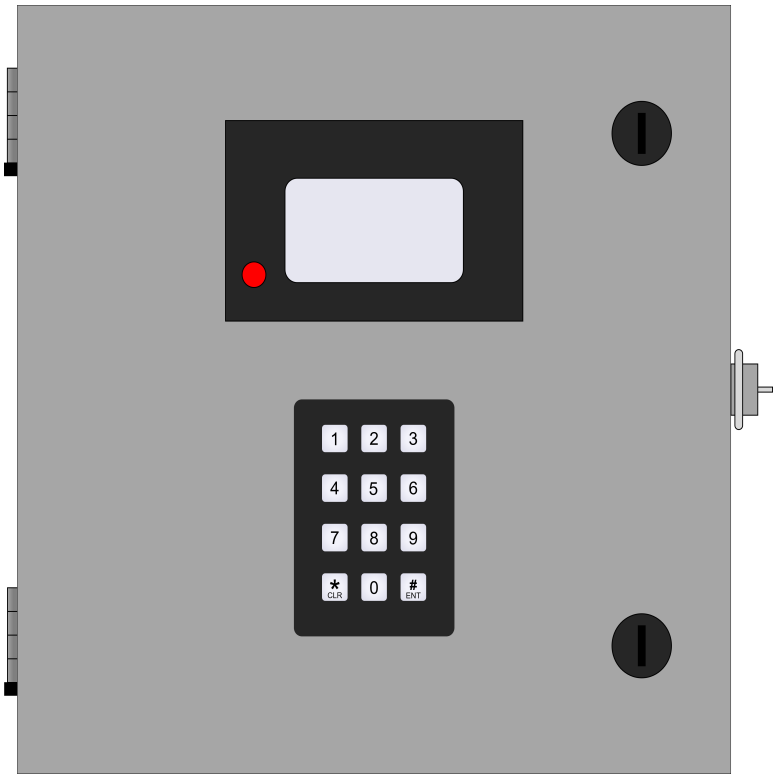
FUEL LOCK®

INSTALLATION & OPERATION MANUAL



700004-FL November 2021 Version 3.0

Thank you for your purchase of Fuel Lock®! We appreciate your business.

CUSTOMER SUPPORT

For warranty service, please contact the your authorized retailer.

For product support, troubleshooting, or additional questions with your Fuel Lock system, please contact your local dealer (www.fuellock.ca/locate-a-dealer) or IntraGrain Technologies Inc. at:

support@intragrain.com

1.833.570.7979

www.fuellock.ca

CERTIFICATIONS

FCC ID: 2AUTY-106304-V03

Contains FCC ID: XPY1EIQ24NN; IC: 8595A-1EIQ24NN

This device complies with part 15 of the FCC Rules.

Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by IntraGrain Technologies Inc. could void the user's authority to operate the equipment.

Caution: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Warning: Radio-frequency radiation exposure risk. This equipment complies with radiation exposure limits prescribed for an uncontrolled environment for fixed and mobile use conditions. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and the body of the user or nearby persons. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter except as authorized in the certification of the product.

MANUFACTURER'S WARRANTY

INTRAGRAIN LIMITED ONE-YEAR WARRANTY

IntraGrain Technologies Inc. (IntraGrain) warrants that for a period of one (1) year from the date of original purchase, this product will be free from defects in material and workmanship. IntraGrain, at its option, will repair or replace this product or any component of the product found to be defective during this warranty period. Replacement will be made with a new or re-manufactured product or component. No warranty is provided for batteries.

This warranty is valid for the original retailer purchaser from the date of initial retail purchase and is not transferable. Proofof purchase is required to obtain warranty performance.

WHAT THIS WARRANTY DOES NOT COVER

This warranty does not cover normal wear of parts or any damage resulting from any of the following: negligent use ormisuse of the product; damage in transport, natural disaster, improper installation or use, improper abuse or improperhandling This warranty is limited to only those manufacturing defects that were caused or allowed by IntraGrain.

How to Obtain Warranty Service

Please contact the authorized retailer you purchased the product from. For additional support, please contact IntraGrain Technologies Inc. at 306.570.7979 or visit www.intragrain.com

CONTACT US

For support questions, troubleshooting, or help with your Fuel Locksystem, please contact your local retailer for more information and assistance, or IntraGrain Technologies Inc. at info@intragrain.com or 306-570-7979.

FUEL LOCK®

LIABILITY CLAUSES

The following clauses describe the general liability limitations/exclusions used in our product sale agreements.

ASSUMPTIONS

1. The client is defined in the agreement as “the Purchaser”
2. IIntraGrain and its authorized distributors are defined in the agreement as “the Seller”
3. The item being sold by the Seller is defined in the agreement as “the Product”

If the assumptions are incorrect, the text needs amendment to accommodate any changes in the assumptions.

CLAUSES

1. INSTALLATION OF PRODUCT

The Seller highly recommends that the Purchaser obtain the services of a licensed electrician when installing the Product at the Purchaser’s premises. The Seller does not recommend that the Purchaser attempt to install the Product on their own.

2. EXCLUSION OF LIABILITY

The Purchaser acknowledges that the Seller is engaged hereunder to provide the sale of the Product only and does not guarantee any installation of the Product by the Purchaser on their premises. The Purchaser agrees that the Seller is not liable for any work performed by the Purchaser or any other person in respect of the installation of the Product on the Purchaser’s premises.

3. LIMITATION OF LIABILITY

The Purchaser and the Seller have agreed to allocate the risk and benefit of the services to be performed by the Seller hereunder. The risks have been allocated such that the Purchaser agrees, to the fullest extent permitted by law, to limit theliability of the Seller to the Purchaser for any and all actions, claims, demands, liability, losses, damages, costs, charges andexpenses (including legal fees and disbursements as invoiced), so that the total aggregate liability of the Seller, its directors,officers, employees and agents to the Purchaser shall not exceed CDN$500.00 or the Seller’s total fee for the Product provided hereunder, whichever is greater. The Purchaser and the Seller intend that this limitation of liability apply to any and all liability or cause of action however alleged or arising, unless otherwise prohibited by law.

4. RELEASE AND INDEMNITY

The Purchaser hereby releases, remises and forever discharges the Seller of and from any and all actions, claims or demands of every nature and kind whatsoever which may be made against the Seller by or through the Purchaser or by thePurchaser through any third party arising out of or in any way connected with the Product, howsoever and whenever brought or made against the Seller. The Purchaser agreesto indemnify and save harmless the Seller of and from any and all actions, claims, demands, liability, losses, damages, costs,charges and expenses (including legal fees and disbursements as invoiced) that the Seller may sustain, incur or be liable for inconsequence of any and all actions, claims and demands of every nature and kind whatsoever which may be made against the Seller by any third party arising out of or in connection with the performance by the Seller of the services hereunder, howsoever and whenever sustained or incurred by the Seller.

SAFETY

READ AND FOLLOW ALL INSTRUCTIONS.

SAVE THESE INSTRUCTIONS.

Use the Fuel Lockdevice for its intended use only, as described in this manual. Do not use attachments not recommended by the manufacturer.

Standards

This manual will use the following standard safety terms and conventions to indicate conditions:

WARNING: INDICATES A HAZARDOUS SITUATION RESULTING IN SERIOUS INJURY OR DEATH.

CAUTION: Indicates a hazardous situation which, if not avoided, could result in moderate injury and/or property damage.

Note: Indicates an important message not related to personal injury or property damage.

Where there is a risk of fire, electric shock, or injury to persons the following labels shall be included:

SAFETY INFORMATION

This is a professional grade product. A knowledge of electrical installation according to codes are required for proper installation and user satisfaction. We recommend that a licensed electrician perform the installation of Fuel Lock. Our warranty does not cover improper installation related problems.

WARNING: RISK OF SEVERE INJURY FROM ELECTRIC SHOCK OR DEATH FROM ELECTROCUTION! Failure in completing the following could result in serious injury or death. We recommend that a licensed electrician perform the installation and servicing of Fuel Lock.

