

USER MANUAL

MODEL:

ALX-PRO

Chemical Allocation Controller

English (Original Instructions) Updated: 04/30/2021



READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT



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MARNING:

- 1. Avoid contact of chemicals with skin and eyes. If contact occurs, see MSDS sheet for further first aid measures.
- 2. Always wear appropriate PPE
- 3. Follow safety instructions of chemical manufacturer (MSDS).
- 4. Always follow plant and OSHA guidelines about the use of equipment.
- 5. Disconnect power before servicing equipment.

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Installation

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Overview

The ALX-PRO offers the highest level system available to control and record chemical consumption. PRO units allow authorized Users to log in with a 4-digit code or RFID card to reliably dispense chemicals via time or weight-based methods. The 10" touchscreen and stainless steel keypad provide an easy interactive platform, making the dispensing process as smooth as possible.

Units integrate with the Clean Intel website that acts as a centralized location for all reporting and data stored on the system. Its secure connection ensures privacy of all data and allows managers to create new Users, make chemical Application recipes, and edit User Permissions both in the field or on the go.

Specifications

Software

Maximum number of Users: 999

Maximum number of Applications: 999

Maximum Dispense Steps per Application: 6

Dispense Step time range: 00.1s - 99m:99.9s

Permissions time range: 1-24 hours

Max Permissions count: 99

Hardware

Maximum number of Devices: 16*

Dimensions: 16" x 14" x 8"

NOTE: A single *CAN-SO-4* counts as 4 Devices.

Terminology

- Users The people who will be using the system to dispense Applications. Up to 999 users can be stored.
- Permissions Control the number of times each User can access each Application. Can be disabled.
- Devices The physical outputs and/or inputs that connect to the controller to perform a function.
 The ALX-PRO is compatible CAN-SO-1 and CAN-SO-4 solenoid valve output devices as well as CAN-SC devices for weight-based applications.
- Applications Recipes which determine the type and sequence of Dispense Steps. Up to 999 recipes can be stored.
- Dispense Steps Segments of an Application that determine which output Device will be energized and for how long. Each Application can contain up to 6 Steps.
- fixed Time Step Will energize an output Device for a specified amount of time. Reported Step volume must be manually entered.
- Calibrated Step Uses Device Calibration to determine how long an output Device should be energized, based on a specified target volume.
- Weight-Based Step Uses Scale Calibrations to determine how long an output Device should be energized, based on weight. Requires CAN-SC device for integration with ALX-PRO.

Acceptable Chemical Products

- Acids
- Caustics
- Sanitizer
- Chlorine

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Installation Requirements

Compressed Air (typical installation)

- Clean, dry air
- 10 CFM (283 L/min) @ 80 psi (5.5 bar) minimum
- 100 psi (6.9 bar) maximum supply pressure
- Recommended regulator setting: 80 PSI (5.5 bar).

Water Supply (typical installation)

- Cold Portable Water
- 7 GPM (26.5 Lpm) @ 35 psi (2.5 bar) minimum
- 100 psi (6.9 bar) maximum supply pressure
- Recommended regulator setting: 50 PSI (3.4 bar)

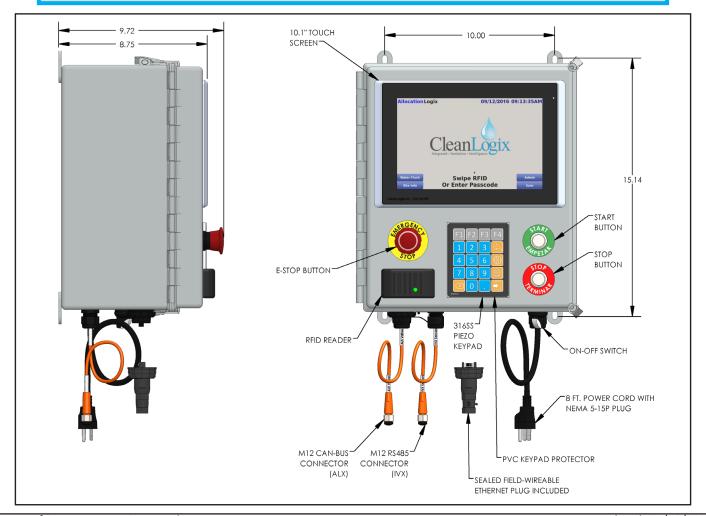
Electrical

- 110 VAC, 5A, Single Phase, 50-60 Hz
- NEMA 5-15 GFCI Protected Outlet
- Surge suppression recommended

Network

- Cat 5e or higher Ethernet cable connection (fieldwired sealed plug included with unit)
- WiFi (802.11n or 802.11b/g), WPA security
- CELL-POE cellular box (sold separately)

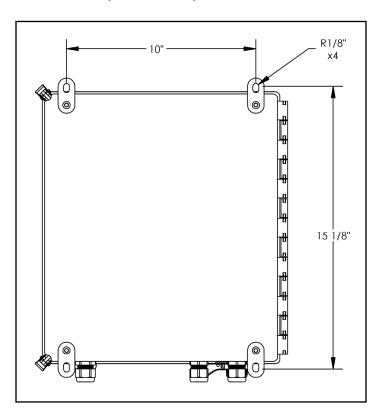
NOTE: A back flow preventer must be installed in the water supply to this unit, per local codes.



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Mounting Controller

- 1. Determine mounting location, with consideration of the following:
 - User accessibility
 - Distance to electrical outlet
 - Distance to Devices/pumps
 - · Accessibility to Ethernet or WiFi
- 2. Attach the included mounting feet to the controller.
- 3. Securely mount unit to wall using appropriate hardware (not included).



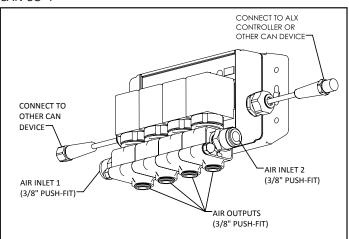
- 4. Plug power cord into a 115 VAC, GFCI protected receptacle.
- 5. Using the included sealed ethernet plug, connect Ethernet (either from the facility or CELL-POE) via Cat 5e cable (or similar).

Connecting Devices

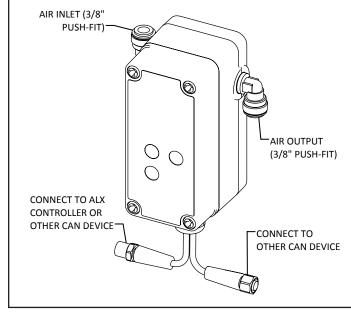
The following types of Devices are compatible with the ALX-PRO:

- CAN-SO-4: A four output, 3-way solenoid valve pack for controlling 1/2" or smaller AODD pumps and/or air operated valves
- CAN-SO-1: A single output, 2-way solenoid valve for controlling up to a 1" Air Operated Double Diaphragm (AODD) pumps

CAN-SO-4



CAN-SO-1



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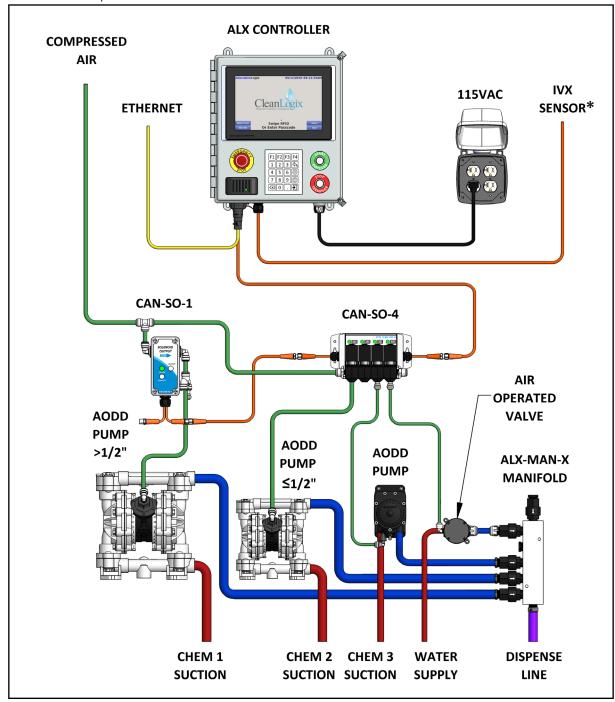


