the selected room mode.

The following settings are available if the Usage is **Room Mode.**

Menu Items	Available Options/Range	Default Value	Description
Output Name	19 Characters	Mode Output	Adjust the output name. **NOTE:** This name will display in the BACnet object name.
Room Mode	All configured room modes	Mode 2 (Setback)	Set the room mode that activates the binary output.
Reverse State	On Off	Off	Reverse when the physical state of the Universal Input sets the current state to Active.
Current State	Read only value		The current state (Active/Inactive) of the output with reverse state applied.

Binary Output – Binary Input

A Binary Output with usage of Binary Input will activate when the configured binary input is in the active state (inactive if reverse state is on) and deactivate when the configured binary input is in the inactive state (active if reverse state is on).

The following settings are available if the usage is **Binary Input.**

Menu Items	Available Options/Range	Default Value	Description
Output Name	19 Characters	Follow BI	Adjust the output name. **NOTE:** This name will display in the BACnet object name.
Binary Input	All configured binary inputs or None	None	Set the binary input to follow.
Reverse State	On Off	Off	Reverse when the physical state of the Universal Input sets the current state to Active.
Current State	Read only value		The current state (Active/Inactive) of the output with reverse state applied.

BACnet

Menu Items	Available Options/Range	Default Value	Description
BACnet	On/Off	On (from Setup Wizard)	Allows the user to enable/disable BACnet communication.
Device Name	19 Characters	LUME	Adjust the device name. **NOTE:** This name will display as the device name for LUME20 on BACnet.
MAC Address	1 to 127	1	Set the BACnet MS/TP MAC address. **NOTE:** This must be unique to the BACnet MS/TP segment.
Device Instance	1 to 4,189,999	158,001	Set the BACnet device instance. **NOTE:** This must be unique to the building BACnet network.
Baud Rate	9600 19200 38400 76800		Set the BACnet MS/TP Baud Rate. **NOTE:** All devices on the BACnet MS/TP segment must use the same Baud Rate.

BACnet Polling Points

This section details configuration instructions and available settings for BACnet Polling Points. Any analog BACnet point (Analog Value, Analog Input, Analog Output) on the same MS/TP network as LUME20 can be polled by LUME20 for display on the Home Screen.

Adding a BACnet Polling Point

To add a BACnet Polling Point, click the Add Point button in the BACnet Polling Points menu.

NOTE: A maximum of nine BACnet Polling Points can be configured per LUME20.
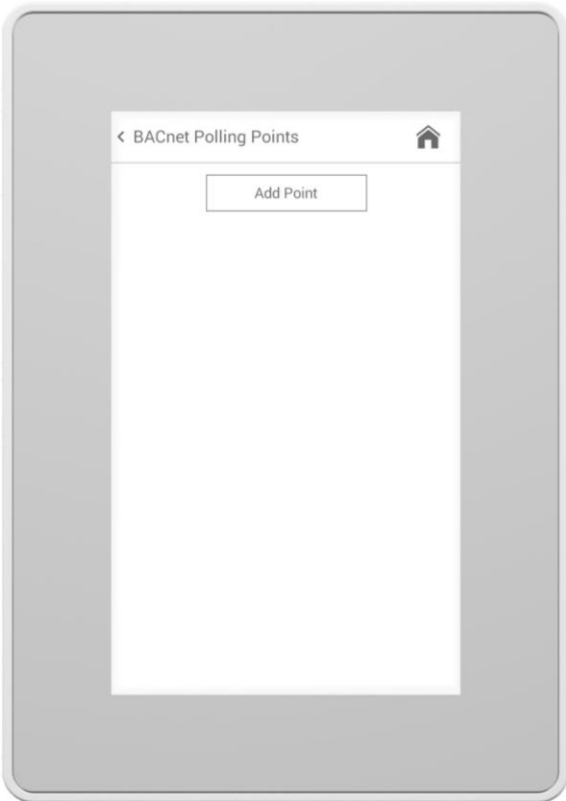
Removing a BACnet Polling Point

