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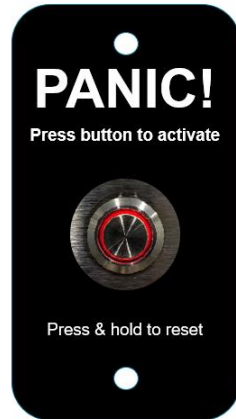
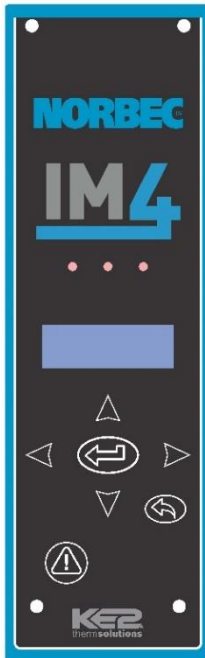
**** IMPORTANT ****




**PLEASE READ PRIOR TO
INSTALLATION AND START UP**

Table of Content

1	Operating and Configuring Instructions.....	3
2	Description for Each Feature	3
2.1	Temperature Monitoring and Display.....	3
2.2	Lighting Control.....	3
2.3	Temperature Alarms	3
2.4	Door Open Alarm	3
2.5	Panic Alarm	4
2.6	Muting an Alarm	4
2.7	Battery Backup.....	4
2.8	Three-Way Switch for Lighting.....	4
3	Options.....	4
3.1	Fan Failure Alarm	4
4	Alarm Message Descriptions.....	5
4.1	Silencing Buzzer	5
5	Display Variables	6
6	Parameters Setting.....	6
7	Parameters Description	7
APPENDIX 1.	Proximity Sensor	Error! Bookmark not defined.
APPENDIX 2.	Installation step: IM4 keyboard	13
APPENDIX 3.	Installation step: Panic Button and temperature sensor.....	19
APPENDIX 4.	Wiring diagram Module IM4.....	21
APPENDIX 5.	Wiring diagram Module IM4 – Remote mounted	22
APPENDIX 6.	Wiring Diagram Module IM4 – Surface mounted.....	23
APPENDIX 7.	IM4 probe installation guide.....	25

1 Operating and Configuring Instructions



1. Up 
2. Down 
3. Left 
4. Right 
5. Enter 
6. Back 
7. Mute Button 

2 Description for Each Feature

2.1 Temperature Monitoring and Display

The unit displays the temperature in degrees Celsius (°C) [adjustable, see *Parameter Descriptions*].

Should one or more alarms be present, the display will show the alarms first. If there are no active alarm, the screen displays only the variables.

2.2 Lighting Control

The lighting is controlled by detecting the opening of the door, which will turn the lights ON and the closing door will initiate a 5-minute countdown [adjustable, see *Parameter Descriptions*]; 30 seconds before the end of the delay, the lights will blink to indicate that the lights are about to turn OFF. This is to warn anyone inside to move to the exit door before the lights go OFF.

2.3 Temperature Alarms

Those alarms are activated 45 minutes [adjustable, see *Parameter Descriptions*] after

reaching the pre-recorded High and Low temperature levels. An audible alarm (about 95 dB) from the keypad will then occur. The display will show the message HIGH MONITOR TEMP2 ALARM or LOW MONITOR TEMP2 ALARM, [see *Alarm Message Descriptions*]. The dry contact (normally closed) from the alarm relay will activate the external alarm signal (low voltage).

The High and Low temperature alarm settings and the activation delay can be modified in the parameter menu.


2.4 Door Open Alarm

If the door remains open for more than 15 minutes [adjustable, see *Parameter Descriptions*], this alarm is triggered and an audible alarm from the keypad will occur. The display will show the message DOOR OPEN ALARM [refer to *Alarm Message Descriptions*]. The dry contact (normally closed) from the alarm relay will activate the external alarm signal (low voltage).

2.5 Panic Alarm

This alarm can be triggered when the backlit push button is pressed and held, located inside, near the door opening. When pressing this button, the lights will turn ON and an audible alarm from the keypad will occur and the dry contact (normally closed) from the alarm relay will activate the external alarm signal (low voltage). The display will also show the message HELP. Once this alarm is triggered, the mute button will not work. The push button must be pressed and held for 3 seconds to deactivate the alarm.

2.6 Muting an Alarm

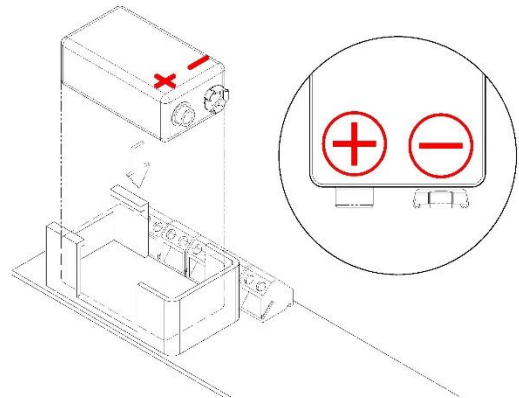
Pressing the "Silent" button  on the keyboard during an alarm will mute the audible signal but the associated alarm message will remain until the alarm condition disappears.

2.7 Battery Backup

The 9-Volt battery holder is located inside the controller. In normal condition, this battery should maintain the temperature display and the alarm messages in operation during power outages. The dry contact (normally closed) from the alarm relay will activate the external alarm signal (low voltage).

The rechargeable battery is positioned upside down in the base. It is necessary to reposition it as shown in the diagram below during the first on-site installation.

1. Switch off the module power supply.
2. Unscrew the screws holding the keyboard.
3. Lift the keyboard to access the back of the module.
4. Install the battery.



2.8 Three-Way Switch for Lighting

This option allows controlling lighting through two different doors in automatic mode. You must refer to the IM4 wiring diagrams for the proper electrical connection.

3 Options



3.1 Fan Failure Alarm


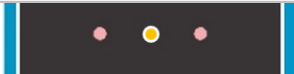




When a ventilation system circulates air in concealed spaces around the exterior of walk-in cold rooms, optional sensors can be supplied to monitor the presence of air flow on each blower. With this option, if airflow stops, the system triggers an audible alarm from the keyboard, the dry contact (normally closed) from the alarm relay will activate the external alarm signal (low voltage) and the display will show the message EXT ALARM alternating with the actual temperature.

3.2 Dry contact


The dry contact links the IM4 module to an external alarm system through a wire. A signal is sent to the external alarm when an alarm from the IM4 module is activated.

4 Alarm Message Descriptions

Use the  and  buttons to view the active alarms.

Scrolling Display	Lights	Description	Parameter	Value
MONITOR TEMP2 SENSOR		The temperature sensor is shorted.	AUX2 SWITCH STATE	OPEN
MONITOR TEMP2 HIGH ALARM		The temperature is above High temp set point for a period than the time set point.	MON Tmp2 HI ALRM	Cooler: 43°F / 6°C Freezer: 10°F / -12°C
			MON TEMP2 AL DLY	45 minutes
MONITOR TEMP2 LOW ALARM		The temperature is lower Low temp set point for a period than the time set point.	MON Tmp2 LO ALRM	Cooler: 32°F / 0°C Freezer: -13°F / -25°C
			MON TEMP2 AL DLY	45 minutes
DOOR OPEN ALARM		The door was left open longer than the delay.	DOOR ALARM DELAY	15 minutes
T3 EXTERNAL ALARM		Alarm for fan Failure Novaflow.	AUX3 FUNCTION	Closed, when the fan is running.
HELP		The panic button is activated.		The push button must be pressed and held for 3 seconds to deactivate the alarm.

4.1 Silencing Buzzer

Once the alarm signal is detected, the buzzer can be muted by pressing the mute button . The alarm message and the dry contact (normally closed) from the alarm relay will activate the external alarm signal (low voltage) will be displayed until the alarm condition is reset.

5 Display Variables

If there is no alarm active, only the variables will be displayed. Use the and buttons to view them.



Variables	Description
TEMP 2	The range is -87.7°F to 183.0°F/ -66.1 à 83.8 °C. If there is a sensor failure, value will read 888.8.
DOOR STATE	“DOOR CLOSED” if reads that door is closed. “DOOR OPEN” if reads that door is open.
T3 NO EXTERNAL ALARM	The Novaflow fan works normally.

6 Parameters Setting

- Enter the Programming Mode by pressing the & and holding for 3 seconds.
The display will show AUX 1 FUNCTION and the green and yellow LED lights will start blinking.
- Use or to scroll through the different configuration parameters.
Press to display the current value of the parameter.
- Press and hold for 3 seconds to change the value.
The yellow and red LEDs will start blinking and the parameter can be adjusted.
Use or to scroll through the options.
When the value is a number, a digit starts blinking. Use or to change the value of the digit, use or to move to the next digit.
- Press and hold for 3 seconds to save the change.
- Press to return to the Programming Mode.
Repeat steps 2 to 5 to change additional parameter.
Press 3 times to return to the default display.