Connecting Devices (continued)

- 1. Mount and connect Devices in a daisy-chain fashion using the orange M12 cables. They can be installed in any order. (*NOTE:* If purchased as a -KIT, the Devices will be supplied pre-mounted and connected)
- 2. Hand tighten M12 cable connections, then tighten two more clicks using wrenches.
- 3. Plumb compressed air lines and fluid lines for pumps and valves as necessary [see below]

*See Appendix for IVX Sensor Integration

Installation Example:



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Set-Up Instructions

General Settings

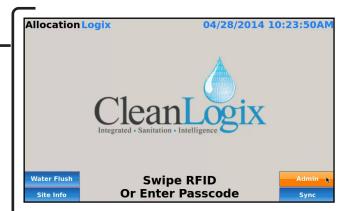
- 1. Press the Admin button on the bottom
- 2. Type in the 4-digit administrator code

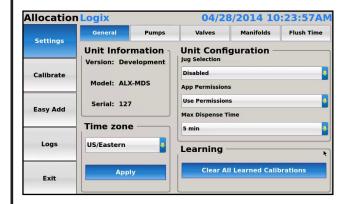
NOTE: The admin screen will automatically time out and return to the home screen after 30 minutes of inactivity for security purposes.

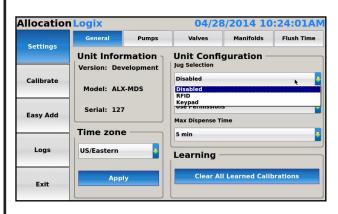
- 3. Click the **Settings** tab on the left side of the screen
- 4. Under the **General** tab, the software version, model, and serial number can be viewed.
- 5. To change the **Jug Selection** type, select an option from the drop-down menu:
 - Disabled: Does not require anything before a dispense.
 - RFID: Requires an RFID card for the jug to be scanned before a dispense.
 - **Keypad:** Requires a user to type in a 4 digit code for the jug before a dispense.

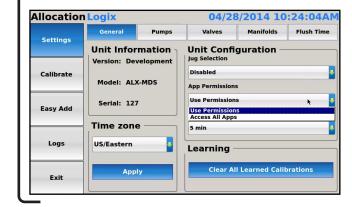
NOTE: See Page 25 for examples of what Jug Selections do before performing a dispense.

- 6. App Permissions allow administrators to limit the amount of dispenses each user can access per/day or not:
 - Use Permissions: References assigned permission levels entered on Clean Intel (permissions levels are reset every 24 hrs.)
 - Access All Apps: No permission counts will be used. When users dispense applications their permissions will appear as "9999 Uses Left"









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READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT



Set-Up Instructions (cont.)

General Settings (cont.)

7. The **Max Dispense Time** sets a time limit for weight-based Applications to dispense within to protect against accidental overflows. To adjust the time limit, select an option from the dropdown menu.

EXAMPLE: A user starts to dispense a 1 gal. Application, but forgets to place the jug on the scale. If the *Max Dispense Time* is not set, the unit will continue to dispense since the scale is not reading an increase in weight.

With it set to 5 Minutes, the dispense will automatically terminate after 5 min. With or without weight recognition*.

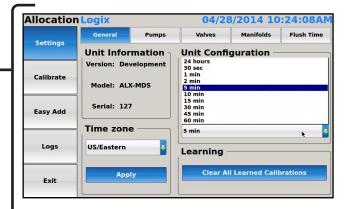
*NOTE: To avoid ending dispenses early, set the *Max Dispense Time* so that it will not compromise larger dispense Applications.

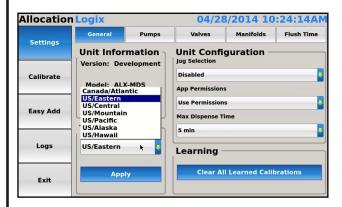
- 7. To change the **Time zone** on the unit, select a new one from the drop-down menu.
- 8. Click **Apply** to save any changes made on this page.

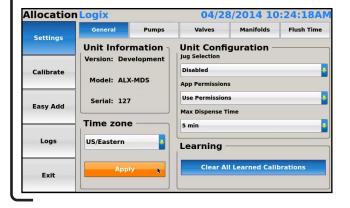
Learning

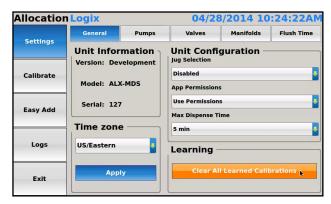
Every time the unit dispenses, it records the weight and time, creating an algorithm to enhance dispense accuracy. **Clear All Learned Calibrations** will erase the logs of the dispenses, causing the unit to build up a new set of Calibrations.

NOTE: Clearing Learned Calibrations will not stop the unit from being able to perform. However, it may take 4 to 5 dispenses before the unit's calibrations are exact again.









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Sleep Function

To prevent the computer from building up too much heat inside the control box, the unit will begin a **Sleep Function** after 90 minutes of inactivity.

- 1. After 80 minutes of inactivity, the unit will load a screen that reads **PREPARING TO SLEEP.**
- 2. After 10 minutes the screen will shut off.
 - Press any number key before 10 min. to return to the home screen.
- 3. When the unit goes to sleep the screen will turn off, but the following lights will remain on:
 - Blue light on the monitor
 - Red light on the RFID reader
 - Green lights on the Devices
- 4. To wake up the unit, simply move or click the mouse on the control box.
- 5. A loading screen will appear and will take between 30 and 60 seconds to load the unit back up.
- 6. Once the home screen appears, the unit can be used again as normal.

Site Info

- To view the Site Information on a specific device, click Site Info at the bottom left corner of the screen.
- 2. Here the Applications, access codes, jugs, users, and chemicals assigned to this unit can be viewed.
- 3. If a user forgets their code for an application, they can simply look it up from the **Site Info** tab.
- 4. Press **STOP** or **A** to return to the home screen.







ΑI	location Log	ix		04/01/2014	02:45	5:50P
		Site Infor	mat	ion		
	Applications	Jugs		Users	Chen	nicals
		Name		Locatio	on	Code
1	Chemical 1 - 16 oz	- Membrane A		Chemical Room		1111
2	Chemical 1 - 32 oz	- Membrane A		Chemical Room		2222
3	Chemical 1 and 2	1 Gal & 1 Gal - Membra	ne B	Chemical Room		6666
4	Chemical 2 - 2 Gal	ons - Membrane B		Chemical Room		3333
5	Chemical 3 - 5 Gal	ons - Membrane A		Chemical Room		4444
6	Chemical 3 - 8 Gal	ons - Membrane A		Chemical Room		5555
7	Deliver A			A		0000
8	Deliver B			В		0001
9	Membrane 1 - Che	mical 2 - 2.5 Gal.		General		9876
10	Membrane 2 - Cau	stic/Surfactant		General		8520
11	Water - 1 Gal.			General		9999
	k					





Adding RFID Credentials

- 1. Log in as an administrator.
- 2. Select **Easy Add** on the left side of the screen.
- 3. Select a user from the drop-down menu.
- 4. Once the user is selected from the list, scan their RFID card to enter it into the system.
- 5. Once the card has scanned, the code will appear in the text box.
- 6. Click Add to save the RFID code to that user.
- 7. A dialog box will appear "RFID Added Successfully." Click "OK" to clear this message.

NOTE: If the dialog box reads *Easy Add Failed* ensure that the unit has an internet connection, reboot, and attempt again.

