

DENLAR

FIRE PROTECTION

PRE-ENGINEERED RANGE HOODS



ClockBox Pro

Installation and Operation Manual

Version 1



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READ AND SAVE THESE INSTRUCTIONS

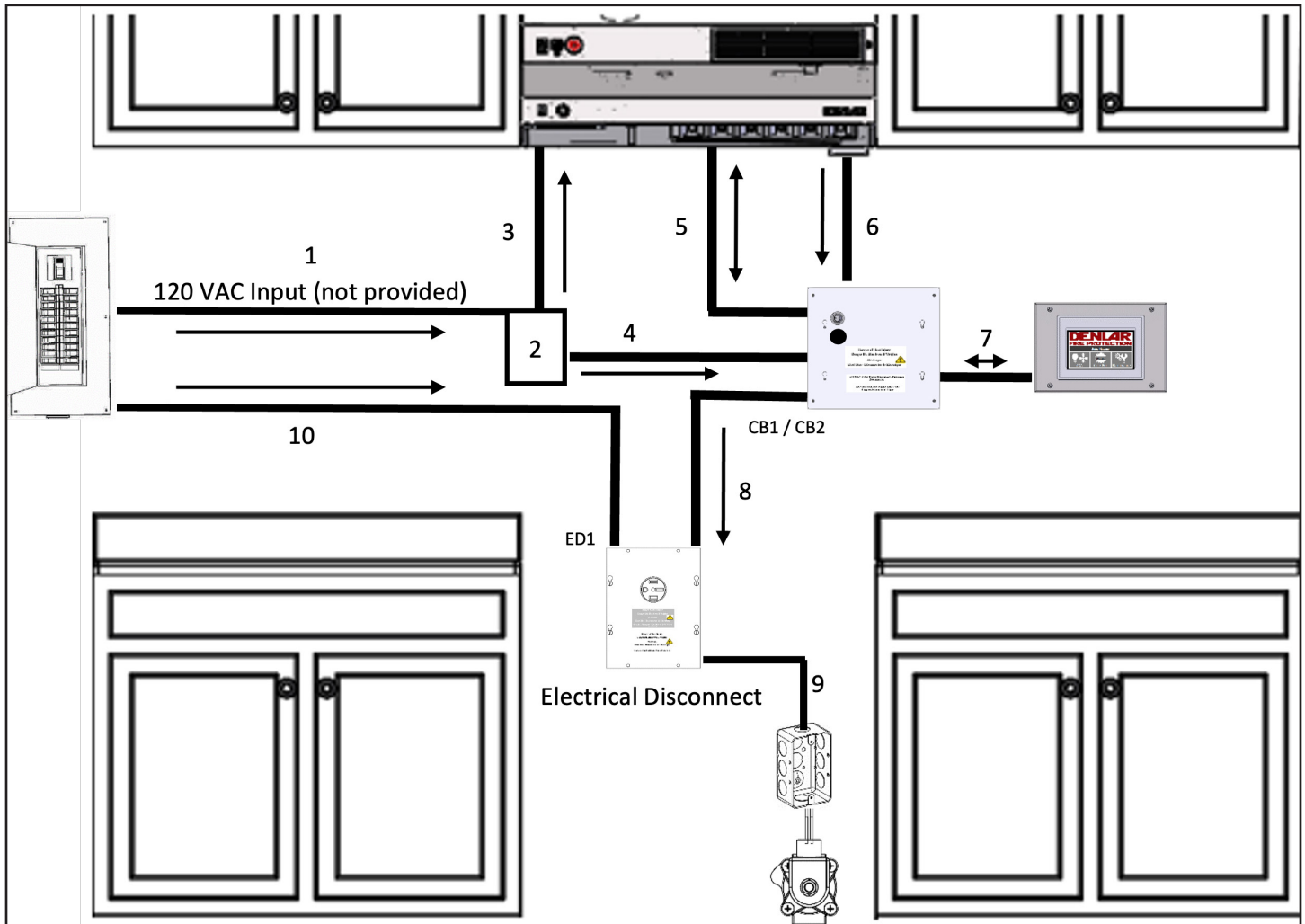
WARNING

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSON, OBSERVE THE FOLLOWING:

1. Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer at the address or telephone number listed on the front cover of this manual.
2. Before servicing or cleaning unit, switch power OFF at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a lockout / tag out device based on local codes.
3. Installation work and electrical wiring must be done by a qualified person in accordance with all applicable codes and standards, including fire-rated construction codes and standards.
4. When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
5. To reduce the risk of fire or electric shock, do not use this device other than specified by the manufacturer.
6. Utilize approved wiring only.
7. This unit must be grounded.

DISCLAIMER: Denlar Fire Protection shall not be liable for errors contained in this manual or for incidental, consequential damages in connection with the furnishing, performance or use of this information. DENLAR Fire Protection makes no warranty of any kind with regards to this information, including, but not limited to the implied warranties of merchantability and fitness for a particular purpose.

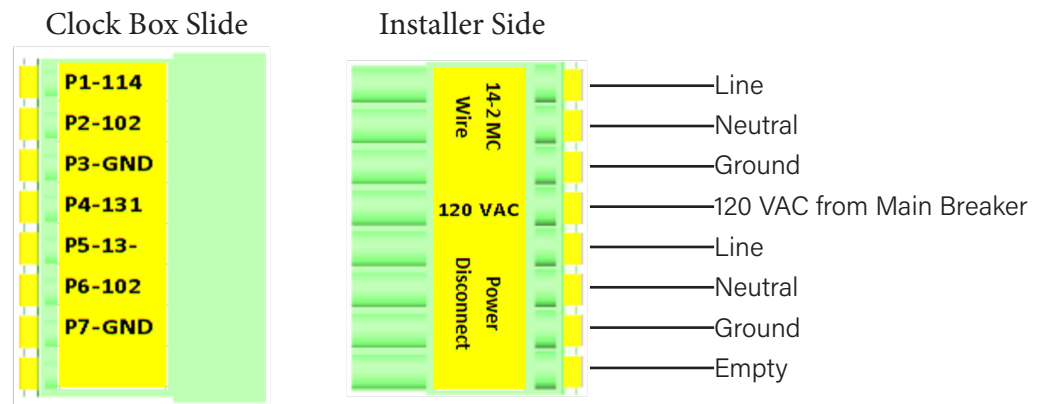
CLOCK BOX PRO AND HOOD INTERFACE DIAGRAM NON-PLUG 'N' PLAY



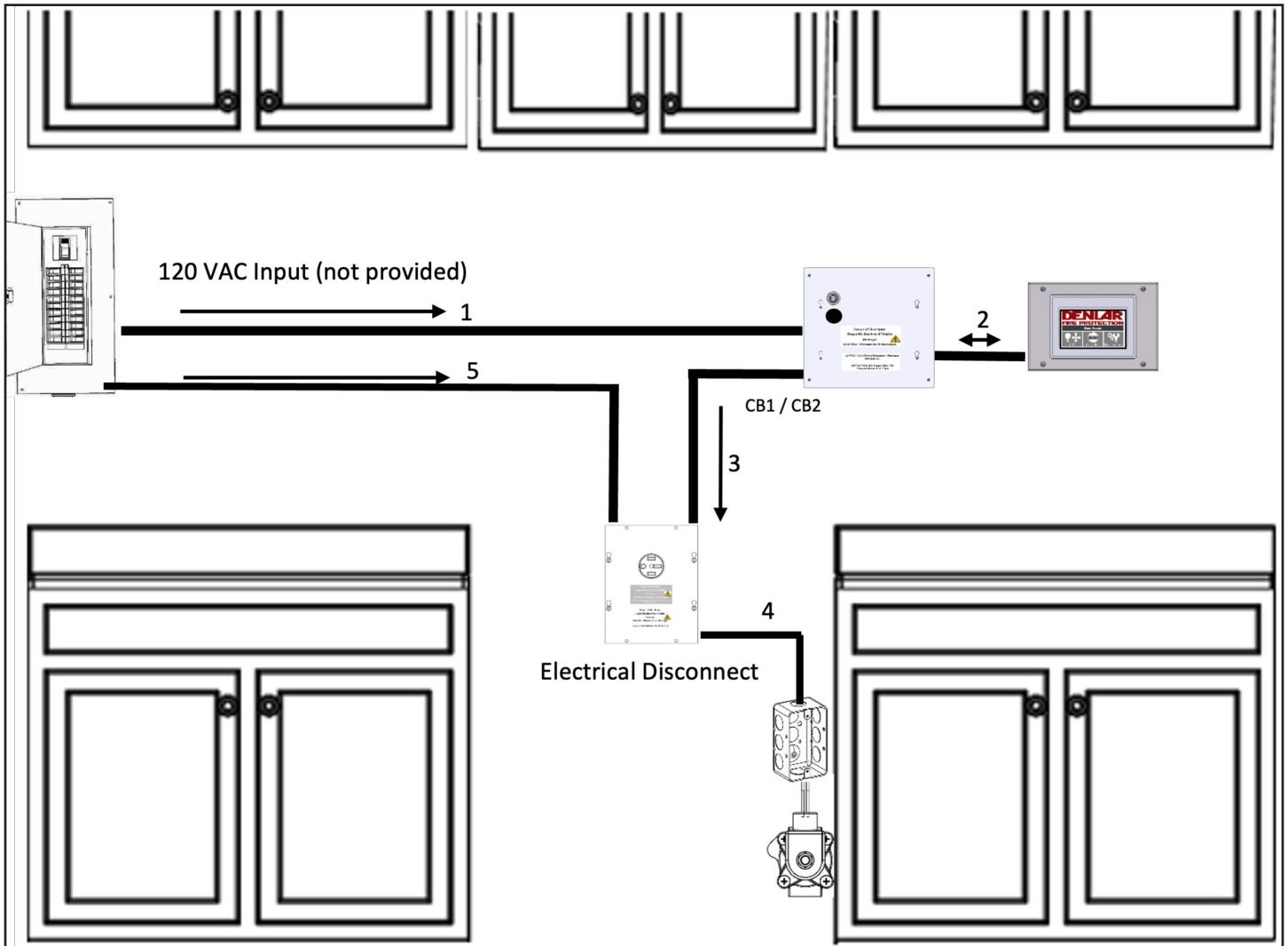
1. 120 VAC Input (not provided)
 - a. 120 VAC / 15 Amp circuit (provided by installer)
2. Junction Box (not provided)
 - a. Run the 120 VAC Input to the Junction Box
 - b. Run the 12-2 MC (3) wire, with the red tape, from the Hood to the Junction Box
 - c. Run a new cable (4) (not provided) from the Junction Box to the ClockBox PRO Control Box
 - d. Wire nut the Hot leads from the three wires (1, 3, 4) together
 - e. Wire nut the Neutral leads from the three wires (1, 3, 4) together
 - f. Connect the grounds accordingly (1, 3, 4)
3. Metal Clad 12-2 MC wire with red tape from the Hood (provided)
4. Cable to provide 120 VAC from the Main Breaker Panel to the ClockBox PRO (not provided)
 - a. Connect the Line side to position four of the eight (8) position Power Plug in the Clock Box PRO Control Box
 - b. The Neutral wire connects to the neutral of the 14/2 MC wire (5). A jumper is also connected to the two Neutrals and inserted into position two of the eight (8) position Power Plug in the Clock Box PRO Control Box.
 - c. Connect the Ground to the ground bar

