



# Exhaust Monitoring System

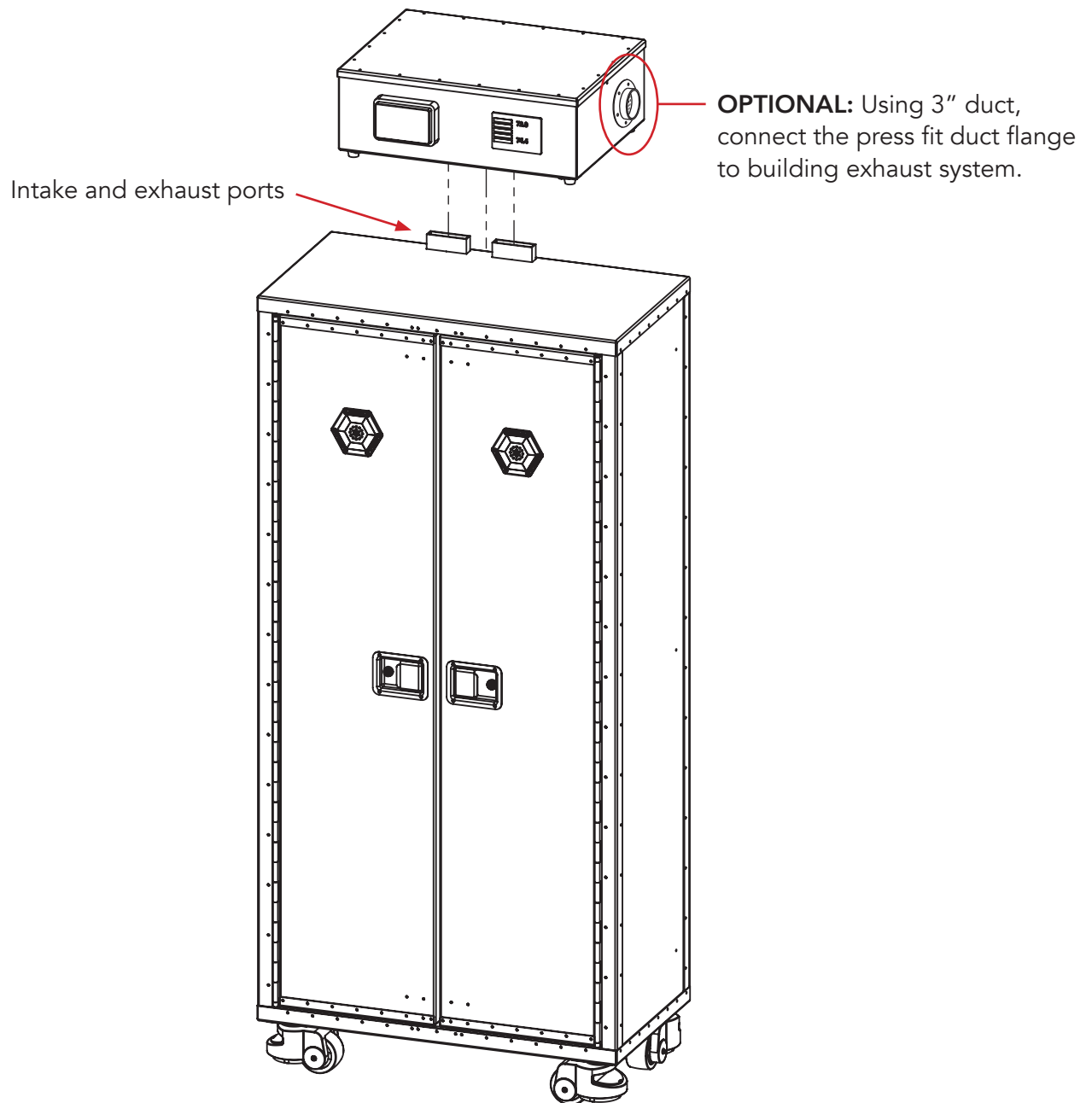
## Instruction Manual

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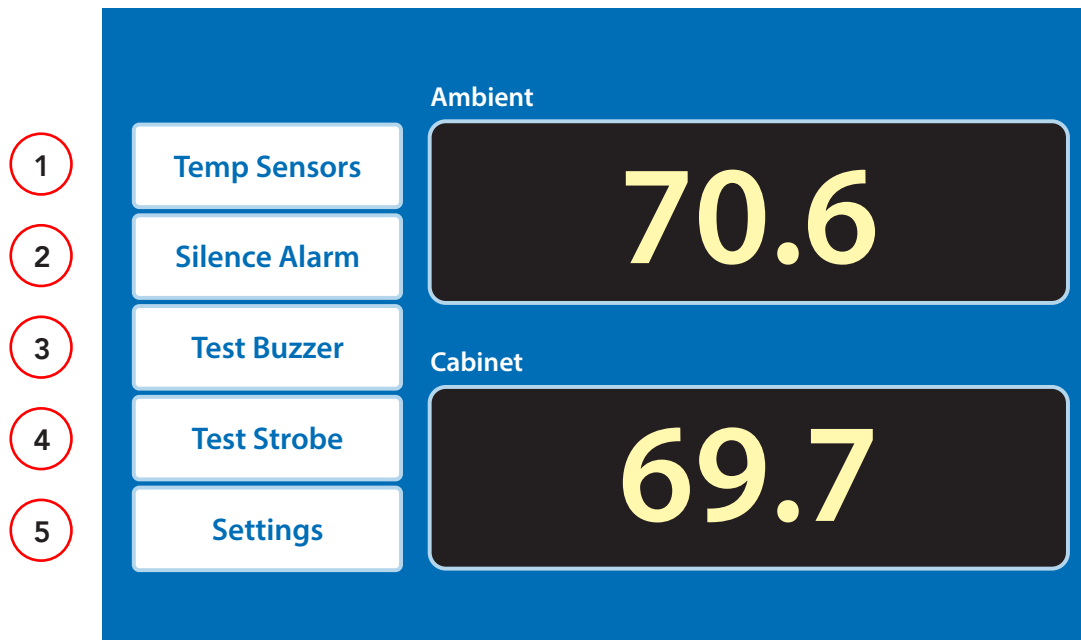
# Installation