7 Parameters Description

Message	MIN VALUE	MAX VALUE	NORBEC DEFAULT VALUE	DESCRIPTION
AUX 1 FUNCTION*	DISABLED	EXTERNAL ALARM	DISABLED	DISABLE / DOOR TEMP / DOOR SWITCH / EXTERNAL ALARM
AUX1 SWITCH STATE*	OPEN	CLOSED	OPEN	State of input for door to be open or external alarm to be active
DOOR TEMP*	-10.0°F	100.0°F	35.0°F	Temperature where heaters are turned on
DOOR TEMP DIFF*	0.1°F	10.0°F	3.0°F	Temperature offset above 'DOOR TEMP' to turn door heater off
HI DOOR ALR OFST*	0.1°F	100.0°F	100.0°F	Temperature offset above 'DOOR TEMP' for high door temperature alarm
LO DOOR ALR OFST*	0.1°F	20.0°F	5.0°F	Temperature offset above 'DOOR TEMP' for low door temperature alarm
DOOR TEMP ALR DLY*	1 minute	1440 minutes	15 minutes	Delay time when door temperature is out of range before setting alarm
DOOR SWITCH STATE	DISABLED	CLOSED	OPEN	State of input for door to be open or disable function (disable, open or closed)
DOOR ALARM DELAY	0 minute	1440 minutes	15 minutes	Time for door to be open before setting door open alarm
LIGHTS OFF DELAY	0 minute	60 minutes	5 minutes	Time after door closes that lights relay is de-energized
Message	MIN VALUE	MAX VALUE	NORBEC DEFAULT VALUE	DESCRIPTION
AUX 2 FUNCTION	DISABLED	EXTERNAL ALARM	MONITOR	DISABLE / ROOM TEMP / DOOR SWITCH / EXTERNAL ALARM/ MONITOR
AUX2 SWITCH STATE	OPEN	CLOSED	OPEN	State of input for door to be open or external alarm to be active
AUX3 FUNCTION (Fan Failure Alarm)	DISABLED	EXTERNAL ALARM	EXTERNAL ALARM	DISABLE / DOOR TEMP / DOOR SWITCH / EXTERNAL ALARM
AUX3 SWITCH STATE	OPEN		CLOSED	State of input for Aux3: Open / Close
MON TMP2 HI ALRM	-60.0°F	90.0°F	Cooler: 43°F / 6°C Freezer: 10°F / -12°C	If monitor temp2 is above this set point for some time, set high temp2 alarm
MON TMP2 LO ALRM	-60.0°F	90.0°F	Cooler: 32°F / 0°C Freezer: -13°F / -25°C	If monitor temp2 is above this set point for some time, set low temp2 alarm

MON TEMP2 AL DLY	1 minute	1440 minutes	45 minutes	Delay time when temp2 is out of range before setting alarm
MON TMP3 HI ALRM*	-60.0°F	90.0°F	35.0°F	If monitor temp3 is above this set point for some time, set high temp2 alarm
MON TMP3 LO ALRM*	-60.0°F	90.0°F	-10.0°F	If monitor temp3 is above this set point for some time, set low temp2 alarm
MON TEMP3 AL DLY*	1 minute	1440 minutes	15 minutes	Delay time when temp3 is out of range before setting alarm
BUZZER MODE	DISABLED	DOOR ALARM ONLY	ENABLED	Function for buzzer DISABLED, ENABLED, DOOR ALARM ONLY
DISP BRIGHTNESS	1	50	18	Dim or brighten display
ADDRESS*	1	5	5	Modbus Adresse
DISP CLEAR ALARM	—	—	—	Press and hold  for 3 seconds, until display changes, to clear alarm set in combo display
DISP FACTORY RST*	—	—	—	Press and hold  for 3 seconds, until display changes, to change set points to factory defaults
TEMPERATURE UNITS	CELSIUS FAHRENHEIT	—	CELSIUS	Temperature units : Fahrenheit, Celsius

*Disregard for IM4

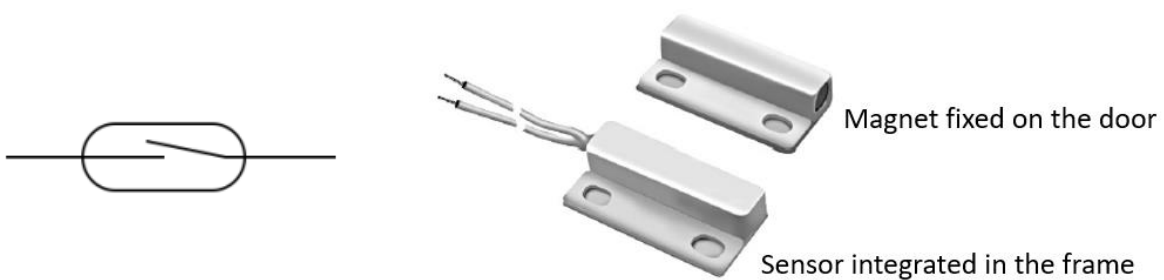
APPENDIX 1. Always active open door alarm solution

The following section is useful if the open-door alarm remains active when the door is closed.

Proximity Sensor Operation

NO Contact (Normally open)

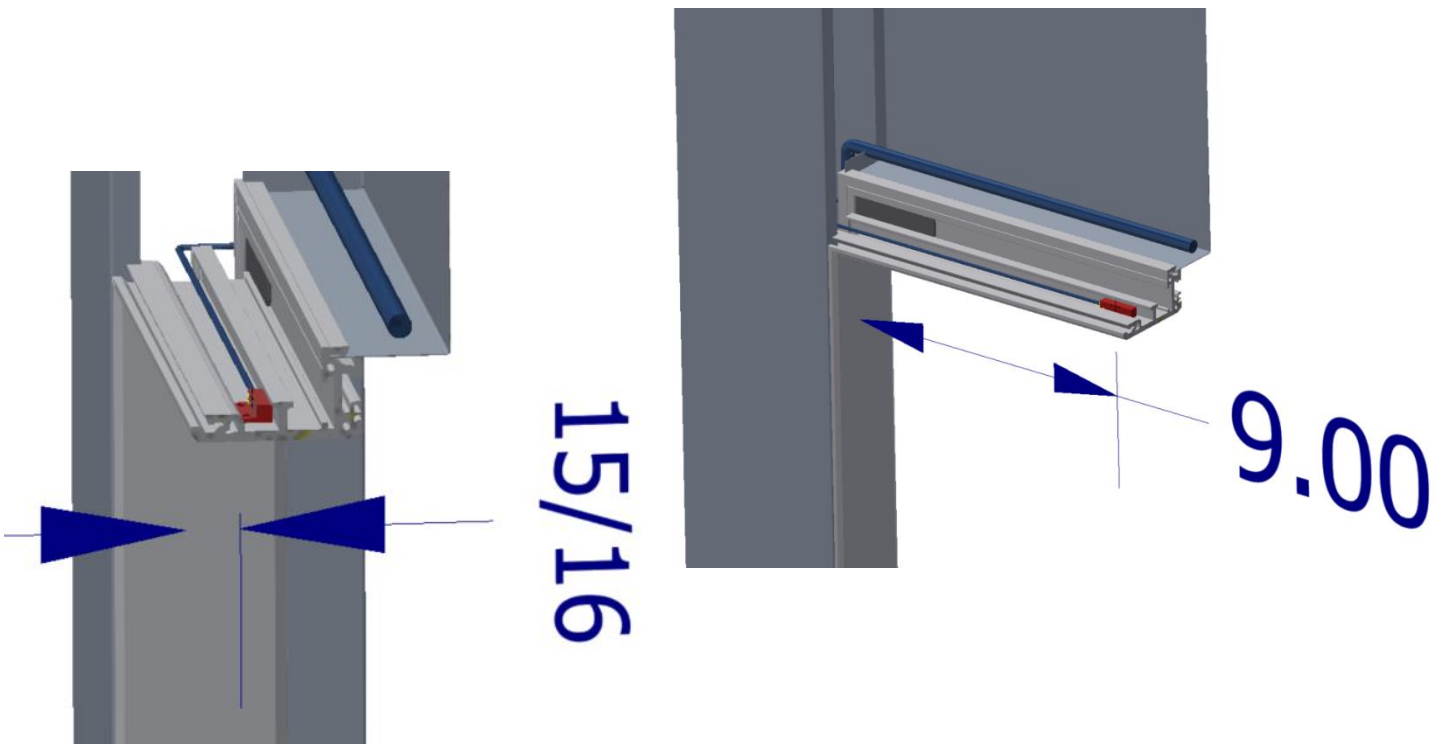
The contact is closed when the magnet is in the operating range. That is the door closed.