1. Turn off electrical power before opening the enclosure cover
2. When closing the cover ensure wires are not pinched
3. The enclosure box must be electrically grounded
4. **Do not** apply power to the device until instructed to do so
5. Perform any line and load voltage wiring in accordance with local and federal authorities and in compliance with the Canadian Electrical Code and National BuildingCode
6. Make sure operator voltage, phase, and frequency nameplate ratings are identical to the job site line voltage ratings
7. Input wiring must be properly sized for the operator's required amperage and must not exceed the nameplate ratings
8. Use a padlock on the device to reduce the risk of injury or tampering of the unit
9. The unit must not exceed 30 amps and 1hp pump motor rating

ABOUT FUEL LOCK

Fuel Lock® was created to fill the need for real-time fuel asset management, showing users when fuel is accessed, and by whom. Fuel Lock allows the flexibility of viewing data from anywhere in the world via desktop or mobile devices.

Fuel Lock is an auto-locking and monitoring device, utilizing coded entry to access fuel and providing real-time reporting for fuel usage. The deviceutilizes cellular data to communicate with the Fuel Lock app when fuel tanks have been accessed. Features include custom alerts as well as notifications to your fuel provider for auto-refilling.

APPLICATIONS

Fuel Lock is used to monitor fuel usage from bulk fuel tanks. The Fuel Lock device is connected to a power source that is installed away from the fuel tanks. To access fuel, users must enter a four-digit PIN to turn on power to the fuel pumps. After use, Fuel Lock will automatically lock after a user set time increment.

The wireless communication of the Fuel Lock device to the app provides the producer or commercial facility operator instant access to employee usage and frequencythrough an interactive and intuitive app display. Real-time alerts are communicated through push, text, and/or email and can be customized for each user.

FEATURES

FUEL LOCK FEATURES	Fuel Lock Personal (FL-106304-P)	Fuel Lock Business (FL-106304-C)
Operates 120/240V pumps	✓	✓
Connection to new or existing pumps	✓	✓
Max 30 amps	✓	✓
Single user PIN entry	✓	✓
Automatic locking timer	✓	✓
Weatherproof enclosure	✓	✓
Equipment ID tracking		✓
Odometer tracking		✓
Fuel fill limits		✓
Tank level sensing compatibility		✓
Ability to control two types of fuel		✓
Free download of Fuel Lock app		✓
Custom text and email alerts		✓
Payment receipts to your email		✓
Daily, weekly or monthly PIN usage reports		✓
Lockout parameters		✓
Enclosure tamper alert		✓
Read volume per employee fill		✓
Flow meter compatible		✓
Annual data fees apply upon account activation		✓
Connection to existing flow meters		✓
Share level data with fuel provider		✓

Fuel Lockdevices are powered by 120V and provide switched power (120V or 240V) to fuel pumps. Each power supply connection uses a contactor to switch up to 30A of current at either 120V or 240V. Fuel Lock Personal has one power supply while Fuel Lock Business has two independently controlled power supplies. **Multiple pumps can be connected to the same power supply so long as the combined current of all pumps connected to all power supplies does not exceed 30A.**

Fuel Lock Personal has one power supply that can provide power multiple to pumps up to a maximum of 30A.

Fuel Lock Business has two independently controlled power supplies. The two power supplies can be set up so that each only provides power to a specific set of pumps. This is the case in Diagram 2 where Power Supply 1 provides power to diesel pumps, and Power Supply 2 provides power to gas pumps. Each can provide power to multiple pumps to a maximum of 30A combined between both power supplies. For example, four 5A pumps could be connected to Power Supply 1 and two 5A pumps could be connected to Power Supply 2.

- Connection to new or existing tank site
- 1-1000 users
- Auto-Lock between 5-60 minutes (Adjustable)
- LED Indicator light to signal locked, unlocked, or settings mode
- LCD display screen
- Compatible with 120/240V pumps (device still requires a neutral)
- Connection to wireless level sensors

(upgrade configuration with flow meter and level sensor options)

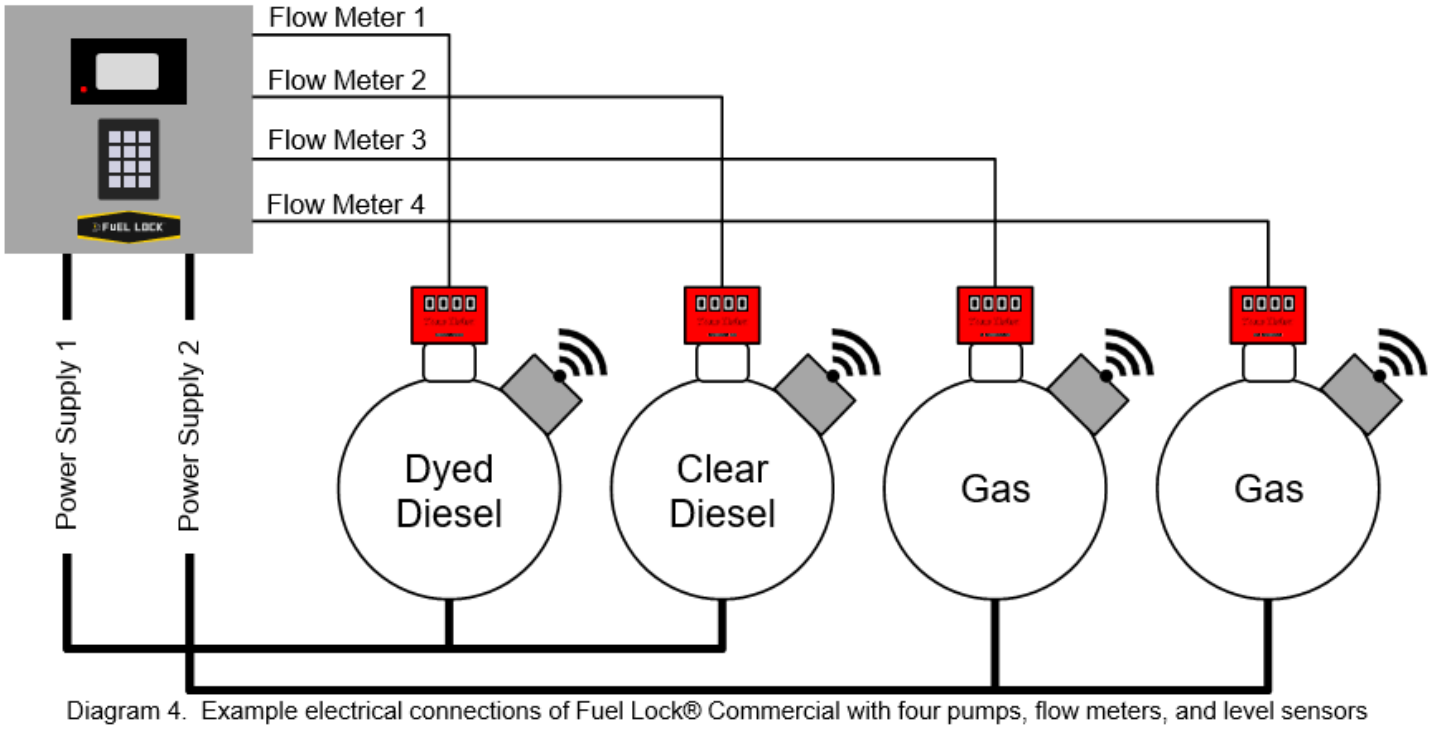
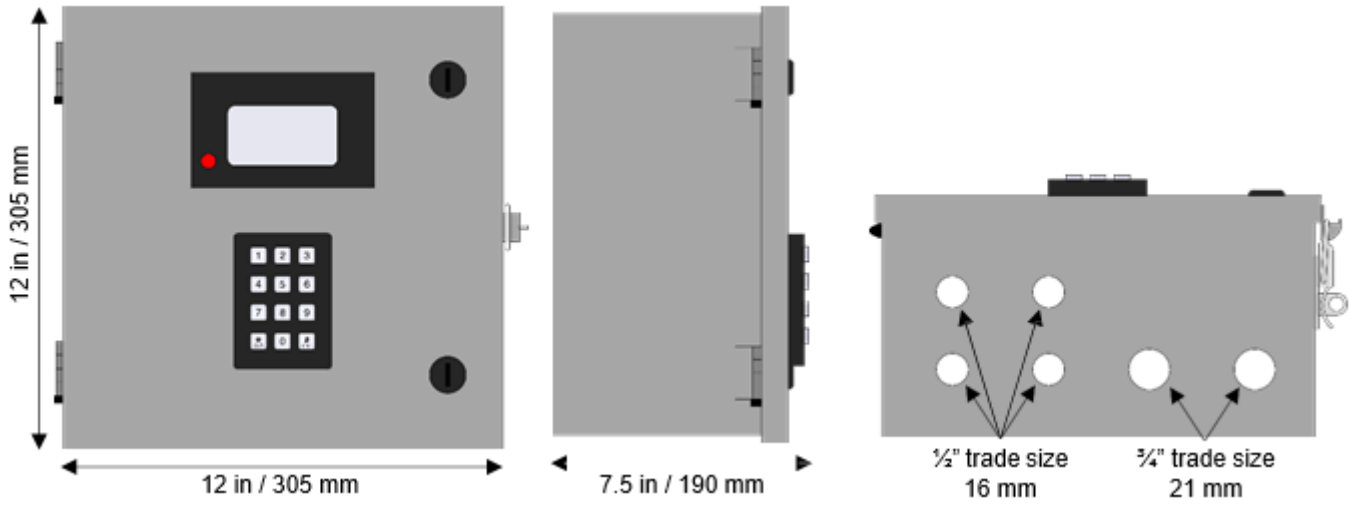