1. Place the monitoring system on the cabinet, aligning the intake and exhaust ports at the top of the cabinet.



2. Connect the system power cord and allow the screen to warm up, the exhaust fan will run for a short period of time.

# Home Screen



## 1. Temp Sensors

**EMS:** Select to display the temperature of the cabinet.

**EMS Plus:** Select to display the temperature at each thermocouple location.

## 2. Silence Alarm

Silences the audible alarm until system is reset. Turn module off and back on again to reset the audible alarm.

## 3. Test Buzzer

Select to test the audible alarm.

## 4. Test Strobe

Select to test visual strobe alarm.

## 5. Settings

Opens the settings menu. See pages 5 - 13 for detailed settings options.

## 6. Ambient

Displays external temperature of the air surrounding the cabinet.

## 7. Cabinet

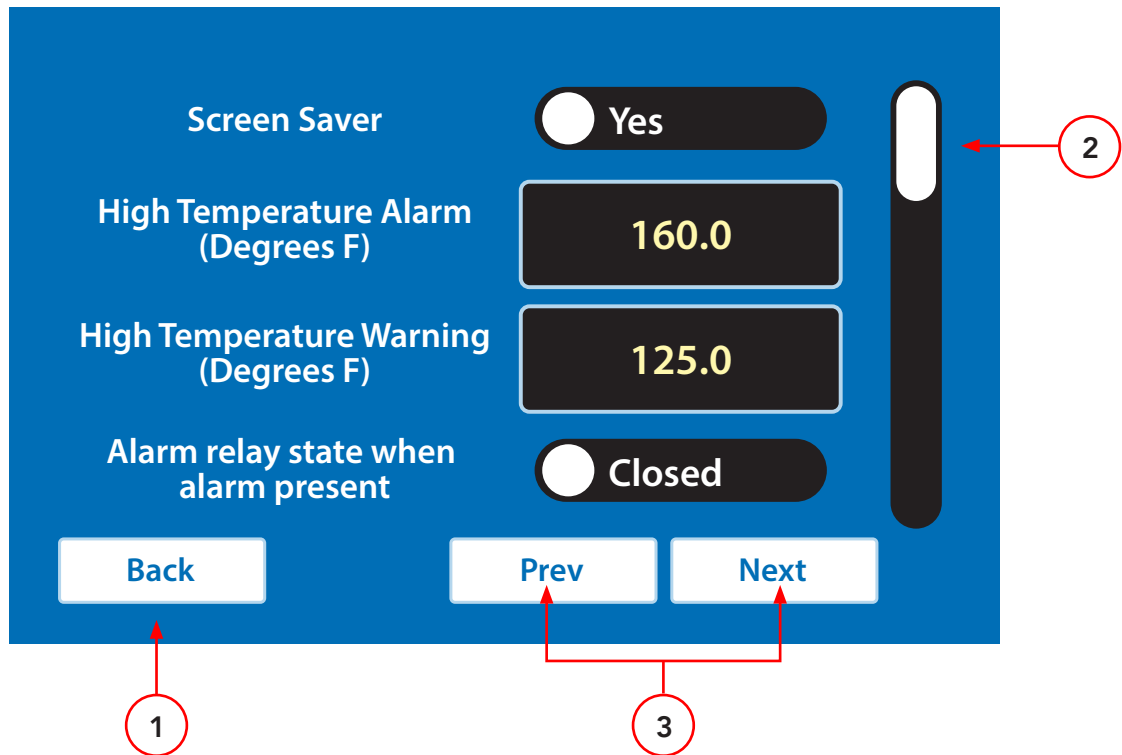
**EMS:** Displays internal temperature of cabinet at the vent.

**EMS Plus:** Displays highest temperature within the cabinet independent of location.

# Settings

Settings Screen

Settings



## 1. Back

Returns to home screen

## 2. Vertical Scroll and 3. Prev/Next

Access additional settings by scrolling **OR**

Access additional menu items by using the Previous and Next buttons

## Screen Saver



Access From: Settings Screen

Settings

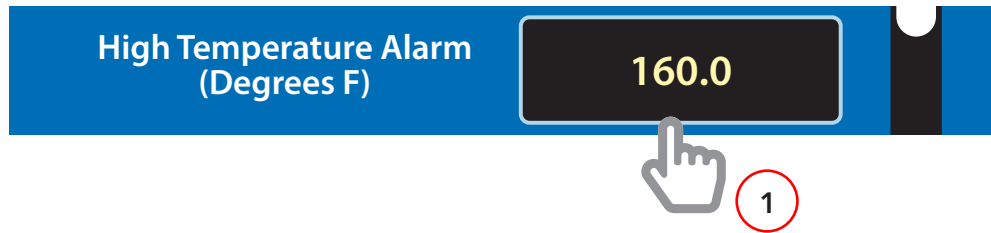
## Options:

**Yes** - the screen will go dark when not in use

**No** - the screen will remain on

# Settings

## High Temperature Alarm



### Description:

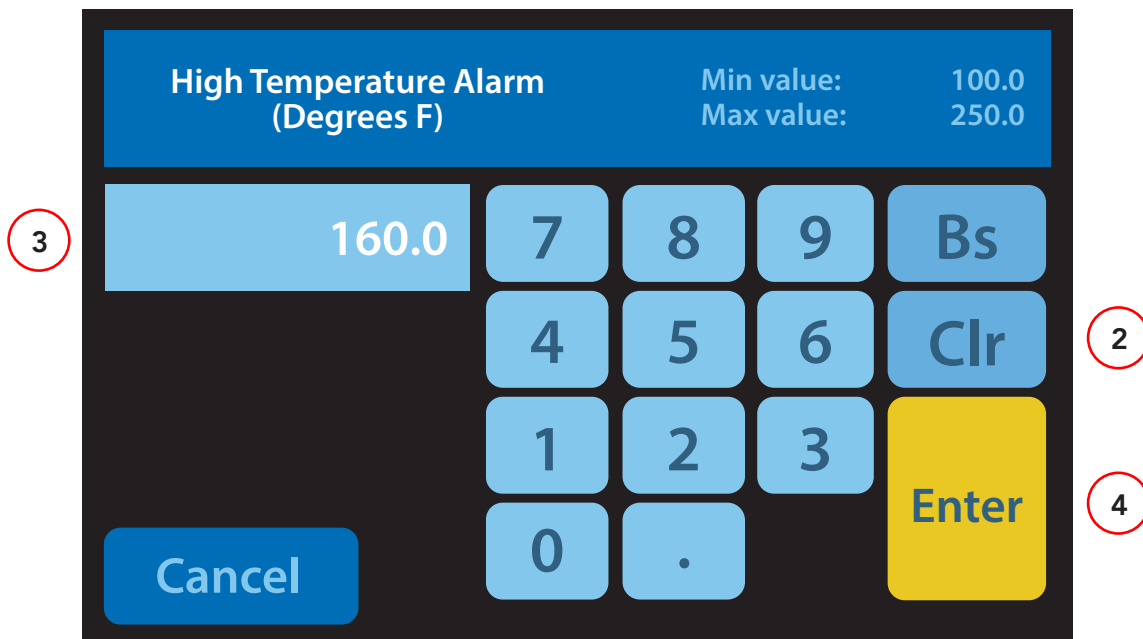
This is the internal cabinet temperature threshold required to deploy the audible alarm and red strobe light. This setting will also indicate what temperature will deactivate the exhaust fan to prevent an accelerated thermal runaway.

**Access From:** Settings Screen

[Settings](#)

**Preset Value:** 160° F

1. Select the temperature setting to open the next screen.
2. Press **Clr** to delete the previous setting.
3. Input the new temperature limit in degrees Fahrenheit.
4. Press **Enter** to return to settings screen



# Settings

## High Temperature Warning



### Description:

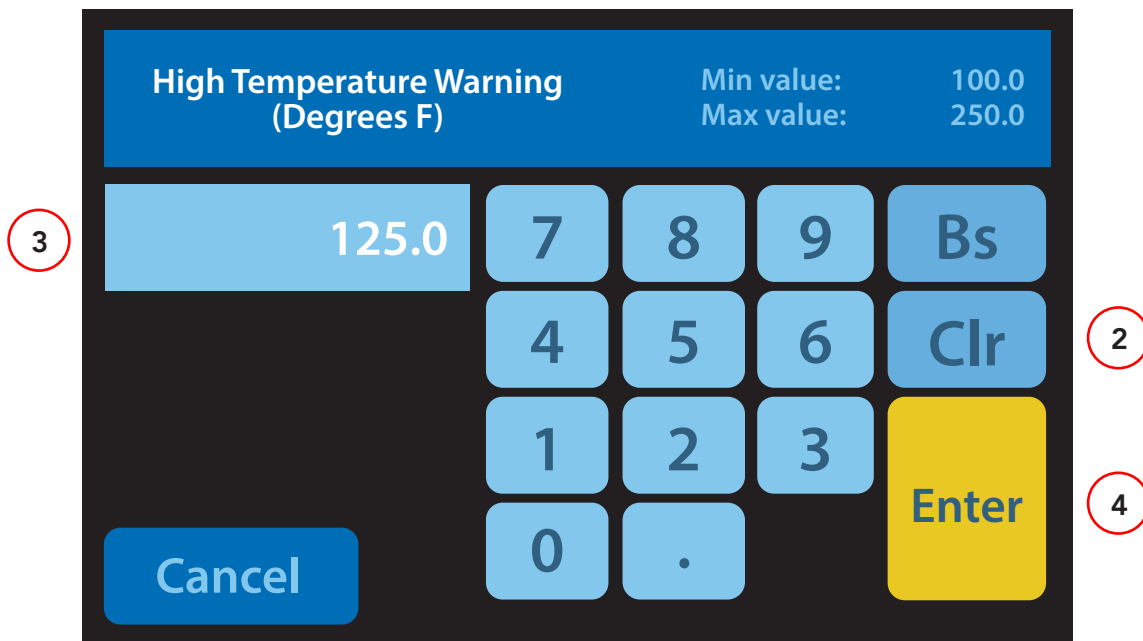
The internal cabinet temperature threshold required to set off the yellow strobe light. The blower remains on.