To remove a BACnet Polling Point, click the trash bin icon on the right side of the BACnet Polling Point to be removed. When clicked, a popup will prompt to ensure the correct point is being removed.
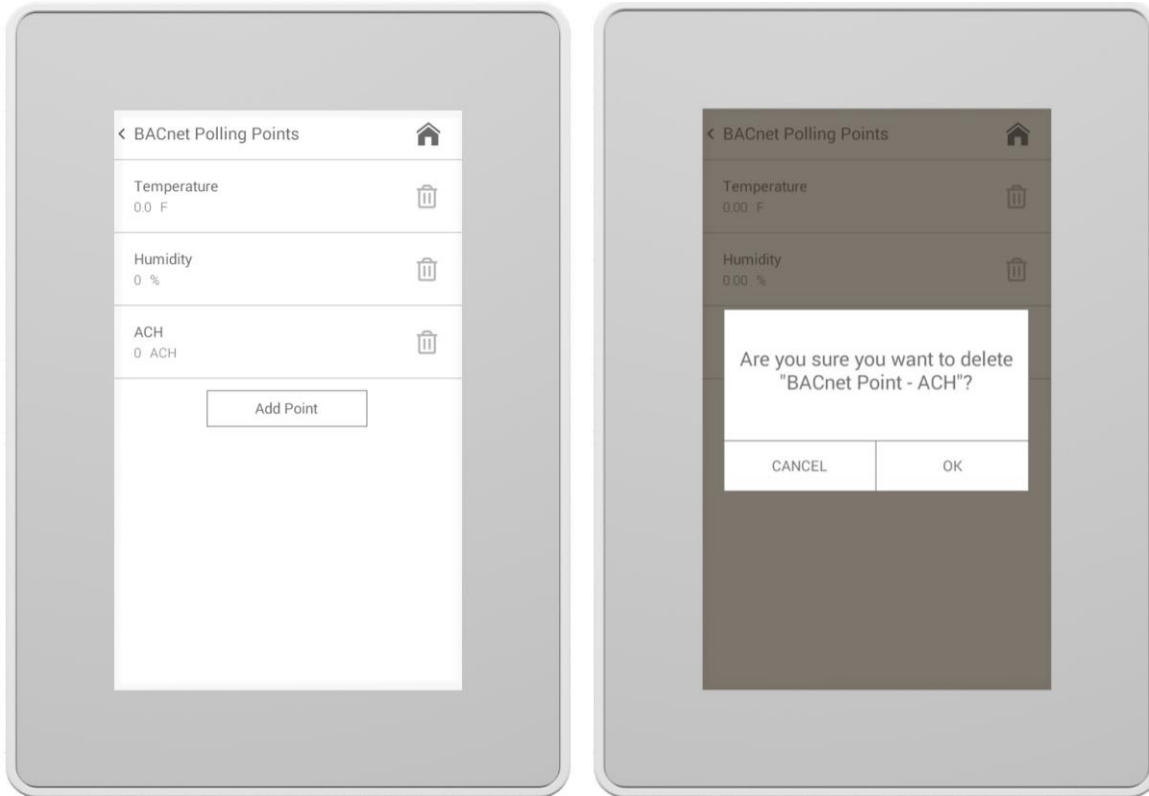
BACnet Polling Point – Settings
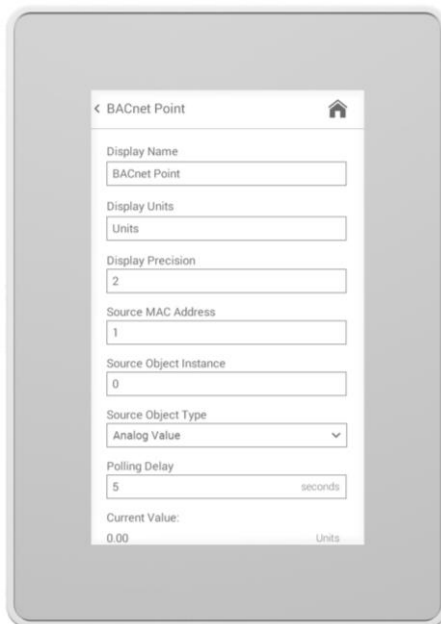
Menu Items	Available Options/Range	Default Value	Description
Display Name	19 Characters	BACnet Input	The header for the value when displayed on the home screen.
Display Units	19 Characters	Units	The units for the value when displayed on the home screen.
Display Precision	0 to 4	2	The number of decimal places for the value when displayed on the home screen.
Source MAC Address	0 to 127	1	The BACnet MS/TP MAC address of the BACnet device the value is being polled from.
Source Object Instance	0 to 4,194,302	0	The instance number of the BACnet point being polled. If the polled BACnet point has Object ID AV22, the Source Object Instance should be set to 22.
Source Object Type	Analog Value Analog Input Analog Output	Analog Value	The object type of the BACnet point being polled. If the polled BACnet point has Object ID AV22, the Source Object Type should be set to Analog Value.
Polling Delay	1 to 60 seconds	5 seconds	The delay between read requests sent by LUME20 to the source BACnet device.
Current Value	Read only value		The current value being polled from the configured BACnet point.

BACnet Polling Points – Home Screen Display

To display a BACnet Polling Point on the Home Screen, the point must be added as a Monitored Device in the corresponding Monitored Room.

NOTE: Up to three BACnet Polling Points can be displayed on the home screen per Monitored Room.