- 8. Press **STOP** twice or press the **A** key to return to the home screen
- 9. Sync the unit.
 - This will send the RFID information up to Clean Intel (See Page 27 for Syncing instructions)
- Once the sync has finished, the user will be able to log in by swiping that RFID card at the home screen.

NOTE: RFID codes cannot be used between multiple users. User's MUST be synced one-at-a-time and before others can be added.

- 11. Repeat this process for as many users and RFID cards as required.
- 12. Once added, the **Site Info** screen will continue to display RFID codes for all registered users.

NOTE: Only *Prox*® RFID cards are accepted. *iClass* cards will not register.







Accepted RFID Cards:

ProxCard® II	Proximity [®]
ISOProx® II	ProxCard® Plus
DuoProx® II	ProxKey [®] II
Smart ISOProx®	MicroProx®
DuoProx® II	MIFARE®

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Pump Devices

In order to dispense chemical with the ALX-PRO, the following items must be setup under **Settings** page for **Pumps**. The following requirements are necessary for a pump to be used:

- Each chemical being dispensed must be assigned to a Solenoid Device.
- Water must be assigned to a solenoid device.

Editing Pump Settings

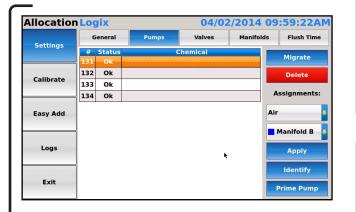
- 1. Log in as an administrator.
- Open the **Settings** window on the left side of the screen
- 3. Click on the **Pumps** tab near the top of the screen to bring up a list of all the solenoid devices connected to the unit.
 - Ok: The device is connected
 - *Missing:* The device is disconnected or not receiving power

NOTE: If a pump is missing, verify it is receiving power. If it is, its green light will be illuminated.

- 4. Select a pump device from the list by clicking on it. The selection will be highlighted in orange.
- Click Identify to make the selected pump device blink a red light on the solenoid device for a few seconds to verify the correct pump is selected.

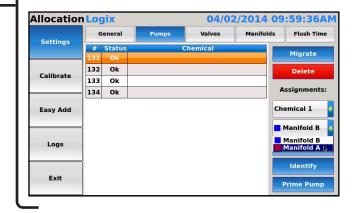
Assigning Chemicals to Pumps

- 1. Select the device to assign and click the first drop down under the **Assignments** window to the right.
- 2. A list of all the chemicals that are set up on this unit will be displayed. Choose a chemical from the list for the selected device to dispense from.
- 3. Click the button underneath the **Assignments** window on the right that reads **Manifold A**.







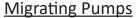




Pump Devices (cont.)

Assigning Chemicals to Pumps (cont.)

- 4. From the drop-down menu select which manifold this chemical will be dispensing through (acids or caustics).
- 5. Click **Apply** to finalize changes.
 - After clicking Apply, a dialog box will appear saying Must Update Calibrations for Pump!

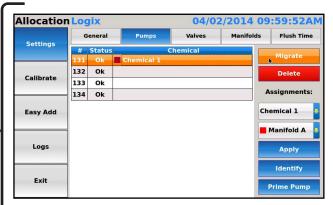


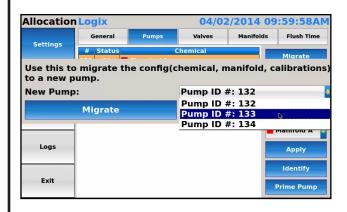
How to move a pump device settings (including calibrations, manifold, and chemical assignment) to a different solenoid device.

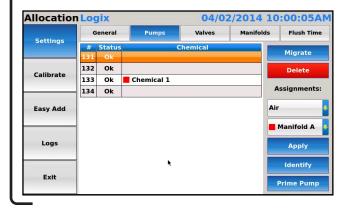
- 1. Select the to be moved and click Migrate.
- 2. A dialog box will appear asking which new device the old configuration will be moved to.
- 3. Select the new device from the drop-down menu and click **Migrate**.

NOTE: If the new device had no chemicals previously assigned, the process will be complete. If it had a previous assignment, an alert will appear warning that the previous configuration will be overwritten.









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Pump Devices (cont.)

Deleting Pumps

- 1. To remove a pump device from the system, select the pump and click **Delete**.
- 2. A dialog box will appear for confirmation, click **Yes** to delete the pump or **No** to cancel the procedure.

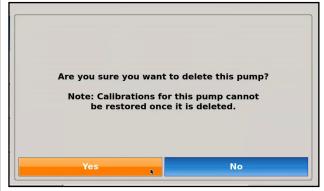


!\ CAUTION:

When deleting a pump any calibrations for timebased dispensing will also be removed. If the pump device is later re-added it will need to be re-calibrated before dispensing.

NOTE: Deleting pumps should only happen when a device breaks and is replaced. If the device is deleted and reconnected, it will automatically show up in the list of pumps again with no chemical assignments.





Manifolds

Manifold Settings

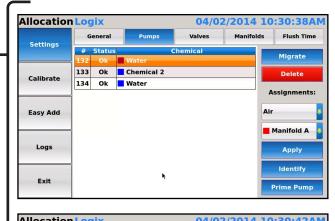
- 1. Log in as an Administrator
- 2. Click Settings on the left side of the screen
- 3. Click **Manifolds** near the top of the screen to view all the chemicals assigned to the different manifolds.
- Click the drop-down menu and select another manifold to view.



!\ CAUTION:

Ensure all acids are assigned one manifold and caustics are assigned to another.

NOTE: If Water is assigned to the manifold, it will appear as a *Valid Manifold*. If there is no water assigned, it will read *You have no water assigned* and will be unable to perform a *Water Flush*.



Settings	G	ieneral	Pumps	Valves	Manifolds	Flush Time
Settings	#	Status		Chemical		Migrate
	131	Ok	k			Migrate
Calibrate	132	Ok	■ Water			Delete
Calibrate	133	Ok	Chemical 2			<u></u>
	134	Ok	Water			Assignments
Easy Add					Air	•
]					Manifold B
Logs						Apply
	ĺ					Identify
Exit						Prime Pump

READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT



Manifolds (cont.)

Assigning Scales to Manifolds

If equipped for Weight-Based dispensing, the ALX-PRO's manifold must have a scale assigned to it before it can dispense Weight-Based Applications.

- Select the Manifold to pair with scale from the drop down menu
- 2. Select the scale to be paired from the drop-down list on the right side of the screen.

Adding Manifolds

- Add a new manifold by clicking Add in the Manifolds Settings screen
- By default, the unit will name the new addition "Manifold" in alphabetical order
 - EXAMPLE) If two manifolds already exist, the new manifold will, by default, be named Manifold C
- 3. Select the color to be displayed with this manifold.

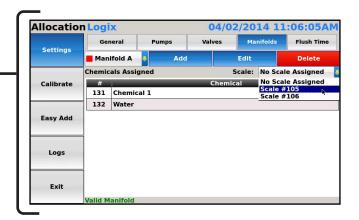
NOTE: The color chosen acts as a reference guide and does not affect performance.

- 4. Click "Yes" to finish adding the new manifold.
- 5. If another manifold is added, the "Pumps" tab will show the new manifold in the drop-down menu.
- 6. The new manifold will have no pumps, chemicals, or scales assigned to it.

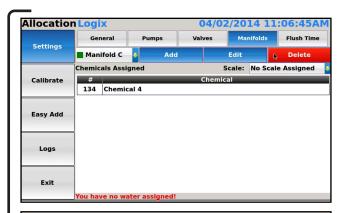
Deleting Manifolds

- 1. Open the **Manifolds** tab, select the manifold to remove, and click **Delete**.
- A confirmation screen will appear, click Yes to delete the manifold.

NOTE: If chemicals are assigned to manifold, the CAN Devices must be moved to a different manifold before the original can be removed.