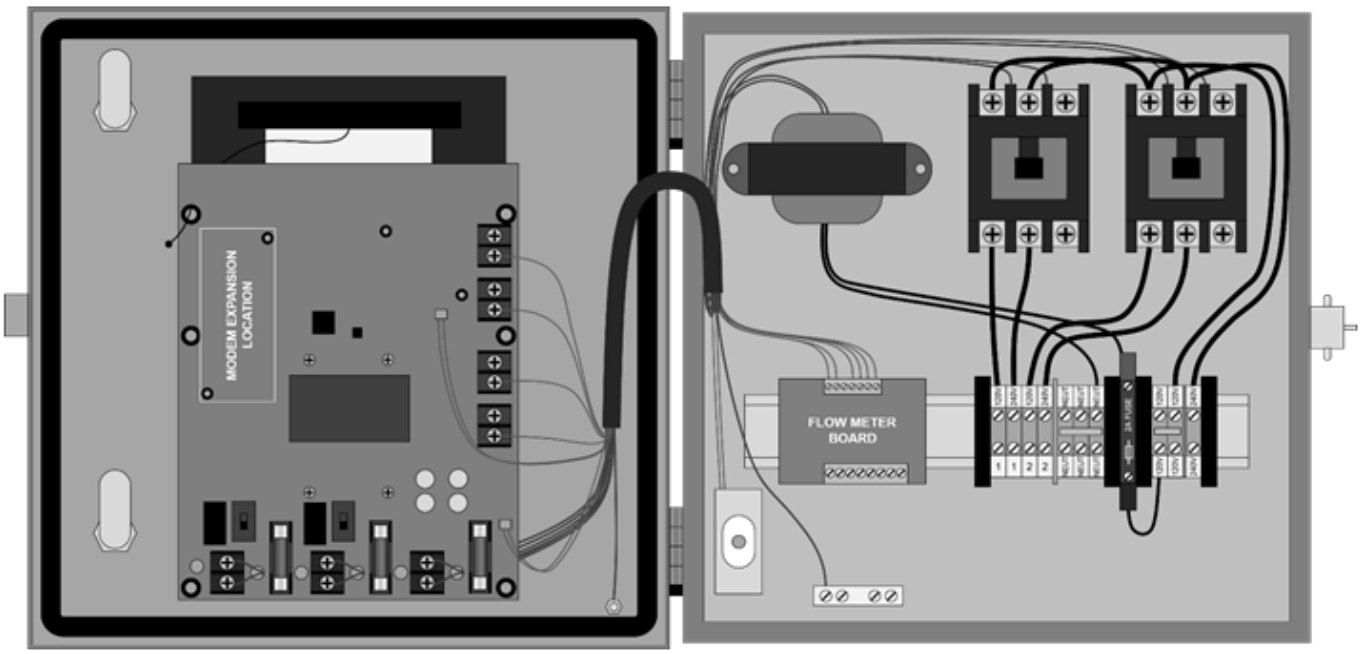
Diagram 4. Example electrical connections of Fuel Lock® Commercial with four pumps, flow meters, and level sensors

SPECIFICATIONS

- Operating Temperature: -40C (-40F) to +60C (+140F)
- Max Voltage: 240 VAC Enclosure Material: SteelHP Rating: 1HP
- Max Amperage: 30A
- Degree of Protection (Enclosure): Powder coated 16 gauge steel, Nema 4-4X, weatherproof IP67 (Li/FeS2) Size: W X L X D 12 X 12 X 7.5 (inches) 305 X 305 X 190
- Weight: 21.5lbs



(inside view)



FUEL LOCK INSTALLATION

Fuel Lock® devices are powered by 120V and provide switched power (120V or 240V) to fuel pumps. Each power supply connection uses a contactor to switch up to 30A of current at either 120V or 240V. Fuel Lock Personal has one power supply while Fuel Lock Business has two independently controlled power supplies.

Note: Multiple pumps can be connected to the same power supply so long as the combined current of all pumps connected to all power supplies does not exceed 30A.

Fuel Lock Personal has one power supply that can provide power multiple to pumps up to a maximum of 30A.

Fuel Lock Business

Fuel Lock Business has two independently controlled power supplies. The two power supplies can be set up so that each only provides power to a specific set of pumps. This is the case in Diagram 4 where Power Supply 1 provides powerto diesel pumps, and Power Supply 2 provides power to gas pumps. Each can provide power to multiple pumps to a maximum of 30A combined between both power supplies.

The upgrade configurations support the connection of up to four flow meters. Flow meters can be connected to any of the four flow meter inputs regardless of which power supply the corresponding pump is connected to.

COMPONENTS

- 1-Fuel Lock Device
- 1-Installation Instruction Manual
- 1-App User Guide

TOOLS REQUIRED

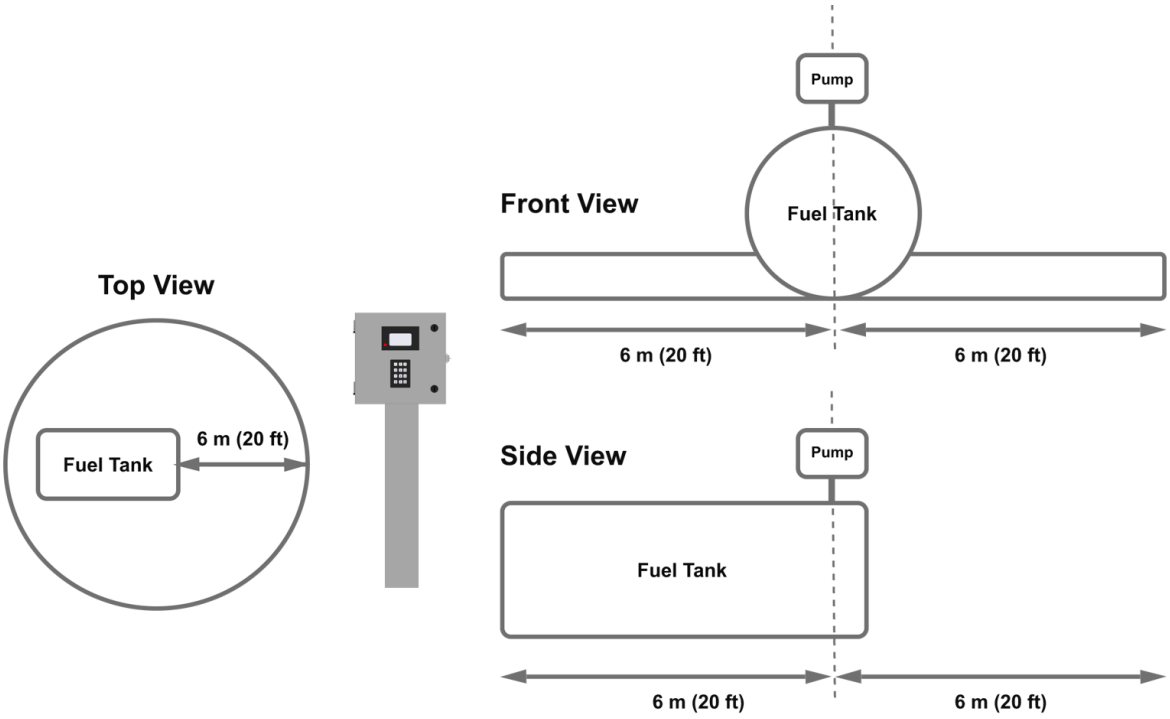
- Wire Strippers
- Medium Flat Screwdriver
- Small Flat Screwdriver

INSTALLATION PROCEDURE

Identify all Fuel Lock components before starting installation.

