

MDE-5402B FlexPay™ IV Applause™ Media Kit with Omnia (M16183K001) Installation Instructions February 2023

# Introduction

## **Purpose**

This manual provides instructions on installing the FlexPay<sup>™</sup> IV Applause<sup>™</sup> Media Kit (M16183K001), which includes the Omnia assembly.

## **Intended Users**

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

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## **Required Tools**

The following tools are required for installing the Applause Media Kit:

- Phillips<sup>®</sup> Screwdriver
- 7-mm Nut Driver
- Basic Service Tools

## **Parts List**

The following table lists the parts included in the Applause Media Kit:

ltem #	Description	Part Number	Quantity
1	Cable, Speaker, Omnia to Peripheral Interface PCB (PIP) 3, Vanguard	M14425A002	2
2	Cable, Omnia to Universal Payment Module (UPM) LVDS Vanguard	M14338A005	2
3	Ethernet® Cable, Yellow	M14080A003	2
4	Cable, Omnia Ethernet to Dispenser Communication Module (DCM)3	M14080A004	1

Location	Description	Part #
Omnia Assembly	Omnia	M16181A002
	DCM3	M15724A001
	Phoenix Supply	M04161B001
	Fuse Board	M05748A001

The following table lists the parts included for FlexPay IV CRIND® with Omnia:

# **Optional Parts**

The following table lists the optional parts included for FlexPay IV CRIND® with Omnia:

Location	Description	Part #	Quantity
Pump assembly in lower center of electronics cavity	PCA, SP-III PUMP CONTROL NODE 3+	M12702A1XX M18666A002	1

# **Related Documents**

Document		
Number	Title	GOLD℠ Library
MDE-3804	Encore® and Eclipse® Start-up/Service Manual	<ul><li>Encore and Eclipse</li><li>Service Manual</li></ul>
MDE-5360	FlexPay IV CRIND (with Omnia) Retrofit Kit Installation Instructions for Encore S E-CIM™	<ul><li>FlexPay</li><li>Service Manual</li></ul>
MDE-5369	FlexPay IV (with Omnia) Programming and Service Manual	<ul><li>FlexPay</li><li>Service Manual</li></ul>

# Abbreviations and Acronyms

Term	Description
ASC	Authorized Service Contractor
AFP	Auxiliary Feature Processor
CAT5	Category 5
CRIND	Card Reader in Dispenser
DCM	Dispenser Communication Module
EMV®	Europay <sup>®</sup> , MasterCard <sup>®</sup> , and Visa <sup>®</sup>
ESD	Electrostatic Discharge
GOLD	Gilbarco Online Documentation
LED	Light Emitting Diode
LON	Local Operating Network
OSHA	Occupational Safety and Health Administration
РСВ	Printed Circuit Board
PCN	Pump Control Node
PIP	Peripheral Interface PCB
SSoM	Secure Systems on Module
UPM	Universal Payment Module
W&M	Weights and Measures

# **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).

#### 

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.

## 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 fluid lines.

#### 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

#### A 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.

#### 

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

#### 

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
  - bocation of accident (for example, address, iron/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)

#### 



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.

#### 



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

#### 

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.

# **Before You Begin**

# CAUTION



A properly grounded Electrostatic Discharge (ESD) wrist strap must be worn while servicing any electronic devices or components. Failure to use electrostatic precautions may damage electronic components and void warranty.

# \land WARNING

Gilbarco recommends against any tampering that compromises the frame integrity during the installation process, and doing so may void the warranty.