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Pumps

Before the unit can dispense chemical, each pump must be primed so the chemical fills up the hose to the manifold for accurate dispense volumes.

Priming Pumps

 From the Pumps List select the Pump to be primed, then click **Prime Pump**.

NOTE: Before the pumps start to prime, a solenoid device must be assigned water to that manifold to perform a manual water flush between priming pumps. (See Page 14)

- 2. A screen will appear begin priming.
- 3. If you wish to prime, press the **Start** button to turn the Device output on and press **Stop** to turn off.



! WARNING:

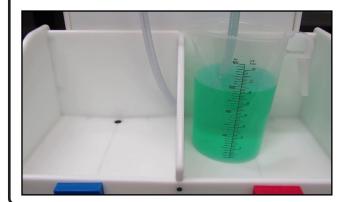
Pressing the START key on this screen will cause the output to turn on and the pump to run! Wear PPE and be ready to contain the flow of chemical in an appropriate vessel!

- 4. Click **Close** when priming has been completed.
- 5. Perform a manual water flush between priming pumps to cleanse the line before dispensing another chemical.
- 6. Repeat this process for each pump.









READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT



Calibrating Pumps

Weight-Based Calibrations

Weight-based ALX-PRO models will require their scales to be calibrated prior to use to ensure the best accuracy when dispensing.

- 1. Log in as an Administrator.
- 2. Select **Calibrate** on the left side of the screen, then click **Scale** on the top of the screen.
- Select the scale to be calibrated from the dropdown menu.

NOTE: If this is the first time calibrating the scale, both scale icons on the screen will appear red with exclamation points.

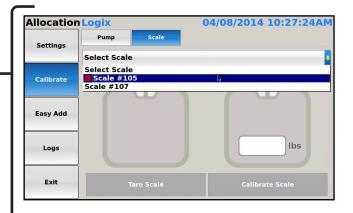
- 4. Make sure there is nothing on the scale, then click **Tare Scale**.
- 5. Place a weight on the scale.

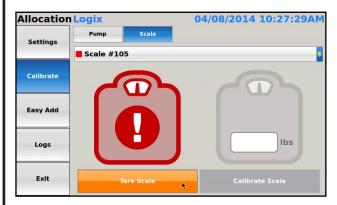
NOTE: The specific weight of this object *must* be known to ensure accuracy.

- 6. Using the keypad, enter the weight and click **Calibrate Scale**.
- 7. Both scale icons on the screen will now appear green with check marks, confirming the scale is fully calibrated.
- 8. If the scale must be recalibrated, remove all weight from the scale and click **Tare Scale** to start over.

NOTE: Recalibrating will wipe all previous calibration values and will require the user to recalibrate the scale before dispensing again.

9. Clean Logix recommends recalibrating the scale every 2-3 months to ensure the best accuracy.









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Calibrating Pumps (cont.)

Time-Based Calibrations -

Before pumps can perform Time-Based dispenses they will each need to be calibrated for the chemical they will be controlling.

- 1. Log in as an Administrator.
- 2. Select **Calibrate** on the left side of the screen, then click **Pump** on the top of the screen.

NOTE: Only pumps that have been assigned to a chemical will appear in this list.

- 3. Select the pump to calibrate from the drop-down
- 4. The unit's text will read:

 Calibrate Pump Without a few calibration
 points close to your regular dispense amounts,
 the unit will not perform up to its capability. To
 add a calibration, click the button below.
- 5. Determine which dispense hose will flow liquid

TIP: Use a container with volume markings!

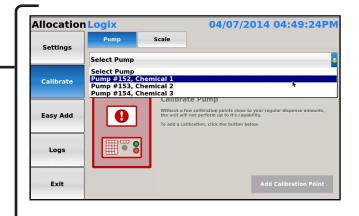
when the Device output is turned on.

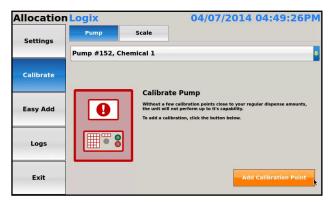
- 6. Arrange a container to catch the liquid.
- Decide on an approximate target volume for the calibration point and press the Add Calibration Point button.
- 8. The on screen instructions will read:
 Run the Pump Dispense a measure that is
 close to what would normally be used. Be sure
 that you dispense into a jug that will let you
 accurately measure how much was dispensed.
 You'll stop the pump by pressing STOP. To
 proceed, press the START button.



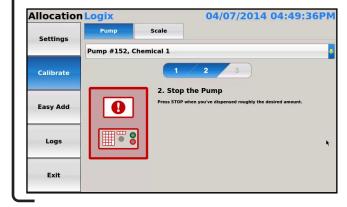
WARNING:

Pressing START will cause the output to turn on and the pump to run! Wear PPE and be ready to contain the flow of chemical!!









READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT



Calibrating Pumps (cont.)

<u>Time-Based Calibrations (cont.)</u>

- 9. Press **START** to begin dispensing.
- 10. When the liquid in the container gets close to your target, press the **STOP** key.
- 11. Take an accurate measurement of the amount dispensed and enter the Volume and Units on the screen.
- 12. Click **Confirm** to save the calibration value. If the measurement was inaccurate (spilled chemical, etc), click **Cancel** to recalibrate.

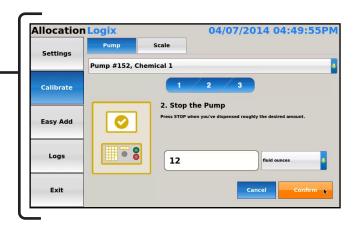
NOTE: The saved calibration values will appear in a table on the right hand side of the screen. Clean Logix recommends having 2 calibration points per pump.

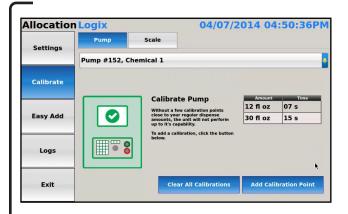
13. Repeat this process with all of the pumps that will be dispensing chemical via time. Once they are all calibrated, the unit can dispense time-based applications.

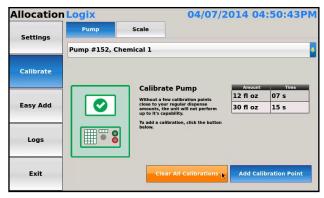
Deleting Calibrations _____

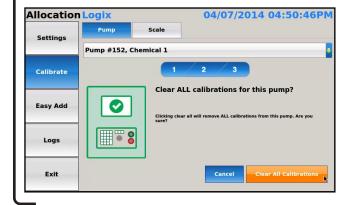
- 1. Select the pump to remove calibration point from in the drop-down menu.
- 2. Click Clear all Calibrations.
- A confirmation message will appear. Click Clear all Calibrations again to confirm the request and erase all the timed calibration points on the selected pump.

NOTE: Clearing calibrations should be a rare occurrence, but may be required if changes in the plant environment occur (e.g. change in air/water pressure, hose length, pump type, etc). That may affect the speed at which chemical is dispensed.









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Calibrating Pumps (cont.)

Water-Flush Calibrations •

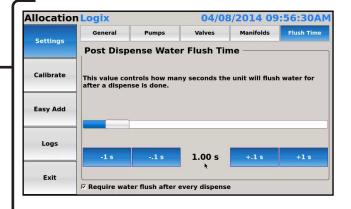
- 1. To change the length of time that water flushes after a dispense, log in as an Administrator.
- 2. Click **Settings** on the left side of the screen and open the **Flush Time** tab near the top of the screen.
- 3. Use the buttons to increase or decrease the time by 1.0 seconds or 0.1 seconds or use the scroll bar to adjust the time frame.

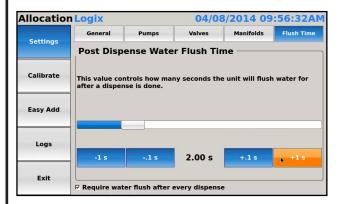
NOTE: The maximum time that water will flush after a dispense is 10 seconds.