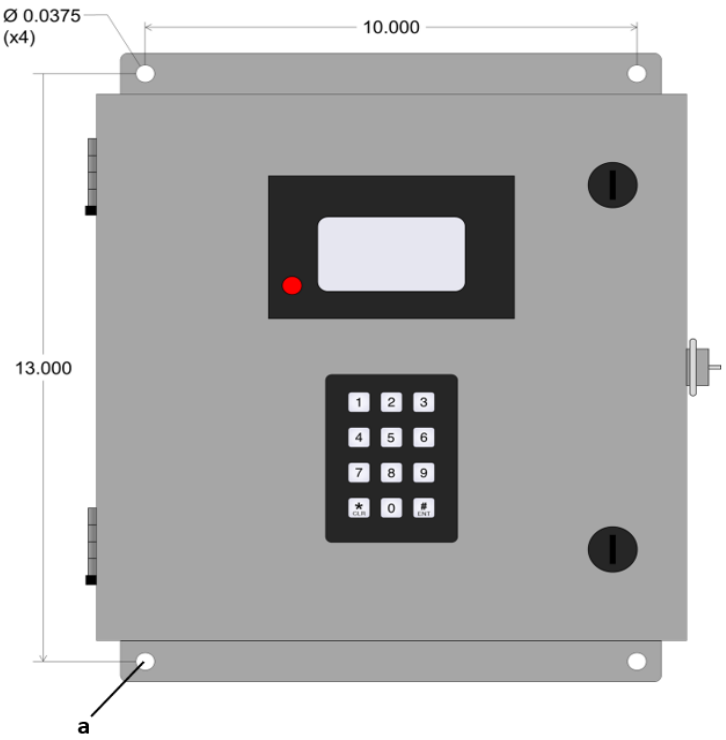
WARNING: DO NOT MOUNT THE FUEL LOCKDEVICE WITHIN A CLASS 1, DIV 1 OR CLASS 1, DIV 2 HAZARDOUS/CLASSIFIED AREA.

CLASS 1, DIV 1	CLASS 1, DIV 2
Entire space within the dispenser enclosure; 450 mm (18 in.) from the exterior surface of the dispenser enclosure to an elevation of 1.22 m (4 ft) above the base of the dispenser; the entire pit or open space beneath the dispenser and within 6 m (20 ft) horizontally from any edge of the dispenser when the pit or trench is not mechanically ventilated.	Up to 450 mm (18 in.) above ground and within 6 m (20 ft) horizontally from any edge of the dispenser enclosure, including pits or trenches within this area when provided with adequate mechanical ventilation.



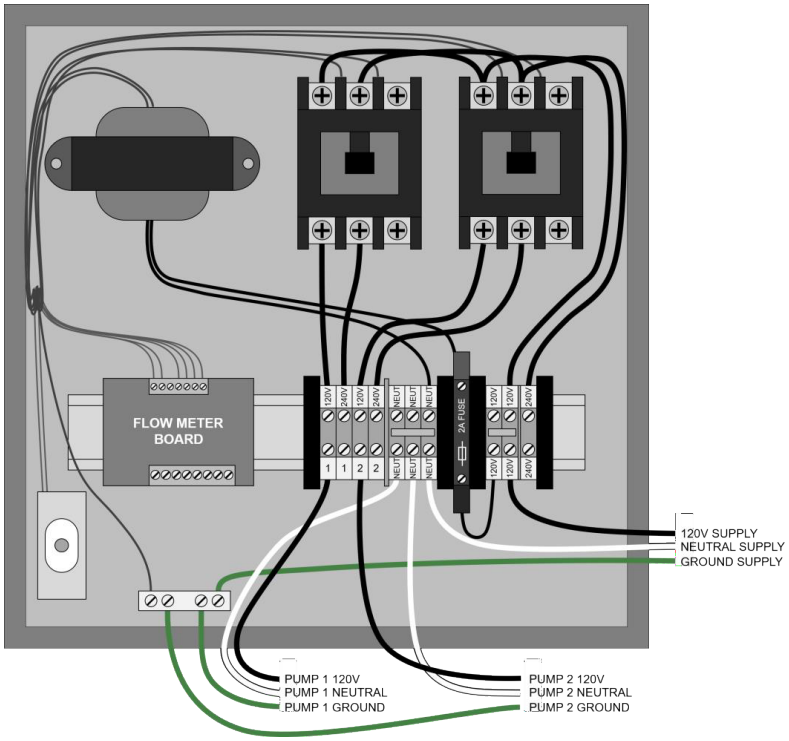
Caution: Do not open the junction box and cut the wire, this will void warranty.

1. Identify a suitable mounting location for the Fuel Lock device within the parameters outlined above
2. Mount the Fuel Lock device to a stable surface using the 4 screw holes on the outside flanges **(a)**



CONNECTING FUEL LOCK TO 120V PUMPS

Note: The combined amperage of all fuel pumps connected to both power supplies must not exceed 30 amps.



120v Pump Connection Diagram

1. Shut off power to the device
2. Connect the line side hot conductor (black, from breaker) to the terminal marked “120V” on the right side of the terminal strip
3. Connect the line side neutral conductor (white, from breaker) to one of the three terminals marked “NEUT”
4. Connect the load side hot conductor (black) for the fuel pump(s) to the terminal marked either “1” or “2” on the bottom and “120V” on the top.
5. Connect the load side neutral conductor (white) for the fuel pump(s) to one of the remaining terminals marked “NEUT”
6. Connect the load and line side ground conductors (green or bare) to the ground bar in the bottom left corner of the Fuel Lockenclosure

Fuel Lock Business

7. Connect the load side hot conductor (black) for the first fuel pump(s) to the terminal marked “1” on the bottom and“120V” on the top
8. Connect the load side hot conductor (black) for the second fuel pump(s) to the terminal marked “2” on the bottom and “120V” on the top
9. Connect the load side neutral conductor (white) for the second fuel pump(s) to the last remaining terminal marked“NEUT”