To prepare the site and dispenser for the upgrade, proceed as follows:

- **1** Verify site and unit operation.
  - **a** Talk with the Site Manager to understand and document any existing issues.
  - **b** Test the dispenser to ensure that the site is configured as expected.
  - **c** Perform a fueling transaction, including printing a receipt (for debit and credit transactions, or contactless transactions, if applicable).
  - d Verify that all unit options are functional, including the intercom.
  - **e** Note existing software versions on the CRIND and pump. Upgrade these to the latest versions, if required.
  - f If the site is running Insite360<sup>™</sup> Encore Remote Management, verify that it has a valid contract. Then, record all Secure Systems on Module (SSoM) settings and de-register Insite360 before removing the power and upgrading the unit with Omnia.
- **2** Barricade the unit to be worked on.
- 3 Remove power to the unit at the breaker panel. Follow OSHA lockout/tagout procedures.
- **4** Read all the safety information provided in *MDE-3804 Encore and Eclipse Start-up/Service Manual*.
- **5** Isolate two-wire communication to the unit.

# \Lambda WARNING

Failure to turn off the unit during the installation of the kit may cause injury or bodily harm from electrical shock. Ensure that all power to the unit is switched off before opening the door to the unit and during kit installation.

# Installing Applause Media Kit (M16183K001) with Omnia

If the kit includes a Pump Control Node (PCN), refer to "Appendix C: Upgrading the PCN" on page 25 for installation instructions.

# **Removing AFP/DCM2.X**

*Note:* Before removing the DCM2.X, record the SSoM settings. These settings will be programmed into the Omnia after installation.

To remove the Auxiliary Feature Processor (AFP)/DCM2.X, proceed as follows:

- **1** Disconnect all cables from the AFP/DCM2.X.
- **2** Remove the three 7-mm nuts underneath the AFP/DCM2.X assembly.
- **3** Remove the power supply and bracket, fuse board, DCM, and stand-offs (if present) from the removed power supply. Transfer those parts on to the Omnia assembly prior to installation. *Note: Secure ring terminal of M12777A004 to the stud on the bracket.*

#### Figure 1: Omnia Bracket



## **Omnia Assembly**

Mount the Omnia assembly on the T-rail using the three 7-mm nuts removed earlier or provided in the kit as shown in Figure 2.

Notes: 1) Use the same holes as those used for the AFP assembly removed earlier.
2) Verify that P6001 of the Omnia board is on the same side as the Weights and Measures (W&M) switch.

Figure 2: Installing Omnia Assembly



The Omnia system can function with the existing PIP3 (M13987A00X) with the following conditions:

- UPMs are updated to 42.10.12 or later
- A connector containing a loopback (M14339A002) is present on the Side B PIP3

Note: The PIP3 Loopback Connector must be installed before the dispenser power is applied.

#### Figure 3: PIP3 Loopback Connector



#### Figure 4: Connector Location on PIP3



## **Omnia Assembly with Auxiliary Power Supply (10.4-inch Display)**

Note: Insite360 Encore requires M07555A004 Encore Power Supply Assembly. Refer to MDE-5349 Insite360 Encore Power Supply Retrofit Kit Installation Instructions for specific instructions.

To connect the power cables, proceed as follows:

Note: Ensure that the AC cables are not bundled with any non-AC cables.

- **1** Connect J104 of the M12777A004 Cable to the M04406A001 AC Distribution Cable in the U-channel.
- 2 Connect P301A/B of the M14340 Cable side A to J301A of the M12777A004 Cable.
- **3** Connect P301A/B of the M14340 Cable side B to J301B of the M12777A004 Cable.

#### Figure 5: Power Supply Wiring (if Optional Power Supply is Supplied with Kit)



#### **Omnia Assembly Without Auxiliary Power Supply (5.7-inch Display)**

To connect the power cables, proceed as follows:

*Note: Ensure that the AC cables are not bundled with any non-AC cables.* 

#### Figure 6: Cable Connections - 24 V Connections Only



1 Connect 24 V P305 of the M07973A007 Cable to J305 of the M05547A00X Cable coming from the power supply.

Note: If the unit's existing M05547A00X Power Cable does not contain a three-position J305, the kit contains a replacement M05547A00X Cable to install (which does contain a three-position J305 connector).

