


ALPHA



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IMPORTANT NOTES

 Pressing red (X) does not save a parameter, and will automatically exit you from the individual setup screens. After setting a parameter always hit the green check mark (✓) to save the parameter. Once saved, if no more parameters need adjustment, the red (X) can be pressed to go directly back to main setup screen without having to cycle through all parameters.

LOCAL SUPPORT

Contact your local area CRC channel partner for product support.

Additional information can be found at criticalroom.com.



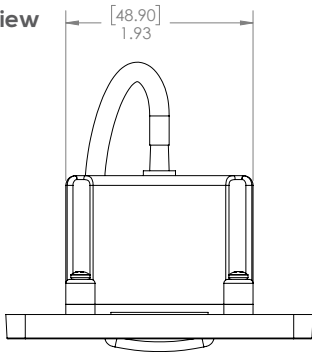
FEATURES

The Alpha is designed specifically to measure and display pressure, indicate room status, and give visual and audible feedback. A simple and cost-effective solution providing repeatable and reliable verification of pressure. The Alpha installs in minutes, utilizing a round LED touchscreen for ease of setup and configuration.

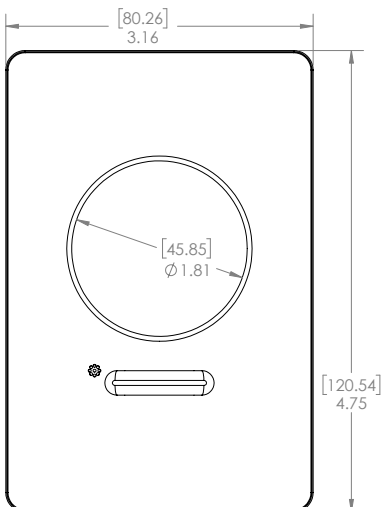
- Single-room pressure indication
- Maintenance-free pressure monitoring
- Analog output pressure signal to BMS
- Ability to remote alarm via a relay
- Straightforward installation and easy configuration via touch screen display
- Configurable audible alarm with a time delay up to 30 seconds and timeout of 5 minutes
- LED light bar viewable from 90 degree angle from either side

DIMENSIONS

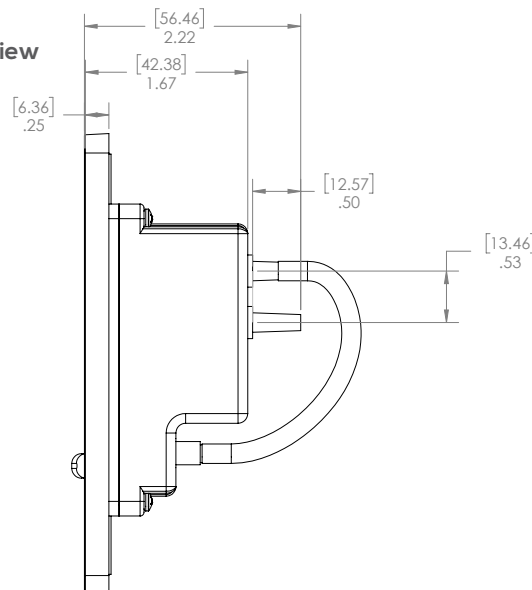
Top View



Front View



Side View



Key

[BRACKETS] = MILLIMETERS (mm)

NO BRACKETS = INCHES (in)

CHARACTERISTICS

Mounting Requirements	Single gang electrical box minimum depth of 3.5"
Enclosure	White fire-retardant plastic UL94 V-0
Pressure Ports	3/16" fitting
Display	Color: RGB 65,535 Resolution: 240 x 240 Backlight: LED Touch: Capacitive
Alarm Delay	0 to 30 seconds

ENVIRONMENTAL LIMITATIONS

Operating Temperature	32 to 120°F (0 to 50°C)
Storage Temperature	-20 to 160°F (-30 to 70°C)
Operating Humidity	5 to 95% RH non-condensing

ELECTRICAL

Power	24 VAC (±10%) 24 VDC (18-32 VDC) 50-60 Hz
Power Draw	5 W max, 3 W typical
Analog Output (Pressure Signal)	0-5 VDC or 0-10 VDC
Wire	Stranded unshielded twisted pair, 18-24 AWG

PERFORMANCE

Accuracy	< ±1.0% of span
Stability	< ±0.25% span/year
Range	±0.1"WC, ±24.91 Pa
Resolution	±0.0001"WC, ±0.01 Pa

ALPHA

INSTALLATION

INSTALLATION INSTRUCTIONS



A



B



C

PARTS

- A. ALPHA WITH 1 PAIR OF SCREWS
- B. ALPHA FRONT PLATE
- C. WALL PLATE PRESSURE PICKUP WITH 1 PAIR OF SCREWS

RECOMMENDED ACCESSORIES

- 3/32 FLATHEAD SCREWDRIVER
- #2 PHILLIPS SCREWDRIVER
- 1/4" O.D. PNEUMATIC TUBING

INSTALLATION INSTRUCTIONS



MOUNTING

Dimensions	Refer to spec sheet for dimensional details
Mounting Requirements	Single gang electrical box minimum depth of 3.5"
Location	Alpha (in reference area) Wall Plate Pressure Pickup (in monitored room)
Orientation	Portrait

