

Introduction

Purpose

The document is intended to provide a comprehensive overview of the steps to enable and configure the Door Sensor 2.0 feature on Pump Control Node (PCN), Omnia, and Insite360, as well as guidance for using this feature for Dispenser Security.

The Door Sensor 2.0 feature extends the dispenser security functionality introduced by Door Sensor 1.0 feature. There are certain minimum hardware/software versions requirements to be met for this feature to work.

Note: The customer must contact their accounts team or customer success team to purchase the Door Sensor 2.0 feature.

IMPORTANT INFORMATION

When using the Laptop Tool for any software loads, Real Time Protocol (RTP) must be disabled or bypassed prior to loading software, or the software load will fail.

Intended Users

This manual is intended for Gilbarco®-trained and certified Authorized Service Contractors (ASCs).

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Minimum Hardware/Software Requirements

The following table lists the hardware/software required for the Door Sensor 2.0 feature:

Item #	Hardware	Associated Minimum Software Version
1	PCN3+ Board	V04.1.39
2	PCN4+ Board	V05.0.20
3	PCN5 Board	Supported on all versions
4	Door Sensor Kit Part*	Not applicable
5	Omnia Board	06.00 Encore® or 06.00 Encore Experience

*For more information, refer to MDE-5320 Security Door Detection Kit (M15611K001, M15929K001, M15930K001, M15931K001, M15956K001, and M15956K002) Installation Instructions.

Note: When using the Laptop Tool for any software loads, RTP must be disabled or bypassed prior to loading software, or the software load will fail.

Apart from the above-mentioned hardware and software requirements, the customer must also purchase the Door Sensor 2.0 feature from Gilbarco. This is required for the Door Sensor 2.0 action commands (“Get Access Code” and “Set Access Code”) to be available for the customer on Insite360 dashboard and for the associated functionalities to work from Insite360.

Related Documents

Document Number	Title	GOLD SM Library
MDE-3860	Programming Quick Reference Guide	<ul style="list-style-type: none"> Encore and Eclipse Encore and Eclipse Installers
MDE-5320	Security Door Detection Kit (M15611K001, M15929K001, M15930K001, M15931K001, M15956K001, and M15956K002) Installation Instructions)	<ul style="list-style-type: none"> Encore Service Manual
MDE-5369	FlexPay™ IV (with Omnia V06.00) Programming and Service Manual	<ul style="list-style-type: none"> FlexPay IV Service Manual
MDE-5686	FlexPay™ 6 (with Omnia V06.00 or Later) Programming and Service Manual.	<ul style="list-style-type: none"> FlexPay 6 Invento

Abbreviations and Acronyms

Term	Description
ASC	Authorized Service Contractor
CC	Command Code
DEF	Diesel Exhaust Fluid
FC	Function Code
FCC	Federal Communications Commission
NEC®	National Electrical Code
NFPA	National Fire Protection Association
OSHA	Occupational Safety and Health Administration
PCN	Pump Control Node
RTP	Real Time Protocol
STP	Submerged Turbine Pumps
TAC	Technical Assistance Center

Important Safety Information

Notes: 1) Save this Important Safety Information section in a readily accessible location.

2) Although DEF is non-flammable, Diesel is flammable. Therefore, for DEF cabinets that are attached to Diesel dispensers, follow all the notes in this section that pertain to flammable fuels.




This section introduces the hazards and safety precautions associated with installing, inspecting, maintaining, or servicing this product. Before performing any task on this product, read this safety information and the applicable sections in this manual, where additional hazards and safety precautions for your task will be found. Fire, explosion, electrical shock, or pressure release could occur and cause death or serious injury, if these safe service procedures are not followed.

Preliminary Precautions

You are working in a potentially dangerous environment of flammable fuels, vapors, and high voltage or pressures. Only trained or authorized individuals knowledgeable in the related procedures should install, inspect, maintain, or service this equipment.