Single Room Monitoring – Multipage Home Page Type
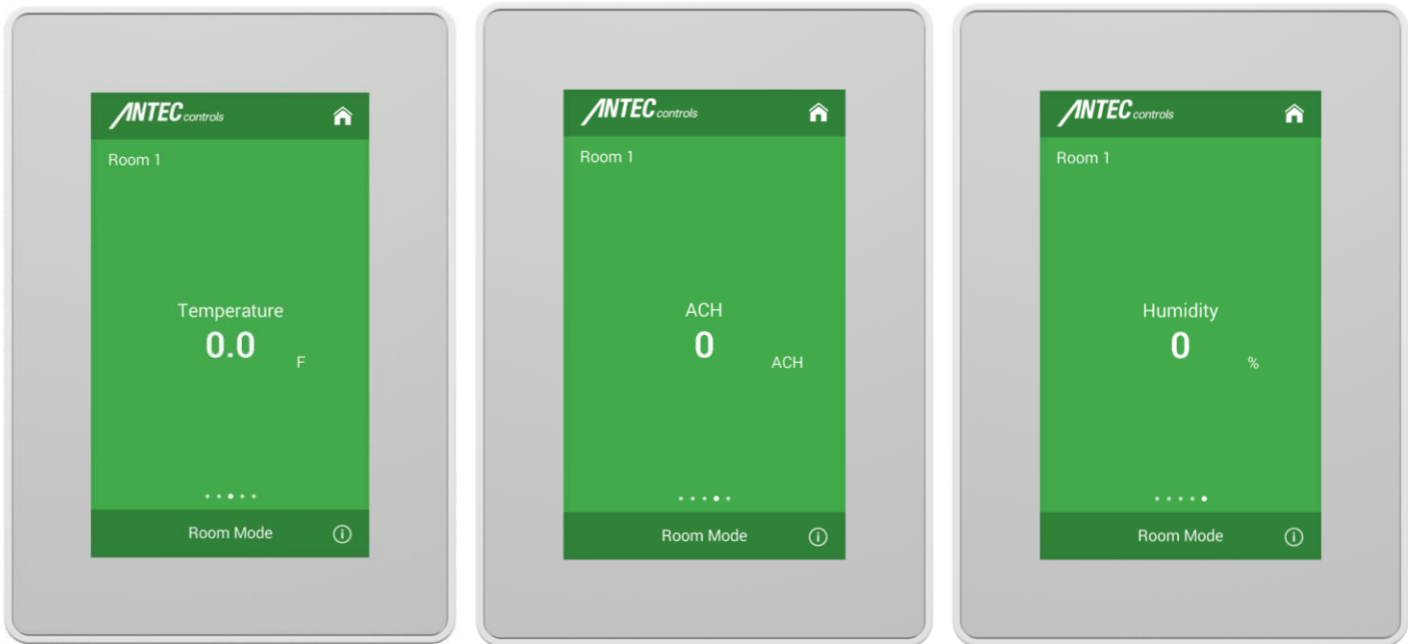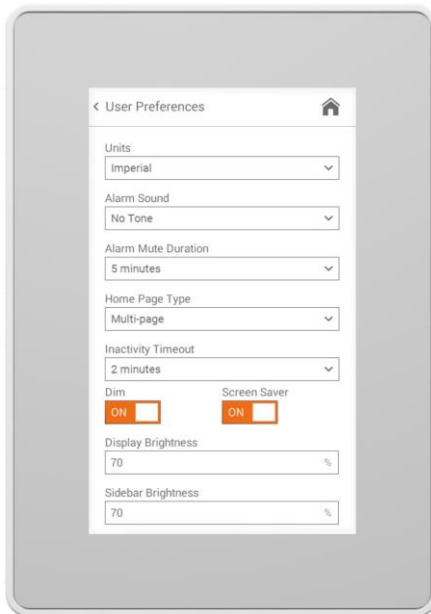

Single Room Monitoring – Single Page Home Page Type

NOTE: For single room monitoring, Home Page Type can be changed in the User Preferences menu.
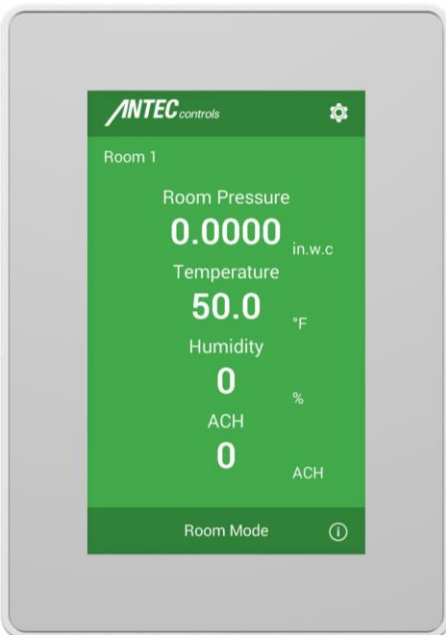
Triple Room Monitoring
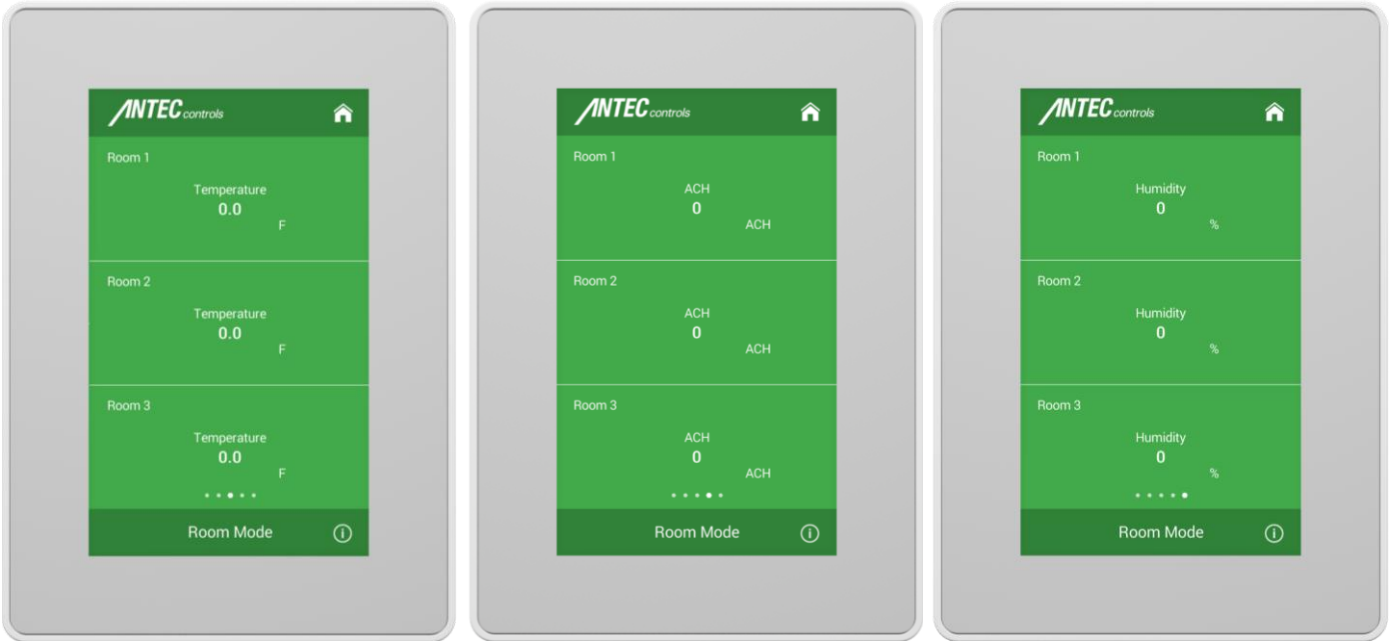
User Preferences