Door Frame With P340 Profile

Position of the proximity sensor in the frame head on the monitor side.

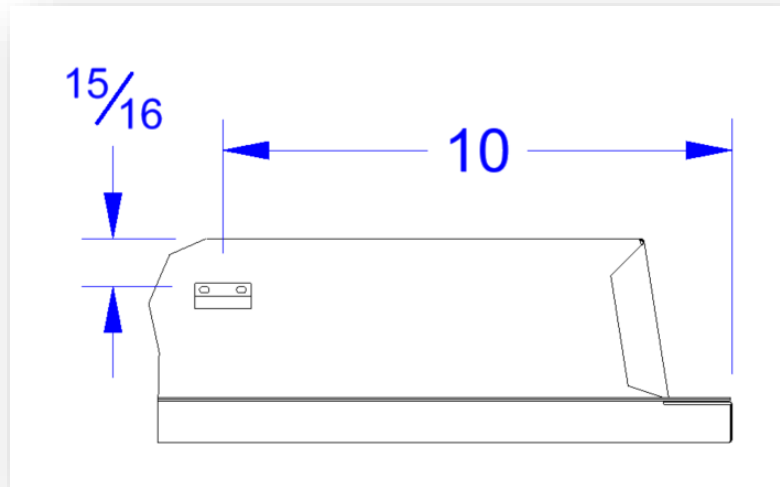
This part is not visible and cannot be moved. It is integrated in the frame



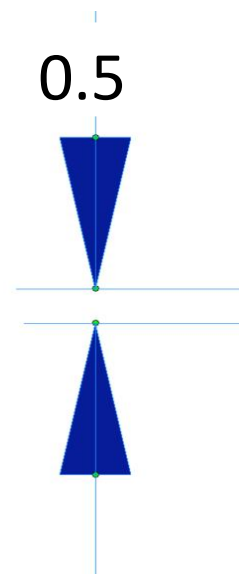
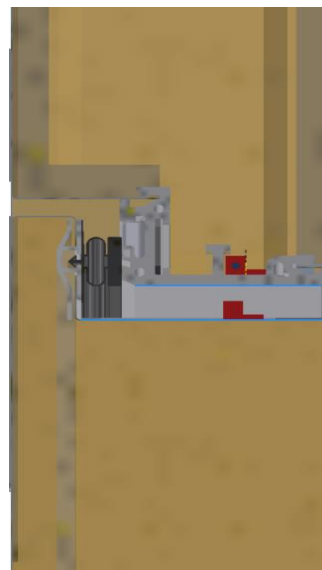
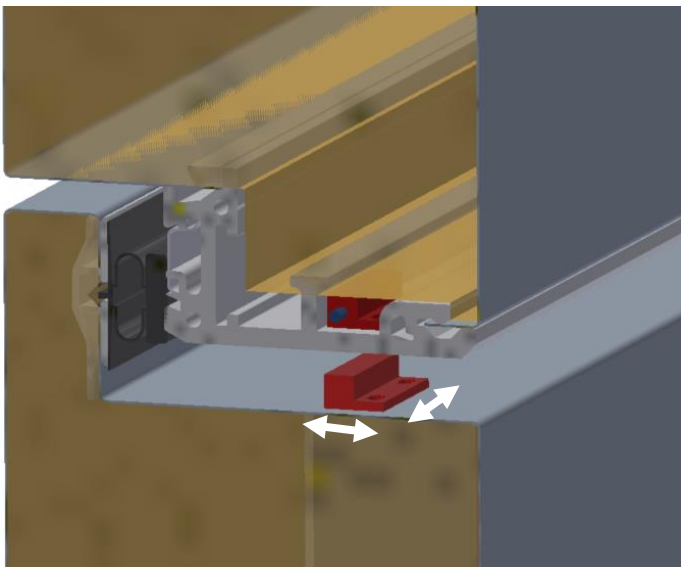
Door

Positioning of the magnet to activate the proximity sensor.

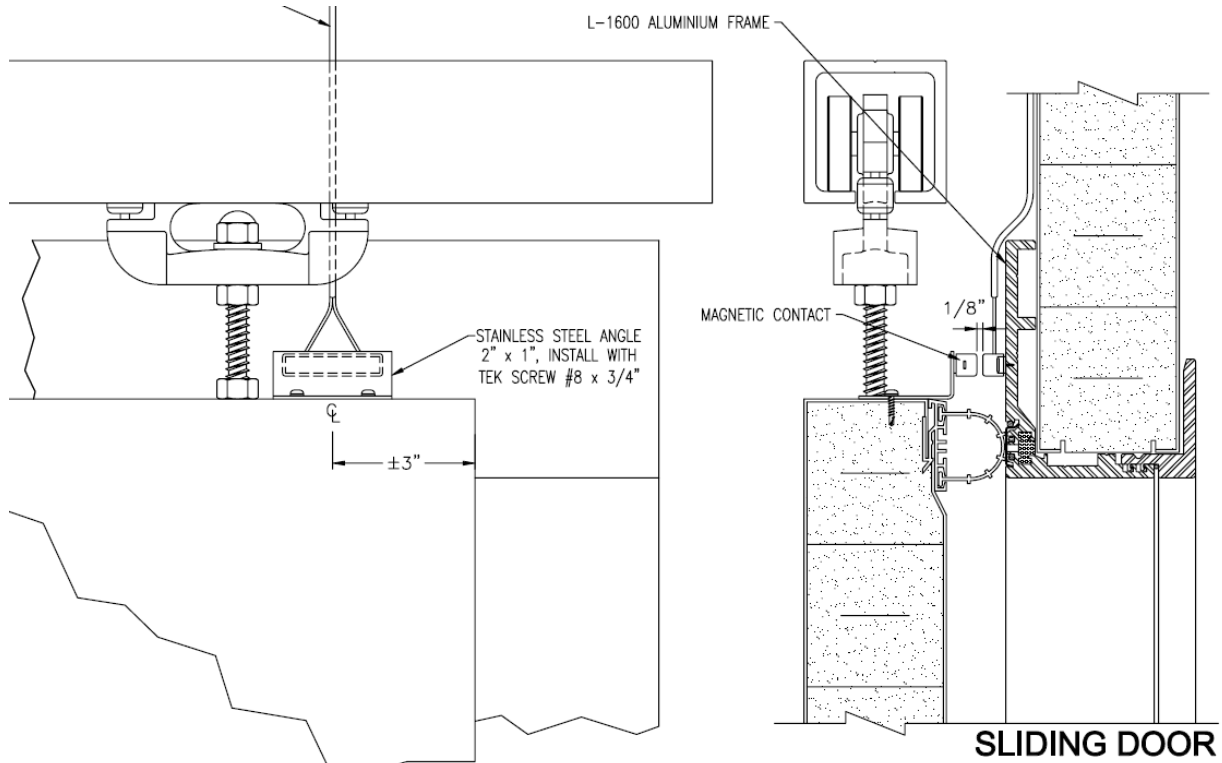
On top of the door, on the monitor side.



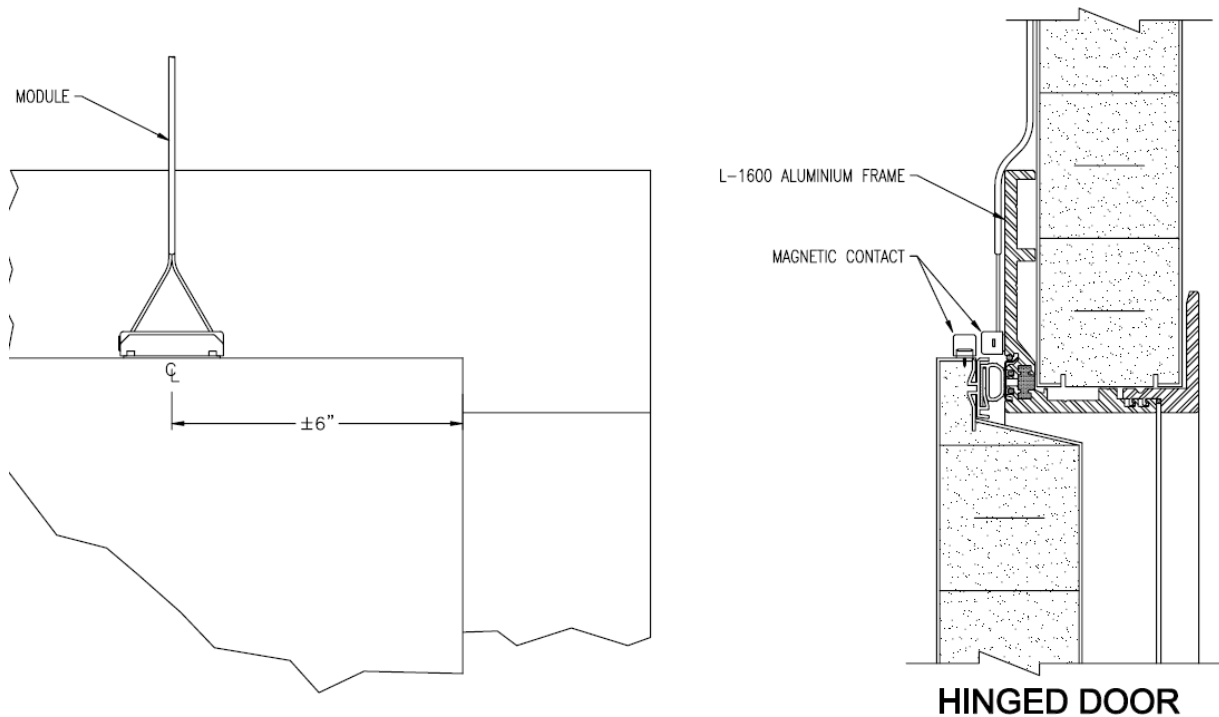
Possible to unscrew the screw to adjust the height and position of the magnet.