Emergency Total Electrical Shut-Off

The first and most important information you must know is how to stop all fuel flow to the pump/dispenser and island. Locate the switch or circuit breakers that shut off all power to all fueling equipment, dispensing devices, and Submerged Turbine Pumps (STPs).

 WARNING	
	The EMERGENCY STOP, ALL STOP, and PUMP STOP buttons at the cashier's station WILL NOT shut off electrical power to the pump/dispenser. This means that even if you activate these stops, fuel may continue to flow uncontrolled.
	You must use the TOTAL ELECTRICAL SHUT-OFF in the case of an emergency and not the console's ALL STOP and PUMP STOP or similar keys.

Total Electrical Shut-Off Before Access

Any procedure that requires access to electrical components or the electronics of the dispenser requires total electrical shut off of that unit. Understand the function and location of this switch or circuit breaker before inspecting, installing, maintaining, or servicing Gilbarco equipment.

Evacuating, Barricading, and Shutting Off

Any procedure that requires access to the pump/dispenser or STPs requires the following actions:



- An evacuation of all unauthorized persons and vehicles from the work area
- Use of safety tape, cones, or barricades at the affected unit(s)
- A total electrical shut-off of the affected unit(s)

Read the Manual

Read, understand, and follow this manual and any other labels or related materials supplied with this equipment. If you do not understand a procedure, call the Gilbarco Technical Assistance Center (TAC) at 1-800-743-7501. It is imperative to your safety and the safety of others to understand the procedures before beginning work.

Follow the Regulations

Applicable information is available in National Fire Protection Association (NFPA) 30A; Code for Motor Fuel Dispensing Facilities and Repair Garages, NFPA 70; National Electrical Code (NEC), Occupational Safety and Health Administration (OSHA) regulations and federal, state, and local codes. All these regulations must be followed. Failure to install, inspect, maintain, or service this equipment in accordance with these codes, regulations, and standards may lead to legal citations with penalties or affect the safe use and operation of the equipment.

Replacement Parts

Use only genuine Gilbarco replacement parts and retrofit kits on your pump/dispenser. Using parts other than genuine Gilbarco replacement parts could create a safety hazard and violate local regulations.

Federal Communications Commission (FCC) Warning

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. Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

Safety Symbols and Warning Words

This section provides important information about warning symbols and boxes.

Alert Symbol



This safety alert symbol is used in this manual and on warning labels to alert you to a precaution which must be followed to prevent potential personal safety hazards. Obey safety directives that follow this symbol to avoid possible injury or death.

Signal Words

These signal words used in this manual and on warning labels tell you the seriousness of particular safety hazards. The precautions below must be followed to prevent death, injury, or damage to the equipment:



DANGER: Alerts you to a hazard or unsafe practice which will result in death or serious injury.



WARNING: Alerts you to a hazard or unsafe practice that could result in death or serious injury.



CAUTION with Alert symbol: Designates a hazard or unsafe practice which may result in minor injury.

CAUTION without Alert symbol: Designates a hazard or unsafe practice which may result in property or equipment damage.

Working With Fuels and Electrical Energy

Prevent Explosions and Fires

Fuels and their vapors will explode or burn, if ignited. Spilled or leaking fuels cause vapors. Even filling customer tanks will cause potentially dangerous vapors in the vicinity of the dispenser or island.

DEF is non-flammable. Therefore, explosion and fire safety warnings do not apply to DEF lines.

Important Safety Information

No Open Fire



Open flames from matches, lighters, welding torches or other sources can ignite fuels and their vapors.

No Sparks - No Smoking



Sparks from starting vehicles, starting or using power tools, burning cigarettes, cigars or pipes can also ignite fuels and their vapors. Static electricity, including an electrostatic charge on your body, can cause a spark sufficient to ignite fuel vapors. Every time you get out of a vehicle, touch the metal of your vehicle, to discharge any electrostatic charge before you approach the dispenser island.