Access From: Settings Screen

[Settings](#)

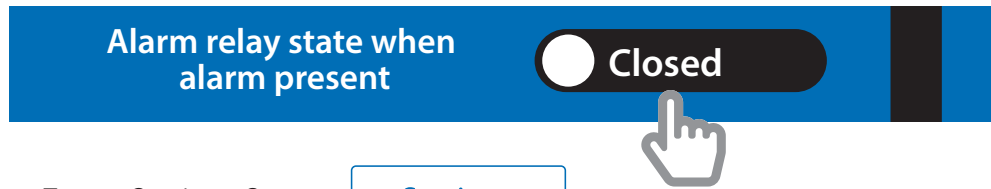
Preset Value: 125° F

1. Select the temperature setting to open the next screen.
2. Press **Clr** to delete the previous setting.
3. Input the new temperature limit in degrees Fahrenheit.
4. Press **Enter** to return to settings screen



# Settings

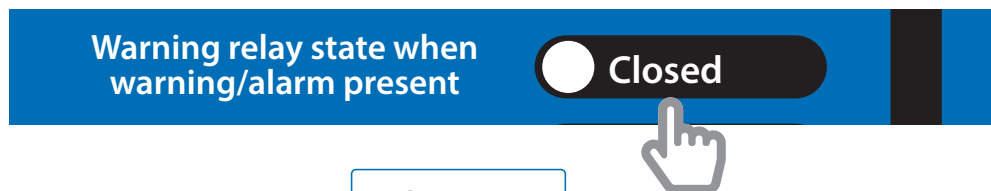
## Alarm Relay State – EMS Plus Only



Access From: Settings Screen [Settings](#)

Toggle the selection button to match the connected circuit system. Select **Closed** for a closed alarm circuit system or **Open** for an open alarm system.

## Warning Relay State – EMS Plus Only

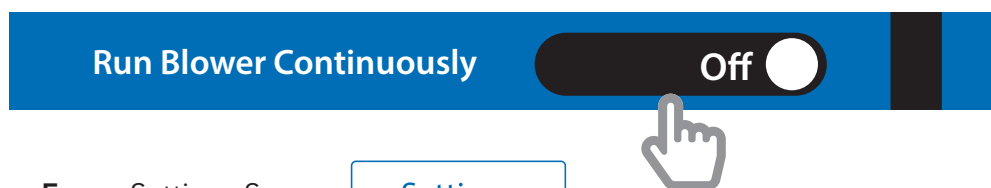


Access From: Settings Screen [Settings](#)

Toggle the selection button to match the connected circuit system. Select **Closed** for a closed alarm circuit system or **Open** for an open alarm system.

**Note:** Removing the power does NOT change the state of either relay. Each will remain in it's last state upon loss of power. In other words, if in alarm, turning off the power will not change the condition of the relay contacts.

## Run Blower Continuously



Access From: Settings Screen [Settings](#)

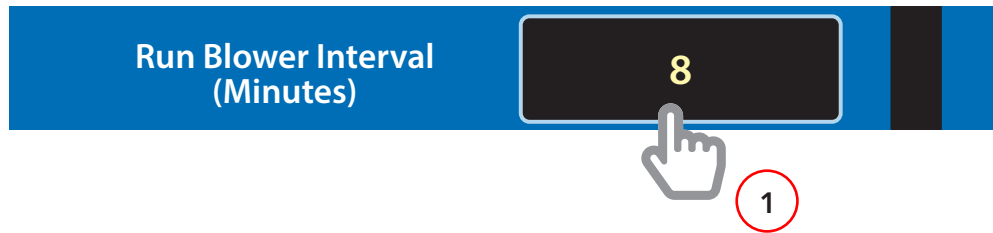
Toggle the selection button to set.

1. When set to **On** blower will run continuously, independent of temperature.
2. When set to **Off** blower will only run on the user-programmed intervals.