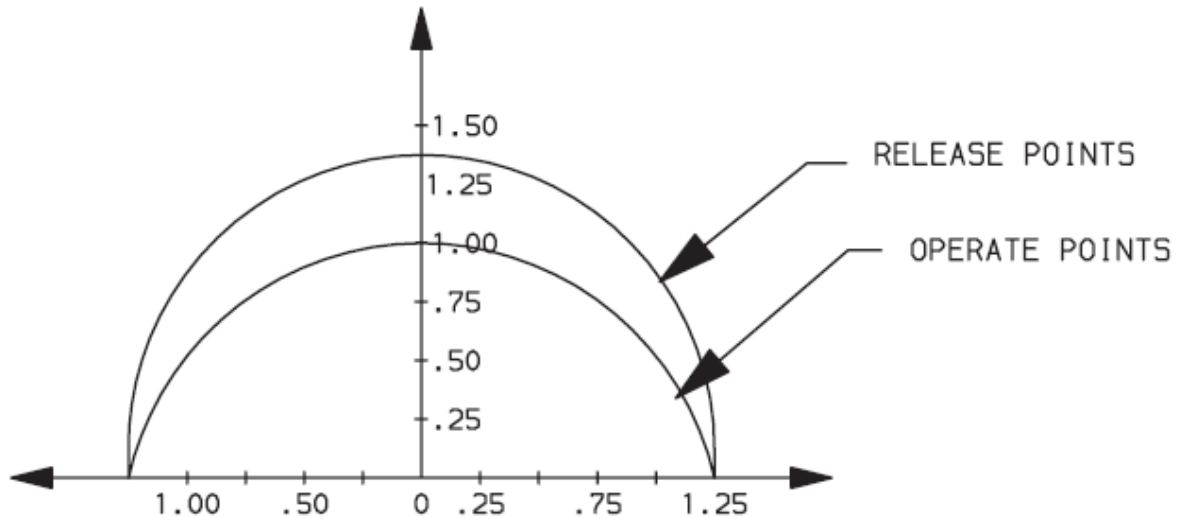


Installation diagram for a proximity sensor on a sliding door: CL-1750



Installation diagram for a proximity sensor on a hinged door: PL-1750





OFFSET OF CENTERLINES AND DISTANCE BETWEEN
FACES OF SWITCH AND MAGNET (INCHES).

ACTUATION CHART

APPENDIX 2. Installation step: IM4 keyboard

ATTENTION: PRIOR TO BEGINNING THE INSTALLATION MAKE SURE YOU HAVE TURNED OFF THE ELECTRICAL SUPPLY CIRCUIT.

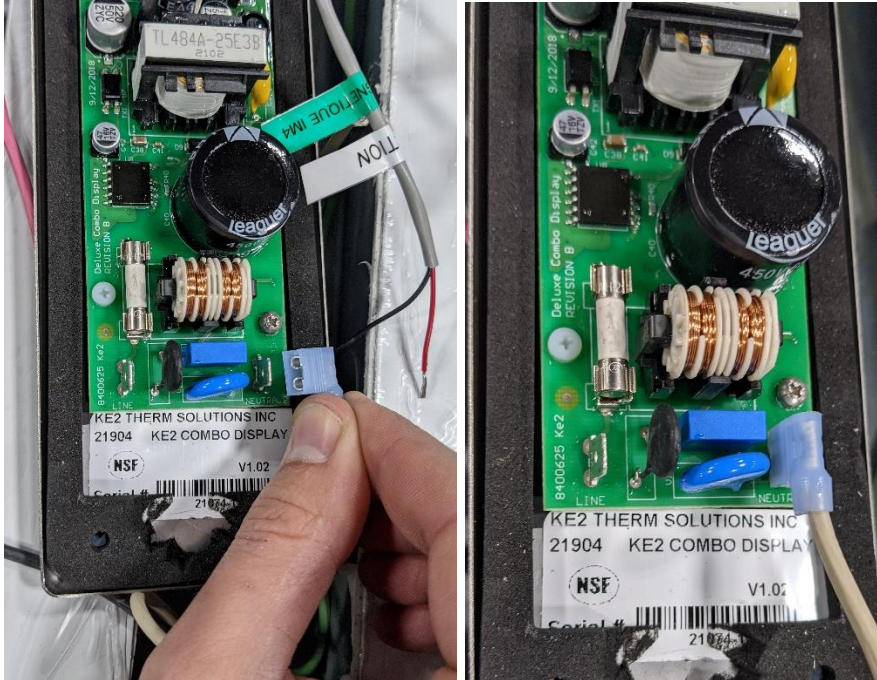


PLEASE REFER TO THE WIRING DIAGRAM FOR THE COMPLETE DIAGRAM.

PLEASE REFER TO THE INSTRUCTIONS MANUAL FOR OPERATING AND CONFIGURATION INSTRUCTIONS.

Keyboard power supply:

1. Connect the white cable connector to the receptacle: « NEUTRAL ».



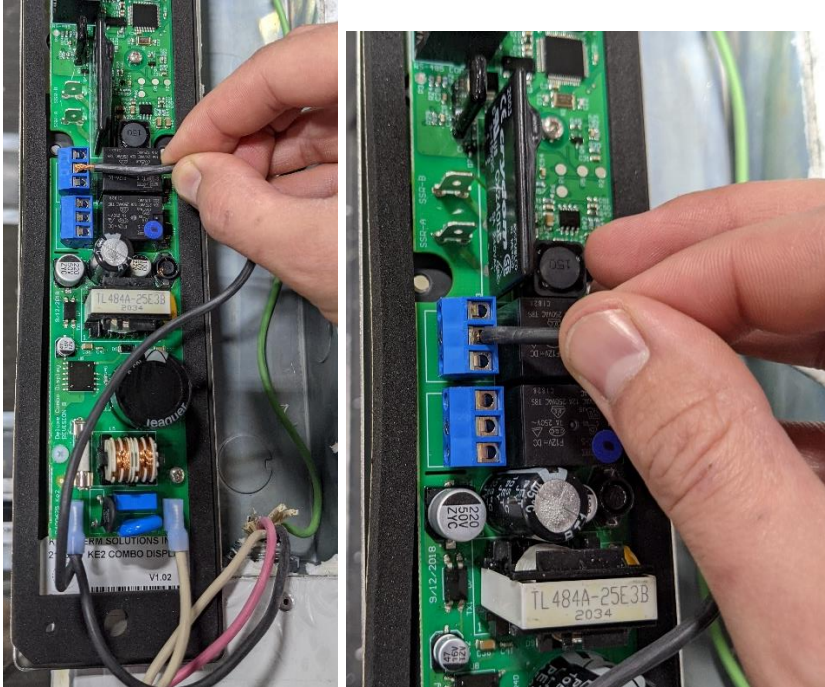
2. Connect the black cable connector to the receptacle: « LINE ».