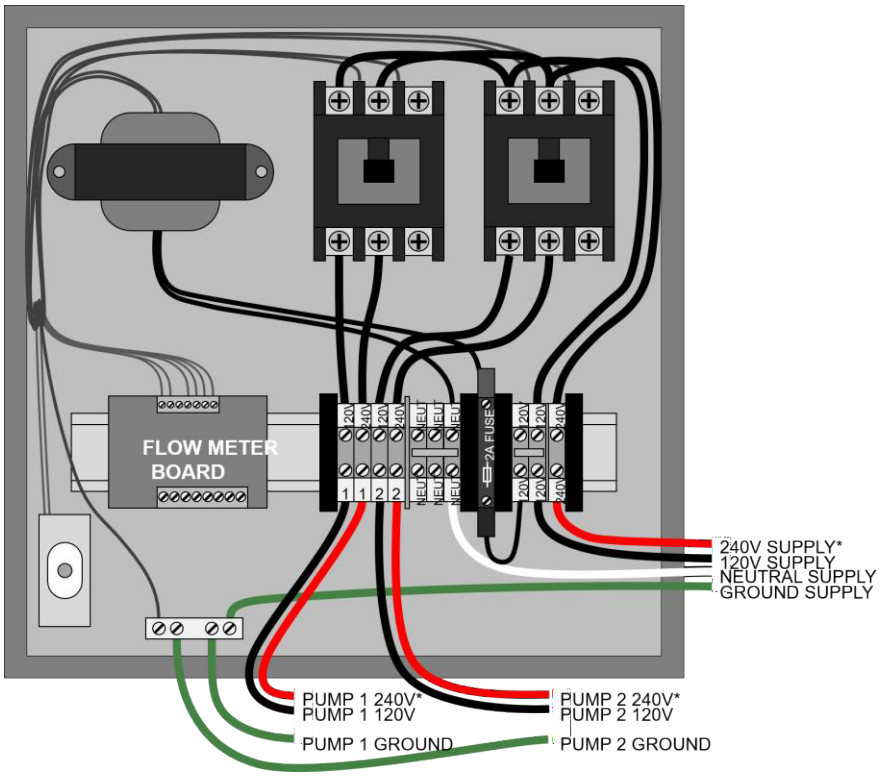
10. Connect the load and line side ground conductors (green or bare) to the ground bar in the bottom left corner of the Fuel Lock enclosure]
11. Install the app to add flow meters

Note: A spare 2A glass fuse is provided in the fuse holder on the terminal strip

Caution: Avoid over-tightening the screw terminals to avoid breaking

CONNECTING FUEL LOCK TO 240V PUMPS

Note: When connecting to 240V pumps, a neutral conductor is still required for the control circuit. A three-conductor wire shouldbe used to provide 240V plus neutral from the panel to the Fuel Lock device.



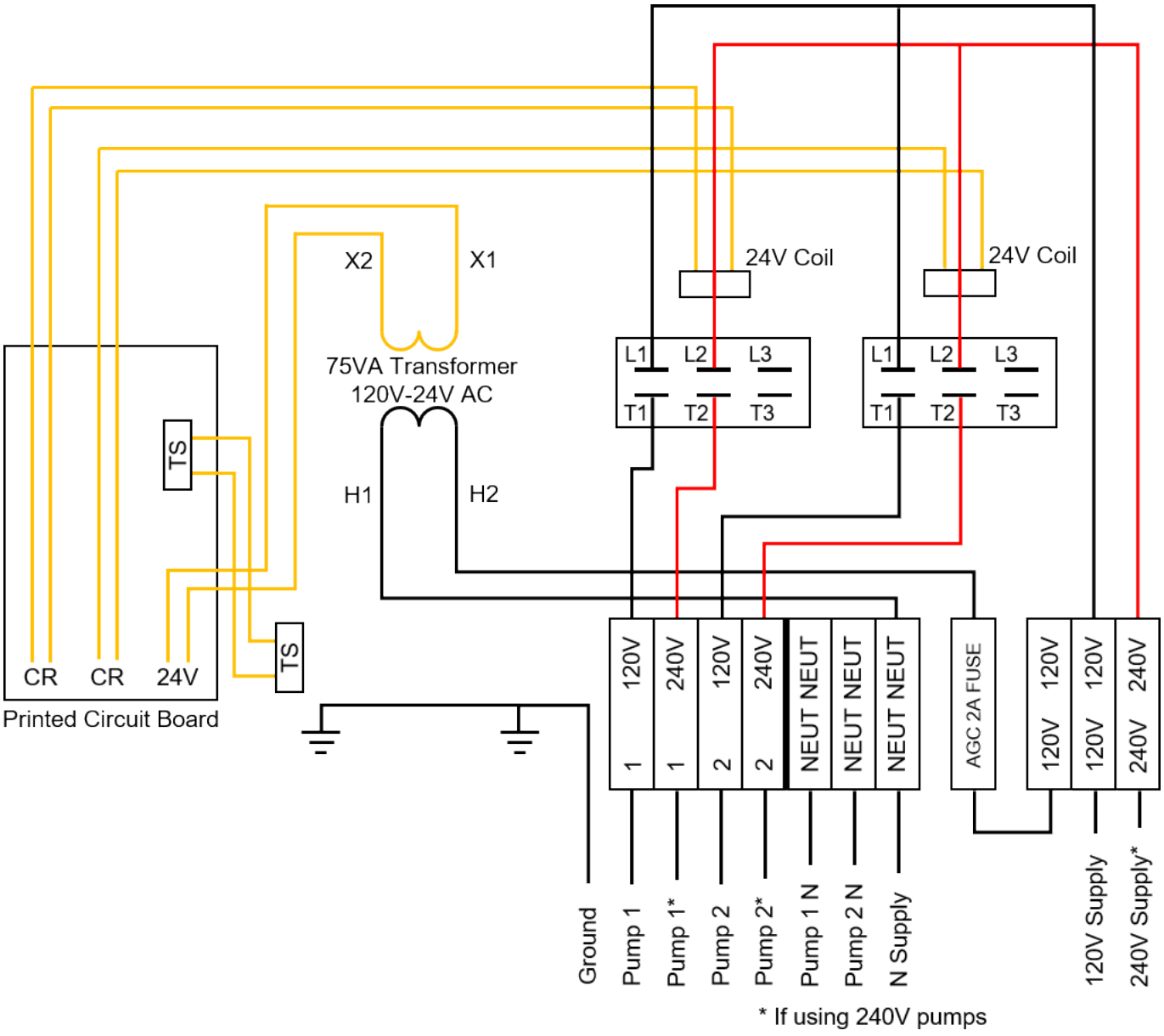
240v Pump Wiring Diagram

1. Shut off power to the device
2. Connect the second line side hot conductor (from breaker) to the terminal marked “240V” on the right side of the terminal strip
3. Connect the second load side hot conductor for the fuel pump(s) to the terminal marked either “1” or “2” on the bottom and “240V” on the top

Fuel Lock Business

4. Connect the second line side hot conductor (from breaker) to the terminal marked “240V” on the right side of theterminal strip

5. Connect the second load side hot conductor for the first fuel pump(s) to the terminal marked “1” on the bottom and “240V” on the top
6. Connect the second load side hot conductor for the second fuel pump(s) to the terminal marked “2” on the bottom and “240V” on the top