- 2 Connect P301A/B of the M14340 Cable side A to J301A of the M07973A007 Cable.
- **3** Connect P301A/B of the M14340 Cable side B to J301B of the M07973A007 Cable, as shown in Figure 7 on page 11.

# **IMPORTANT INFORMATION**



Cable routing is critical. It is very important to route and dress the cables properly. Exercise care in routing the cables, keeping in mind that the door(s) opens and closes for service. The cables must be dressed neatly. Ensure that there is no interference after the cables are connected and routed. Ensure that the ESD ground straps can be bundled together, but need to be well separated from data and power cables. Note that they should be fastened to the U-channel with separate bolts.



#### Figure 7: Power Supply Wiring (if Optional Power Supply is not Supplied with Kit)

4 Connect the Ethernet cable to the card reader. The yellow Category 5 (CAT5) Cable (M14080A003) in the kit matches the yellow connector on the Omnia PCB (for dedicated side).

#### Figure 8: Connecting Ethernet Cable to the UX300 Card Reader



**5** Connect all the applicable cables to the Omnia assembly as shown in Figure 9.



Figure 9: Omnia Board Connections

Figure 10: Connecting Cables



- 6 Connect the Ethernet cable from each UPM to the Omnia board. M14080A003 is the yellow cable connecting the UX300 Card Reader to the yellow RJ-45 ports. M14080A002 is the blue cable connecting the UPMs to the Blue RJ-45 ports.
  - *Note: These ports are dedicated. The UPMs and UX300 Card Readers must be connected to the correct ports.*

Figure 11 shows the labels on the Omnia board.

Figure 11: Omnia RJ-45 CAT5 connections for UPMs and UX300s (+ Spares)

Spare	UX300A	UPMA
Spare	<u> UX300В</u>	UPMB

# **Forecourt Wiring**

Depending on the dispenser type and whether or not it has factory-installed conduit, there are different specifications in the current loop wiring.

If the kit includes DCM3, refer to information about merged and non-merged high speed connections (see "Appendix A: DCM3 Assembly (M15724A001)" on page 19).

If the site has CAT5/CAT6 routed through a conduit separate from the AC, then refer to "Appendix B: System Block Diagram" on page 24 for the connection information.

## Considerations

- P300 has the red/yellow and blue/yellow current loop inputs for both the pump and the CRIND.
- P303 is the current loop output to the pump. It must be used even in the Generic CRIND mode.

## For Passport® (MOC)

- CRIND two-wire must be on the blue/yellow wires.
- The pump two-wire input must be connected to P303.

To set up the Omnia board for Passport wiring:

- 1 Remove the two-wire cables from the conduit that are attached to A9 and A19, as applicable (see Figure 12 on page 15).
- 2 Connect the blue wire to CRIND A9 (see Figure 12 on page 15).
- **3** Connect the mated yellow wire to CRIND A19.
- 4 Connect the J300 connector on the M02993A005 to P300 of the Omnia board.
- **5** Connect J403 of the M00491A001 Cable to P303 on the Omnia board.
- 6 Connect the other end of the M00491A001 cable to the P1109 on the PCN.



Figure 12: Two-Wire Connection (MOC)

## For Generic CRIND

- CRIND two-wire must be connected to the blue/yellow wires. Pump two-wire must be connected to the red/yellow wires.
- The pump two-wire input is driven by P303.

To connect the Omnia board with the PCN and conduit:

- 1 Remove the J1109 connector of the pump two-wire from the PCN.
- 2 Remove the two-wire cables from the conduit that are attached to A9, A19, B9, and B19 (see Figure 13 on page 16).
- **3** Connect the wires labeled 'CRIND' and pump of the M02993A005 Cable to the two-wire cables coming out of the conduit (see Figure 13 on page 16). Connect the colored wires as follows:
  - **a** Connect the red wire to pump A9.
  - **b** Connect the mated yellow wire to pump A19 and CRIND B19.
  - **c** Connect the blue wire to CRIND B9.