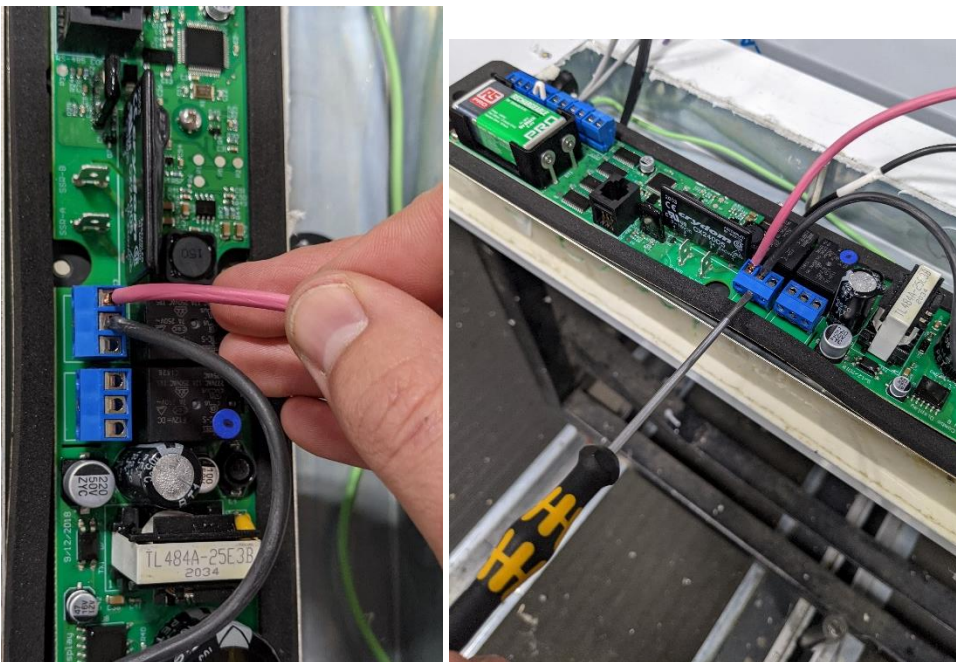
With a 3mm flat screwdriver

Light control:

3. Insert and screw the stripped end of the black cable into the blue terminal block, in the position: COM.

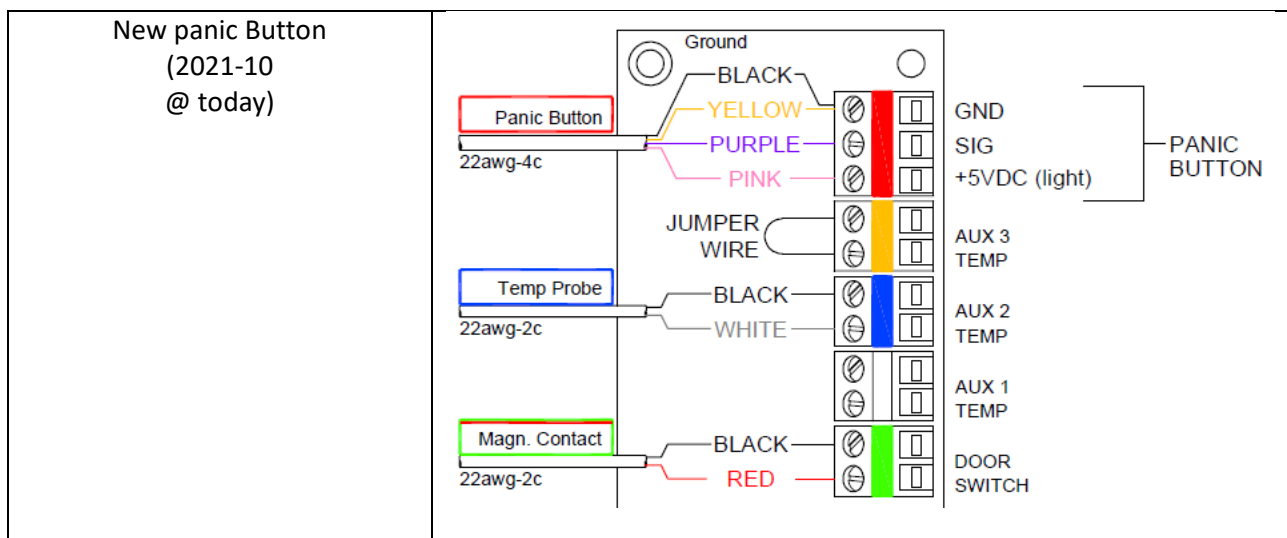
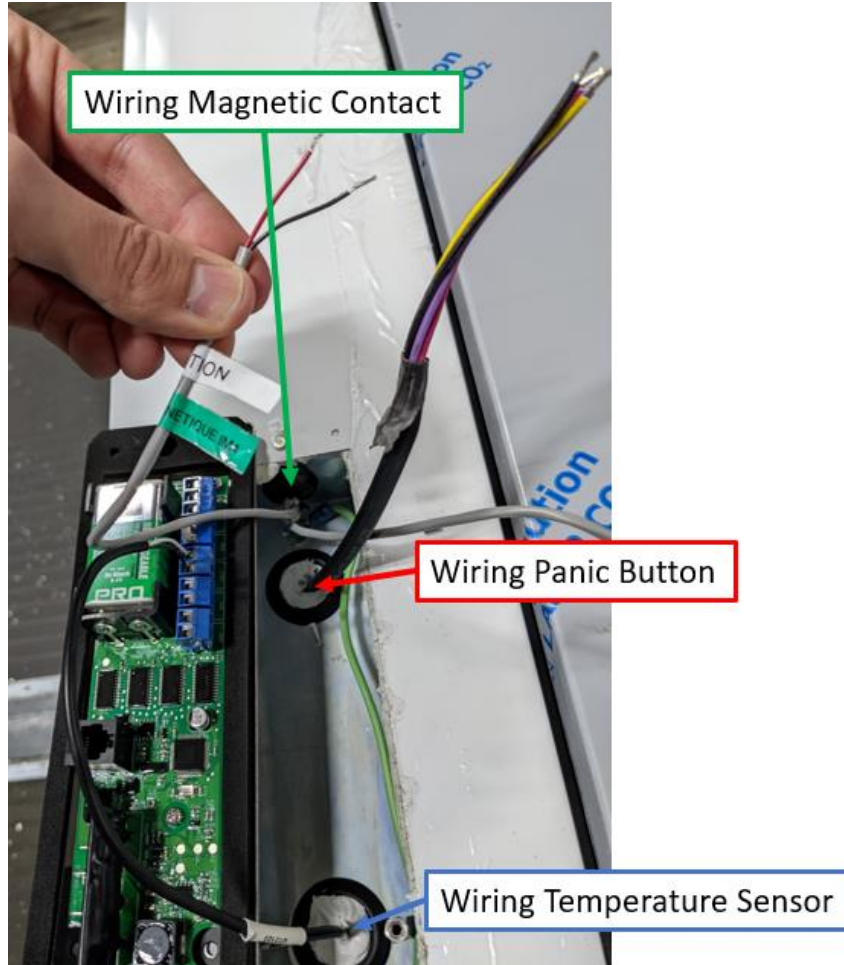


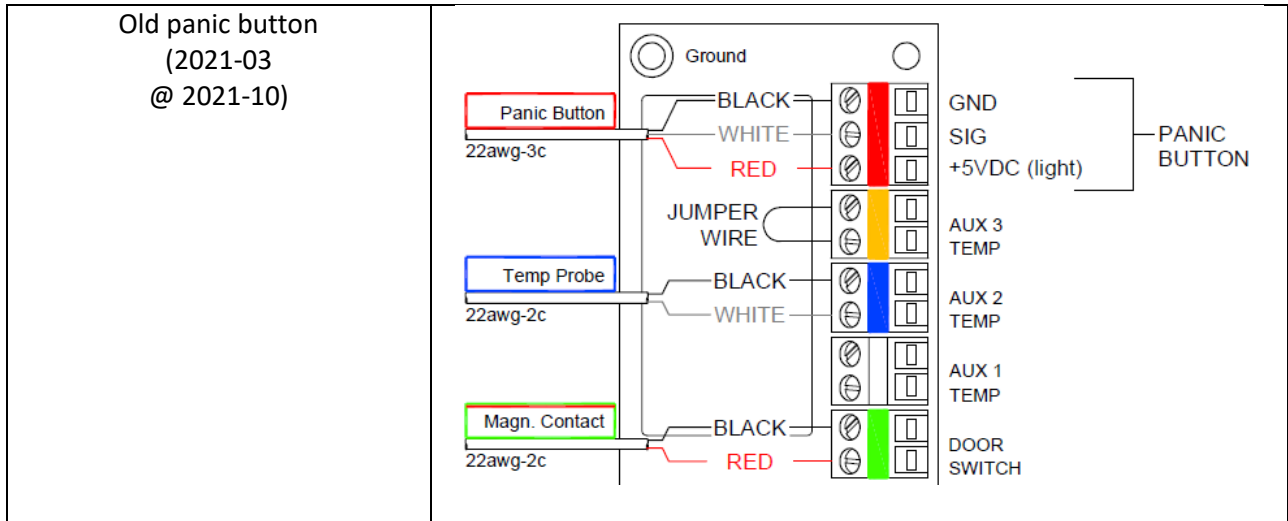
4. Insert and screw the stripped end of the red cable into the blue terminal block, in the position: NO



Panic button, temperature sensor and magnetic contact:

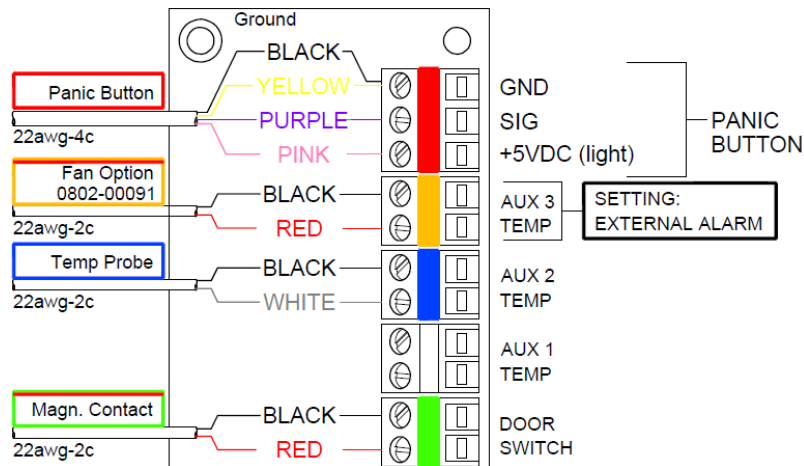
5. Insert and screw the stripped ends of the cables according to the following connection diagram:





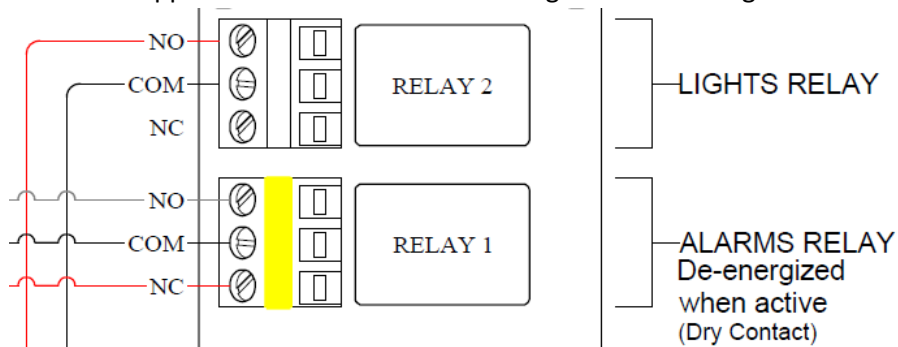
Fan option

- Insert and screw the stripped ends of the cables according to the following connection diagram:

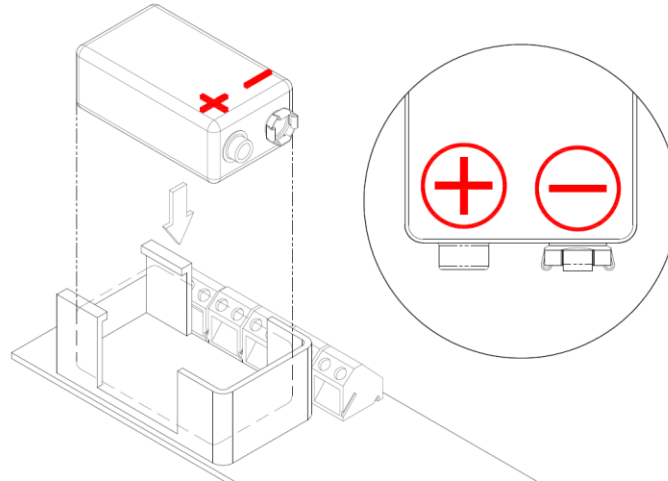


Dry contact option – Alarm relay

- Insert and screw the stripped ends of the cables according to the following connection diagram:



8. Replace the 9v battery :



9. Replace the keyboard, making sure that the cables are not to trap and making sure the gasket is in place.
10. Fix the keyboard with the 6 screws provides.

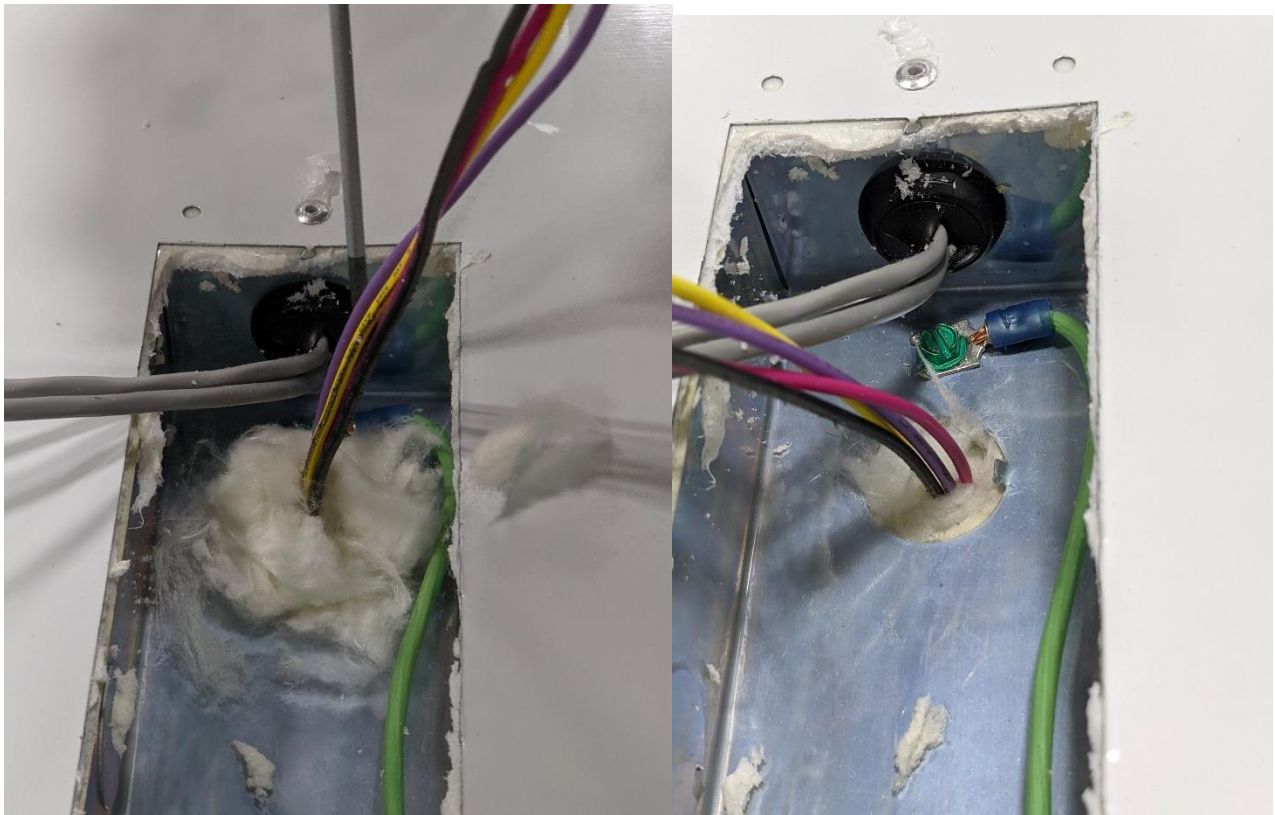
APPENDIX 3. Installation step: Panic Button and temperature sensor

On the inside of the room:

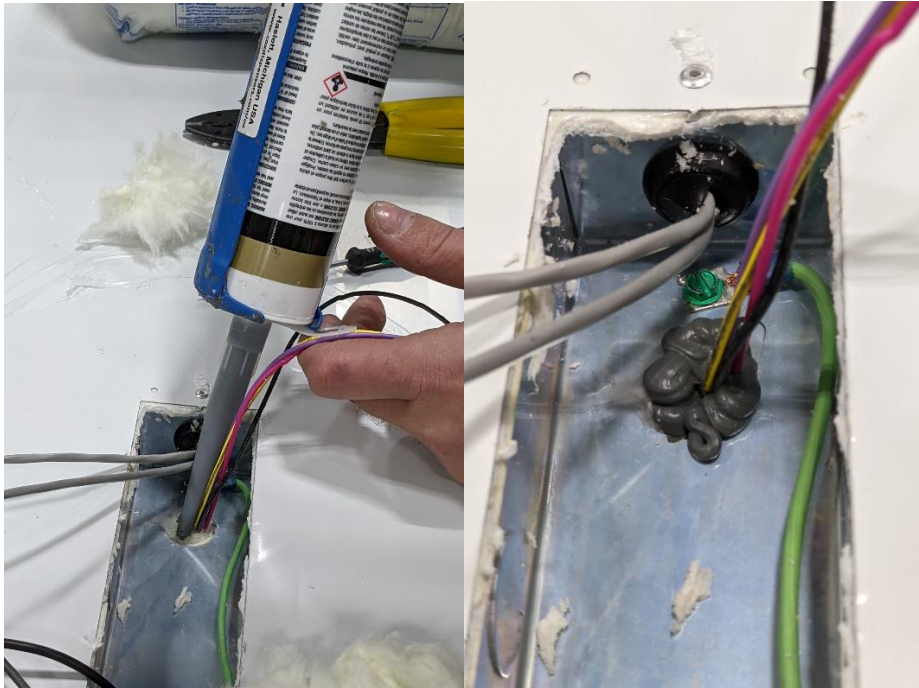
1. Route the panic button assembly wiring trough the top hole to the IM4 junction box.
2. Attache the plate to the inner sheet of the panel, making sure the gasket id in place correctly.