Working Alone

It is highly recommended that someone who is capable of rendering first aid be present during servicing. Familiarize yourself with Cardiopulmonary Resuscitation (CPR) methods, if you work with or around high voltages. This information is available from the American Red Cross. Always advise the station personnel about where you will be working, and caution them not to activate power while you are working on the equipment. Use the OSHA Lockout/Tagout procedures. If you are not familiar with this requirement, refer to this information in the service manual and OSHA documentation.

Working With Electricity Safely

Ensure that you use safe and established practices in working with electrical devices. Poorly wired devices may cause a fire, explosion or electrical shock. Ensure that grounding connections are properly made. Take care that sealing devices and compounds are in place. Ensure that you do not pinch wires when replacing covers. Follow OSHA Lockout/Tagout requirements. Station employees and service contractors need to understand and comply with this program completely to ensure safety while the equipment is down.

Hazardous Materials

Some materials present inside electronic enclosures may present a health hazard if not handled correctly. Ensure that you clean hands after handling equipment. Do not place any equipment in the mouth.

WARNING

In the event of inclement weather, including snow, ice, or flooding that makes driving conditions dangerous, please avoid servicing units. Always use available door stops to secure upper doors against unwanted/unexpected movement, especially during high winds. If necessary, reschedule service to avoid damage to the equipment. Weather may change unexpectedly; be aware of local weather conditions. During service, if conditions develop making service unsafe, close the unit(s) and proceed to a safe location.

WARNING

The pump/dispenser contains a chemical known to the State of California to cause cancer.

WARNING

The pump/dispenser contains a chemical known to the State of California to cause birth defects or other reproductive harm.



Gilbarco Veeder-Root encourages the recycling of our products. Some products contain electronics, batteries, or other materials that may require special management practices depending on your location. Please refer to your local, state, or country regulations for these requirements.

In an Emergency

Inform Emergency Personnel

Compile the following information and inform emergency personnel:

- Location of accident (for example, address, front/back of building, and so on)
- Nature of accident (for example, possible heart attack, run over by car, burns, and so on)
- Age of victim (for example, baby, teenager, middle-age, elderly)
- Whether or not victim has received first aid (for example, stopped bleeding by pressure, and so on)
- Whether or not a victim has vomited (for example, if swallowed or inhaled something, and so on)

WARNING



Gasoline/DEF ingested may cause unconsciousness and burns to internal organs. Do not induce vomiting. Keep airway open. Oxygen may be needed at scene. Seek medical advice immediately.

WARNING

DEF generates ammonia gas at higher temperatures. When opening enclosed panels, allow the unit to air out to avoid breathing vapors. If respiratory difficulties develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention.

WARNING



Gasoline inhaled may cause unconsciousness and burns to lips, mouth and lungs. Keep airway open. Seek medical advice immediately.

WARNING



Gasoline/DEF spilled in eyes may cause burns to eye tissue. Irrigate eyes with water for approximately 15 minutes. Seek medical advice immediately.

WARNING



Gasoline/DEF spilled on skin may cause burns. Wash area thoroughly with clear water. Seek medical advice immediately.

WARNING




DEF is mildly corrosive. Avoid contact with eyes, skin, and clothing. Ensure that eyewash stations and safety showers are close to the work location. Seek medical advice/recommended treatment if DEF spills into eyes.

IMPORTANT: Oxygen may be needed at scene if gasoline has been ingested or inhaled. Seek medical advice immediately.