# Settings

## Blower Run Interval



### Description:

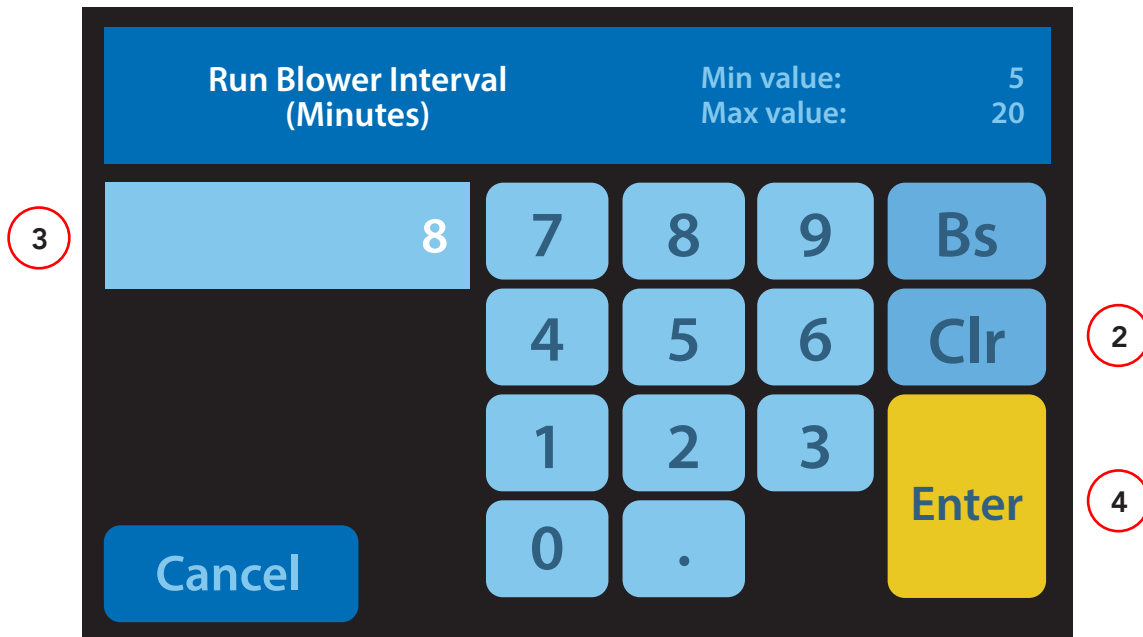
The period in minutes the module waits between running the blower to record a sample temperature of inside the cabinet.

**Access From:** Settings Screen

[Settings](#)

**Preset Value:** 8 (minutes)

1. Select the interval setting to access the next screen
2. Press **Clr** to delete the previous setting
3. Input the new time interval in minutes
4. Press **Enter** to return to settings screen



# Settings

## Blower Run Time to Sample



### Description:

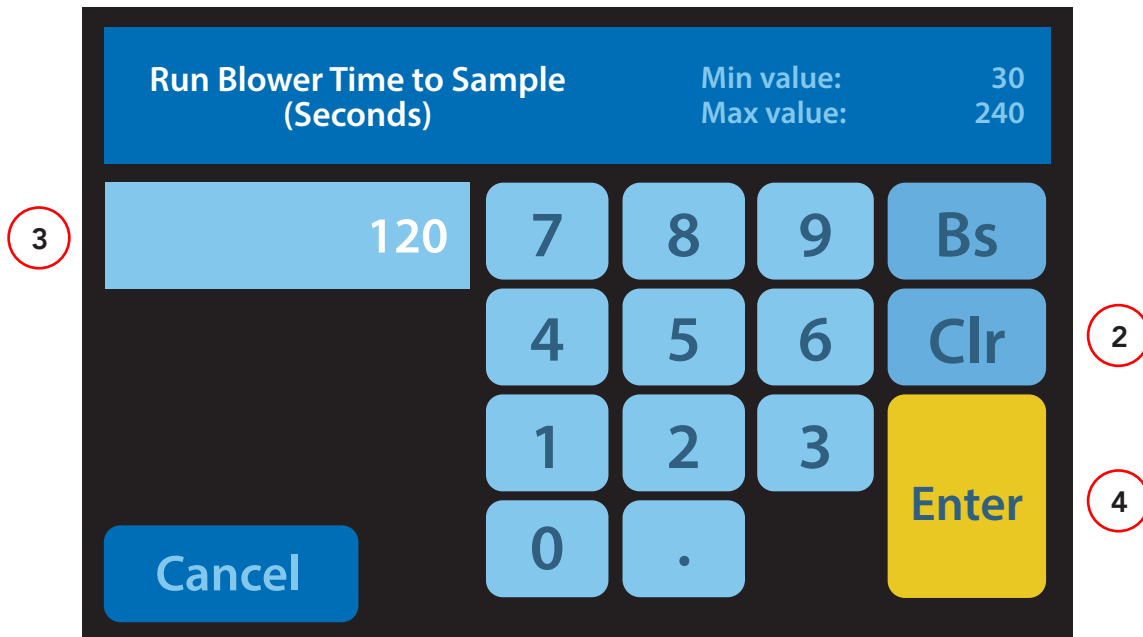
The period in seconds the blower will draw air during each Sample Temperature Interval.

**Access From:** Settings Screen

[Settings](#)

**Preset Value:** 120 (seconds)

1. Select the run time setting to access the next screen
2. Press **Clr** to delete the previous setting
3. Input the new time interval in seconds
4. Press **Enter** to return to settings screen