On the outside of the room:

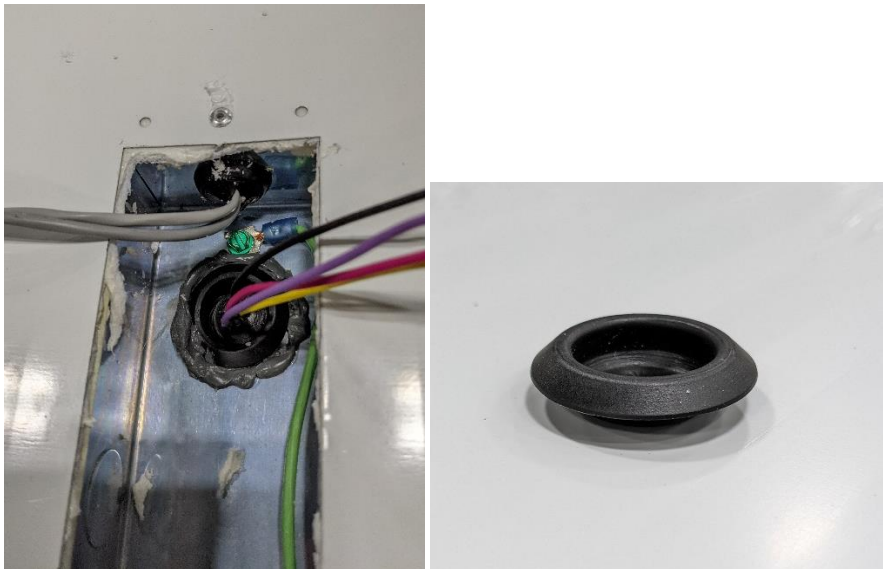
3. Fil the space around the panic button with mineral wool.