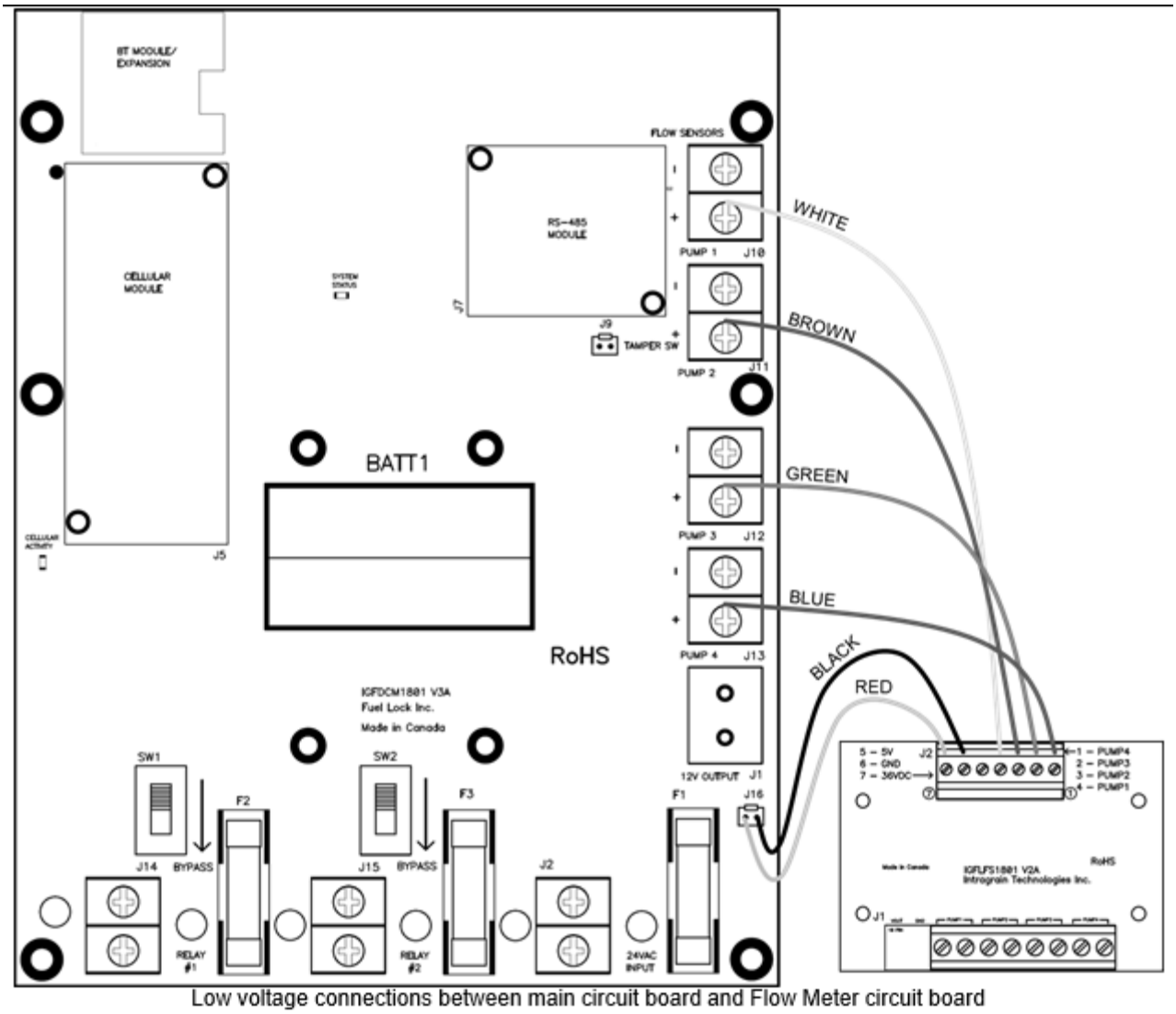
Fuel Lock Device Schematic Wiring Diagram

FLOW METER - FUEL LOCK BUSINESS

Note: Fuel Lock (FL-106304-B) will be manufactured with flow meter hardware (effective April 1, 2019).

Fuel flow meters and pulsers are connected to Fuel Lock devices through the Fuel Lock flow meter board. The flowmeter board conditions the electrical signals from flow meters and pulsers, and provides convenient access to the flow meter connection terminals.

The screw terminals at the top of the flow meter board connect it to the main circuit board in the Fuel Lock device. The diagram below shows the connections between the main circuit board and the flow meter board.



Low voltage connections between main circuit board and Flow Meter circuit board

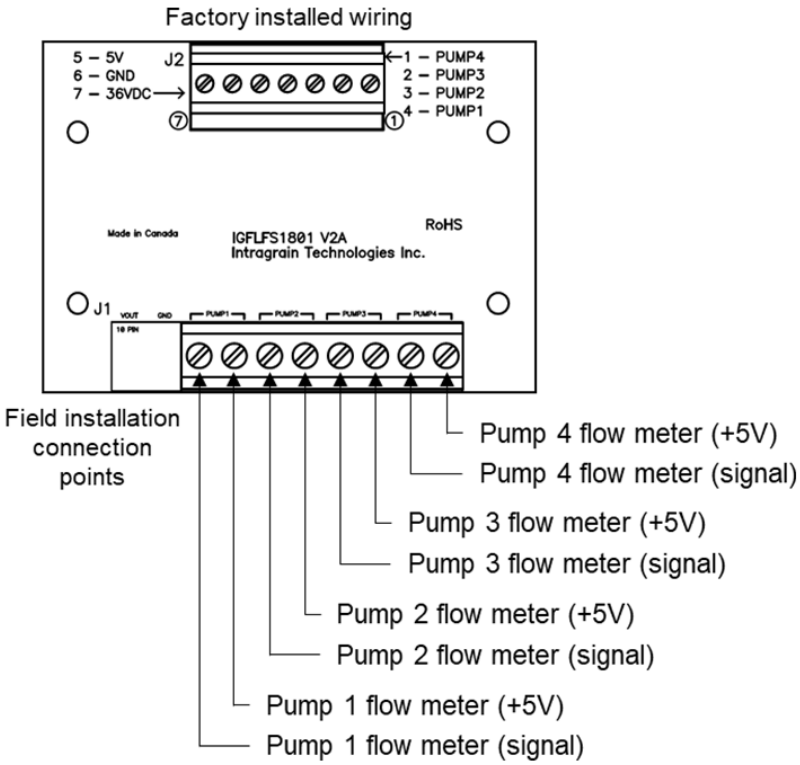
Fuel Lock is compatible with third party pulsers (Fuel Lock does not supply pulsers) that generate volume data for the Fuel Lock to display on the device screen, mobile app and excel reports.

Fuel Lock is compatible with 2 wire, reed switch pulsers that generate a signal voltage between 0-5VDC and does not support 3 wire pulsers or pulsers that require an external DC power to operate.

Warning: Do not attach AC power to the terminal marked 12VDC. This terminal is for DC powered pulsers only.

Install pulser according to the manufacturer's instructions.

Note: For 2 wire pulser models, either wire is interchangeable with the terminals.



Flow Meter Board Field Installation Electrical Connections

Caution: When installing flow meter wiring, avoid running flow meter signal wires nearby fuel pump power wires to reduce the risk of interference and false readings. For best results, run flow meter circuits in a separate wire or conduit.

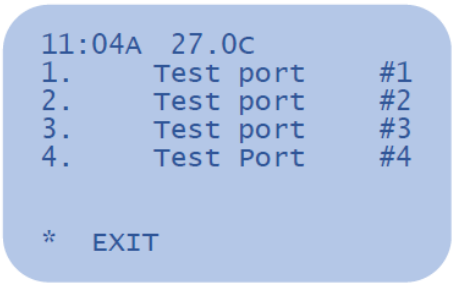
INSTALLATION FLOW TEST

Fuel Lock® devices are equipped with an on-board install/troubleshooting menu designed to assist installers and electricians with initial install and calibration of the device, as well as field troubleshooting if hardware fails during operation.

Note: This tool does not require any app connectivity.

The following procedure shows the calibration of custom pulse rates, as well as the verification of third-party pulser functionality with the device.

Note: The menu is specifically designed for installers and can be accessed by using the factory default PIN. The default PIN is 1234 if the device has not previously been connected to the mobile app.



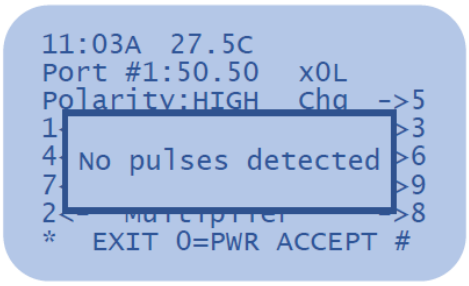
1.Press ***Menu** and enter the administrator PIN to gain access

2.Press **#**

3.Select **#5 Install Support**

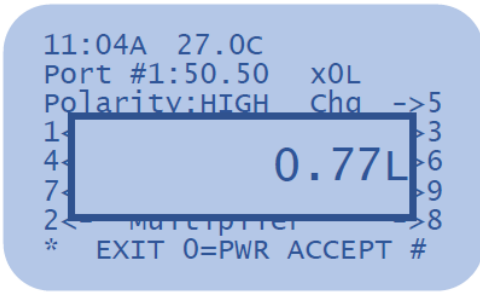
4.Select **#1 Tank Calibration**

5.Ensure the selected port has a pulser that is physically connected to the pulser circuit board inside the device



When first entering each Test Port menu, the screen will flash **"No pulses detected"**. This indicates that the pulser connected to the pulser board is not generating pulses (flow).