# Settings

Keep Blower Running if Ambient Air plus X degrees



## Description:

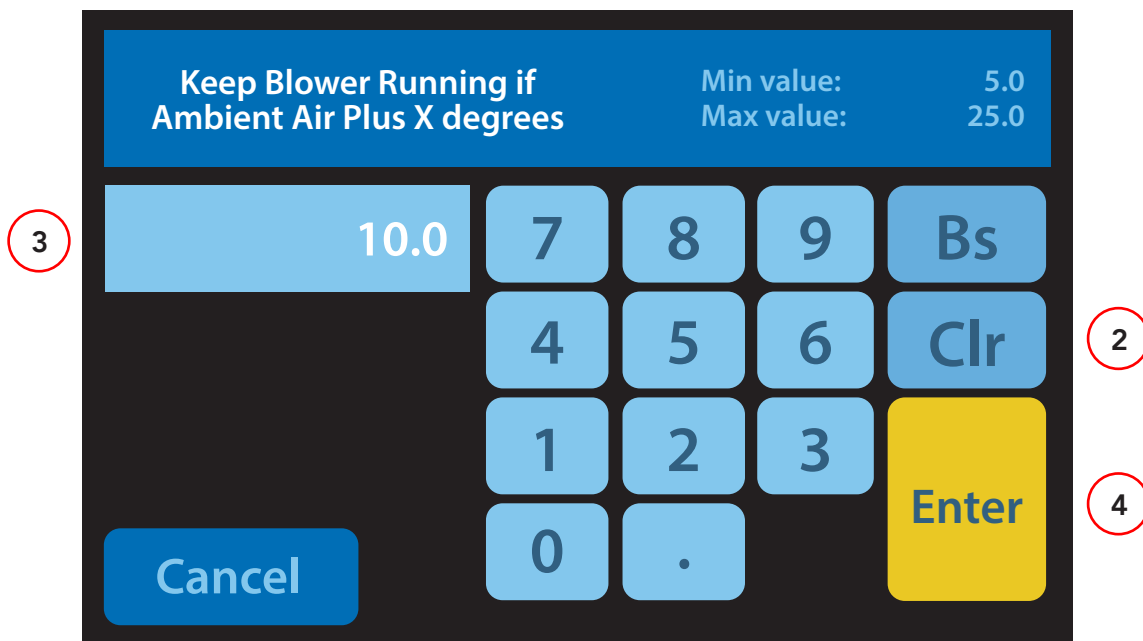
The temperature difference between the internal cabinet temperature and external ambient temperature. Exceeding this threshold will trigger the blower to run constantly. Used in instances when battery chargers increase the internal temperature of the cabinet without thermal runaway occurring.

Access From: Settings Screen

[Settings](#)

Preset Value: 10° F

1. Select the run time setting to access the next screen
2. Press **Clr** to delete the previous setting
3. Input the new temperature difference in degrees Fahrenheit.
4. Press **Enter** to return to settings screen



# Settings

## Reset Blower if Ambient Air plus X degrees



Reset Blower If Ambient Air Plus X degrees

5.0

1

### Description:

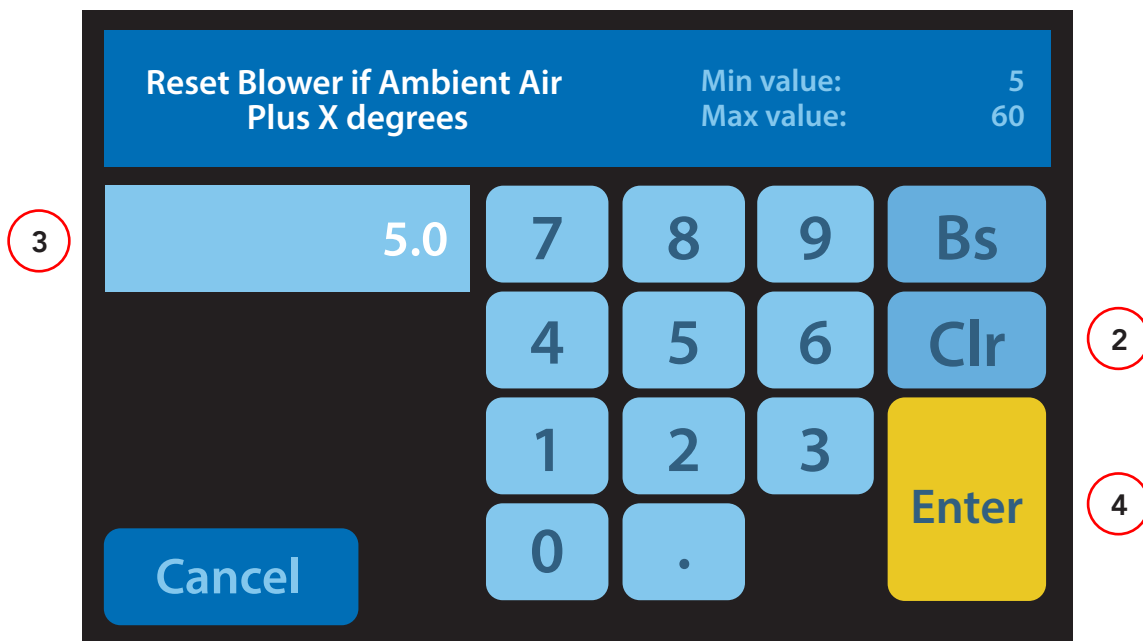
The temperature difference between the internal cabinet temperature and external ambient temperature which will reset the exhaust fan to previous settings once the cabinet has decreased in temperature from the **Keep Blower Running if Ambient Air plus X degrees** occurrence.