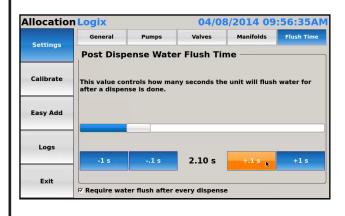
4. Click the Check-box on the bottom to require a water flush after every dispense.

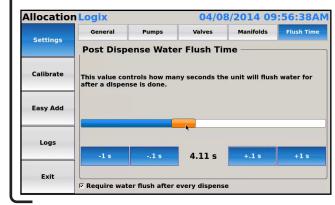
NOTE: If this is not checked, users can skip the post-dispense water flush by pressing **STOP**.

- Any changes made on this page will automatically be saved.
- 6. Press **STOP**, **A**, or click **Exit** to return to the home screen.











Dispense Instructions

Application Dispensing

- To begin dispensing, log in as a User by either swiping a RFID card or typing in their 4-digit passcode to login.
- 2. Select an application to dispense by typing in its 4-digit code.

NOTE: Once the application has been selected, the unit shows the name, location, manifold, and allowed uses of the application.

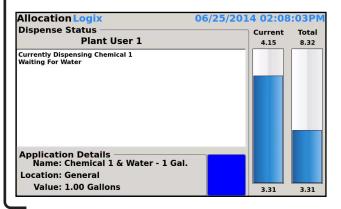
- Press START to confirm the application and continue.
- 4. If Jug Selection has been set-up a message will appear requesting verification for the type of container being used to ensure that acids and caustics are dispensed into appropriate containers:
 - RFID: the Jug's RFID card must be scanned
 - **Keypad**: the Jug's 4-digit code must be entered
- Once the jug selection requirements have been fulfilled (or if the Jug Selection is set to **Disabled**) the unit will automatically go to the pre-dispense screen.
- 6. Make sure the dispensing hose from the manifold is securely in the jug that the chemical will dispense into.
- 7. Press **START** to begin the dispense.

NOTE: The bar on the left of the screen shows the current dispense volumes while the right shows the total application volume amount. If there is more than one chemical being dispensed, these bars will be different. If there is only one chemical being dispensed, they will be equal.







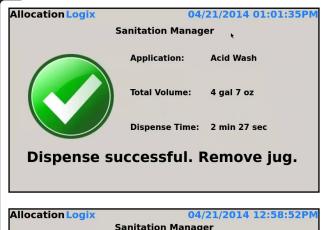


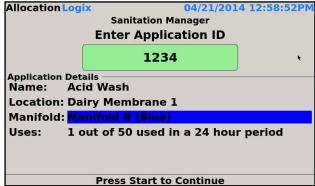
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Dispense Instructions (cont.)

Application Dispensing (cont.)

- 8. Once the dispense has been completed, press **START** to perform a Water Flush.
- 9. If another dispense is required, press **START**.
- 10. The pre-dispense screen will appear.
 - If the same application needs to be dispensed again, press **START** to begin the dispensing.
 - If a different application is required, press
 CE/E on the keypad to remove the current code and type in the new code for a different Application.
- 11. When dispensing is finished, press STOP to log out.





Manual Water Flush

- 1. To manually flush out the dispense hoses with water, select **Water Flush** from the home screen.
- 2. The screen will say *Press Key That Corresponds* to *Manifold for Flush*.
 - Press 1 to select the Red manifold.
 - Press 2 to select the Blue manifold.

NOTE: If there are more than 2 manifolds setup on the unit, press the corresponding numbers to select the correct manifold (e.g. pressing "3" would select the next manifold.)

- 3. Once the manifold has been selected, press **START** to manually rinse with water.
- 4. Rinse for a desired time length then press **STOP** to end the Water Flush and return to the home screen.



READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT



Reporting & Logs

Syncing

- To sync information to and from CleanIntel.com, press the Sync button in the bottom right corner of the home screen.
- 2. A data transfer will automatically initiate from the unit to the website and back again through the cellular router.
- 3. The unit will sync up all the data logs of dispenses including:
 - Which users have logged in
 - How much chemical has been dispensed
 - Which applications have been used
 - The time and duration for all dispenses
- 4. If a manager has created a new user, updated the list of chemicals or applications, or added new user permissions on CleanIntel.com, the syncing process will update the unit with this new data.
- 5. The unit is configured to sync to **CleanIntel.com** hourly, so a user will rarely need to manually sync.
- 6. If the syncing fails, ensure the unit has internet connection by checking the network connection method (ethernet, WiFi, or CELL-POE).
 - If configured with a CELL-POE device, check the router's status lights:
 - 4 Solid Bars = Strongest signal
 - 1 Red Bar = Weakest signal

NOTE: Consult the CELL User Manual for additional information or troubleshooting.











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USER MANUAL: ALX-PRO

READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT

Reporting & Logs (continued)

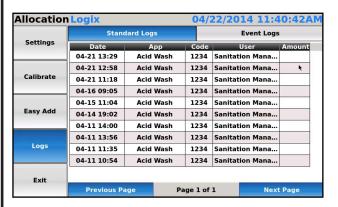
Standard & Event Logs

The data logs on the ALX-PRO can be used to see what has been happening on the unit.

- 1. To access the data logs, log in as an Administrator.
- 2. Select **Logs** from the left side of the screen.
- 3. The **Standard Logs** show which applications were dispensed when and by which user.
- 4. If there is more than one page of logs, navigate through the pages by clicking **Next Page** or **Previous Page**.

NOTE: The Event Logs show each individual action that took place on the unit, including all button presses and pointer clicks.







llocatio	nLogix	04/22/201	4 11:40:49
	Standard Logs	Ev	vent Logs
Settings	Message	Туре	Date
	Error Logs Clicked	BUTTON_CLICK	2014-04-22
	Switched to ADMIN Settings	ADMIN_VIEW_SW	2014-04-22
Calibrate	Switched to ADMIN Settings	ADMIN_VIEW_SW	2014-04-22
	View: AdminController	VIEW_SWITCHED	2014-04-22
	Key 1 Pressed	KEY_PRESSED	2014-04-22
Easy Add	Key 2 Pressed	KEY_PRESSED	2014-04-22
	Key 3 Pressed	KEY_PRESSED	2014-04-22
	Key 4 Pressed	KEY_PRESSED	2014-04-22
Logs	Valid Pin 1234 entered.	PIN_VALID	2014-04-22
	Admin Plant Manager Logge	ADMIN_LOGIN	2014-04-22
	Admin Button Clicked	BUTTON_CLICK	2014-04-22
Exit	Previous Page P	age 1 of 99	Next Page

READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT



Troubleshooting

Message	Invalid App Code
Cause	The code typed in does not reference any existing application setup on cleanintel. com.
Solution	Check the Site Info tab to see the existing applications setup on the unit, then type in a correct code to dispense an existing application.

Message	Not all Chemicals Have a Pump
Cause	A chemical in the application is not assigned to a pump.
Solution	Ensure all solenoid devices have power. On unit, go into the Admin screen, then under "Pumps" tab. Assign the chemical to a device.

Message	Not All Chemicals on Same Manifold
Cause	The application trying to dispense has multiple chemicals, but not all are assigned to the same manifold.
Solution	On unit, go into the Admin screen, then under "Pumps" tab. Assign the chemicals in the application to the same manifold. (See Page 14).

Message	No Water Pump (Water Flush Required)
Cause	Water is not assigned to the manifold that has an application that is trying to dispense, but a post-dispense water flush is required.
Solution	On unit, go into the Admin screen, then under "Pumps" tab and assign water to the correct manifold, or go under the "Flush Time" tab and deselect "Require a flush after each dispense." (See Page 23).