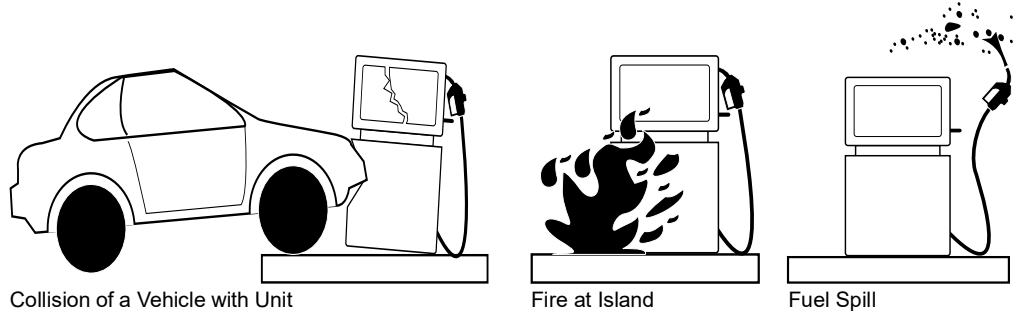
Lockout/Tagout

Lockout/Tagout covers servicing and maintenance of machines and equipment in which the unexpected energization or start-up of the machine(s) or equipment or release of stored energy could cause injury to employees or personnel. Lockout/Tagout applies to all mechanical, hydraulic, chemical, or other energy, but does not cover electrical hazards. Subpart S of 29 CFR Part 1910 - Electrical Hazards, 29 CFR Part 1910.333 contains specific Lockout/Tagout provision for electrical hazards.

Hazards and Actions

 WARNING	
	Spilled fuels, accidents involving pumps/dispensers, or uncontrolled fuel flow create a serious hazard.
	Fire or explosion may result, causing serious injury or death. Follow established emergency procedures. DEF is non-flammable. However it can create a slip hazard. Clean up spills promptly.

The following actions are recommended regarding these hazards:



- Do not go near a fuel spill or allow anyone else in the area.
- Use station EMERGENCY CUTOFF immediately. Turn off all system circuit breakers to the island(s).
- Do not use console E-STOP, ALL STOP, and PUMP STOP to shut off power. These keys do not remove AC power and do not always stop product flow.
- Take precautions to avoid igniting fuel. Do not allow starting of vehicles in the area. Do not allow open flames, smoking or power tools in the area.
- Do not expose yourself to hazardous conditions such as fire, spilled fuel or exposed wiring.
- Call emergency numbers.

Configuring Door Sensor Feature

For more information on installing the Door Sensor Hardware, refer to *MDE-5320 Security Door Detection Kit (M15611K001, M15929K001, M15930K001, M15931K001, M15956K001, and M15956K002) Installation Instructions*. After installing the Door Sensor Hardware, proceed with the following steps:

PCN Board Configuration

To configure the PCN board, proceed as follows:

- 1 Remove power from the dispenser.
- 2 Disconnect the two-wire cable.
- 3 Reapply power to the dispenser and wait for five to ten minutes to access the PCN programming via the Manager Keypad. There is usually a beep once the dispenser is ready for Manager Keypad entry.
- 4 Press **F1** and input the L4 PIN code. Then, press **ENTER**.
- 5 Put the pump in standalone operation mode. Refer to *MDE-3860 Programming Quick Reference Guide* for steps to configure CC24 = 2.
- 6 Set the PC Serial Communication Protocol in Real Time Protocol (RTP) mode. Refer to *MDE-3860 Programming Quick Reference Guide* for steps to configure CC91 > FC47 = 3.

Note: For more information on configuring the dispenser for the desired Door/Hydraulic Panel Switch option(s), refer to MDE-3860 Programming Quick Reference Guide.

- 7 After the Door/Hydraulic Panel Switch programming is completed, reconnect the two-wire and exit programming.
- 8 Once the PCN has rebooted, refer to *MDE-5320 Security Door Detection Kit (M15611K001, M15929K001, M15930K001, M15931K001, M15956K001, and M15956K002) Installation Instructions* to verify that the Door Sensors are operating correctly.
- 9 Set the pump in two-wire operation mode. Refer to *MDE-3860 Programming Quick Reference Guide* for steps to configure CC24 = 1.

