PI Configurator

Installation Guide

PROGRESSIVE INTERNATIONAL ELECTRONICS

PROGRESSIVE
INTERNATIONAL
E L E C T R O N I C S

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M E M B E R

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PI Configurator Manufacturer's Warranty

Progressive International Electronics, Inc. (SELLER) warrants to the Purchaser of fuel control equipment manufactured by Seller against defects in material or workmanship for one (1) year from date of shipment. Seller will replace or repair defective parts or replace and issue credits to the Purchaser's account in accordance with the following Conditions of Warranty.

CONDITIONS OF WARRANTY

1. Credit will be applied only when the completed warranty request form and the defective parts are received and inspected.
   Decisions to repair or replace defective equipment are solely at the discretion of PIE.
2. When parts shipments are made prior to receiving the required warranty request and defective parts, they will be billed to the Purchaser.
3. In all cases, approved warranty requests will be expedited by issuing the appropriate credit to the Purchaser's account and shipping replacement parts.
4. Credits will not be issued for parts and no cash refunds for warranty credits will be made.
5. All components and parts must be returned to the factory prepaid, and in turn, replacement components and parts will be returned prepaid by the factory.
6. Seller's warranty applies only if the equipment has been installed and used in accordance with Seller's instructions. The warranty is void if any unauthorized alteration or addition has been made to the equipment or if it has been subject to damage caused by abuse, misapplication, accident or improper operation.
7. The Seller's liability for any damages, including contribution and indemnification, arising out of or in any way connected with the supplying of the equipment or its use, shall not in any case exceed the cost of repair of the equipment as herein provided. Upon expiration of the warranty, all such liability, as well as any other liability, shall terminate.
8. Nothing contained herein shall make the Purchaser, its agents or employees, an agent or representative of Seller and Seller assumes no responsibility of any act, omission, representation or warranty by the Purchaser or anyone else except as expressly stated herein.
9. The final Decision as to the validity of any claims arising under the warranty shall be determined solely by the Seller.

THE FOREGOING WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OR MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEED THE AFORESAID OBLIGATIONS AND ARE HEREBY DISCLAIMED AND EXCLUDED BY SELLER.

W A R N I N G

Installation must comply with the National Electrical Code, as well as Federal, State, Local and all applicable codes.

Do not install PI Configurator in a volatile, combustible or explosive atmosphere. PI Configurator must be protected from severe vibration, extreme temperatures, and excessive humidity.

Any peripheral equipment is to be installed in a non-hazardous location.

Any peripheral equipment connected to the PI Configurator must be UL listed.

The PI Configurator **must** be plugged into a dedicated 115 VAC wall socket.

History of Documentation

Version 1.0 — 2003
    Initial Release

Version 2.0 — April 2005
    Moved Kraus and Bennett sections to other manuals

Version 3.0 — November 2019
    Added Multi-Configurator section

Notice

Copyright

Patents

Progressive International products are manufactured or sold under one or more of the following U.S. patents.

5,790,410	5,663,887	5,361,216
5,831,861	5,557,529	5,270,943
5,694,326	5,394,336	5,108,742

Service App

The most recent release of the PI DBox Installation Guide is always available at pie-corp.com in .pdf format. For assistance in the field, be sure to download the PIE Support App from the Google Play Store, or use the QR code or link below.

https://play.google.com/store/apps/details?id=com.piecorp.pie_inc_support

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System Installation

System Installation Warnings

Safety hazards are inherent with all electrical equipment. Standard precautions must be taken at all times during installation and operation of the PI Configurator units. In addition to normal electrical precautions, the following points should be noted during installation.

- Installation must comply with National Electrical Code, as well as Federal, State/Provincial, Local, and all applicable codes.

- High voltages are present in the PI Configurator components, as well as the equipment to which it is attaching. To prevent personal injury or equipment damage, disconnect all power before proceeding with installation.

- PI Configurators must be installed in nonvolatile, noncombustible, nonexplosive areas. The box must be protected from severe vibration, extreme temperatures and excessive humidity.

- All PI Configurators and associated equipment must be installed in nonhazardous locations and must be UL-listed, using standard communication.

For Use in USA

Installation of the PI Configurator and associated equipment must comply with the requirements of the National Electrical Code (NFPA 70), the Automotive and Marine Station Code (NFPA 30A), and all Federal, State, Local, and applicable safety codes.