Menu Items	Available Options/Range	Default Value	Description
Units	in.w.c. Pa	in.w.c. (from Setup Wizard)	Set the units for pressure on the Home Screen display, for values within the Settings Menu and for pressure values on BACnet.
Alarm Sound	Wail Steady 2KHz No Tone	No Tone	Set the audible alarm that will sound when there is an alarm active.
Alarm Mute Duration	30 seconds 1 minute 5 minutes 15 minutes 30 minutes Always	5 minutes	Sets the length of time for which audible alarms will be muted after silencing the alarm from the Silence Screen.
Home Page Type	Multi-page Single Page	Multi-page	Multi-page displays Room Status and Pressure Mode on the Home Screen and the room pressure reading on a second page that can accessed by swiping the touchscreen. Single Page will display only the room pressure reading on the Home Page. **NOTE:** Single Page is only available when using single room monitoring.
Inactivity Timeout	30 seconds 1 minute 2 minutes 5 minutes 15 minutes Never	2 minutes	Set the length of time before the display will dim and screen saver will activate if enabled.
Dim	On Off	On	Enable or disable the screen dim after the inactivity timeout has elapsed.
Screen Saver	On Off	On	Enable or disable the screen saver after the inactivity timeout has elapsed.
Display Brightness	0 to 100%	70%	Adjust the brightness of the display when the monitor is not in the inactivity dim state.
Sidebar Brightness	0 to 100%	70%	Adjust the brightness of the sidebars.
Alarm Sidebar Type	Off Solid Blink	Blink	Adjust the sidebar behavior when an alarm is active.
Caution Sidebar Type	Off Solid Blink	Solid	Adjust the sidebar behavior when a caution is active.
Settings Password	Any 4-digit number	1-6-6-4	Adjust the password used to enter the settings menu. **NOTE:** If the updated settings password is forgotten, please contact Antec Controls.
Room Mode Password	Any 4-digit number	1-2-3-4	Adjust the password for accessing the room mode override menu from the bottom of the Home Screen. When turned off, the room mode override menu can be accessed without a password.
	On Off	On	

⚠️ **CAUTION**

Turning off inactivity dim and/or screen saver will reduce the lifetime of the screen.

LUME ASSISTANT

System Requirements

System requirements to run LUME Assistant:

- Operating System: Windows 10 or higher
- CPU: 2 Gigahertz or faster
- RAM: 4 Gigabytes or more
- Hardware: Ethernet port **or** USB port and USB to Ethernet adapter

Installation Requirements

To install LUME Assistant:

- Click on the LUME Assistant option provided on AntecControls.com/products/LUME
- Download the LUME Assistant installer (LUMEAssistantSetup.exe)
- If prompted by Windows Defender, Click **More info**, then **Run anyway**:
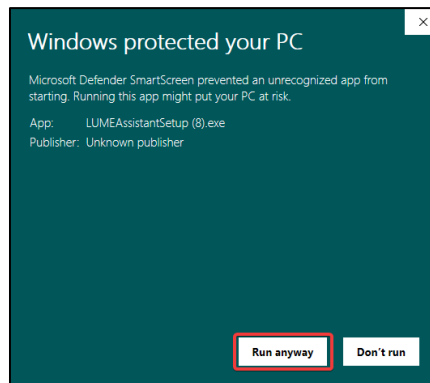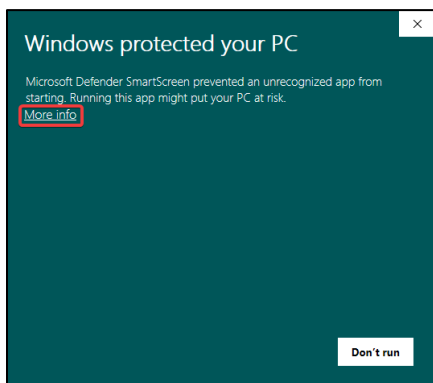
- When the following prompt is seen, **check the box for Public networks** and click Allow access:
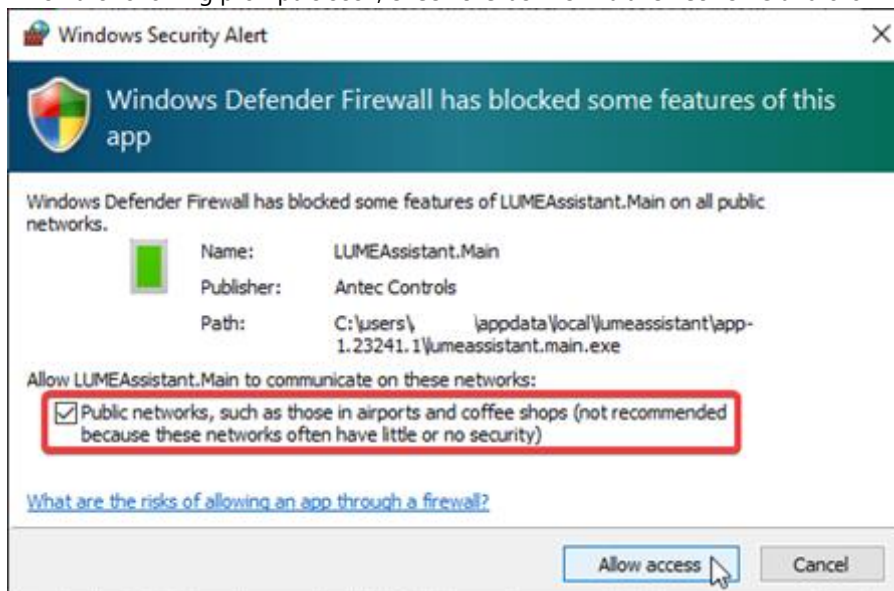
NOTE: If you do not see the firewall prompt, or do not check the box for public networks before clicking Allow access, follow the instructions in the Adjusting Windows Defender™ Firewall Settings section.