To run a test:



1.Press **0=PWR** to engage power supply and turn on pumps

2.Ensure the screen is displaying a volume count

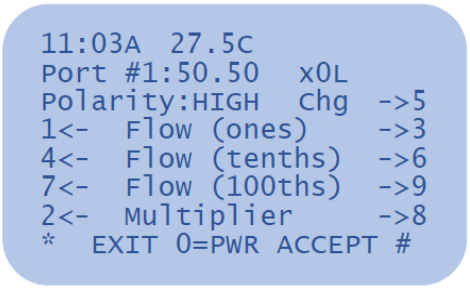
3.Repeat steps 1 and 2 on all ports with connected tanks (pulsers)

4.When volume data is displaying correctly for all tanks, connect the device to the app.

Note: A “No pulses detected” message during test fill indicates a wiring or pulser issue. Refer to third-party supplier instructions.

Setting a Custom Pulse Rate

For custom pulse rate setting or calibration tests, this menus allows you to adjust pulse rates.



IntraGrain support.

a. **Ones** - toggle (1,4) on the keypad to change the one value.

b. **Tenths** - toggle (4,6) on the keypad to change the tenth value.

c. **Hundredths** - toggle (7,9) on the keypad to change the hundredths value.

d. **Multiplier** - (8) keep the setting at **0L** unless instructed by the dealer or IntraGrain support.

e. **Polarity** - (5) keep the setting at **HIGH** unless instructed by the dealer or

FLOW METER CIRCUIT BOARD REPLACEMENT

The flow meter circuit board is a small circuit board with electrical connection terminals connecting pulse flow meters to the Fuel Lock® device. The circuit board is located next to the large terminal strip in the main area of the Fuel Lock enclosure. The following instructions describe the process for replacing the flow meter circuit board in the Fuel Lock device.

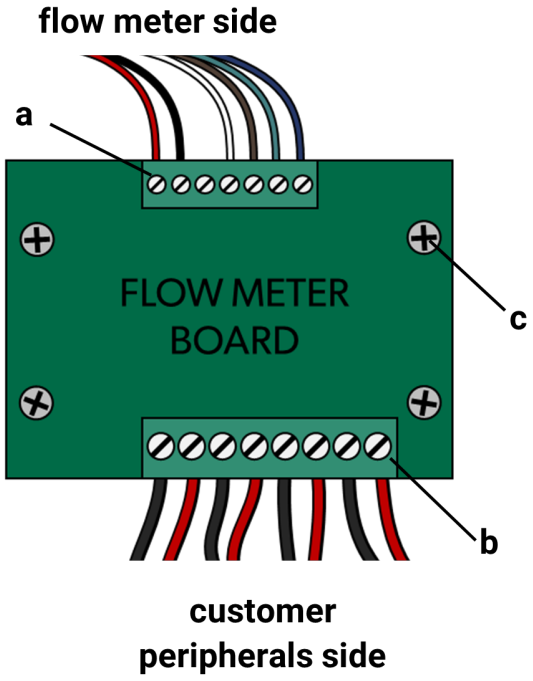
TOOLS REQUIRED

- Phillips screwdriver
- Small flat screwdriver
- Labeling tape

PROCEDURE

Warning: All power must be disconnected before proceeding. Shut off power to the Fuel Lock device at the circuit breaker.

1. Label the wires connecting the flow meters to the flow meter circuit board and from the customer peripherals side to the circuit board for easier identification when reconnecting to the new circuit board
2. Use the small flat screwdriver to loosen the screw terminals on the bottom side of the flow meter board
3. Loosen the screw terminals **(a)** that connect the six wires at the top of the flow meter board, then disconnect the wires
4. Loosen the screw terminals **(b)** that connect the peripheral equipment wires at the bottom of the flow meter board, then disconnect the wires
5. Remove the four Phillips screws **(c)** that secure the flow meter board in place and remove the existing flow meter circuit board from the enclosure



6. Place the new flow meter circuit board into the enclosure and secure it with the four Phillips screws **(c)**
7. Reconnect the flow meter wires to the screw terminals **(a)** at the top of the flow meter board using the labels placed in the first step. The wires must be connected to the terminals in the following order from left to right:

   Red - Black - *No connection* **- White - Brown - Teal - Blue**

8. Reconnect the peripheral equipment wires to the screw terminals **(b)** at the bottom of the flow meter board using the labels placed in the first step.
9. Restore power to the Fuel Lock device

10. Unlock the device and pump fuel to test that all connections have been restored and that the new flow meter circuit board is functioning correctly

USING FUEL LOCK

AFTER FUEL LOCK® IS CONNECTED

1. After all connections are wired correctly, apply power to the device to turn on the LCD screen
2. The Fuel Lock device will now be ready to use with the default settings
   a. Default PIN: **1234** (followed by **#**)
   b. Auto-lock time: **30 minutes**

CHANGING YOUR PIN

The default PIN is **1234** (followed by **#**)

1. From the main lock screen, press ***** to access the administration page
2. Enter your PIN followed by **#** to gain access to the administration menu (once accepted, the indicator light will blink amber)
3. In the administration menu, press **1** to change your PIN
4. Follow the on-screen prompts to enter your new PIN (you will be prompted twice)
5. Once accepted, you will be returned to the administration menu
6. Press ***** to exit and return to the main lock screen

USING FUEL LOCK

1. Enter your 4-digit PIN and then press **#** (e.g. 5678#), you should hear a click signaling power
2. Commence fueling
3. The device will automatically lock when the timer expires
4. To manually lock the device after fueling, press ***** two times

CHANGING THE AUTO-LOCK TIME

Note: The default auto-lock time is 30 minutes. The Auto-lock time can be set anywhere from 5-60 minutes.

1. From the main lock screen, press ***** to access the administration page
2. Enter your PIN followed by **#** to gain access to the administration menu (once accepted, the indicator light will blinkamber)
3. In the administration menu, press **2** to change the auto-lock time
4. Enter any time between 5-60 minutes and press **#** to accept
5. Once accepted, you will be returned to the administration menu.
6. Press ***** to exit and return to the main lock screen

CHANGING THE SCREEN CONTRAST

1. From the main lock screen, press ***** to access the administration page

2. Enter your PIN followed by **#** to gain access to the administration menu (once accepted, the indicator light will blink amber)
3. In the administration menu, press **3** to change the screen contrast
4. Press **1** to lighten, press **3** to darken
5. Once the desired contrast level is reached, press ***** to save and return to the administration menu
6. Press ***** to exit and return to the main lock screen

RESTORING DEFAULT SETTINGS

If problems arise with your device, you can choose to restore all settings to their defaults.

1. From the main lock screen, press ***** to access the administration page
2. Enter your PIN followed by **#** to gain access to the administration menu (once accepted, the indicator light will blinkamber)
3. In the administration menu, press **4** to restore all settings to their defaults
4. Key in the random PIN shown on the screen to erase all current settings (this may take a few minutes)
5. Once completed, the device will automatically return to the main lock screen

CHANGING UNITS AND TIME FORMAT

1. From the main lock screen, press ***** to access the administration page
2. Enter your PIN followed by **#** to gain access to the administration menu. Once accepted, the indicator light will blinkamber.
3. In the administration menu, press **5** to change units
4. Follow the on-screen instruction to change the temperature units and/or time format
5. Press **#** to save and return to the administration menu
6. Press ***** to exit and return to the main lock screen

FUEL LOCK BUSINESS

AFTER FUEL LOCK IS CONNECTED

1. After all connections are wired correctly, apply power to the device to turn on the LCD screen
2. Your Fuel Lock device will now be ready to use with the default settings

Note: The default PIN is1234 (followed by #). Auto-lock time is 30 minutes.

3. Install the app to add flow meters

USING THE FUEL LOCK

1. Enter a 4-digit PIN and then press **#**. (e.g. 5678#), you should hear a click signaling power
2. Commence fueling

Note: The device will automatically lock when the timer expires. To manually lock the device after fueling, press "*" twice.

3. The device will automatically return to the main lock screen

CHANGING SETTINGS THROUGH THE FUEL LOCK APP

Several device settings can be managed in the Fuel Lockapp. Your Fuel Lock device must synchronize (sync) with the Fuel Lock app for changes to take effect. A sync automatically takes place every time the device is unlocked and daily at midnight**.**

Note: For changes made in the app to take effect immediately, you will need to manually sync the device.