CLOCK BOX PRO AND HOOD INTERFACE DIAGRAM NON-PLUG 'N' PLAY

5. Metal Clad 14-2 MC wire with black tape from the Hood (provided)
 - a. Connect the 14-2 MC wire with black tape to the eight (8) position Power Plug in the ClockBox PRO Control Box
 - i. The Line side connects to position one of the eight (8) position Power Plug in the ClockBox PRO Control Box
 - ii. Connect the Neutral according to 4-b listed above
 - iii. The Ground connects to position three of the eight (8) position Power Plug in the ClockBox PRO Control Box
6. 24 VDC and 120VAC Hood interface cable (provided)
7. 24 VDC Input / Output Communication cable encased in 16 mm ENT Flexible Conduit (provided)
 - a. 25 Ft in length
 - b. One communication (Ethernet) cable and one plenum cable
 - c. Connects between the Clock Box PLC and HMI / Touch Screen
8. Output Power Disconnect Cable (provided)
 - a. Connect the other end to the coil of the Power Source Disconnect (D1000-E, D1000-G, or D1000-DED)
9. Jumper cable for the D1000-DED if applicable (not provided)
10. Supply Line 120-220 VAC from the Main Breaker Panel to the D1000-E (not provided)



CLOCK BOX PRO STAND-ALONE INTERFACE DIAGRAM NON-PLUG 'N' PLAY

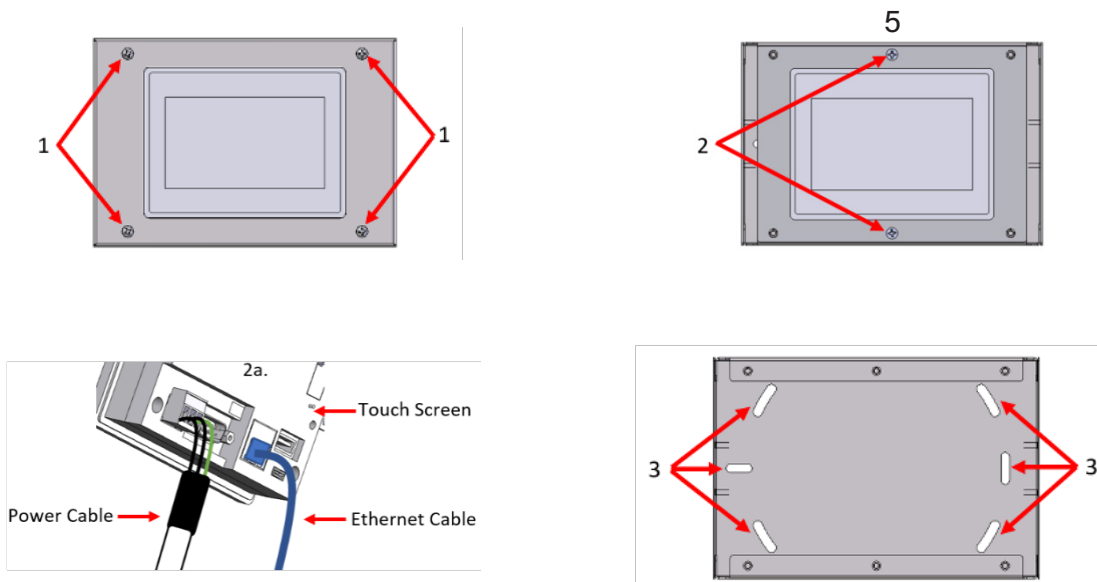


1. Cable providing 120 VAC from Main Breaker Panel to the ClockBox PRO (not provided)
 - a. Connect the Line side to position four of the eight (8) position connector in the ClockBox PRO Control Box Power Plug
 - b. Connect the Neutral side to position two of the eight (8) position connector in the ClockBox PRO Control Box Power Plug
 - c. Connect the Ground side to position three of the eight (8) position connector in the ClockBox PRO Control Box Power Plug
2. 24 VDC Input / Output Communication cable encased in 16 mm ENT Flexible Conduit (provided)
 - a. 25 Ft in length
 - b. One communication (Ethernet) cable and one plenum cable
 - c. Connects to the Clock Box PLC and HMI / Touch Screen
3. 120 VAC Output from the Clock Box PRO encased in 16 mm ENT Flexible Conduit (provided)
 - a. Output Power Disconnect Cable (provided) 10 Ft in length
 - b. One plenum cable
 - c. Runs from the Clock Box PRO to the Power Source Disconnect

TOUCH SCREEN MOUNTING

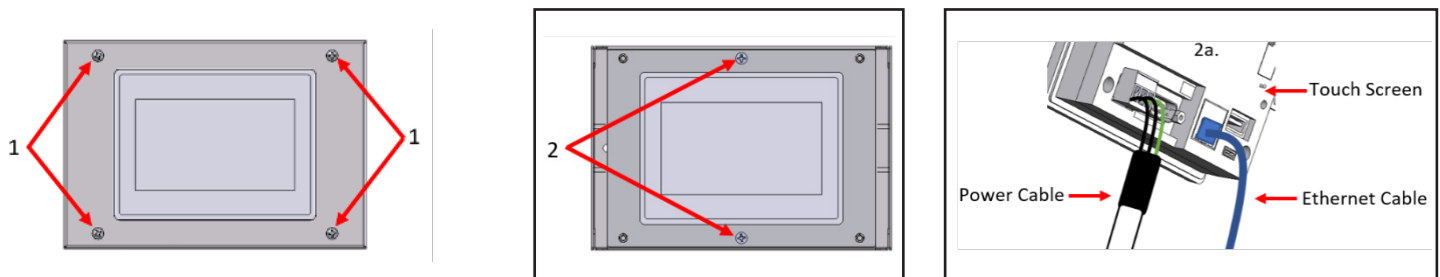
Surface Mounting

1. Using a 5/64" Allen wrench (provided in bag inside ClockBox Control Box), remove the four (4x) allen screws on the front cover of the touch screen.
2. Underneath the front cover, there is a plate holding the touch screen. The plate is secured to the touch screen enclosure with two (2x) Phillips screws. Remove both screws.
 - a. Unplug the power cable and ethernet cable from the touch screen.
3. There are six (6x) slots that a screw can go through to mount the touch screen enclosure to the wall, secure the touch screen enclosure
(Note: secure to studs or use an anchor).
4. Attach the ethernet cable and power cable to the touch screen. Secure the touch screen plate to the touch screen enclosure.
5. Attach the cover to the touch screen enclosure.

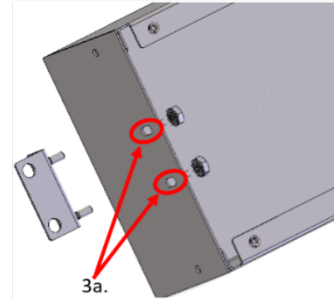
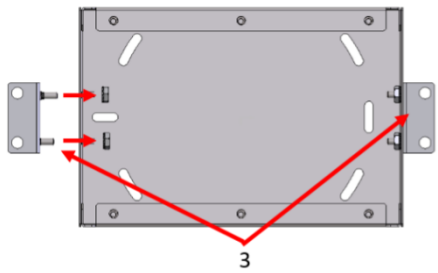


Flush Mounting

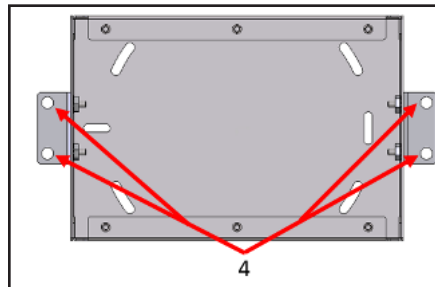
1. Using a 5/64" allen wrench (provided in bag inside ClockBox Control Box), remove the four (4x) allen screws on the front cover of the touch screen.
2. Underneath the front cover there is a plate holding the touch screen. The plate is secured to the touch screen enclosure with two (2x) Phillips screws; remove both screws.
 - a. Unplug the power cable and ethernet cable from the touch screen.



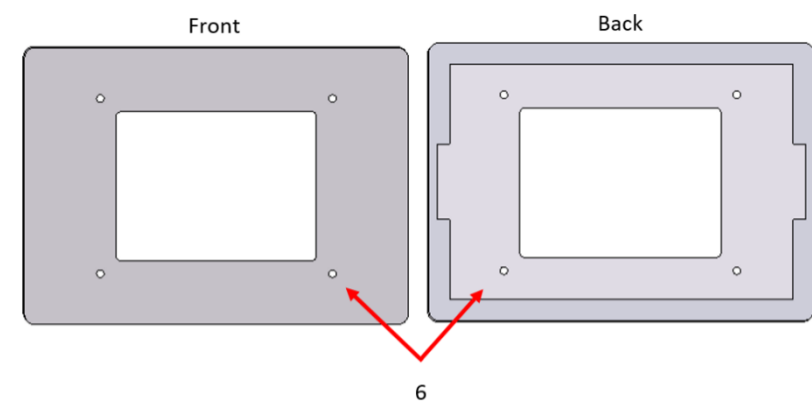
TOUCH SCREEN MOUNTING



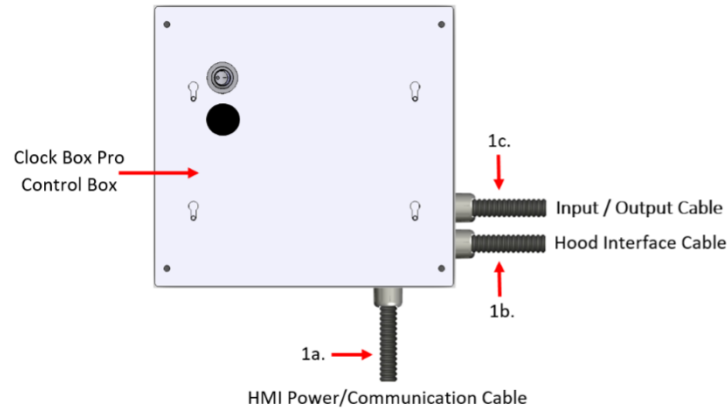
3. There are two (2x) mounting brackets (provided in bag inside ClockBox Control Box) that mount to the side of the touch screen enclosure. There are slots on the side of the touch screen enclosure that the mounting brackets secure through. Using a 11/32" wrench, secure the nuts to the brackets.
 - a. The slots allow the touch screen enclosure mounting brackets to be adjusted depending on the thickness of the wall.
4. On each bracket there are two holes for screws to go through to mount to the wall, mount the touch screen enclosure to the wall.