4. Seal the hole with silicone.

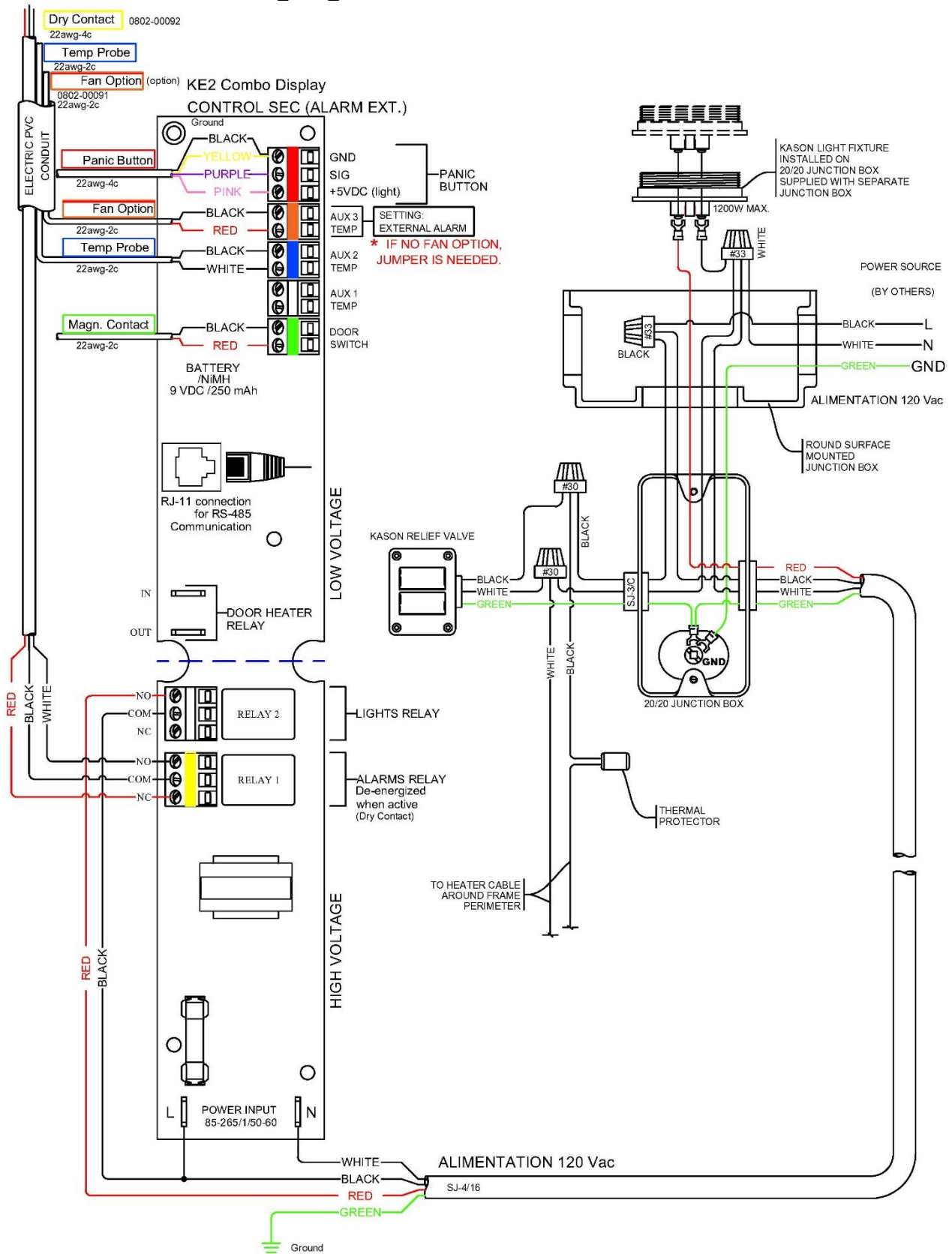


5. Close the hole with the grommet plug to contain the excess silicone.

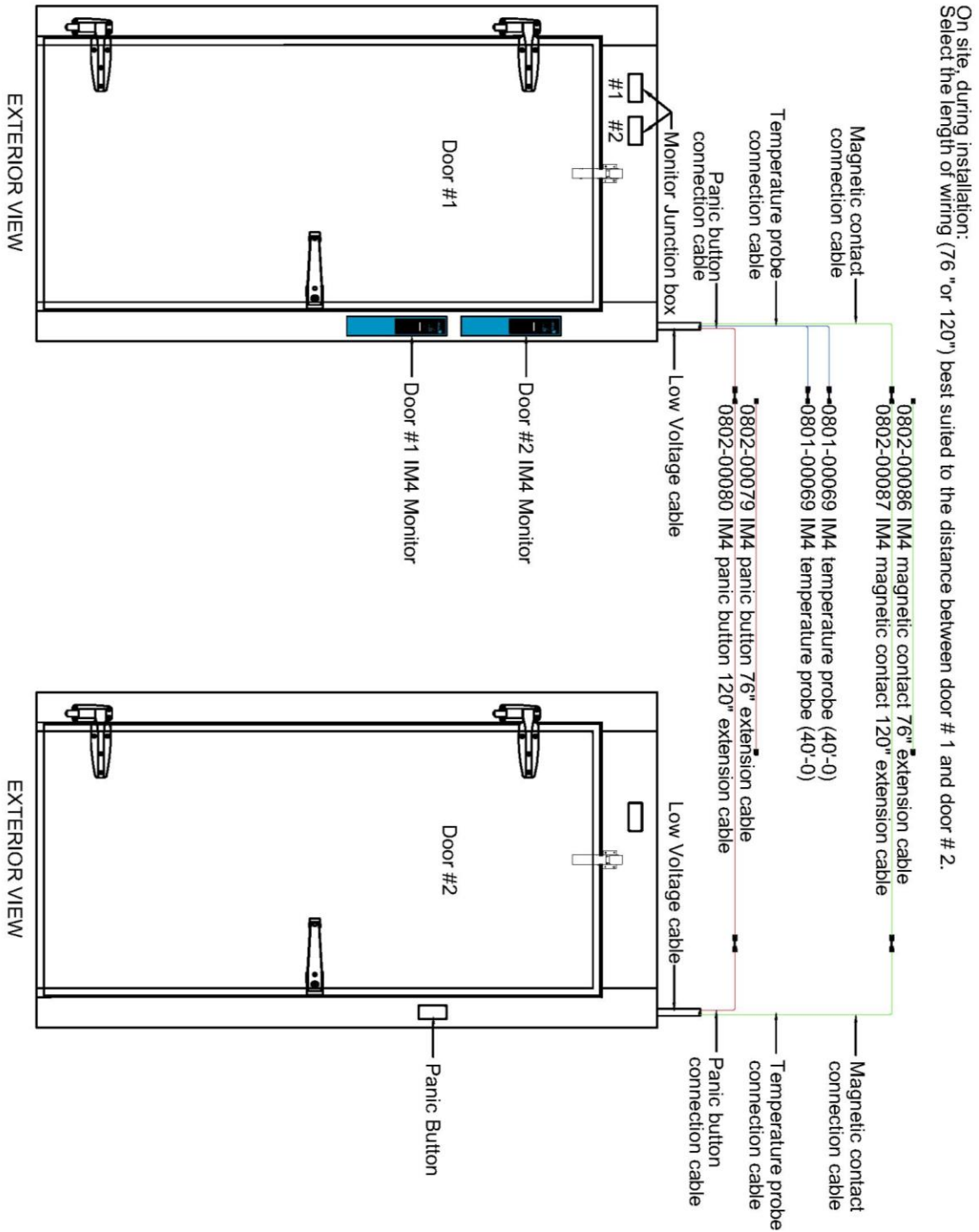


6. Connect the panic button wiring to the IM4 monitor terminal block.
7. Repeat steps 3 to 5 for the temperature sensor.
8. Attach the monitor plate to the outer sheet of the panel, making sure the gasket is in place correctly.

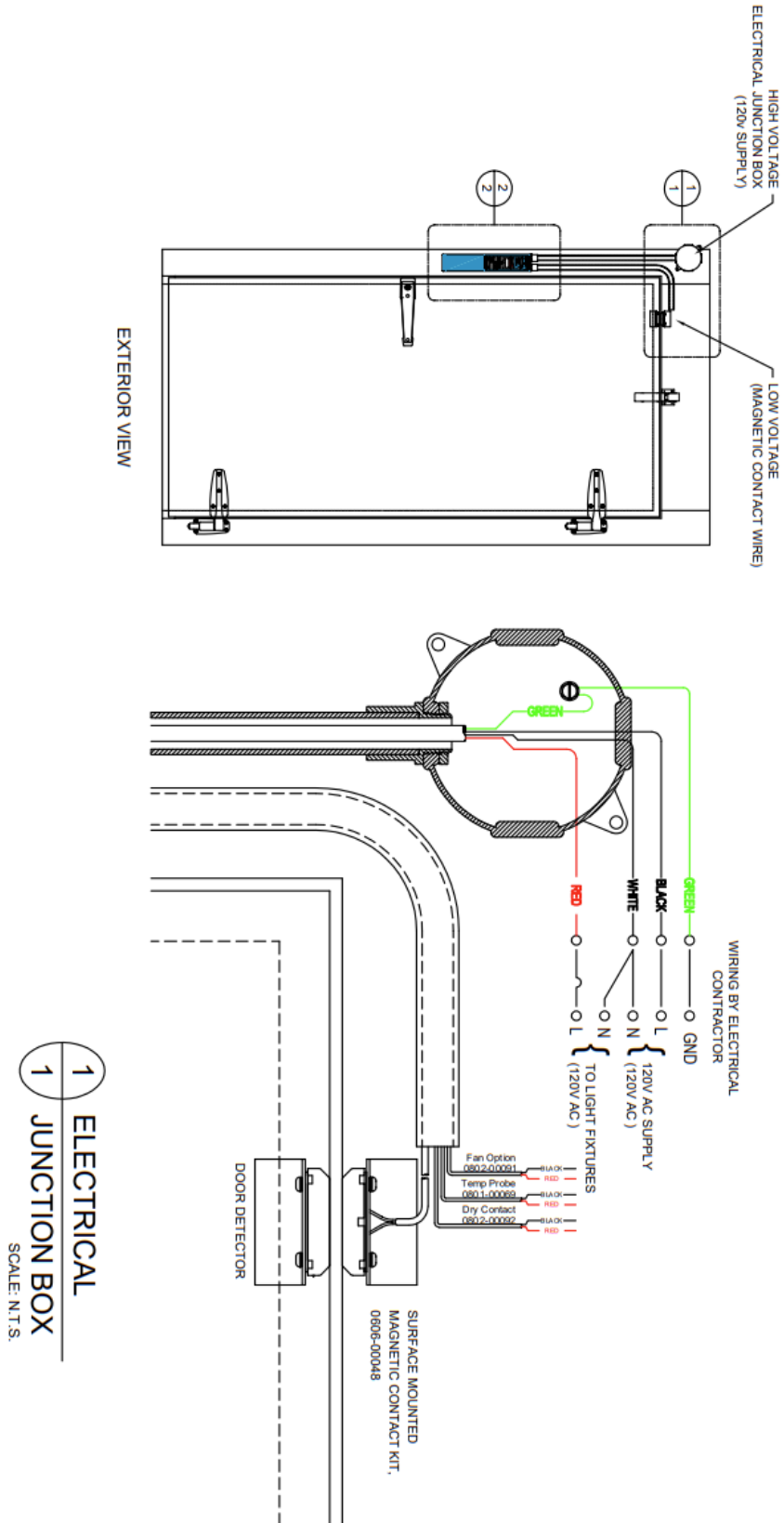
APPENDIX 4. Wiring diagram Module IM4



APPENDIX 5. Wiring diagram Module IM4 – Remote mounted



APPENDIX 6. Wiring Diagram Module IM4 – Surface mounted



APPENDIX 7. IM4 probe installation guide

List of parts included in the kit



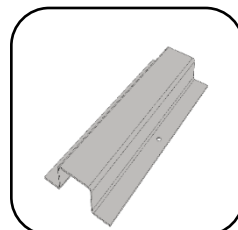
1) 40' long temperature probe



2) Polyethylene foam sheet



3) Nylon probe holder

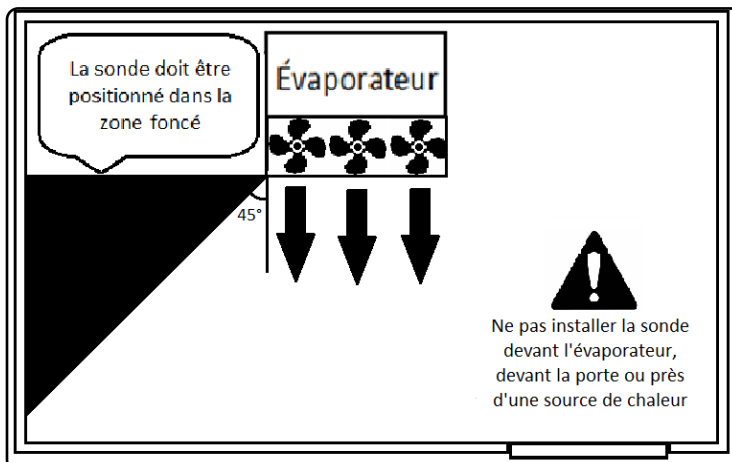


4) Cache sonde

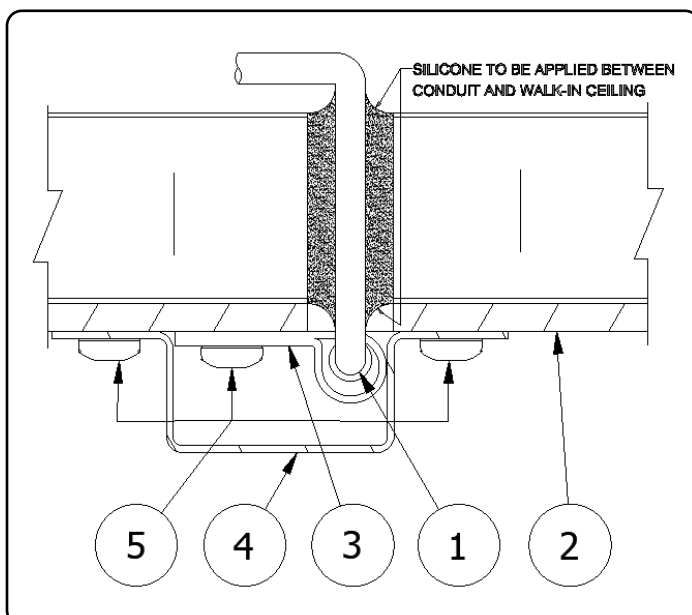


5) Selftap metal screw #6 1/2" square-drive 3X

Installation steps



1) Drill a hole with a diameter between 3/8" and 1/2"



2) Once the probe went through the hole, fill the hole with silicon and install the remaining parts included in the kit