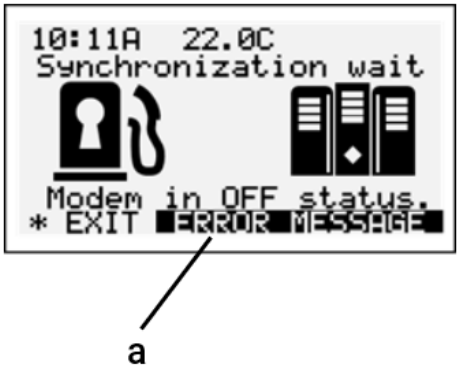
1. From the main lock screen, press ***** to access the administration page
2. Press **#** three times to start a sync, the indicator light will turn amber and the sync status will display on the screen
3. Once the sync is complete, the device will automatically return to the main lock screen

Please see the Fuel Lock App Guide for further instructions on how to use the app with your Fuel Lock device.

ERROR MESSAGES

In the event of issues, Fuel Lock® devices will display error messages on the device screen to assist with trouble-shooting during installation and/or operation.

Error codes will display on the device screen (a):

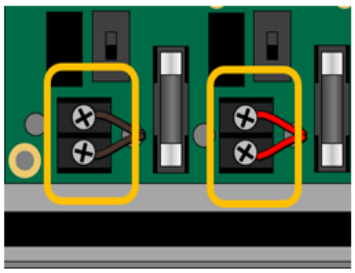
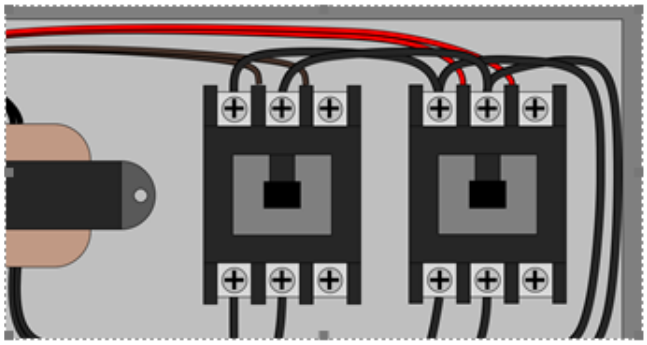


ERROR MESSAGE	CAUSE
Network Fail	Server unresponsive (server stopped replying to packets but the link to the server is connected)
Connect Fail	Dropped connection to server (lost connection with server after being connected)
Hardware Fail	Hardware failure of Fuel Lock device
Connect Limit	Device took too long to connect to cell network
User Aborted	User interrupted call-in
Network Error	Cannot connect to server

TROUBLESHOOTING

Warning: Ensure power isoff before removing or working near the contactors

Troubleshooting

Issue	Solution
Erroneous fuel flow readings	Keep the high voltage 120/240 V power wires away from the low voltage pulsar signal wires.
No power to fuel pumps after unlocking with PIN	Flip the bypass switch into the "BYPASS" state and check if the contactor energizes. • If the contactor does not engage, check the fuses on the circuit board • Check that 24 VAC is present at the contactor coil terminals • Check that 120/240V power is present at the supply and load terminals of the contactor
Inconsistent Contactor Connection	• Check that the relays at the bottom of the circuit board (next to the bypass switches) are not loose or dislodged • Ensure the brown and red contactor wires are securely connected to the terminals at the bottom of the circuit board and to the coil terminals on the backs of the contactors, possibly having to remove the contactors from the backplate to gain access to the coil terminals  Red/brown wire connections to circuit board screw terminals  Red/brown wire connections to contactor coil terminals

Troubleshooting

Issue	Solution
Blank screen	• If the LED Indicator light to the left of the screen is lit, check that the electrical connections to thescreen are secure and try restarting the device • Check that the system status light on the circuit board is blinking indicating the device ispowered and operating • If the system status light is not blinking, check that there is power to the 24VAC input terminals of the circuit board and that none of the fuses on the circuit board are blown • Check that the circuit breaker powering the unit has not tripped and that 120/240V is present at the device **Note: A spare fuse for 120V power is provided in the fuse holder next to the 120/240V connections.**
Unresponsive screen	• Check that the electrical connections to the screen and keypad are secure • Try restarting thedevice by interrupting power at the circuit breaker, in extreme cold conditions the screen maybe slow to respond
No power to Fuel Lock	• Check that the breaker is on and not tripped • Consult with an electrician to ensure the proper power is beingsupplied to the Fuel Lock device
Screen, keypad, and LED indicator light are all off (with power to device)	• Check the 2 amp glass fuse on the bottom right of the circuit board and ensure it has not blown. • Open the fuse holder on the terminal strip and ensure the 2A fuse has not blown. • Check if the system status light locatednear the top center of the main circuit board is flashing green. If the light is flashing, the main circuit board haspower and the problem is likely with the screen or keypad.
Screen shows pump is unlocked, but pump will not operate.	Ensure the correct power supply is unlocked—Fuel Lock devices have two individually controlled contactors to switch power to pumps. If the contactors do not click when unlocked, check that the two leftmost 2A fuses on the bottom of the circuit board are not blown.

Troubleshooting

Issue	Solution
Fuel Lock device shows an (!) mark in the top right corner of the screen and won't connect.	Ensure the antenna connector is connected to the J3 terminal on the modem. The antenna is located abovethe main circuit board and attached to the back of the window. Once this is done cycle the power to the deviceby switching the breaker on and off. You should notice ain the top right corner when the device is successfully calling in.
No fuel volume readings on the device screen or in the Fuel Lock app (flow meters connected to Fuel Lockand dispensing fuel)	• In the Fuel Lock app, ensure you have created a tank and selected the proper flow meter and flowmeter port from the drop-down menu under "Tank Configuration". • Ensure that you have purchased a compatible flow meter from our list on www.fuellock.ca. • Ensure all connections have been made as per the Electrical and Instruction Manual (Section: Flow Meter Electrical Overview). On most Flow Meter connections points you should be reading either 0VDC or 5VDC when the pumps are sitting idle and see a varying pulsing voltage between 0-5VDC when dispensing fuel. These voltages can be read by a multimeter on the bottom terminals of the flow meter board inside the Fuel Lock device. (Pump 1, Pump 2, Pump 3, Pump 4). If connected properly, a liter count will start to display onthe Fuel Lock screen. **Note: Please consult a licensed electrician to troubleshoot and read these voltages.**
Not receiving text messages or push notifications when employees are filling.	• Ensure notifications are turned on in notification settings and mobile phone settings. Also ensure additionalmobile numbers are entered under notifications settings to receive text alerts. • Ensure notificationsare turned on for each individual employee (under "edit employee").
Receiving notifications and liter amounts for my administrator when the administrator hasn't unlocked or filled from Fuel Lock.	If you are using a mechanical meter on your Fuel Lock system, please refrain from resetting the dial when the device is in a locked state. Spinning the reset dial has been known to input false readings into fuel management systems. Not resetting the dial has no impact on the accuracy or functionality of the Fuel Lock device.

Troubleshooting

Issue	Solution
Flow meter isn't reading correctly on the Fuel Lock device and is showing "Unknown (0)" instead of set tank name.	• Ensure all the proper settings are inputted into the app under the tank configuration page. • Next, ensure thatthe physical wiring of the flow meter inside the Fuel Lock device matches the Port numbers chosen on the App. Ex. If the settings of the flow meter on the App are placed on Port 2 and the flow meter is physically wired to Port 3 by accident on the device, the flow meter will read incorrectly and will read "Unknown (0)" on the App and notifications.

MAINTENANCE

Keep the Fuel Lock device clean and free of debris.

Attempting maintenance and/or repairs not described in this manual could void the product warranty. Contact your dealer for details.

SAFETY

WARNING: TURN OFF POWER SUPPLY TO THE FUEL LOCK DEVICE WHEN OPENING THE ENCLOSURE OR PERFORMING ANY WORK.

Fuse Replacement

Note: A spare 2A glass fuse is provided in the fuse holder on the terminal strip

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