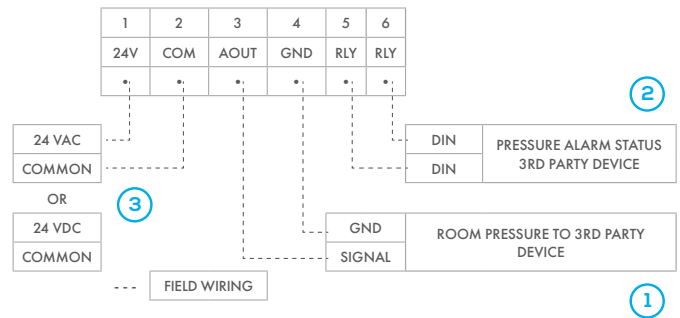
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WIRING GUIDELINES

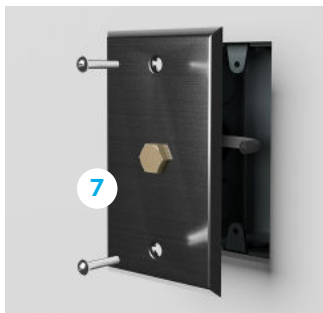
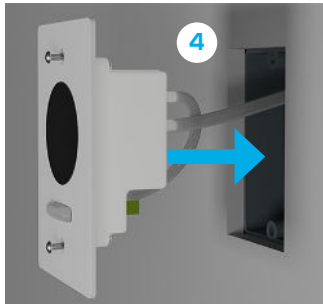
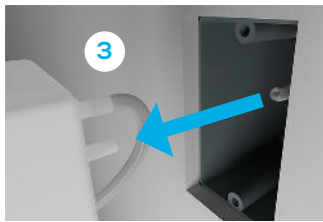
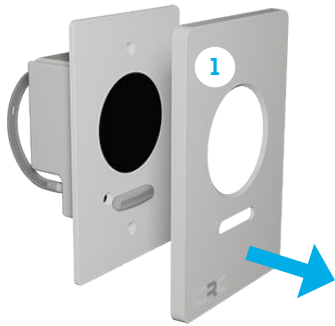


- 1 Room pressure signal (AOUT) → Voltage: 0-5 VDC or 0-10 VDC
- 2 Pressure alarm status (RELAY) → Closed: In alarm / Open: Not in alarm
- 3 24 VAC or 24 VDC power input

SAFETY PRECAUTIONS

- Securely mount the Alpha to prevent it from falling
- Keep wiring and cables organized and secure to prevent damage to connections
- Avoid applying excessive force when connecting or disconnecting components to prevent damage

INSTALLATION INSTRUCTIONS



REFERENCE AREA

- 1 Remove the Alpha front plate from the Alpha.
- 2 Wire the following to the back of the Alpha terminals.
 - 24 VAC or 24 VDC to 24V
 - Common/Ground to COM
 - Room Pressure Signal AOUT to 3rd Party Device
 - Room Pressure Ground to 3rd Party Device
 - Pressure Alarm Status DIN 3rd Party Device to RLY
 - Refer to page 3 for the wiring guidelines
- 3 Attach the pneumatic tubing to the back of the Alpha.
- 4 Mount the Alpha on the wall in the reference area using the provided screws.
- 5 After mounting, place the Alpha front plate back onto the Alpha.

MONITORED ROOM

- 6 Connect the pneumatic tubing from the back of the Alpha to the back of the wall plate pressure pickup.
- 7 Mount the wall plate pressure pickup on the wall inside the monitored room using the provided screws.

QUICKSTART GUIDE

HOME SCREEN



The home screen displays pressure, indicates room status, and provides visual and audible feedback.

Press and hold anywhere on the screen for 5 seconds to access the setup menu.



STANDBY mode temporarily disables alarm parameters and LEDs. It can be used when the room does not have to be pressurized.

STANDBY mode can be accessed from the home screen by swiping left.

SETUP MENU



The SETUP menu is the central location for accessing feature configurations. Submenus include:

- DISPLAY
- ALARM
- I/O
- SYSTEM

Press any button to access submenu and customize settings.

SYSTEM MENU



The SYSTEM menu contains a product description, version information, and options to RESTART or RESET the Alpha.

- **Restart:** The Alpha will reboot with the same saved settings and configurations.
- **Reset:** The Alpha will return to factory default settings. To see a list of all default settings, refer to Appendix on page 6.