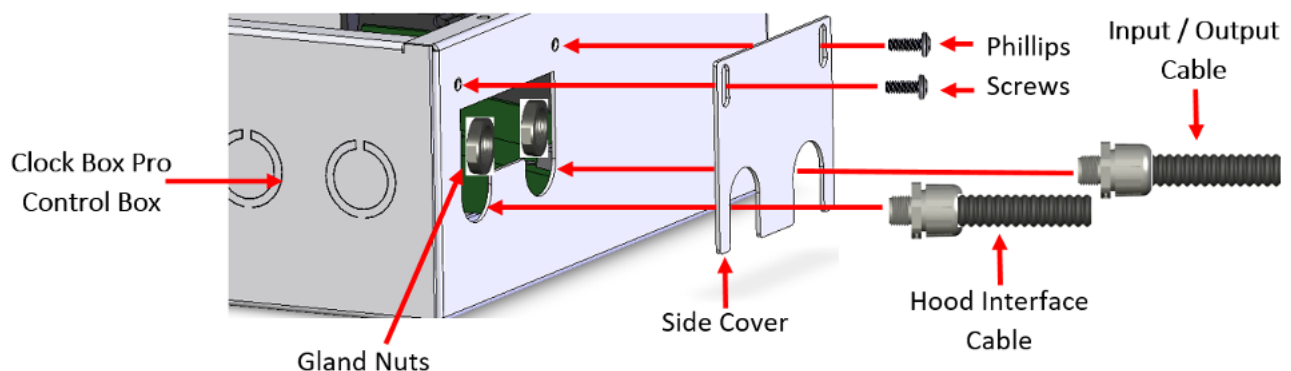
5. Attach the ethernet cable and power cable to the touch screen. Secure the touch screen plate to the touch screen enclosure. (page 12)
6. For flush mount applications, use the cover for the touch screen enclosure flush mount. The cover is shipped in the foam of the main packing material sent with the ClockBox PRO. Remove the flush mount cover and install it on the touch screen enclosure.



ENT FLEXIBLE CONDUIT INSTALLATION

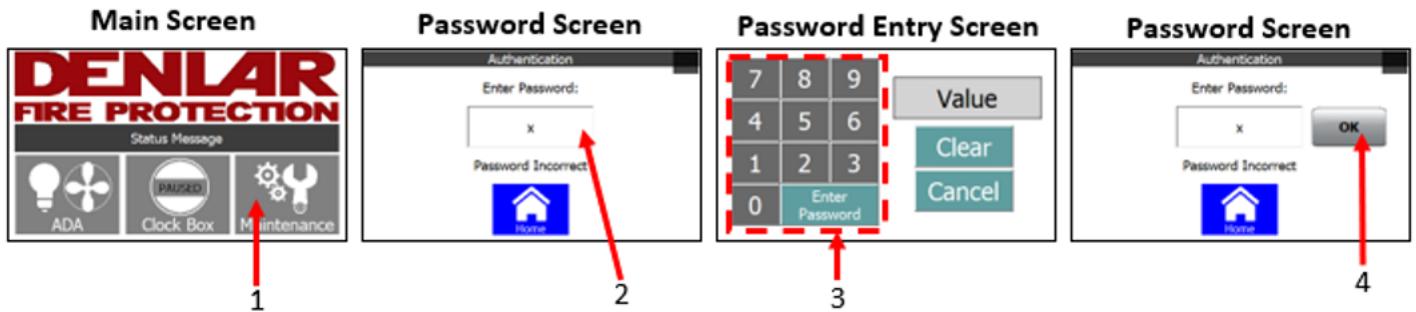


1. There are three (3x) 16mm ENT flexible conduits connected to the ClockBox PRO Control Box.
 - a. HMI Power/Communication Cable
 - i. One (1x) Ethernet Cable
 - ii. One (1x) three wire plenum Cable
 - b. Hood Interface cable
 - i. One (1x) twelve wire multi conductor
 - c. Input / Output Cable
 - i. One (1x) three wire plenum cable
 - Input
 - ii. One (1x) four wire plenum cable
 - Output
2. The HMI Power/Communication Cable is removed by loosening the gland nut in the ClockBox PRO Control Box. The Connector on the three wire plenum cable and the ethernet cable are small enough to fit through the hole in the gland nut. Reverse the process to reinstall the cable.
3. To remove the Hood Interface Cable and the Input / Output Cable, it requires removing a side cover.
 - a. Loosen the two (2x) gland nuts securing the cables to the ClockBox PRO Control Box.
 - b. On the outside of the ClockBox PRO Control Box, there are two (2x) Phillips screws securing the side cover to the box. Remove the two screws, take the side cover off.
 - c. With the side cover removed, it opens and opening in the box that is wide enough to allow the cables connectors to be removed from the ClockBox PRO Control Box. These plugs remain attached to the cables. To install the cables, reverse the process.

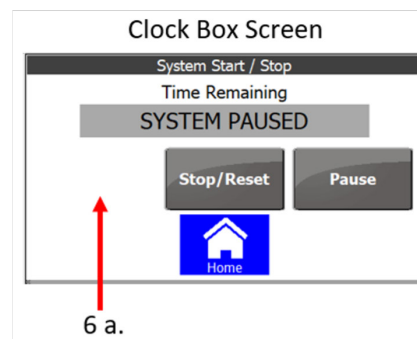
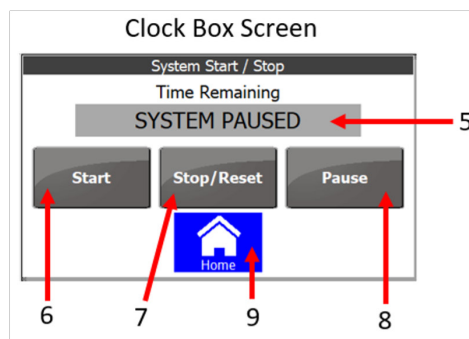


OPERATING THE CLOCK BOX PRO

1. From the Main Screen, press the Maintenance button. This displays the Password Screen.
2. Press the empty box below "Enter Password:": This displays the Password Entry Screen.
3. Using the Number Pad, enter the Password (1234) and press Enter. This displays the Password Screen.
4. Press OK. This displays the Clock Box Screen.

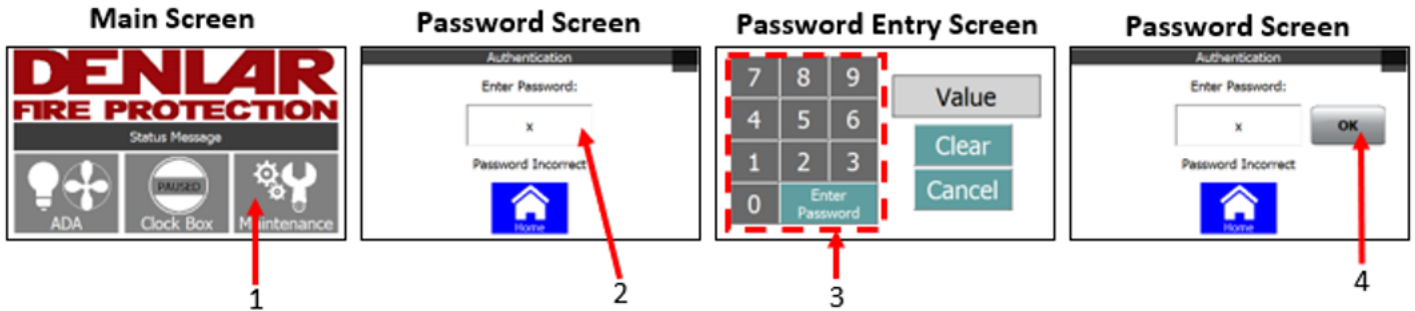


5. The ClockBox PRO Screen display's the time remaining or if the system is paused. After two minutes the screen will display the Main Screen.
6. To start the timer, press the Start Button.
 - a. If the Start Button is not visible, then there is a fault. See Status Screen or Main Screen Fault Messages section of the manual for further assistants.
7. To stop the timer and reset the time, press the Stop/Reset Button.
8. Pressing the Pause Button pauses the time until the user presses pause again.
9. The Home Button brings the screen to the Main Screen.

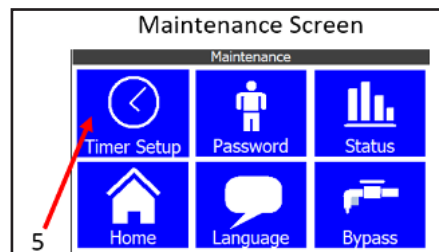


TIMER SETUP

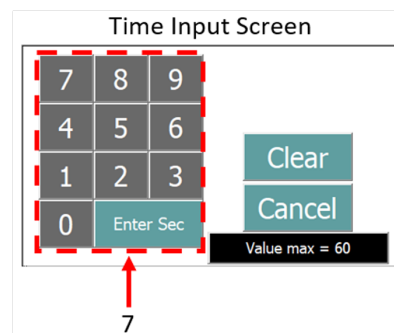
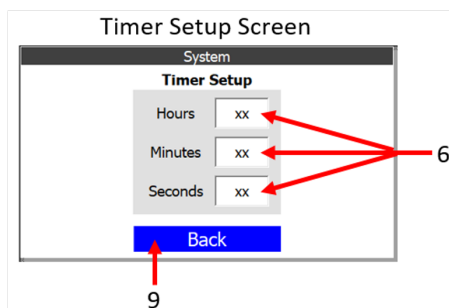
1. From the Main Screen, press the Maintenance button. This displays the Password Screen.
2. Press the empty box below "Enter Password:." This displays the Password Entry Screen.
3. Using the Number Pad, enter the Password and press Enter. This displays the Password Screen.
4. Press OK. This displays the Maintenance Screen.