How to Connect to LUME20

The user can connect directly to one of the ethernet ports on the back of any LUME20 with an ethernet cable connected to their laptop.

Tools Required

- Computer running Windows 10 or higher with LUME Assistant installed
- Ethernet Cable
- 1/16" Allen Wrench

Setup
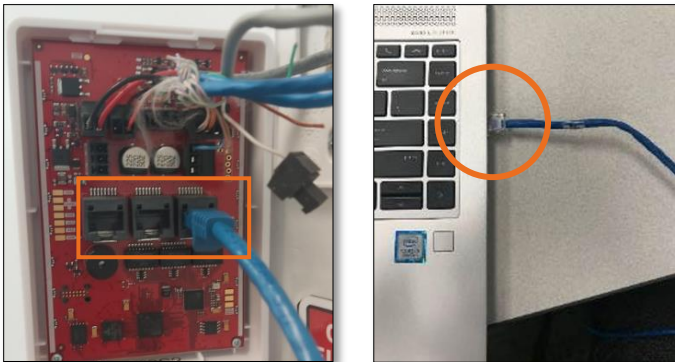
NOTE: The ethernet cable can be connected to any of the three ports on the back of LUME20.

LUME Assistant Start-Up

Upon start-up of the software, the user is prompted with the following screen:

Loading Screen

When opening LUME Assistant, the loading screen will display the current software version that is running on the computer. If there is a new version available, LUME Assistant will automatically update. This ensures users are always running the newest software version.

LUME Assistant will also check for the latest LUME firmware. If the local version of firmware is not the latest version, it will also download the latest version. It is always recommended that firmware is updated prior to arriving on site when beginning the start-up process.

 CAUTION

An internet connection must be present for LUME Assistant to detect that an update is available. Always open LUME Assistant with an internet connection before going to a jobsite to ensure the program and firmware are up to date.

Home

The Home screen contains the three primary functions of LUME Assistant: configuration, commissioning report and firmware update. At the top of the screen is a dropdown to select an ethernet adapter. Once the correct ethernet adapter is selected, the connection status will change from **Not Connected** to **Connected** and the number of connected LUME room pressure monitors will be displayed. If there are issues connecting to a LUME, refer to the Adjusting Windows Defender™ Firewall Settings section.

	Display Component	**Description**
1.	Configuration	**Configuration Status**
		If there is no configuration file on the connected LUME, the LUME Configuration Status will display **Not Configured**. If there is a configuration file on the connected LUME, the LUME Configuration Status will display **Configured**.
		Retrieve Configuration
		Allows the user to retrieve the configuration file from the connected LUME. If the device is not configured, this option is disabled.
		Upload Configuration
		Allows the user to upload a configuration file from their computer onto the connected LUME. When connected to devices with BACnet capability, LUME Assistant will display a reminder to update the BACnet settings on the configured LUME.
		NOTE: The password of the connected LUME must be entered to upload a configuration. If the device has not been configured, use the default password.
2.	Commissioning Report	**Use Device Configuration**
		Uses the information from the connected LUME to generate a zip file with the commissioning report and configuration file.
		Locate File
		Uses the information from a configuration file selected from the user's computer to generate a zip file with the commissioning report and configuration file.
		NOTE: If no LUME is connected, the Use Device Configuration button is disabled.
3.	Firmware Update	Allows the user to update the firmware of the connected LUME. The menu displays the current firmware of the connected LUME room pressure monitor(s), the latest available firmware and the estimated time to update the firmware to the latest version.
		NOTES:
		1. If the current firmware differs from the latest firmware, the Use Latest button is enabled, and the Current Firmware version will be displayed in **red**.
		2. If the current firmware is the same as the latest firmware, the Use Latest button will be disabled and the Current Firmware version will be displayed in **green**.
		3. If a LUME is connected, the Locate File button is enabled, and a firmware update can be performed with a user-supplied firmware file (hex or json).

Diagnostics

The Diagnostics screen contains information about the connected LUME and the files on it, as well as some basic diagnostic functions for the user.
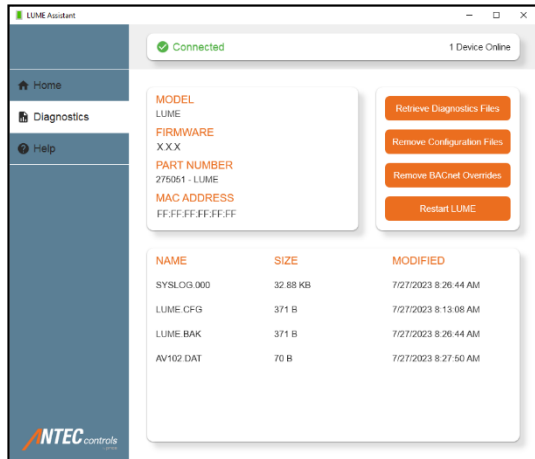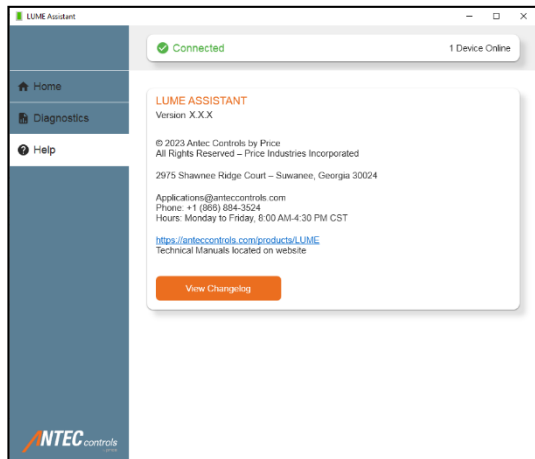