For Use in Canada

Installation of the fuel control equipment must comply with the requirements of the Canadian Electrical Code, the Flammable and Combustible Liquid Code, and all Federal, Provincial, State, Local, and applicable safety codes.

The installation of the systems covered by this manual in conjunction with equipment not UL Listed has not been evaluated by the Underwriters Laboratories and is outside the intended use of this equipment. Warning: All dispensing equipment discussed in this manual is not UL Listed and the combination has not been evaluated by Underwriters Laboratories.

Multi-Configurator
PCB Assembly Number 9000-11-4013

The Multi-Configurator has replaced the Gilbarco Configurator, Wayne Configurator, Tokheim Configurator, and the RS232 (Generic) Configurator. It can control one of each of these brands depending on the configuration. Refer to the Dispenser Specific sections for installation information.

Hardware Configuration

	Gilbarco	Wayne	Tokheim	Generic
Blue Harness	P17 (CURRENT LOOP)	P17 (CURRENT LOOP)	P13 (TOKHEIM)	P15 (RS232)
P9	CL	CL	TOK	RS232
SW1	LOW	HIGH	LOW (N/A)	LOW (N/A)
P11	GILB	WAYNE	N/A	N/A

Interface Connections

PI Configurators can come with multiple interface connections that allow the Configurator to be used in many different applications. Below is a breakdown of each interface and how to connect to each.

PiPort: A proprietary port used by Progressive's PIcon II Console and Omega JR controller.

1. Connect the PIcon II or the Omega JR to the PiPort connector of the PI Configurator using a serial cable supplied by PIE.

RS422: Used by Progressive's PIcon II Console and Omega JR. *(If this jumper setting is not available, the Configurator model does not support this interface type.)*

1. Connect the PIcon II or the Omega JR to the RS422 connector using the supplied cables and/or adapters. See Installation manuals for each product to configure each controller for RS422.

XPort: Used by Progressive's FuelDirect Software Controller only.

1. Connect to the Local Area Network using an ethernet cable connected to the XPort of the PI Configurator. Refer to the IP Addressing section at the end of this manual for further ethernet instructions.

2. The Configurator and POS will need to be on the same Local Area Network, and it is highly recommended that they are on their own isolated network by being on the same switch.

IP Addressing

The default IP address for the PI Configurator is 192.168.0.200. When the IP jumper is installed, the default address changes to 192.168.0.199. Since each device at the site must have a unique IP address, it may be necessary to reconfigure all Configurators to avoid conflicting addresses on the network. The IP address for each PI Configurator may be changed by using the following procedure.

Changing IP Address

Device Installer

1. Download Device Installer from the Support page of www.pie-corp.com.

2. After installation, open Device Installer and click on Search.

3. Select the xPort device listed on the right section of the program.

4. Click on Assign IP

    a) Verify that "Assign a specific IP address" is selected, then press Next.

    b) Type in the new IP Address (should automatically fill in Subnet Mask and Default Gateway) then press Next.

    c) Press Assign.

    d) Press Finish when it is complete.

5. Verify that the IP Address has changed to the new IP Address.

6. Once the update is complete, power cycle the Configurator.

Dispenser Specific Installation
Gilbarco Electronic Dispenser

⚠️ Note all warnings in System Installation Warnings section.

Installation instructions in this manual refer to the specific DBoxes supplied by dispenser manufacturers, used in conjunction with the PI Configurator, in a Progressive International product installation. If using Progressive International's PI DBox (which replaces both the dispenser manufacturer's DBox and the PI Configurator), refer to the PI DBox Installation Guide.

PIE ships the Multi-Configurator as standard for use with Gilbarco DBoxes. Some Gilbarco DBoxes are configured for RS422 operation. If the RS422 DBox cannot be converted to current loop operation, you must use an RS422 configurator and cables. Contact your PIE dealer to order.