Figure 13: Two-Wire Connection (Generic)

# **Completing Installation**

To complete the installation, inspect all the connections and cable routing before applying power.

# **IMPORTANT INFORMATION**



Cable routing is critical. It is very important to route and dress the cables properly. Exercise care in routing the cables, keeping in mind that the door(s) opens and closes for service. The cables must be dressed neatly. Ensure that there is no interference after the cables are connected and routed. ESD ground straps can be bundled together, but need to be separated from data and power cables. ESD ground straps should be fastened to the U-channel with separate bolts (see Figure 15 on page 18). After making all cable connections, close the main door and open the printer door. Pull the sliding printer tray and ensure that there is no cable interference.

The important factor in cable routing is to separate the ground cables (which route ESD events to chassis) from the data and power cables.



#### Figure 14: Separating Ground Cables from Data and Power Cables

Figure 15 shows a ground wire connected to the chassis. The 8-mm ground screw (2X) is provided in the kit.

Note: Fasten each ground cable individually to the chassis (one cable per ground screw).



#### Figure 15: Ground Wire Connected to Chassis

## **Updating Software**

- **1** Update the PCN software to 3.3.32 or later.
- **2** Update the CRIND software to the latest version that supports Omnia. Depending on the existing version, you might need to update to an intermediate version 42.10.12 or later.
- **3** After upgrading the CRIND software, configure Omnia in the Maintenance Menu.
- 4 For instructions to configure Omnia from the Maintenance Menu in the CRIND, refer to *MDE-5369 FlexPay IV (with Omnia) Programming and Service Manual.*

# **Registering Kits with Gilbarco Warranty**

To register the kits with Gilbarco Warranty:

- 1 After the kits are successfully installed, register kits through web commissioning within 30 days.
- **2** Provide the correct model and serial numbers. The kit model number is EPK M7 E-CIM. *Note: Registering the kits ensures that proper warranty is applied.*

# Appendix A: DCM3 Assembly (M15724A001)

The DCM3 is used when high-speed communication is required across the forecourt. The DCM3 is only used with the Back Room Communication Module (BRCM)2.x. Connect the cables to the DCM3 assembly as shown in Figure 16.



#### Figure 16: DCM3 Connections

# Connection Table (M15724A001)

Connector	Port Number	Function	From	То
RJ-45	J17	Ethernet	J21	Omnia P304
5-pin MTA	J21	OLC/two-wire	Conduit/J21	Omnia P300
2-pin MTA	J15	Power IN		DCM3
2-pin MTA	J16	Power Out	N/A	N/A-no current use

#### **DCM3 Two-Wire Connections**

These instructions detail how to perform two-wire connections when a DCM3 is used in the system. The DCM3 is required when a BRCM2.x is used to provide high-speed communication across the forecourt. The BRCM2.x when used with the DCM3 supports the following two modes:

- The option of merging the high speed data onto the same conductors used for current loop.
- The option of not merging high speed data onto the same conductors used for current loop. This setup requires additional wire pairs brought out to each dispenser.

#### **DCM3** Two-Wire Connection (Merged)

Ensure that the two-wire connection when high speed data is merged onto the same conductors is as follows:

- 1 Connect P21 of the M11961A003 cable to J21 of the DCM3.
- 2 Connect J300 of the M11961A003 cable to P300 of the Omnia.
- **3** Connect the Y/Y pair of the M11961A003 to the B/Y pair of wires coming from the conduit.

# Passport \*CRIND current loop Passport \*CRIND Two-wire becomes inactive with EMV.

#### Figure 17: MOC (Merged), Pre-EMV\*

#### DCM3 Two-Wire Connection (Non-Merged)

Ensure that the two-wire connection when high speed data is not merged onto the same conductors is as follows:

- 1 Connect P21 of the M11961A003 cable to J21 of the DCM3.
- 2 Connect the Y/Y pair of the M11961A003 to the designated wires coming out of the conduit.
- 3 Connect J300 of the M02993A005 cable to P300 of the Omnia.
- 4 Connect the B/Y pair of the M02993A005 to the B/Y pair coming from the conduit.