5. From the Maintenance Screen, press the Timer Setup Button. This displays the Timer Setup.



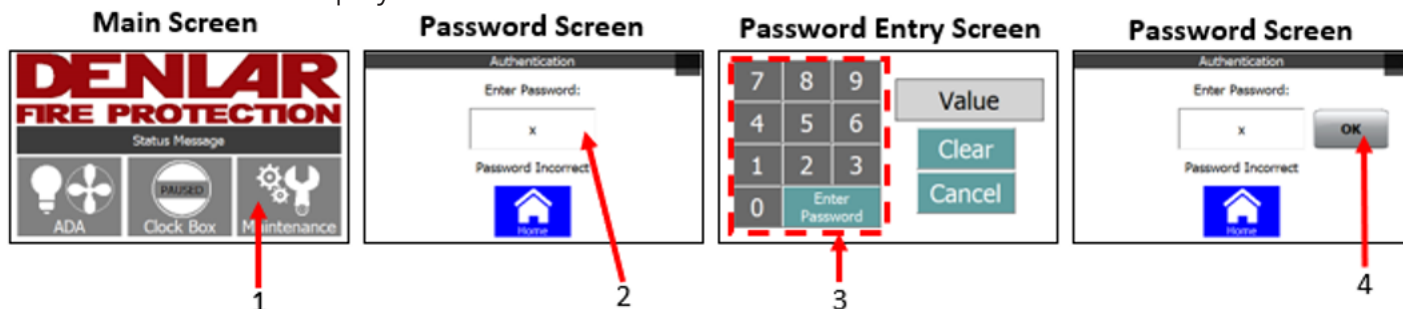
6. On the Timer Setup Screen, there is an option to select Hours, Minutes, and Seconds. Press the empty box next to the desired time setting to change. This displays the Time Input Screen.
7. On the Time Input Screen, input the desired time setting for the selected Hours, Minutes, or Seconds. Once the desired time setting is inputted press the Enter button. This Displays the Timer Setup Screen.
 - a. The Hours setting is limited to 17 hours, if a higher value is inputted the Enter Button disappears.
 - b. The Minutes setting is limited to 60 minutes, if a higher value is inputted, the Enter Button disappears.
 - c. The Seconds setting is limited to 60 seconds, if a higher value is inputted, the Enter Button disappears.
8. Repeat this process to change any of the three time settings, Hours, Minutes, and Seconds.
9. Press Back to return to the Maintenance Screen.



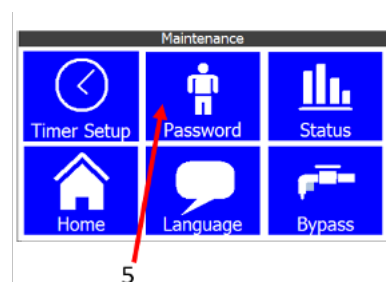
PASSWORD SETUP AND RESET

Change Password:

1. From the Main Screen, press the Maintenance button. This displays the Password Screen.
2. Press the empty box below "Enter Password:." This displays the Password Entry Screen.
3. Using the Number Pad, enter the Password and press Enter. This displays the Password Screen.
4. Press OK. This displays the Maintenance Screen.

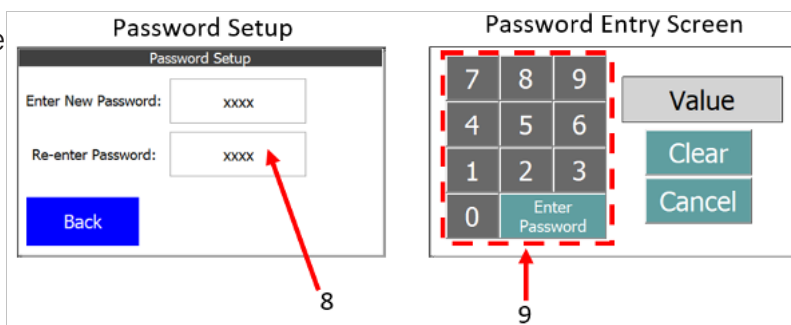
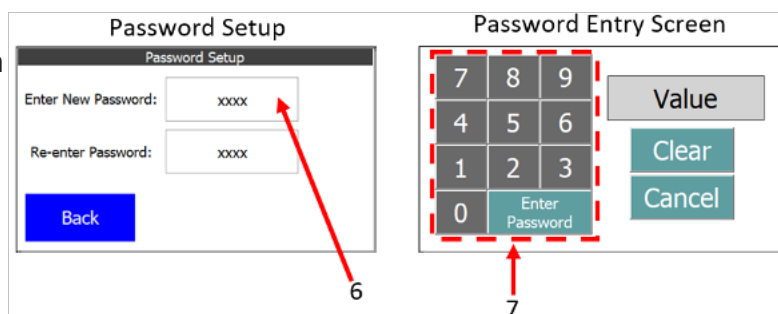


5. From the Maintenance Screen, press the Password Button. This displays the Password Setup Screen.
6. Press the empty box next to "Enter New Password:." This displays the Password Entry Screen.
7. Press the Clear Button to remove the current password from the box. Enter the password that is to be used, then press Enter Password. The screen displays the Password Setup Screen.



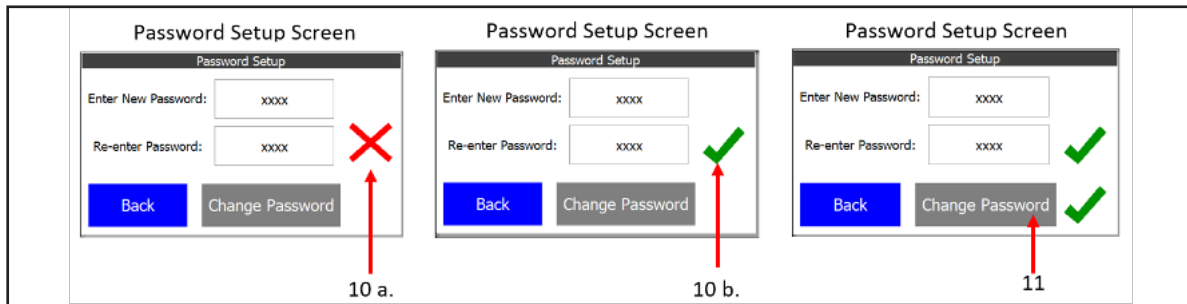
- a. The password can be one digit.
- b. The Clear Button clears the box.
- c. The Cancel Button cancels the operation and brings the screen to the Password Setup Screen.

8. Press the empty next to "Re-enter Password:." This displays the Password Entry Screen.
9. Press the Clear Button to remove the current password from the box. Enter the password that is to be used, then press Enter Password. The screen displays the Password Setup Screen.



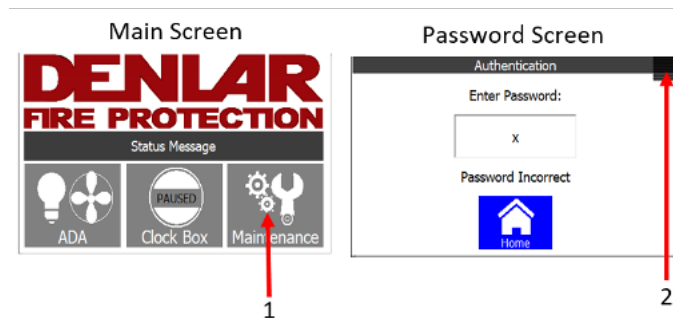
PASSWORD SETUP AND RESET

10. On the Password Setup Screen, there is a red X or a green check mark next to the box for "Re-enter Password:"
 - a. A red X means the Re-enter password does not match. Re-enter both passwords to verify the correct password.
 - b. A green check mark means the passwords match.
11. If there is a green check mark press the Change Password Button. A green check mark will appear next to the Change Password Button verifying the password is changed.

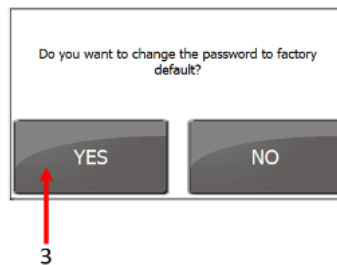


Password Reset:

1. From the Main Screen, press the Maintenance Button. This displays the Password Screen.

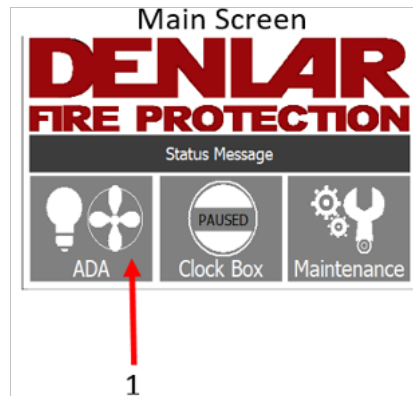


2. On the top right corner of the Password Screen, is a hidden button, press the button. This displays the Password Reset Screen.
3. To reset the password, press the Yes Button. This restores the factory default password of 1234. The screen Displays the Password Screen. The No Button will cancel the operation and bring the screen back to the Password Screen.



HANDICAP ACCESSIBLE CONTROLS (ADA)

The Clock Box PRO has the ADA option. This option allows a user to turn ON or OFF the fan and light. If the Screen is mounted in accordance with the American with Disabilities Act and local codes, it meets the American with Disabilities Act requirements.



Operating the ADA Controls

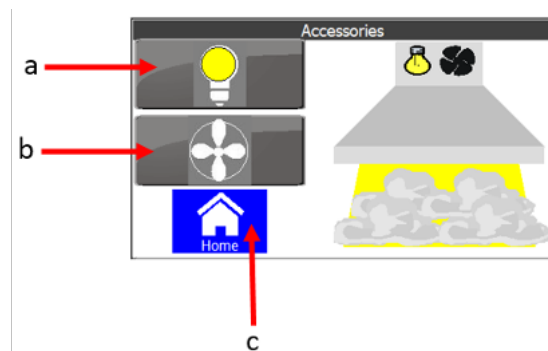
1. On the Main Screen, select the ADA option. This displays the Accessories Screen.
2. On the Accessories Screen, there are three buttons. There are three buttons, one with a Light Bulb on it, one with a Fan on it, and with a House on it.
 - a. The button with a Light Bulb powers ON and OFF the Hood light.