Note: Placing the PCN in standalone mode is optional. However, you can save time if the programming mode is exited before completing programming/testing.

Omnia Configuration

To configure Omnia, proceed as follows:

- 1 Log in to the Omnia Webui.
- 2 The Omnia software V06.00 or higher is required for configuring the Door Sensor 2.0 feature.

- 3 Verify that the **General Settings > Select Pump Connection Type** is set to “RTP-serial”.
Note: The Door Sensor 2.0 feature requires the Omnia and PCN to be in RTP protocol.

Figure 1: General Settings

The screenshot shows the 'General Settings' page in the Omnia configurator. The left sidebar is expanded to 'General Settings'. The main content area is titled 'General Settings' and contains a 'General configuration' section. The following table represents the configuration items shown in the screenshot:

Field	Value
Select Dispenser Model	Encore
Select Payment Type	M7
Select Dispenser Type	Dual side
Select TwoWire Connection Type	MOC
Select Pump Baud Rate	DEFAULT (5787)
Fill In Dispenser Serial Number	EN123456
Side A Fueling Position	1
Side B Fueling Position	2
Select Pump Connection Type	RTP-serial

- 4 Navigate to **Insite 360 > General Configuration**. Ensure that the **Door Sensor Enabled (RTP)** checkbox is selected.

Figure 2: Insite 360 Configuration Settings

The screenshot shows the 'Insite 360' configuration page in the Omnia configurator. The left sidebar is expanded to 'Insite 360'. The main content area is titled 'General Configuration' and contains the following configuration items:

Field	Value
GVR ID	100454
Site Name	GVR Lab 100
Site Address	7300 W FRIENDLY AVE UNIT 100 Greensboro, NC 27410
Omnia Nickname	Omnia_13_14_100454
Dormant Enabled	<input type="checkbox"/>
Incremental Logs	<input checked="" type="checkbox"/>
Download Logs Every (mins)	30
Serial Cable Beep Alert Enabled (Zmodem/RTP)	<input checked="" type="checkbox"/>
Door Sensor Enabled (RTP)	<input checked="" type="checkbox"/>

- 5 Save the configuration and exit.

For more information, refer to *MDE-5369 FlexPay™ IV (with Omnia V06.00) Programming and Service Manual* or *MDE-5686 FlexPay™ 6 (with Omnia V06.00 or Later) Programming and Service Manual*.

Insite360 Configuration

Other than Gilbarco personnel enabling the “Door Sensor 2.0” feature for the customer’s account, there is no configuration required. After the feature is enabled, the Customer must be able to see “Get Access Code” and “Set Access Code” commands in the Pump component’s actions list.

Using the Door Sensor 2.0 Feature

The eight-digit Door Sensor Access Code is required to modify the following Level 1-4 PCN Programming parameters.

- CC91/FC34
- CC91/FC37
- CC91/FC41
- CC91/FC42

The factory default Door Sensor access code is “00000000”. The access code can be changed from Insite360 (only) by following the steps below:

- 1** Log in to Insite360 Remote Management and navigate to the GVR ID and target dispenser.
- 2** Click **Encore Pump** or **Pump Controller Node** component, and then click **Actions**.
- 3** Click **Get Access Code** and then click **Submit** at the bottom of the screen (*).
- 4** Wait for four-five minutes and then click **Get Access Code**.
 - a** The L1, L2, L3, and L4 pin codes along with the eight-digit access code will be displayed
 - b** The eight-digit access code should be 00000000 if the factory default has not been changed yet.
- 5** Click **Set Access Code**, a new randomized eight-digit access code will be displayed
- 6** Click **Submit** at the bottom of the screen.
- 7** Wait for four-five minutes and then click **Get Access Code**.
 - a** The L1, L2, L3, and L4 pin codes along with the randomized access code from step **5** will appear.

*Note: *The command sent to the device and its response can be seen in the events view.*

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