Allocation Logix O4/23/2014 02:44:25PM Plant Manager Enter Application ID
1213
Application Details Error: Invalid App Code
Enter an app code

Allocation Logix 04/23/2014 02:47:31PM
Plant Manager
Enter Application ID
1234
Application Details Name: Acid Wash
Location: Dairy Membrane 1 Manifold:
Error: Not all chemicals have a pump.
App has errors

Allocation Lo	ogix 04/23/2014 03:25:27PM Plant Manager Enter Application ID
	1234
Application D Name:	
Location: [Dairy Membrane 1
Manifold:	Manifold B (Blue)
Error:	Not all chemicals are on the same nanifold
	App has errors

Allocation Logi	x 04/29/201	L4 08:16:13AM
	Plant Manager	
	Enter Application ID	
	1234	
Application Deta Name: Aci		
Location: Da	iry Membrane 1	
Manifold: Ma	nifold B (Blue)	
Error: No	water pump (water flush	required).
	App has errors	

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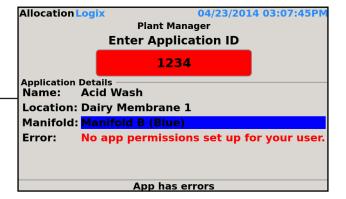
Troubleshooting (continued)

Message	No App Permissions Set Up
Cause	No permissions to dispense this application have been setup for this user on cleanintel.com.
Solution	On website, edit the user's permissions to be able to dispense that application, then sync the unit. Alternative : under General Settings select "Don't Use Permissions" (See Page 8).

Message	Too Many Uses
Cause	The application has been dispensed by that particular user to their max permission level within a 24-hour period.
Solution	On website, edit the user's permissions to be able to dispense that application more times within a 24-hour period, then sync the unit. Alternative: under General Settings select "Don't Use Permissions" (See Page 8).

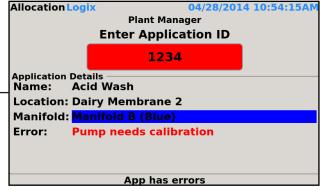
Message	Warning: No Calibrations Near Dispense Size
Cause	There are no calibrations close to the amount of chemical that is attempting to be dispensed.
Solution	On unit, go into the Admin screen, then under "Calibrate" tab. Select which pump to calibrate, then calibrate a value close to the dispense amount. (See Page 21).

Message	Pump Needs Calibration
Cause	The application trying to dispense is time-based and needs the pump to be time-calibrated, but the pump is not.
Solution	On unit, go into the Admin screen, then under "Calibrate" tab. Select which pump to calibrate. (See Page 21).



Allocation L	ogix 04/23/2014 02:53:07PM Plant Manager Enter Application ID
	1234
Application D	Details Acid Wash
Location:	Dairy Membrane 1
Manifold:	Manifold B (Blue)
ELLOL:	Too many uses, next valid use: Tuesday, Jun 24, 02:08 PM
	App has errors

Allegation	x 04/23/2014 03:31:52PM
Allocation Logiz	Plant Manager Enter Application ID
	1234
Application Deta Name: Aci	
Location: Dai	ry Membrane 1
Manifold: Mai	nifold B (Blue)
	rning: No calibrations near pense size
	App has errors



READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT



Troubleshooting (continued)

Message	No Scale Assigned to this Manifold	
Cause	The scale has not been assigned to a manifold in the Admin screen.	
Solution	On unit, go into the Admin screen and assign the scale to a manifold under the "Manifolds" tab. (See Page 17).	

Message	The Scale is not Connected
Cause	The scale assigned to the manifold of the application is not connected to the CAN network.
Solution	Check for a red light on the scale conditioner signaling power, then check the connection from the scale conditioner to the scale.

Message	The Scale is not Calibrated	
Cause	The scale has not been calibrated.	
Solution	On unit, go into the Admin screen, then under "Calibrate" tab. Tare the scale, then follow on-screen instructions to calibrate. (See Page 20).	

Message	Dispense Cancelled
Cause	User pressed STOP before the dispense finished.
Solution	During a dispense, do not press any buttons until the screen shows a green check mark signaling the end of the dispense. If this error appears, press STOP to return to the home screen.

Allocation Log	ix 04/23/2014 03:31:52PM	
	Plant Manager	
	Enter Application ID	
	1234	
Application Det		
Location: Da	Location: Dairy Membrane 1	
Manifold: Ma	nifold B (Blue)	
	ere is no scale assigned to this unifold	
	Ann has arrows	
	App has errors	

Allocation Log	ix 04/23/2014 03:3	1:52PM
	Plant Manager	
	Enter Application ID	
	1234	
Application Det Name: Ac		
Location: Da	iry Membrane 1	
Manifold: Ma	anifold B (Blue)	
Error: Th	e scale is not connected	
	App has errors	

Allocation Logix	Plant Manager	.4 10:48:07AM
_	Enter Application ID	
	1234	
Application Detail Name: Acid		
Location: Dair	y Membrane 2	
Manifold: Man	ifold B (Blue)	
Error: The	scale is not calibrated	
	App has errors	

Allocation Logix	04/	/23/2014 03:52:09PM
Plant Manager		
	Application:	Acid Wash
	Total Volume:	0 oz
	Dispense Time:	6 secs
Dispense ca	anceled! R	emove jug.

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Troubleshooting (continued)

Message	Dispense canceled! Remove Jug.
Cause	User pressed STOP before the dispense finished.
Solution	During a dispense, do not press any buttons until the screen shows a green check mark signaling the end of the dispense. If this error appears, press STOP to return to the home screen.

Message	Jug lifted prematurely! Remove jug.
Cause	On a weight based unit - user interfered with the tank before the dispense finished - causing incorrect scale readings.
Solution	Make sure the tank and scale are not touched during the dispense until the screen shows a green check mark.

Message	Scale never settled! Remove Jug.	
Cause	On a weight based unit - Vibration or unstable communication with the unit caused the scale to be unable to settle/tare itself before the dispense.	
Solution	Verify CAN-SC device(s) are properly connected, nothing is physically interfering with the scale, and that the scale is working properly and has not been damaged.	

Message	Pump activated, but no chemical arrived! Remove Jug
Cause	On a weight based unit - No chemical arrived during the dispense.
Solution	Check that pump is primed and has an air supply to it to turn it on. (See Page 21)



Allocation Logix	04/	/29/2014 08:28:53AM
	Plant Manager	
	Application:	Acid Wash
	Total Volume:	0 oz
	Dispense Time:	14 secs
Jug lifted prematurely! Remove jug.		

Allocation Logix	04/29/2014 08:39:57AM		
Plant Manager			
	Application:	Acid Wash	
	Total Volume:	0 oz	
	Dispense Time:	23 secs	
Scale never settled! Remove jug.			



READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT



Troubleshooting (continued)

Keypad Not Working

Cause	Solution
-------	----------

The USB may not be plugged in

a. Plug in the USB to the correct CPU port and Reboot

<u>Cause</u> <u>Solution</u>

The keypad may be broken a. Replace the keypad (see Parts Callout for part # and contact Clean Logix)

Touchscreen Not Selecting Properly

<u>Cause</u> <u>Solution</u>

The screen may need to be calibrated

a. Follow the monitor calibration instruction (page 37) to recalibrate the touchscreen. Restart the system when complete and try again.