NOTE: The Light Bulb button on the screen does not monitor the Hood's Light Switch. If the Hood's Light Switch is ON, then to turn OFF the Hood's Light switch. Both the Hood's Light Switch and the screens button with a Light Bulb are turned OFF.

- b. The button with a Fan powers ON and OFF the Hood fan.

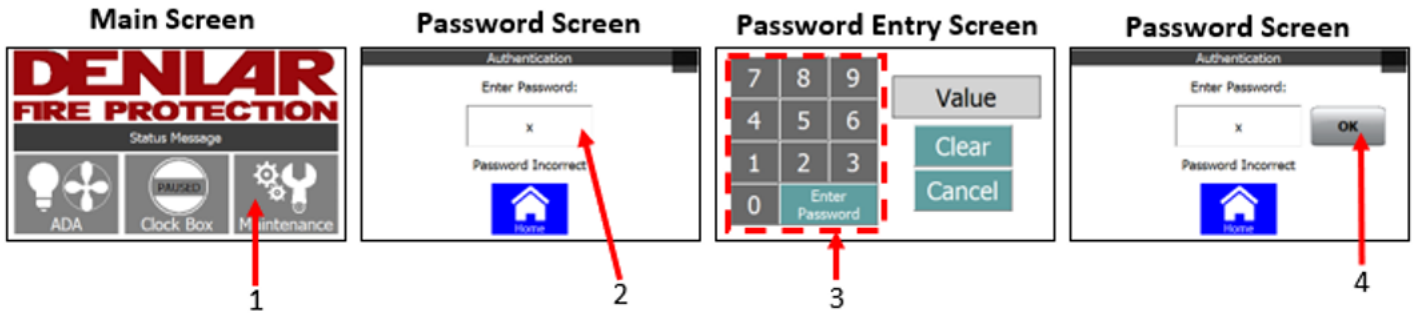
NOTE: The Fan button on the screen does not monitor the Hood's fan motor. To turn OFF the Hood's fan motor, both the Hood's Fan Speed Control and the screen's button with a Fan need to be turned OFF.

- c. The button with the House on it brings the user back to the Main Screen.

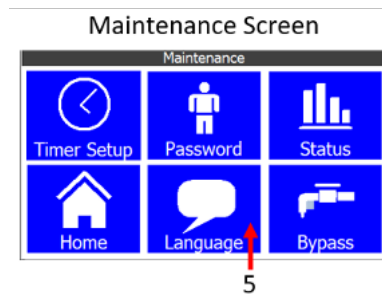


LANGUAGE SETUP

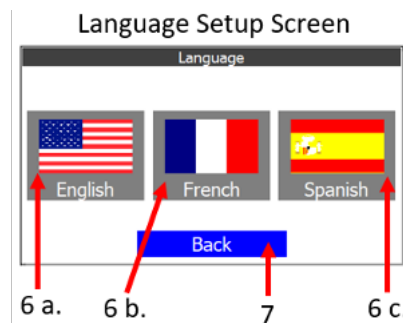
1. From the Main Screen, press the Maintenance button. This displays the Password Screen.
2. Press the empty box below "Enter Password:": This displays the Password Entry Screen.
3. Using the Number Pad, enter the Password and press Enter. This displays the Password Screen.
4. Press OK. This displays the Maintenance Screen.



5. From the Maintenance Screen, press the Language Button. This Displays the Language Setup Screen.

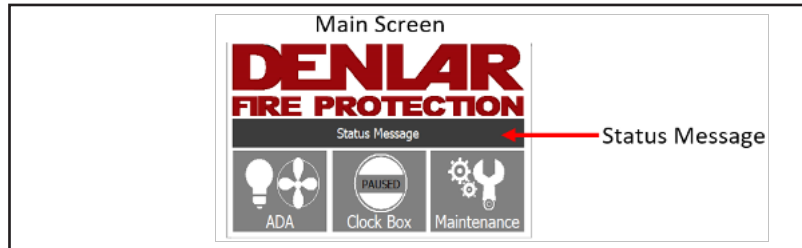


6. On the Language Setup Screen, there are three different languages to choose from. Select the desired language by pressing the button.
 - a. English
 - b. French
 - c. Spanish
7. Press the Back Button to display the Maintenance Screen.



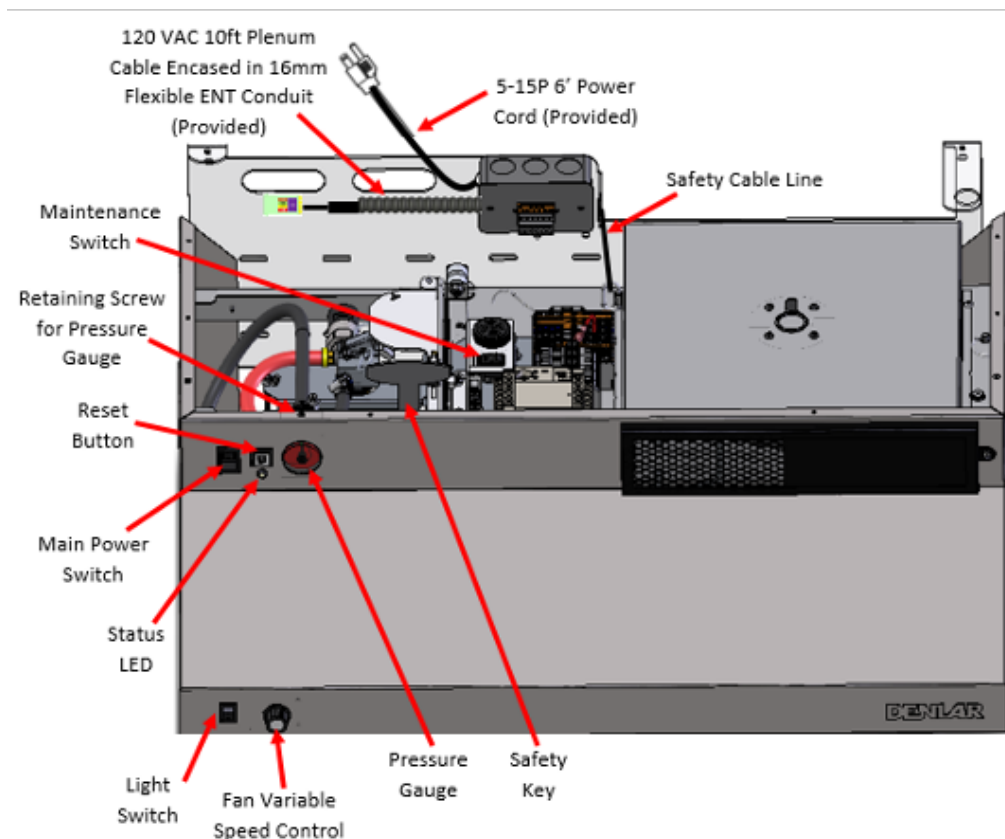
MAIN SCREEN FAULTS

When the ClockBox PRO is powered on, it loads the Main Screen. On the Main Screen there is a Status Message. If connected to a D1000 Hood, the status message gives the user step by step instructions on ensuring the D1000 Hood is in operating mode. If the D1000 Hood is not in operating mode, is turned OFF, or has an event, the status message will display what is happening.



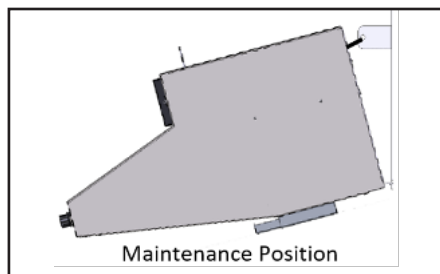
Status Messages:

1. The Hood is turned OFF. Turn Power on to the Hood.
 - a. The Main Power Switch to the Hood is OFF. The Range will not power on. Turn the Switch On.
2. The Hood is in Standby mode. Press the Reset Button.
 - a. The Hood is powered on but in Standby Mode. The Range will not power on. The Status LED on the Hood is a solid yellow. Press the Reset Button. The Status LED turns a solid Green.
3. The Hood is in Maintenance Mode. The Range will not Power On.
 - a. The Maintenance Switch in the Hood is in Maintenance Mode. The Range will not power on. Turn the Switch to Operating Mode (See D1000 Manual) and Press the Reset Button.



MAIN SCREEN FAULTS

4. The Tank Pressure is Below 75psi. The Range will not Power on.
 - a. The Pressure in the D1000 Tank is low and cannot put out a fire. The Range will not power on. Inspect the Pressure Gauge on the top front of the Hood. If the Arrow is out of the green area by plus or minus 10%, then the D1000 Tank needs a replacement.
5. The Tank Discharge Hose is not connected properly. The Range will not Turn On.
 - a. The Tank's Discharge Hose is not properly connected to the Hood. Place the Hood in the 45deg maintenance position (See D1000 Manual). Attach the Discharge Hose properly to the Hood, ensure the micro switch is engaged.
6. The Temperature at the Hood is above 190F. The Range will not Power On.
 - a. The high temperature thermostat for the Hood activated due to high temperature at the Hood. The Range will not Power On. Leave the Hood's fan on for a few minutes to dissipate the heat.

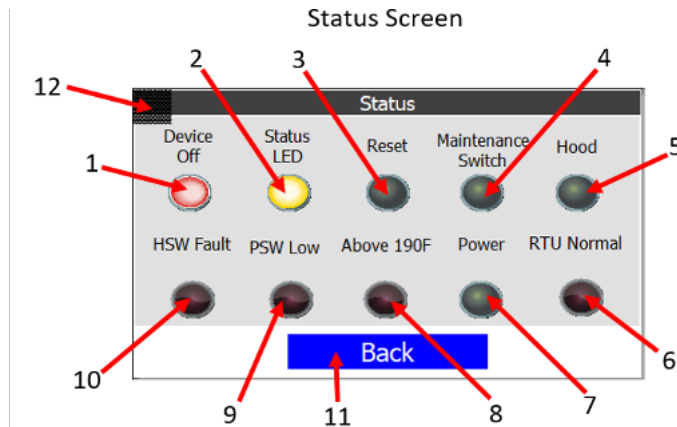


7. External Monitoring System Shut Down Fault
 - a. The external building monitoring system or alarm system sent a signal to shut down the Range. The Range will not Power On.
8. Start the Clock Box Timer
 - a. The Hood is in Normal Operating Mode with no events. The external building monitoring system or alarm system did not send a shutdown signal. The Clock Box PRO timer can be started. The Range will not Power On.
9. The Power Disconnect is Closed. The Range is Powered On.
 - a. The Hood is in normal operating mode with no events. The external building monitoring system or alarm system did not send a shutdown signal. The Clock Box PRO timer is started and counting down. The Range is powered on.