	Display Component	Description
1.	Retrieve Diagnostics Files	Retrieves all files from the connected LUME as well as all diagnostic files from LUME Assistant and places them in a .zip file on the computer.
2.	Remove Configuration Files	Removes all files related to configuration from the connected LUME. The password of the connected LUME must be entered before the configuration can be removed. Once the files have been removed, the LUME will reboot and enter the setup wizard. **NOTE:** The files deleted include regular configuration files (.cfg), backup configuration files (.bak) and bad configuration files (.bad).
3.	Remove BACnet Overrides	Removes any BACnet override files from the connected LUME. This does not include BACnet schedule files.
4.	Restart LUME	Restarts all connected LUME pressure monitors.

Help

The Help screen contains information regarding LUME Assistant such as the version and changelog. There is also the contact information for Antec Controls Applications.

	Display Component	Description
1.	View Changelog	Opens a changelog menu containing a history of LUME Assistant versions and the changes that were made in each version.

Adjusting Windows Defender™ Firewall Settings

This section details how to manually allow LUME Assistant through your Windows Defender™ Firewall settings.
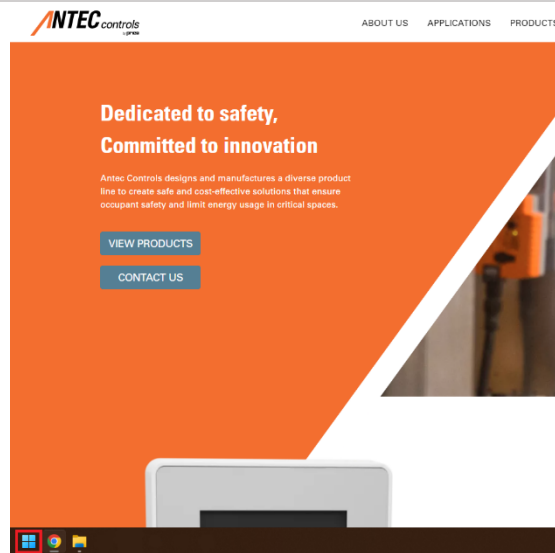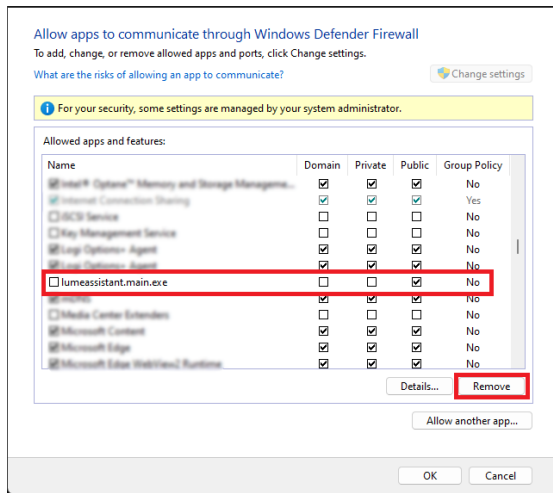

Step 1
Select the **Start** button.
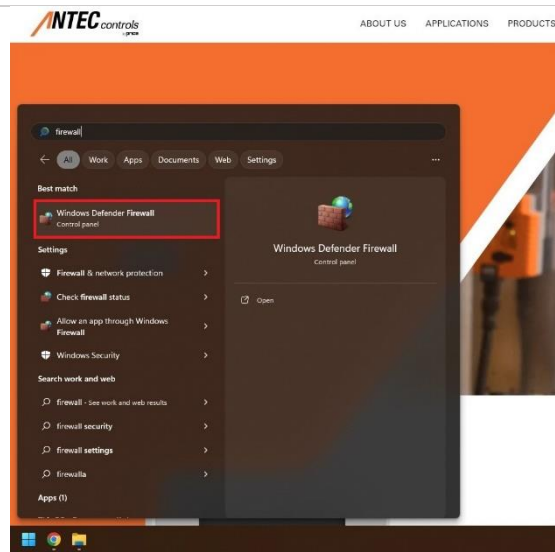
Step 2
Type "firewall" in the start menu and select the **Windows Defender™ Firewall** option.
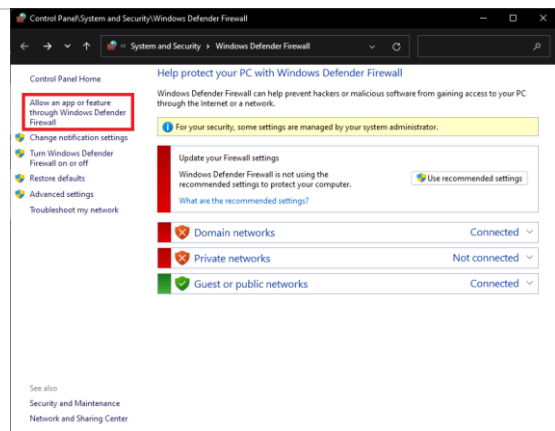
Step 3
Select the **Allow an app or feature through Windows Defender™ Firewall** option on the left side of the window.