Access From: Settings Screen

Settings

Preset Value: 5° F

1. Select the run time setting to access the next screen
2. Press **Clr** to delete the previous setting
3. Input the new temperature difference in degrees Fahrenheit.
4. Press **Enter** to return to settings screen



Reset Blower if Ambient Air Plus X degrees

Min value: 5  
Max value: 60

5.0

7 8 9 Bs

4 5 6 Clr

1 2 3

0 . Enter

Cancel

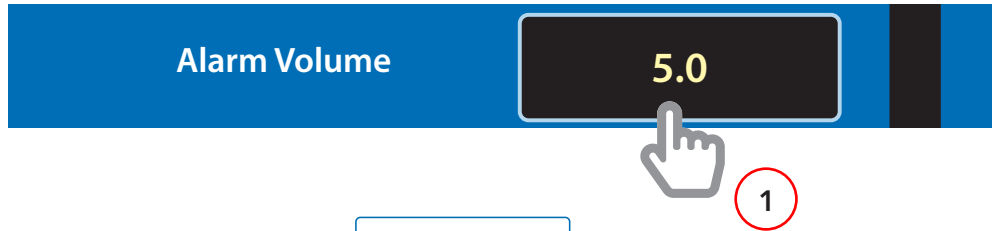
3

2

4

# Settings

## Alarm Volume

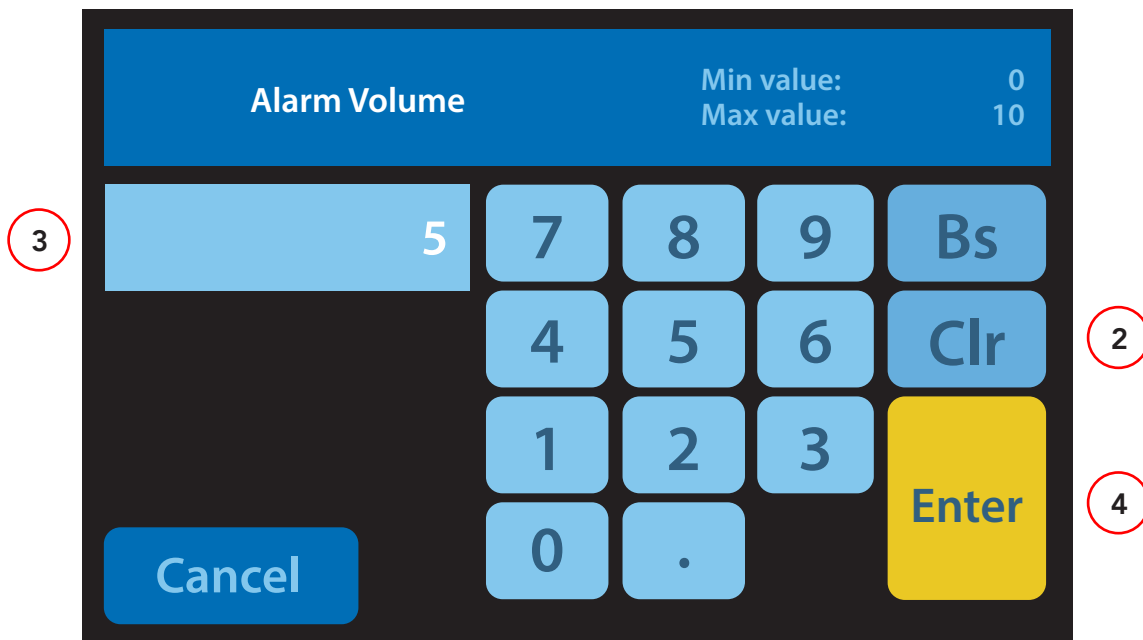


Access From: Settings Screen

Settings

### Preset Value: 5

1. Select the Alarm Volume setting to access the next screen
2. Press **Clr** to delete the previous setting
3. Input the new Alarm Volume in decibels x 10 (i.e. 1 = 10 dB; 10 = 100 dB)
4. Press **Enter** to return to settings screen



# Settings

## Sensor Type



### Description:

Sensor Type syncs the system with the correct thermocouple type. Options include B, E, J, K, N, R, S, and T. **If none are selected the device will not alarm for temperature.** (CellBlock FCS installs K-Type thermocouples).

### NOTE:

**EMS:** Only Sensor 1 is used. If using the pre-installed sensor, select K-Type.

**EMS+:** Sensors 1-6 will be used.


**EMS+:** Sensors 1-12 will be used. Additional sensors by special orders only.

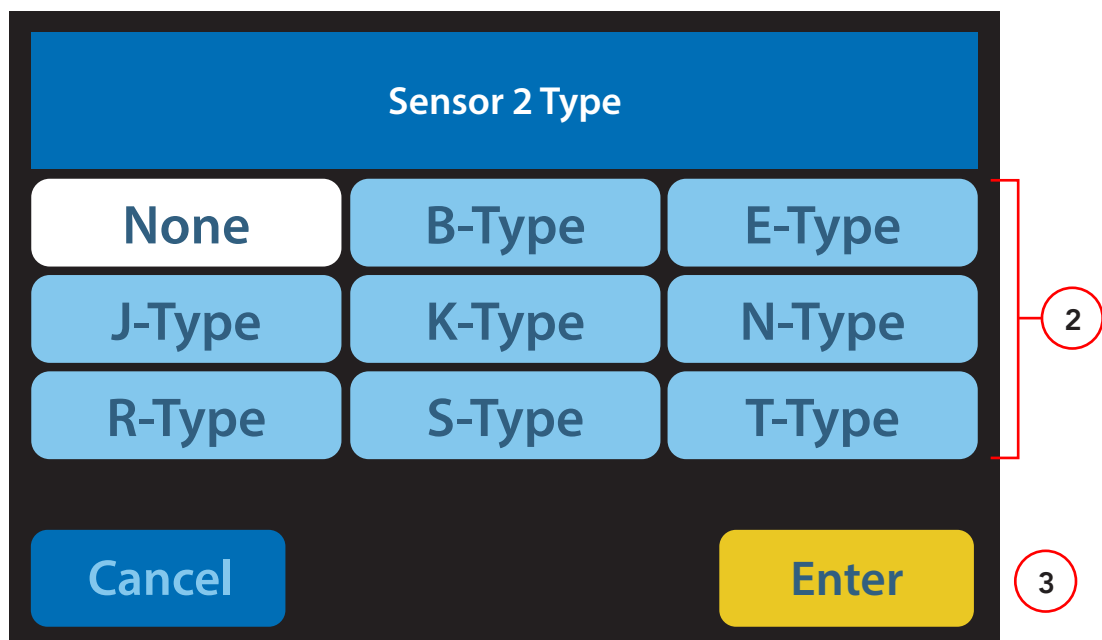
*See Chart on page 15 for TC assignments*