#### Figure 18: MOC (Non-Merged)



#### **Generic (Merged)**

The Omnia board supports high speed communication via the BRCM2.x. When connection to a BRCM2.x is required, the kit will ship with a DCM3 (M15724A001) attached to the Omnia bracket assembly. See the following wiring instructions.

Ensure that the connection to Omnia is as follows:

- 1 Connect P21 of the M11961A004 cable to J21 of the DCM3.
- 2 Connect the Y/Y pair of the M11961A004 to the Y/Y pair of wires coming from the conduit.
- **3** Connect the B/Y pair of M11961A004 to the B/Y pair coming from the conduit.
- 4 Connect J300 of the M11961A004 cable to P300 of the Omnia.

#### Figure 19: Generic (Merged)



#### Generic (Non-Merged)

Ensure that the connection to Omnia is as follows:

- 1 Connect P21 of the M11961A003 cable to J21 of the DCM3.
- 2 Connect the Y/Y pair of the M11961A003 to the designated wires coming out of the conduit.
- **3** Connect J300 of the M02993A005 cable to P300 of the Omnia.
- 4 Connect the B/Y pair of M02993A005 to the CRIND loop pair coming from the conduit.
- 5 Connect the R/Y pair of the M02993A005 to the pump loop pair coming from the conduit.

#### Figure 20: Generic (Non-Merged)



# Appendix B: System Block Diagram

Figure 21: Cable Block Diagram for FlexPay IV CRIND



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# **Appendix C: Upgrading the PCN**

As part of an Omnia upgrade, you may be required to change the PCN board. For an Ultra-Hi<sup>™</sup> unit, ensure that you adhere to the stated recommendations for prover can size (typical: 50 or 100 gallon provers). This procedure ensures that redundant data is copied correctly.

# **IMPORTANT INFORMATION**



The following process must be followed exactly in the sequence listed below. If this process is not followed or if the sequence is altered, there is a risk of losing calibration and configuration data.

- 1 When you power on the dispenser, check the door node board type. If you have door node 5 (M12605), upgrade the door nodes to version 59 or higher before proceeding. For other door node board types (not door node 5), no action is required. Continue to step 2.
- 2 If applicable, record the Pump Totals. Totals will be re-entered later in this process.
- **3** Isolate two-wire connections from the POS and mark the cables, if necessary.
- 4 Unseal the Security (W&M) Switch.
- **5** Turn ON the Security Switch.
- **6** Update the software on the existing PCN of the dispenser to the version that is printed on the label of the new PCN that you are installing.
  - Note: If you are not able to obtain the software version from the original PCN because it is defective, proceed to step 8. If the original PCN is DOA, there is an increased risk of losing calibration and configuration.
- 7 After the PCN software upgrade has completed, remove the AC unit power.
- 8 To initialize the new PCN, replace the PCN and reconnect all the cables removed except the Door Node Local Operating Network (LON) cables.
- **9** Ensure that the security switch is still in the ON position.
- **10** Turn ON the AC power to the dispenser.
- **11** Wait for the Heartbeat Light Emitting Diode [LED (D14)] on the PCN to blink for 10 seconds. A blinking Heartbeat LED indicates that the PCN software has finished the boot process.
- 12 Remove the AC power to the Dispenser. This concludes the new PCN initialization.
- **13** Reconnect the Door Node LON cables to the PCN.
- **14** Turn ON the AC power to the dispenser.
- **15** Re-enter the pump totals recorded earlier.
- **16** Turn OFF the security switch.
- 17 Connect two-wire cabling to establish communication with the POS.
- **18** Test the dispenser for proper operation and communication.
- **19** If necessary, notify the local W&M office that you broke the seal on the security switch to make the repairs.

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