Step 4
Scroll through the list of allowed apps and search for any entries named **LUMEAssistant.Main** or **lumeassistant.main.exe**. If any entries are found, click on them, and click **Remove**. Click **Yes** on the pop-up confirming that you would like to remove the entry.
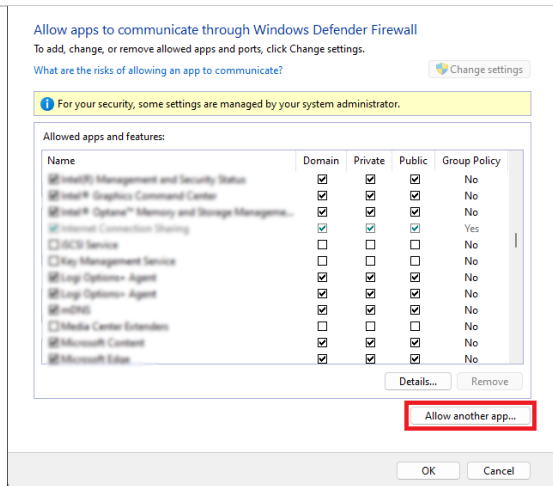
Step 5
Once there are no entries for LUME Assistant in the list of allowed apps, select **Allow another app** in the bottom right corner of the window.
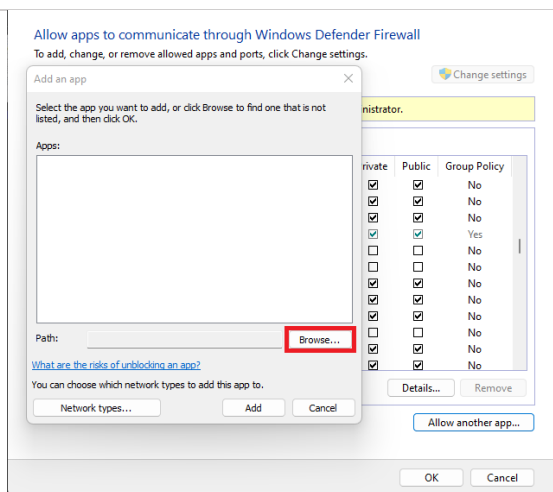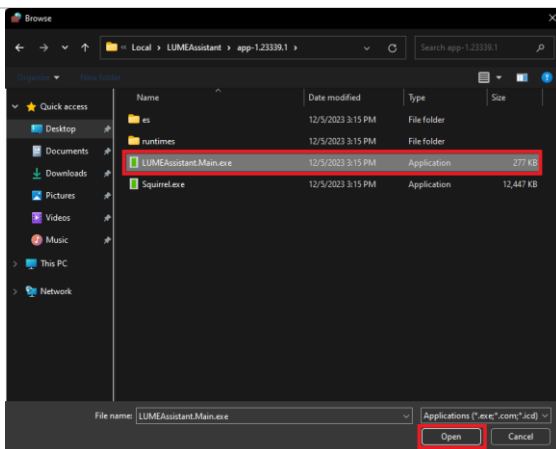

Step 6
Select **Browse**.
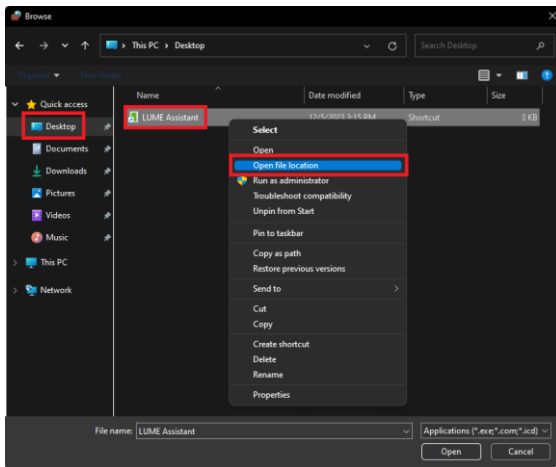
Step 7
Select **Desktop** in the quick access bar of the window. Locate the LUME Assistant program, right click it, and select **Open file location**.
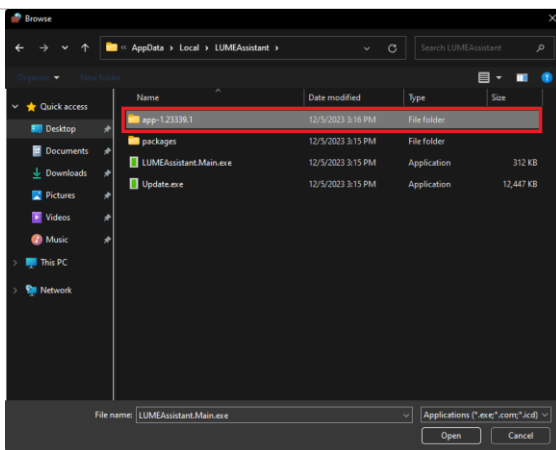
Step 8
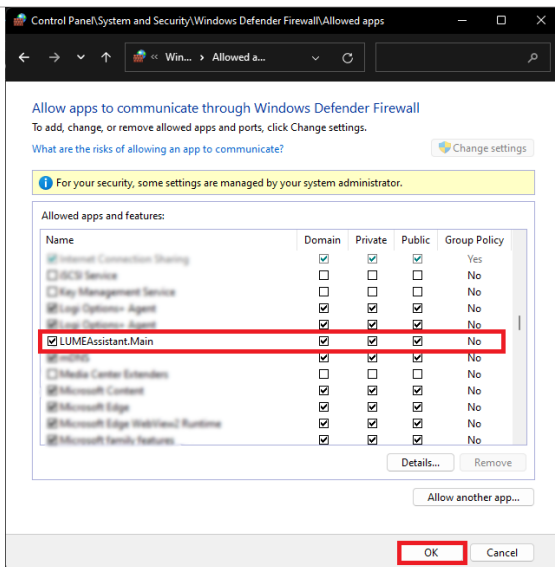Open the folder starting with "app-". If there are multiple folders, open the one with the highest number.