<u>Cause</u> <u>Solution</u>

The screen may be broken

a. Replace the screen (see Parts Callout for part # and contact Clean Logix)

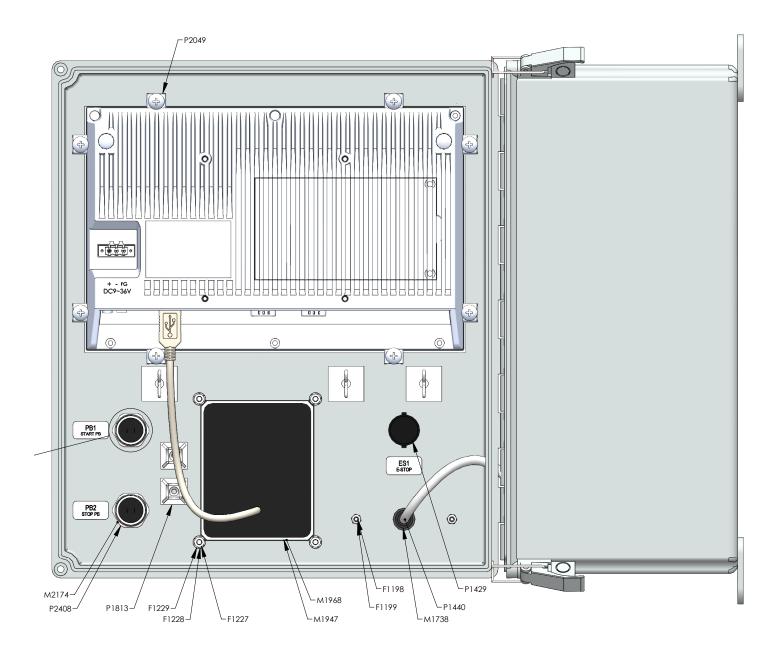
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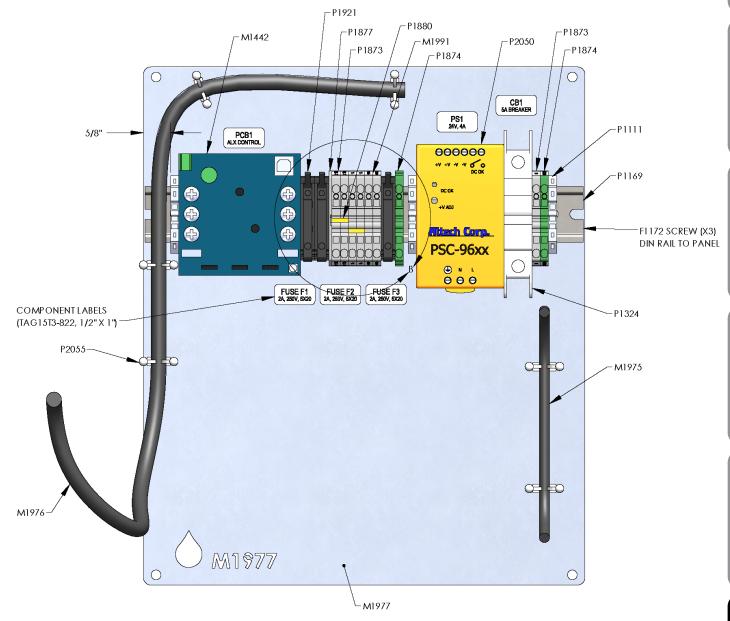


Appendix A - Parts Callout (continued)



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Appendix A - Parts Callout (continued)



READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT



Appendix A - Parts Callout (continued)

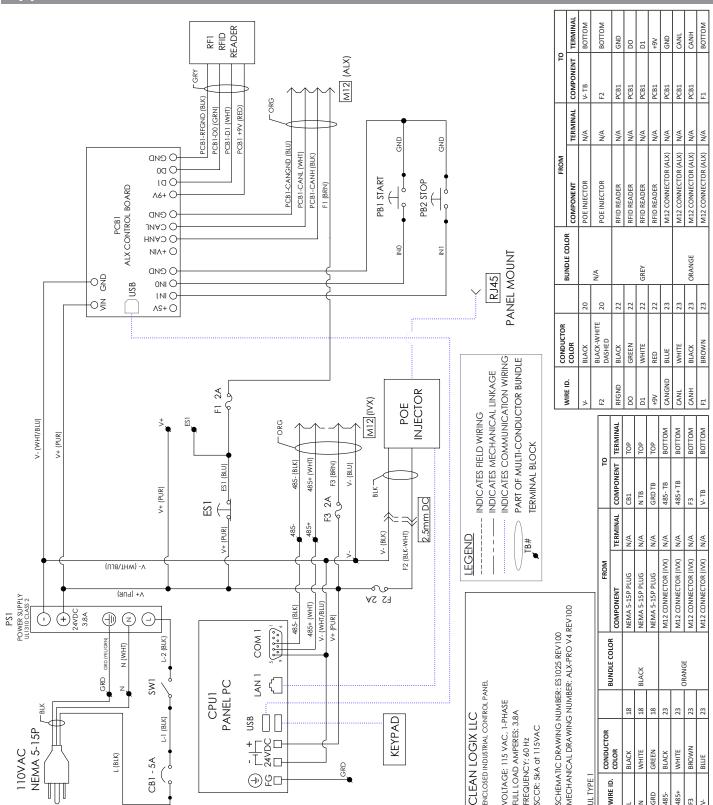
Part No.	Description
F1096	SCREW MACHINE 10-32 X 3/8 SS PHILLIPS TRUSS HD
F1172	SCREW THREAD FORMING 10-32 X 1/2 HEX WASHER HEAD ZINC
F1198	SCREW MACHINE 4-40 X 1/2 FLAT HEAD PHILLIPS 316SS
F1199	NUT NYLOCK 4-40 ZN
F1227	NUT HEX M4 ZN
F1228	WASHER SPLIT LOCK M4 316SS
F1229	WASHER M4 316SS DIN125
L0002	LABEL - COMPONENT, USES 1" X 0.5" STOCK P2038 (TAG15T3-822)
L0003	LABEL - WIRE, USES 1" X 2.25" SELF LAMINATING STOCK P2035 (TAG9T3-100B)
L0004	LABEL - SYSTEM SPECIFICATIONS, USES 3" X 5" SILVER STOCK P2036 (TAG80T1-795)
M1326	DECAL START BUTTON 22mm
M1327	DECAL STOP BUTTON 22mm
M1442	PCB ALX CONTROL
M1738	GASKET RFID PROXPOINT PLUS
M1947	KEYPAD, PIEZO, STAINLESS STEEL 20-KEY
M1968	KEYPAD GASKET, PIEZO
M1972	ENCLOSURE, ALX-PRO V4, MACHINED
M1973	DECAL, E-STOP LEGEND, 22mm BUTTON
M1975	WIRE HARNESS - ALX-PRO V4 - POWER (rev A)
M1976	WIRE HARNESS - ALX-PRO V4 - CONTROL (rev C)
M1977	ALX-PRO V4 BACK PANEL
M1991	TERMINAL BLOCK LABEL 5.1mm, CUSTOM LABELS FOR ALX-PRO V4, 1492-M5X5C
M1993	PANEL PC
M2024	LABEL ALX-PROV4 PIEZO KEYPAD
M2174	GASKET, RUBBER, 22mm ID X 28mm OD, FOR P2408
P1111	DIN RAIL ENDSTOP PHOENIX CONTACT 3022276 CLIPFIX 35-5
P1147	CORD GRIP 1/2 NPT X .170450 BLK HEYCO M3231
P1148	CORD GRIP NUT 1/2" NPT BLACK - HEYCO 8463
P1169	DIN RAIL 35mm
P1184	CORD GRIP 1/2 NPT X .095260 BLK HEYCO M4518