QUICKSTART GUIDE

DISPLAY SUBMENU



Within the DISPLAY submenu, you can adjust the following parameters:

- **Engineering Units:** Select preferred pressure reading units.
Recommended: "WC (inches of water column)
- **ISO Text:** Displays the intended pressure state of the room.
Recommended: Desired pressure state of room
- **Pressure:** Show or do not show pressure on main screen.
Recommended: Show
- **Resolution:** Select preferred number of decimal places.
Recommended: 0.000 (3 decimal places)
- **Average Rate:** Sets the sample time and adjusts the responsiveness of the pressure readout.
- **LED Status:** Toggle status indicator LED on or off.
Recommended: On

ISO TEXT AND PRESSURE



- A** ISO Text options have the following effect on the home screen:
 - **Negative:** Default setting NEGATIVE.
 - **None:** Removes default NEGATIVE wording.
 - **Positive:** Replaces default NEGATIVE with POSITIVE.
- B** Show/Hide Pressure options have the following effect on the home screen:
 - **Show:** Pressure reading is displayed.
 - **Hide:** Removes pressure reading from main screen.

QUICKSTART GUIDE

ALARM SUBMENU



Within the ALARM submenu, you can adjust the following parameters:

- **Alarm High & Low:** The Alpha will enter alarm state if room pressure is greater than Alarm High or less than Alarm Low. Use left and right arrows to select which digit to adjust. Use up and down arrows to adjust the digit's value.
- **Alarm Delay:** Select time before Alpha enters alarm state when alarm conditions are met.
- **Audible On/Off:** Toggle an audible alarm on or off when alarm conditions are met. The alarm can be silenced from the home screen by pressing MUTE if audible alarm is on.
- **Timeout On/Off:** Toggle on enables a 5 minute silence of the alarm after pressing the mute button. If alarm conditions remain for 5 continuous minutes, the audible alarm will resume. Toggle off allows indefinite muting of the alarm until pressure returns to an acceptable range.

I/O SUBMENU



Within the I/O submenu, you can adjust the following parameters:

- **AI Zero:** To zero room pressure, open the door(s) between the primary space and reference to establish a neutral room pressure. Press the ZERO button while the door is open. The current value for room pressure should now read 0.00 "WC or Pa. Ensure the Alpha is zeroed correctly during commissioning activities.
- **AO Type:** Choose 0-5 V or 0-10 V pressure output signal.

TROUBLESHOOTING

If Alpha does not turn on:

- Must be 24 VAC or 24 VDC to power up.
- Ensure the Alpha is wired properly.
- Refer to wiring guidelines.

Faulty wiring, loose connections, or damaged cables between the 3rd party device and the Alpha can disrupt the signal. Inspect and repair the wiring and connections as needed.

- Refer to wiring guidelines.

If the Alpha is displaying the expected value with the opposite sign, ensure the wall plate and Alpha are mounted in the correct location.

- Wall plate mounted inside of monitored room.
- Alpha mounted in reference area outside of the monitored room.

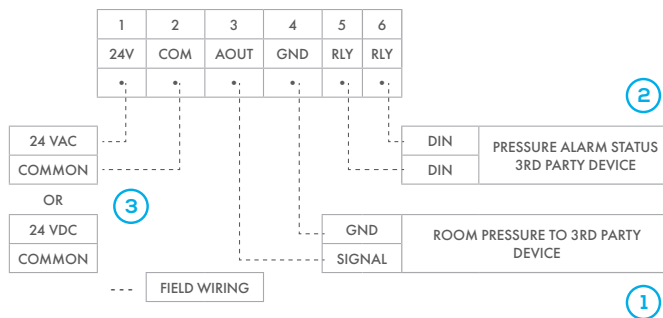
Ensure pneumatic tubing is connected properly from the back of Alpha to the back of wall plate pressure pickup.

Environmental Limitations:

- Extreme environments can affect the accuracy of the Alpha. Ensure that the Alpha operates within its specified environmental ranges.

Local Support:

- Contact your local area CRC channel partner for product support.
- Additional information can be found at criticalroom.com.



- 1 Room pressure signal (AOUT) → Voltage: 0-5 VDC or 0-10 VDC
- 2 Pressure alarm status (RELAY) → Closed: In alarm / Open: Not in alarm
- 3 24 VAC or 24 VDC power input

MAINTENANCE

SAFETY FEATURES

- Enclosure: White (Fire-retardant plastic UL94 V-)
- Audible Alarm: Continuous audible alarm with mute and timeout options

SAFETY PRECAUTIONS

- Securely mount the Alpha to prevent it from falling
- Keep wiring and cables organized and secure to prevent damage to connections
- Avoid applying excessive force when connecting or disconnecting components to prevent damage

ROUTINE MAINTENANCE

Occasionally wipe the exterior of the Alpha using a soft, lint-free cloth and mild cleaning agents. Avoid spraying the Alpha and using abrasive materials.

DEFAULT VALUES

Menu	Setting	Default Value
Display	Engineering Units	"WC
Display	ISO Text	NEG.
Display	Pressure	SHOW
Display	Resolution	0.0001
Display	Average Rate	0s
Display	LED Status	ON
Alarm	Alarm High	0.0000
Alarm	Alarm Low	0.0000
Alarm	Alarm Delay	5s
Alarm	Audible On/Off	OFF
Alarm	Timeout On/Off	OFF
I/O	AI Zero	.0000"
I/O	AO Type	0-10V

criticalroom.com



Measure What Matters.

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