Step 9
Select **LUMEAssistant.Main.exe** and click **Open** in the bottom right corner of the window.
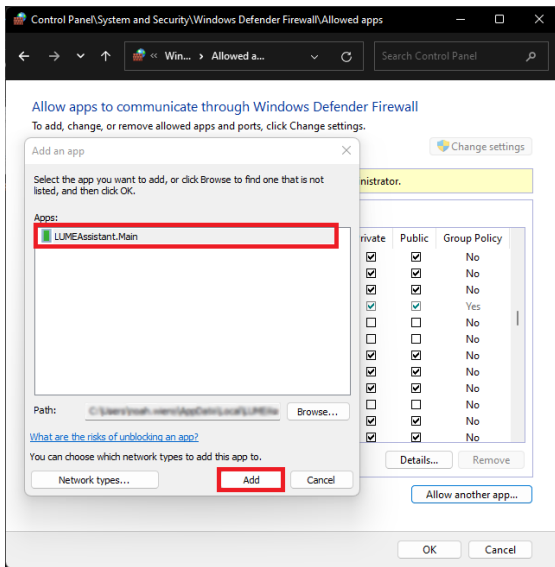
Step 10
Select LUME Assistant and then click **Add**.

Step 11
An entry for LUME Assistant should now appear in the list of allowed apps. Check the box to the left of the LUME Assistant entry. Check all three boxes to allow access for Domain, Private, and Public networks.

Select OK in the bottom right corner of the window. LUME Assistant has successfully been allowed through the Windows Defender^{TM} Firewall.

MAINTENANCE

If the settings password is forgotten, contact Antec Controls to reset.

Replacement Parts

Replacement parts are available. Please contact your local Antec Controls Representative.

Technical Support

If technical support is required, please contact us:
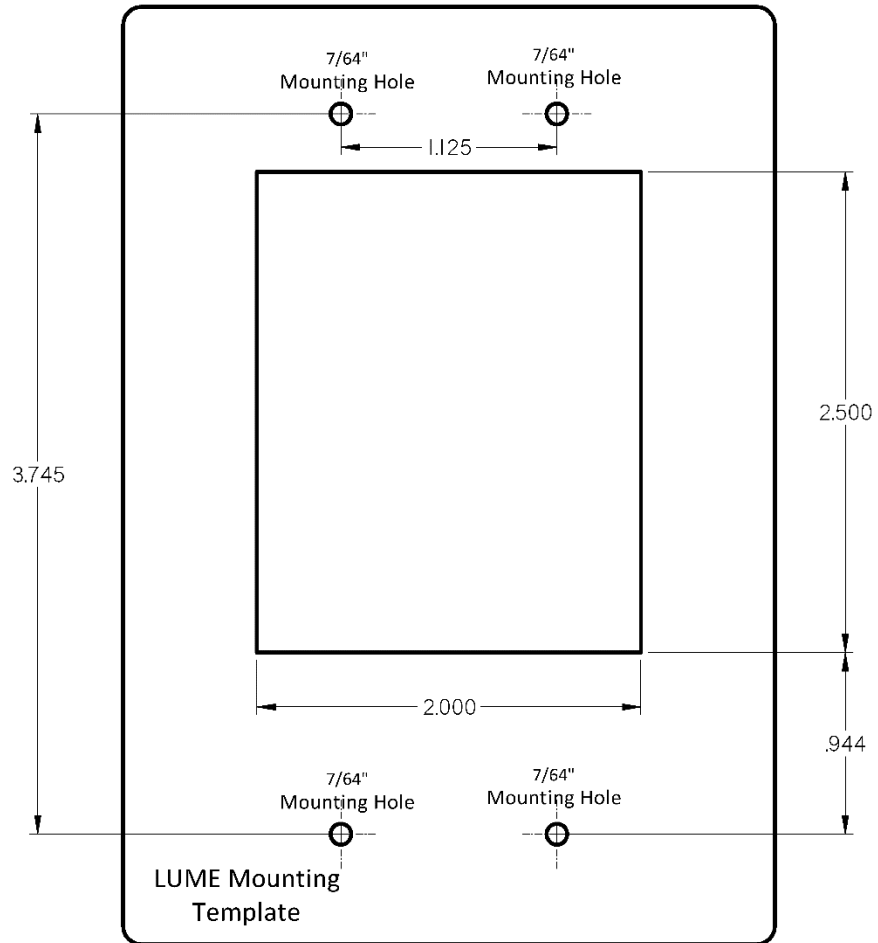By Email: Applications@AntecControls.com
By Phone: 866-884-3524
Hours of Operation: Monday – Friday, 8am to 4:30pm CST

NOTE: If you will need support after hours, please contact us 48 hours in advance.

APPENDIX A

Lume™ Drywall Cut-Out

7/64"
Mounting Hole

7/64"
Mounting Hole

1.125

2.500

3.745

2.000

.944

7/64"
Mounting Hole

7/64"
Mounting Hole

LUME Mounting
Template