STATUS SCREEN

The Status Screen is an annunciator for different events that take place between the Hood, the ClockBox PRO, the Device being controlled, and the building monitoring system or alarm system. The lights below each of the ten items being monitored illuminate on different events.

1. Device
 - a. This illustrates if the Clock Box PRO is energizing the power source disconnect or a device that is 120VAC / 8A.
 - i. If the displayed text reads "Device Off" and the light is red, the ClockBox PRO is not energizing the power source disconnect or a device that is 120VAC / 8A.
 - ii. If the displayed text reads "Device On" and the light is green, the Clock Box PRO is energizing the power source disconnect or a device that is 120VAC / 8A.

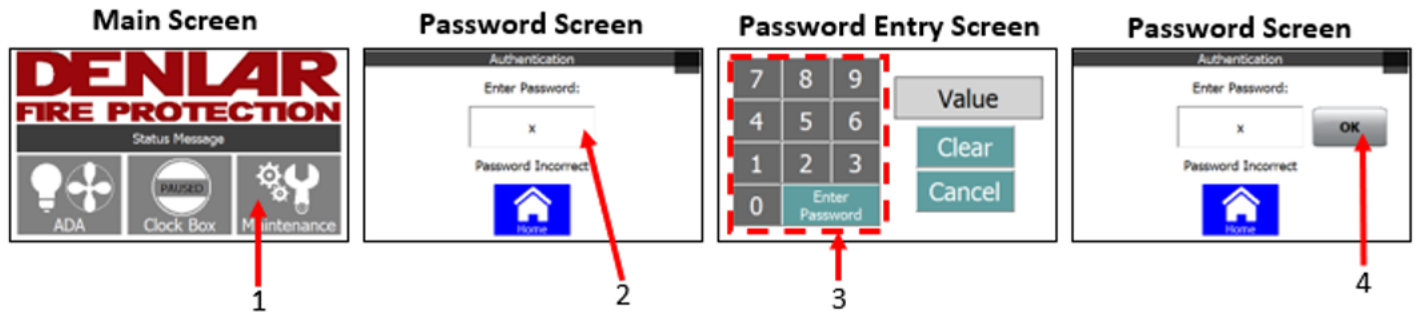


2. Status LED
 - a. This displays the color of the status LED on the Hood.
 - i. See D1000 Manual for LED code references.
3. Reset
 - a. This illuminates when the Reset Button on the Hood is pressed.
4. Maintenance Switch
 - a. This illuminates when the Hood is in Maintenance Mode.
5. Hood
 - a. This illuminates if the Hood is in Operating Mode.
6. RTU Normal
 - a. This illuminates if a building monitoring system or alarm system sends a signal to shut the range OFF.
7. Power
 - a. This illuminates when the Hood is powered ON.
8. Above 190°F
 - a. This illuminates if the temperature at the Hood is above 190°F.
9. PSW Low
 - a. This illuminates if the Tank pressure is below 75psi.
10. HSW Fault
 - a. This illuminates if the Tank's discharge Hose is not installed properly.
11. Back
 - a. This brings the screen back to the Maintenance Screen.
12. Is a hidden button
 - a. This brings the screen to the Monitoring Screen.

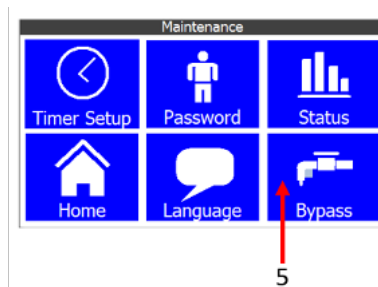
BYPASS SETUP

The ClockBox PRO is equipped with a Bypass feature. This feature allows the user to test the Hood without a tank installed. The Bypass is hard coded to a 30-minute time limit, this cannot be adjusted.

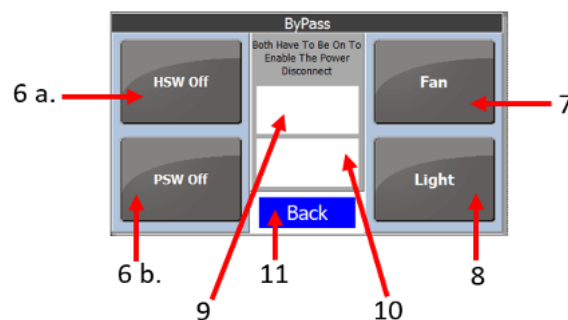
1. From the Main Screen, press the Maintenance button. This displays the Password Screen.
2. Press the empty box below "Enter Password:." This displays the Password Entry Screen.
3. Using the Number Pad, enter the Password and press Enter. This displays the Password Screen.
4. Press OK. This displays the Maintenance Screen.



5. From the Maintenance Screen, press the Bypass Button. This displays the Bypass Screen.



6. To emulate that a tank is installed:
 - a. Press the HSW Off Button. The text in the button switches to HSW On.
 - i. This emulates that the tank's discharge hose as being connected.
 - b. Press the PSW Off Button. The text in the button switches to PSW On.
 - i. This emulates that there is pressure in the tank assembly.
 - c. The Hood can be tested for functionality for 30-minutes at this point. The switches reset after the 30-minute timer expire.
7. The Fan Button will power the Fan to High speed. (See Handicap Accessible Controls section of the manual)
8. The Light Button will turn the Light ON. (See Handicap Accessible Controls section of the manual)
9. Status Message stating if the Hood is in Normal Operating Mode (See D1000 Manual).
10. Status Message stating if the ClockBox PRO is powering the power source disconnect or a device that is 120VAC / 8A.
11. The Back Button brings the screen to the Maintenance Screen.

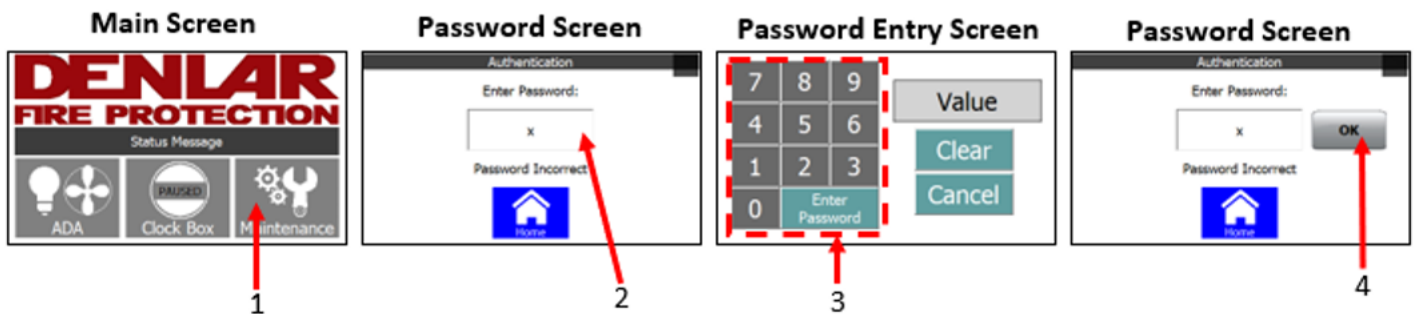


MONITORING SYSTEM

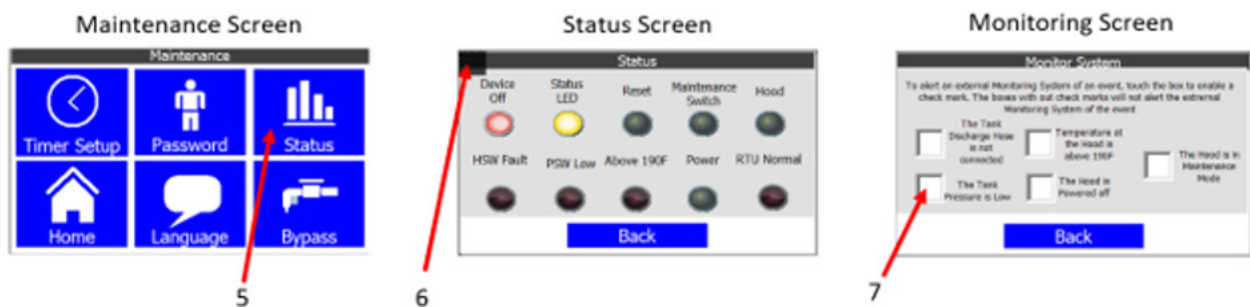
The ClockBox PRO has an option to connect to a building monitoring system or alarm system. This feature allows the ClockBox PRO to send a signal to the building monitoring system or alarm system based on events chosen by the user. Also, this feature allows a building monitoring system or alarm system to send a signal to the ClockBox PRO to shut the range OFF.

Setting up the Monitoring System events

1. From the Main Screen, press the Maintenance button. This displays the Password Screen.
2. Press the empty box below "Enter Password:." This displays the Password Entry Screen.
3. Using the Number Pad, enter the Password and press Enter. This displays the Password Screen.
4. Press OK. This displays the Maintenance Screen.



5. Press the Status button. This displays the Status Screen.
6. In the top left corner of the Status Screen, there is a hidden button, press the hidden button. This displays the Monitoring Screen.



On the Monitoring Screen, there are several check boxes next to each event the system monitors. To enable the ClockBox PRO to send a signal to the building monitoring system or alarm system, press the check box next to the event the user wants to monitor for.

Events:

The Tank's Discharge Hose is not connected.

- If checked, a signal is sent when the Hood's Tank Discharge Hose is not properly installed.

The Tank Pressure is Low.

- If checked, a signal is sent when the Hood's Tank pressure is below 75psi.