Access From: Settings Screen

[Settings](#)

Preset Value: K-Type

1. Select the Sensor Type setting to access the next screen
2. Select Sensor Type from menu
4. Press  to return to settings screen



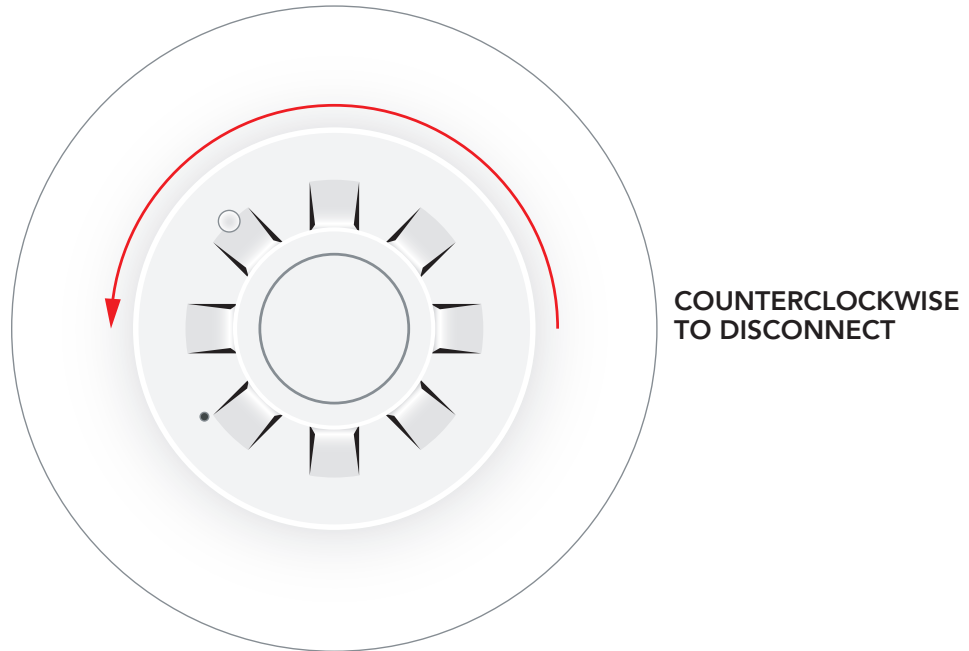
## Chart - Thermocouple Assignments

	ALL Cabinets Standard EMS	3672/6172 EMS+ (5 Shelves)	3672/6172 EMS++ (5 Shelves)	6165 EMS+ (4 Shelves)	6165 EMS++ (4 Shelves)	1952 EMS+ (3 shelves)	1952 EMS++ (3 shelves)	3736 EMS+ (2 shelves)
TC1	Exhaust	Exhaust	Exhaust	Exhaust	Exhaust	Exhaust	Exhaust	Exhaust
TC2	none	Shelf 1	Shelf 1A	Shelf 1	Shelf 1A	Shelf 1	Shelf 1A	Shelf 1A
TC3	none	Shelf 2	Shelf 1B	Shelf 2	Shelf 1B	Shelf 2	Shelf 1B	Shelf 1B
TC4	none	Shelf 3	Shelf 2A	Shelf 3	Shelf 2A	Shelf 3	Shelf 2A	Shelf 2A
TC5	none	Shelf 4	Shelf 2B	Shelf 4	Shelf 2B	none	Shelf 2B	Shelf 2B
TC6	none	Shelf 5	Shelf 3A	none	Shelf 3A	none	Shelf 3A	none
TC7	none	none	Shelf 3B	none	Shelf 3B	none	Shelf 3B	none
TC8	none	none	Shelf 4A	none	Shelf 4A	none	none	none
TC9	none	none	Shelf 4B	none	Shelf 4B	none	none	none
TC10	none	none	Shelf 5A	none	none	none	none	none
TC11	none	none	Shelf 5B	none	none	none	none	none
TC12	none	none	none	none	none	none	none	none

## Smoke Alarm Cleaning

*Frequency:* Every 6 months.

1. Remove the twenty screws using a flat head screwdriver. Lift the module cover off.
2. Turn the removable sensor on the smoke alarm counterclockwise until it disconnects.



3. Carefully blow any dust or debris off the sensor and sensor housing.
4. To reconnect the sensor, turn clockwise until hand tight.
5. Place the module cover on the top and screw in using the twenty screws.