Part No.	Description
P1190	USB CABLE RT ANGLE, STRAIGHT A MALE, UP ANGLE B MALE, 0.75M
P1276	CABLE ASSY DC POWER 2.5mm X 6' 18AWG
P1282	CABLE, M12, 4 POLE, 5m (16.48 ft.) AXIAL FE- MALE/AXIAL MALE, PVC IP69K ORG
P1288	POWER CORD 18/3 SJOOW 90 BLACK N.A. W/ 5-15P & 7in ROJ (10 FEET)
P1317	Eaton Selector Switch, NON-ILL V-POS MTN SEL SWTCH THB-GP BLK-BZL 2NO
P1324	CIRCUIT BREAKER EATON WMZT1D05
P1429	PUSH-PULL PUSH BUTTON, RED, 40MM, NON-ILL, COMPACT (NOTE: Order in multiples of 20)
P1432	USB RECEPTACLE DUST CAP SAMTEC DCA-17-01
P1440	RFID READER HID PROXPOINT PLUS 6500
P1441	FUSE 250VAC 2A 5X20
P1540	M12 PORT CAP
P1640	POE INJECTOR WITH LED INDICATOR
P1668	SOCKET RJ45 FIELD WIRED SAMTEC SCPFE- 17-G-01
P1669	RECEPTACLE RJ45 PANEL MOUNT SAMTEC SCRES-G-00.25-D-C5E
P1758	LABEL, UNDERWRITERS LABRATORY
P1813	CABLE TIE HOLDER
P1873	TERMINAL BLOCK SPRING CLAMP 2.5mm 2 POINT PASS THRU GRAY A-B 1492-L3
P1874	TERMINAL BLOCK SPRING CLAMP 2.5mm GROUND A-B 1492-LG3
P1877	TERMINAL BLOCK END BARRIER L3 SERIES A-B 1492-EBL3
P1880	TERMINAL BLOCK JUMPER 5.1mm 10-POLE A-B 1492-CJK5-10
P1921	FUSE HOLDER 5mm DIN RAIL MOUNT A-B 1492
P1934	GREASE, ELECTRIC INSULATING .170Z ONE TIME USE PACK
P2049	PC, PANEL MOUNT, 10 INCH, TEGUAR TP-2945-10
P2050	POWER SUPPLY 24VDC, 4A, ALTECH PSC-9624
P2051	DRIVE, SOLID STATE, 2.5", 30GB, MLC, IND. TEMP, SSD
P2054	CABLE CLIP, TWIST LOCK, ADHESIVE MOUNT, 1" X 1" PAD, UP TO 1/2" BUNDLE
P2055	CABLE CLIP, TWIST LOCK, SNAP-IN, UP TO .600" BUNDLE
P2408	SWITCH, PIEZO BUTTON, N.O., MOMENTARY, SINGLE POLE, 22mm, 316SS, 24V AC/DC, 0.2A

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Appendix B - Electrical Schematic



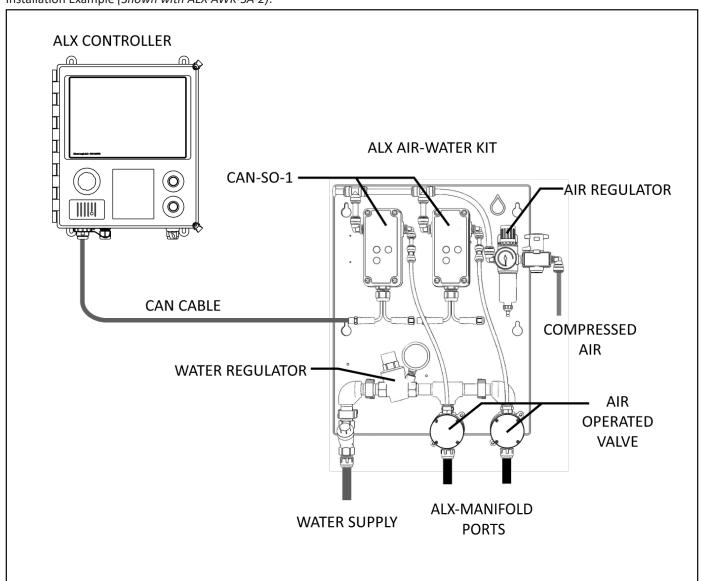
READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT



Appendix C - ALX AIR-WATER KIT Installation Set Up

- 1. Mount and connect Devices in a daisy-chain fashion using the orange M12 cables. They can be installed in any order.
- 2. Hand tighten M12 cable connections, then tighten two more clicks using wrenches.
- 3. Plumb compressed air lines and fluid lines for pumps and valves as necessary [see below]
 - *Clean Logix recommends setting the air pressure between 60 & 80 PSI.

Installation Example (Shown with ALX-AWK-SA-2):



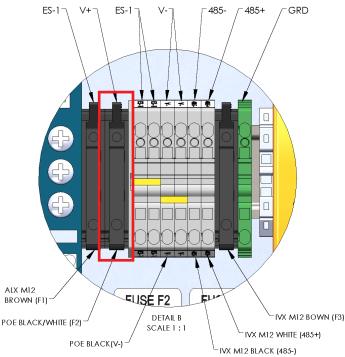
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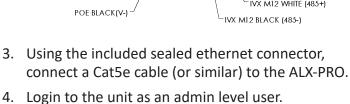
Appendix D - Network Configuration

Network Configuration settings are available for units to be integrated into a facility's existing network, via Ethernet or WiFi sources. To connect and configure the unit for either option:

- 1. Power down the system via the power switch on the bottom of the enclosure and unplug the unit.
- 2. Open the enclosure and remove **FUSE F2** (for use with the CELL-POE) as shown in [Figure 34.1].

FUSE & WIRE LOCATIONS





- 5. Navigate to **Config** screen to view **Network Settings**.
- 6. Enter the information as necessary for the plant network to be configured to.
- 7. Click **Apply** to save changes and enable networking.

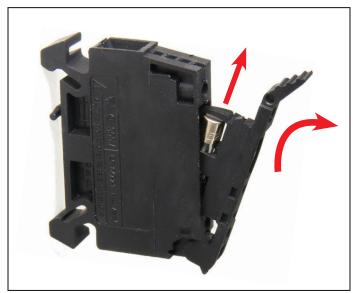
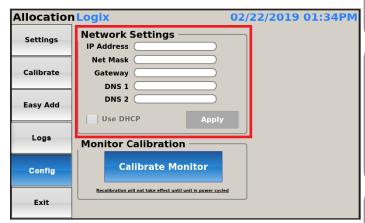


Fig 35.1: Opening fuse holder and removing fuse



READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT

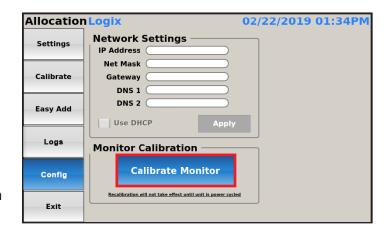


Appendix E - Screen Calibration

The touchscreen HMI used in the ALX-PRO allows for the precise selection of on-screen commands. In some cases, these calibration settings may become invalid, causing incorrect or missed selections.

To recalibrate the screen review the following instructions:

- 1. Login to the unit as an admin level user.
- 2. Navigate to the Config menu screen.
- Select Calibrate Monitor and follow the on screen instructions to re-calibrate the touch screen settings.
- 4. Setting are saved on completion.
- 5. Power cycle the unit to enable the new calibration settings.
- 6. Test touchscreen and re-calibrate as necessary.



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Appendix F - IVX Sensor Integration

 Connect Clean Logix IVX sensors using the orange M12 cable labeled for IVX.

NOTE: 2 orange M12 cables are exiting the unit. The LEFT cable is labeled for ALX solenoids, the RIGHT cable is labeled for IVX sensors.

- 2. The IVX Signal Converter (IVX-SIG) power and sensor connection lights will illuminate when fully connected.
- 3. Install the sensor to the container to be monitored.
- 4. Login to the ALX-PRO.
- Navigate to Settings > IVX to view the raw milliamp output of the sensor.
 - ID numbers are based on IVX Signal Converter.
 Open the Signal Converter's enclosure cover to identify each sensor's ID number.
- 6. Raw Values can be converted using the following formulas:
 - Pressure mA = [RAW VALUE] ÷ 3000
 - Example) $12819 \div 3000 = 4.273 \text{ mA}$
 - Ultrasonic Distance (in.) = [RAW VALUE] ÷ 128
 - *Example*) $12819 \div 128 = 100.15$ inches

NOTE: For further information on installing and configuring sensors, consult the IVX Sensor User Manual.