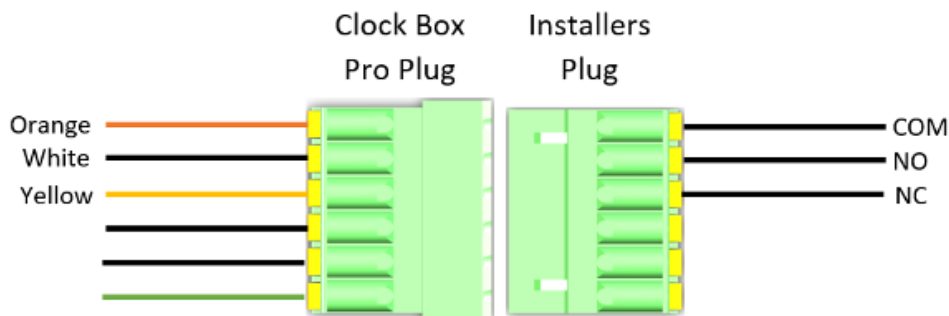
MONITORING SYSTEM

- iii. Temperature at the Hood is above 190°F.
 - If checked, a signal is sent when the Hood reaches 190°F.
 - iv. The Hood is powered OFF.
 - If checked, a signal is sent when the Hood is not powered ON.
 - v. The Hood is in Maintenance Mode.
 - If checked, a signal is sent when the Hood is switched from Operating Mode to Maintenance Mode.
- b. Each of the five events above prevents the range from being powered ON.

Sending a signal to the building monitoring system or alarm system

The ClockBox PRO provides a discreet COM, NO, and NC relay circuit. To send a signal to the monitoring system, the installer can connect to the appropriate configuration required to alert the monitoring system.

In the ClockBox PRO control box, there is a six-position plug for the monitoring system. The first three wires are colored orange, white, and yellow. The orange is the COM. The white is the NO, and the yellow is the NC. The installer's plug is a push-to-connect for solid or terminated ferruled wires. The Clock Box PRO relay changes states based on the events selected on the Monitoring Screen (See above).



MONITORING SYSTEM

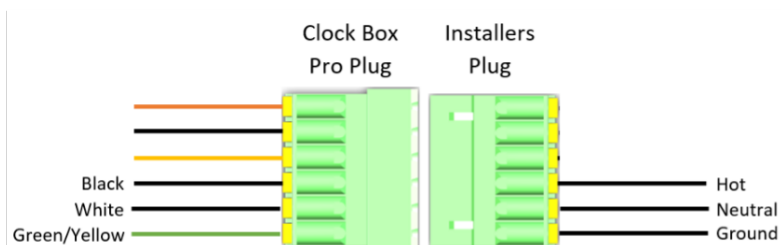
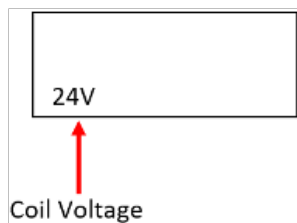
Receiving a signal from the building monitoring system or alarm system.

The ClockBox PRO provides a connection that allows a building monitoring system or alarm system to send a signal to the Clock Box PRO to power down the range.

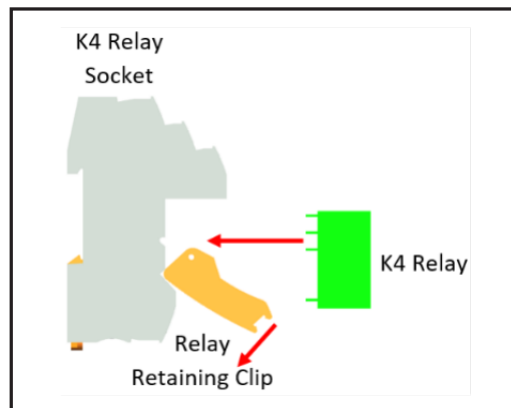
In the ClockBox PRO control box, there is a six-position plug for the monitoring system. The last three wires are black, white, and green/yellow. The black and white wires control a relay coil that is powered by the signal sent from the building monitoring system or alarm system. The optional relay voltages (sent with the ClockBox PRO) are 120 VAC, 24 VDC, and 12 VDC. Define the needed voltage and install the relay accordingly (See below). If an additional voltage is required, please contact Denlar Service.

To connect the wires, the black is the Hot or positive, the white is the neutral, and the green/yellow is for ground. The installer's connector is a push-to-connect for solid or terminated ferruled wires.

To select the relay, there is a bag with three (3x) different relays in it. The coil voltage for the relays are marked on the top of the relay. Identify the correct relay required.

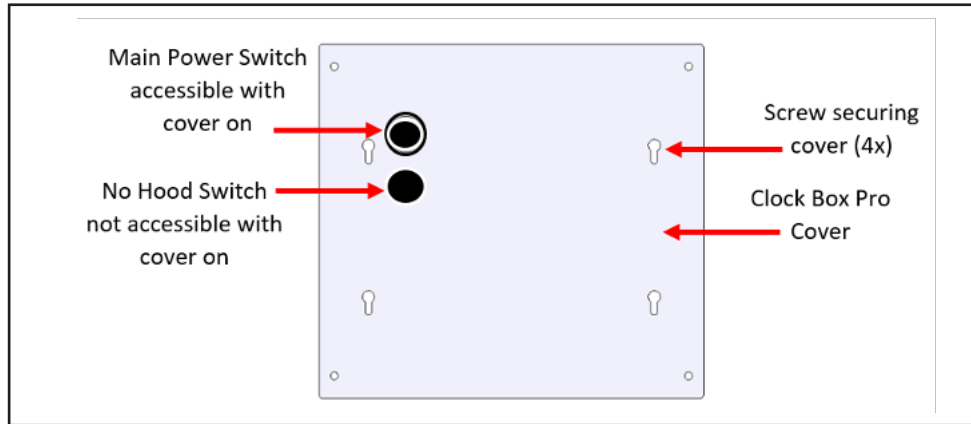


Insert the relay into the K4 relay socket. To do this, press the Relay Retaining Clip down. Insert the required K4 Relay into the K4 Relay Socket. Press the top of the Relay down to engage the K4 Relay.

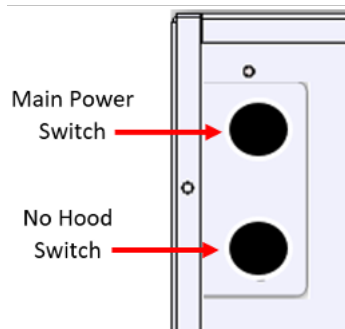


NO HOOD CONNECTED

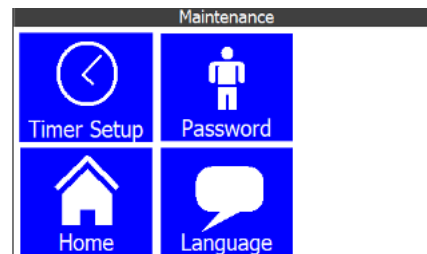
The Clock Box PRO has an option to be connected to a power source disconnect or a device limited to 120 VAC / 8A. No additional wiring is needed for to accomplish this. The Clock Box PRO comes equipped with a selector switch to do this. Using this switch, allows the 120 VAC powering the Clock Box PRO to energize the power source disconnect or a device that is 120 VAC / 8A.



NOTE: The Clock Box PRO comes with a 1A fuse, if the device is over 1A then the F5 fuse has to be replaced with the applicable fuse (type 5mm x 20mm cartridge).



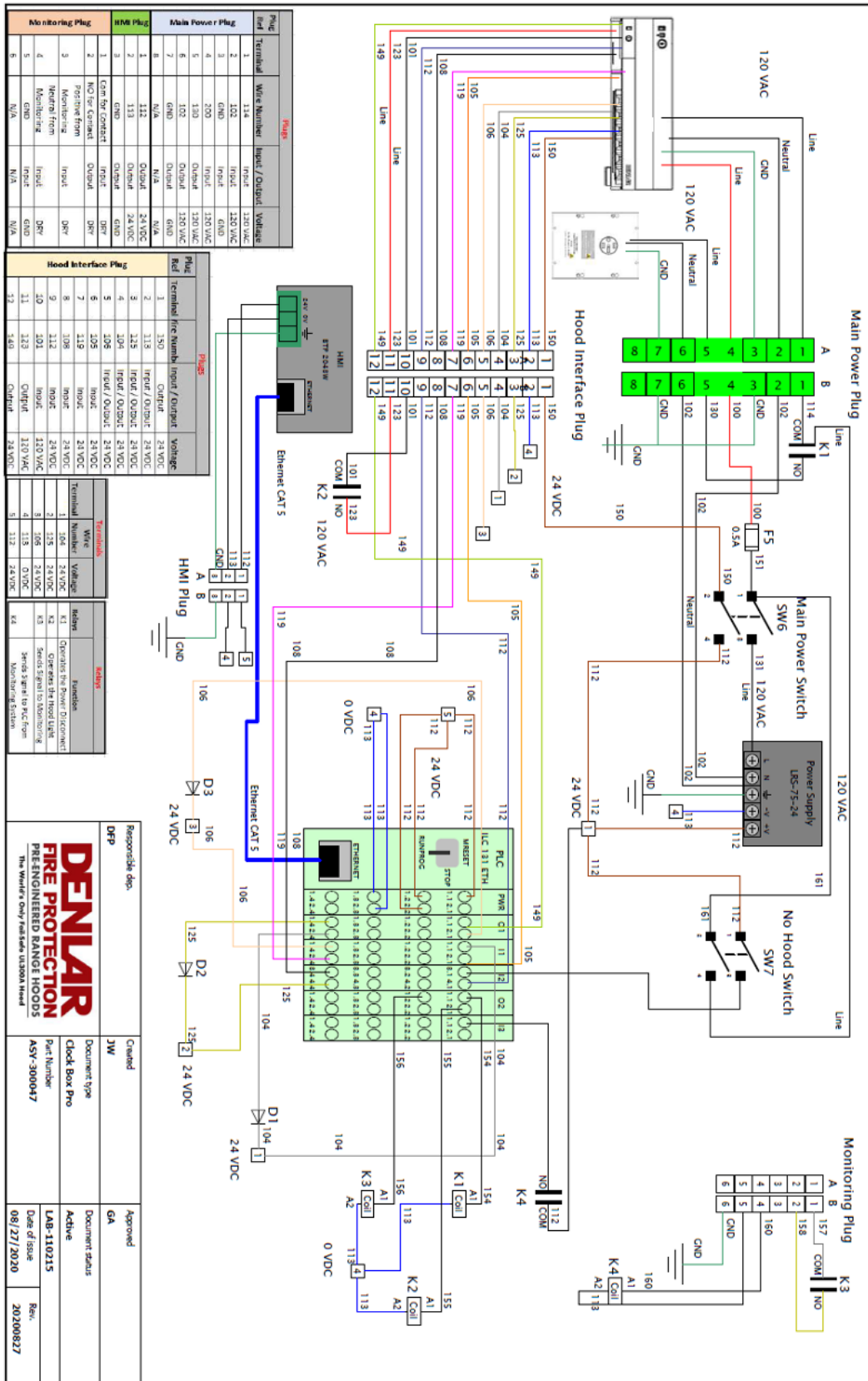
1. To enable the No Hood function, remove the four screws securing the Clock Box PRO Cover.
2. The No Hood Switch is exposed. Flip the switch to enable the No Hood option.
3. Certain options on the screen will not be accessible due to the fact that a no Hood option was selected.
 - a. The Main Screen ADA button is removed.
 - b. On the Maintenance Screen, the Status and Bypass buttons are removed.
4. The option is disabled by reversing the process.



TROUBLESHOOTING QUICK GUIDE

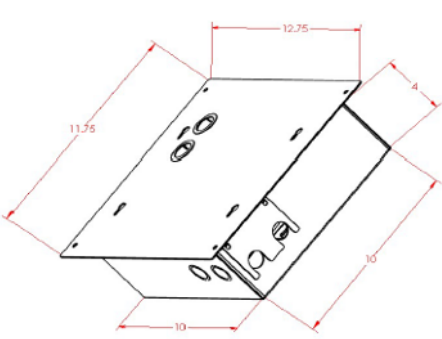
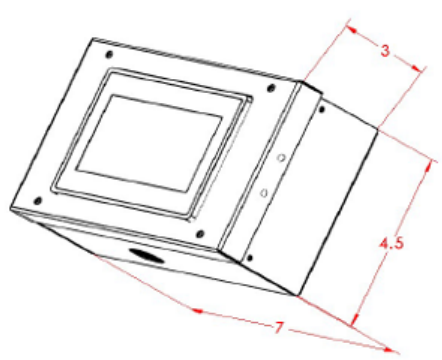
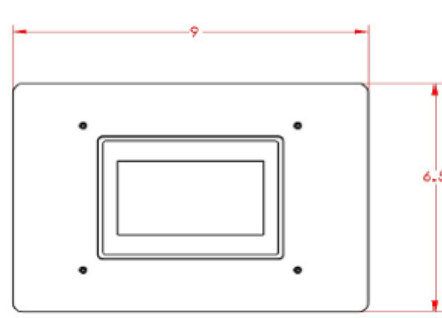
Device	Fault	Action
Touch Screen	Power Does Not Come ON	Check to see if the power switch is ON
		Check that the main breaker is not tripped
		Check the F5 fuse, replace if blown
		Check the power plug connection at the touch screen.
		Check the power plug connection at the Clock Box Pro control Box
	Communication Error	Check the ethernet connection at the touch screen
		Check the ethernet connection at the Clock Box Pro control Box
		Replace the ethernet cable
Start Button missing from Clock Box Screen	The Hood is not in Normal Operating Mode. Check status Screen Section of the manual.	
	There is an event with the Hood. Check status Message on Main Screen. Refer to Status Screen Section of the manual.	
Password does not work	Reset the Password. Refer to Password Setup Section of the manual.	
Power Source Disconnect	Power Source Disconnect is not turning ON wen the timer is started	Refer to D1000 Manual.
		Refer to the Device Flow Chart to ensure Proper connections.
Status Messages	The Hood is turned OFF. Turn Power ON to the Hood.	The main Power Switch to the Hood is OFF. The Range will not power ON. Turn the Swithc ON.
	The Hood is in Standby Mode. Press the Reset Button.	The Hood is in Standby Mode. Press the Reset Button.
	The Hood is in Maintenance Mode. The Range will not Power ON.	The Maintenance Switch in the Hood is in Maintenance Mode. The Range will not power ON. Turn the Switch to Operating Mode (see D1000 Manual) and Press the Reset Button.
	The Tank Pressure is below 75psi. The Range will not Power ON.	The Pressure in the D1000 Tank is low and cannot put out a fire. The Range will not power ON. Inspect the Pressure Gauge on the top front of the Hood. If the Arrow is to the left outside of the green area, the D1000 Tank needs a replacement.
	The Tank Discharge Hose is not connected Properly. The Range will not Turn ON.	The Tank's Discharge Hose is not Properly connected to the Hood. Place the Hood in the 45deg maintenance position (see D1000 Manual). Attach the Discharge Hose Properly to the Hood, ensure the microswitch is engaged.
	The Temperature at the Hood is above 190°F. The Range will not Power ON.	The high temperature thermostat for the Hood activated due to high temperature at the Hood. The Range will not Power ON. Leave the Hood's fan ON for a few minutes to dissipate the heat
	External Monitoring System Shut Down Fault	The external building monitoring system or alarm system sent a signal to shut down the Range. The Range will not Power ON.
	Start the Clock Box Timer	The Hood is in Normal Operating Mode with no events. The externa; building monitoring system or alarm system did not send a shutdown signal. The Clock Box Pro timer can be started. The Range will not Power ON.
	The Power Disconnect is closed. The Range is Powered ON.	The Hood is in Normal Operating Mode with no events. The external building monitoring system or alarm system did not send a shutdown signal. The Clock Box Pro timer is started and counting down. The Range is powered ON.

CLOCK BOX PRO SCHEMATIC



CLOCK BOX PRO DATA SHEET

MATERIAL INFORMATION															
TYPE	QTY	BRAND	MODEL	COLORS AVAILABLE	MOUNTING CONFIG.	MATERIAL SPECIFICATIONS						COMPONENT INFORMATION			
						LENGTH (in.)	DEPTH (in.)	HEIGHT (IN.)	WEIGHT (lbs)	MATERIAL	MOUNTING HEIGHT	VOLTAGE	PHASE	BREAKER SIZE (amp)	CONTINUOUS OPERATING CURRENT (amp)
Option	1	DENLAR	CLBX-Pro	Stainless Steel	Surface Mount or Flush Mount	Control Box: 10" Touch Screen: 7"	Control Box: 4" Touch Screen: 4.5"	Control Box: 10" Touch Screen: 4.5"	18	Galvanized and 304 SS	See Local Codes	110 VAC	1	15	0.10 A

CLBX ASY-200047		
CLBX-PLC ASY 3000020	HMI, Screen for Clock Box	
	Surface Mount	Flush Mount
		
NOTES: 1. Enclosure can be Flush or Surface Mounted. 2. A 120 VAC Plug connection coming from the Hood or ClockBox is needed to be plugged in (Refer to Devices Flow Chart LAB-110207)		

GAS DISCONNECT DATA SHEET

D1000-G ASY-200094														
MATERIAL INFORMATION														
TYPE	QTY	BRAND	MODEL	COLORS AVAILABLE	MOUNTING CONFIG.	MATERIAL SPECIFICATIONS					COMPONENT INFORMATION			
						LENGTH (in.)	DEPTH (in.)	HEIGHT (IN.)	WEIGHT (lbs)	MOUNTING HEIGHT	VOLTAGE	PHASE	BREAKER SIZE (amp)	CONTINUOUS OPERATING CURRENT (amp)
Option	1	DENLAR	D1000-G	N/A	IN LINE	2.83"	2.75"	3.96"	2	See Local Codes	110 VAC	1	15	0.10 A

VALVE TYPE	FUNCTION	ACTUATION TYPE	COIL TYPE	BODY MATERIAL	SEAL MATERIAL	ORIFICE SIZE	PORT SIZE	NUMBER OF PORTS	PORT TYPE	MEDIA	MAXIMUM PRESSURE DIFFERENTIAL	MINIMUM FLUID TEMPERATURE	MAXIMUM FLUID TEMPERATURE	FLOW COEFFICIENT
2-WAY	NORMALLY CLOSED	DIRECT LIFT	1/2" NPT CONDUIT 18" LEADS, CLASS F, NEMA 4X	BRASS	NBR	7/16"	3/4"	2	NPT	GENERAL PURPOSE FOR AIR, LIQUIDS, AND GASES	100 PSI (AC) PSI	0°F	185°F	5 Cv

D1000-G ASY-200094

3.961

2.830

NOTES:	
1.	A Flexible 16 mm ENT is included with the Assembly (Not Shown).

ELECTRICAL DISCONNECT DATA SHEET

D1000-G ASY-200094																	
MATERIAL INFORMATION																	
TYPE	QTY	BRAND	MODEL	Construction Data Report	COLORS AVAILABLE	MOUNTING CONFIG.	MATERIAL SPECIFICATIONS						COMPONENT INFORMATION				
							LENGTH (in.)	DEPTH (in.)	Height (in.)	Weight (lbs.)	MATERIAL	MOUNTING HEIGHT	VOLTAGE	PHASE	BREAKER SIZE	CONTIOUS OPERTATING	D1000-E
Option	1	DENLAR	D1000-ED	3133316CRT-003	N/A	Surface Mount or Flush Mount	8"	3.7"	8"	6.8	Galvanized	See Local Codes	110 VAC COIL	1	N/A	0.25	Specify NEMA 14-50R, 6-20R, 6-15R, or 5-15R

D1000-E ASY-200074

NOTES:

- Enclosure can be Flush or Surface mounted.
- A 220 VAC 50Amp Contactor is provided in the Assembly (Not Shown)
- Installer will provide circuitry proper for the associated range up to 220 VAC and 50 Amps
- A NEMA 14-50R, 6-20R, 5-20R, OR 5-15R is [provided in the Assembly.
- A 120 VAC Plug connection coming from the Hood or ClockBox is needed to be plugged in (Refer to Devices Flow Chart LAB-110084

CONTACT INFORMATION

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1700 Parker Drive Charlotte NC USA
P: 704-372-3485
F: 704-372-3485
www.denlarhoods.com

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704-372-3485 option 2
service@denlarhoods.com

Sales

704-372-3485 option 1
sales@denlarhoods.com

Warranty Information

Specific warranty statement can be found at denlarhoods.com within the product pages or by contacting us via e-mail at info@denlarhoods.com with a request for the Warranty Statement.

DENLAR™

FIRE PROTECTION

1700 Parker Drive | Charlotte NC USA |
704-372-3485 | sales@denlarhoods.com | www.denlarhoods.com



Not responsible for typographical errors. Continuing research results in manufacturing improvements, therefore specifications are subject to change without notice. For the most updated information, please contact fastcorp directly. DL12342C_7/25 LAB-110218