Follow instructions in the installation section of the accompanying product manual before connecting PI Configurator as follows:
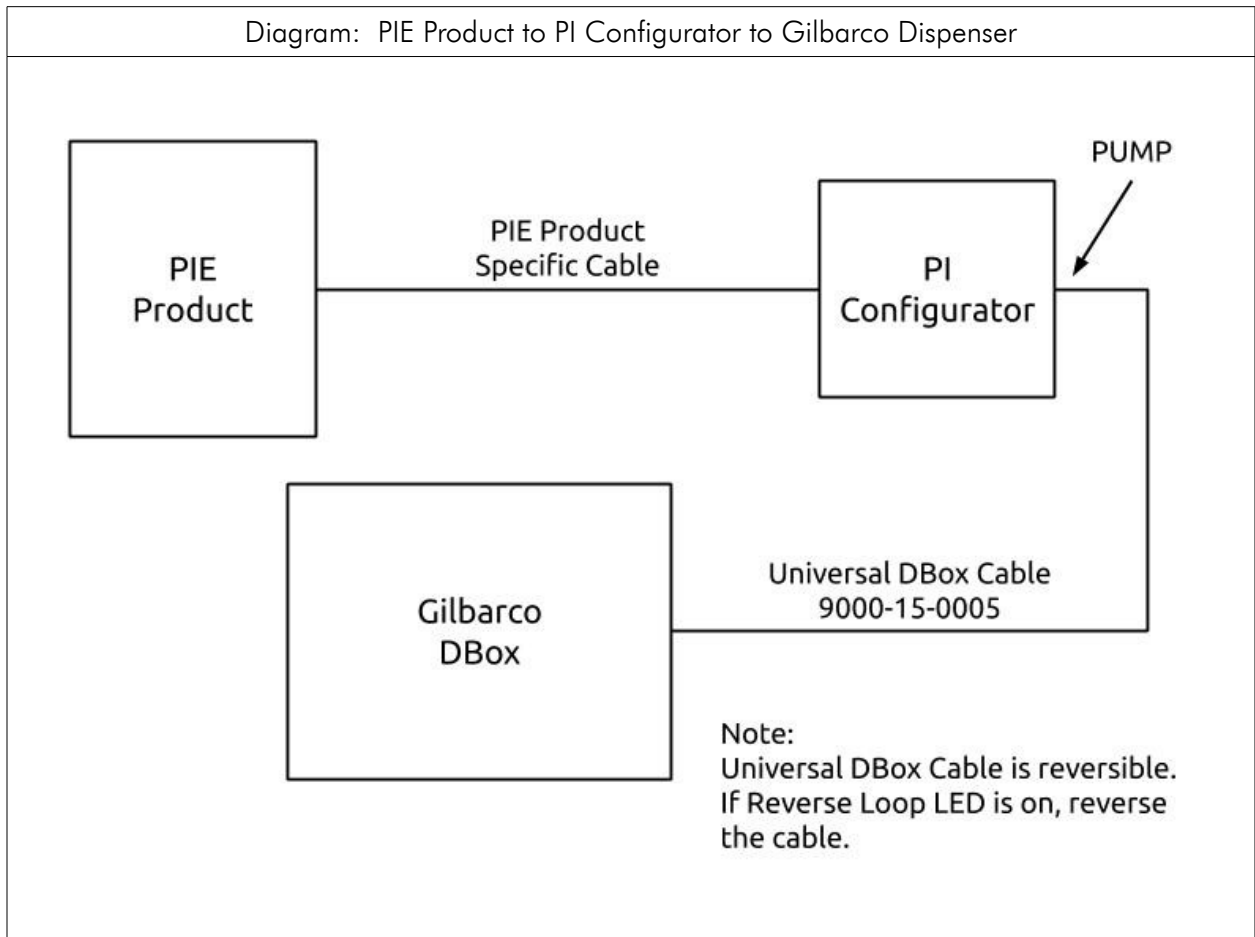
1. Disconnect the Gilbarco console (if applicable) from the distribution box and connect the Gilbarco style PI Configurator to the Gilbarco DBox using the Universal DBox Cable (9000-15-0005) supplied by PIE. This cable is reversible, so if the Reverse Loop LED is on in the DBox, reverse the cable.

2. Connect the PI Configurator to the PIE product using the appropriate cables supplied by PIE. Refer to Diagram: PIE Product to PI Configurator to Gilbarco Dispenser following this section.

3. On PI Configurator board, locate jumper P11and select GILB. Locate jumper P9 and select CL. Locate position SW1 and select LOW. Move the Blue Harness to P12 (CURRENT LOOP). *Note: the wires should come out of the connector toward the center of the pc board.*

4. Proceed with programming of system.

Note: All Single Product Dispensers (SPDs) must be set for grade 1.

Listing: Gilbarco DBoxes

Gilbarco DBox Part #	Description
Gilbarco DBox Part #	Description
PA01330000	Old Style with DIN connector
PA0261X000010	Universal Style with 1 board current loop
PA0261X000020	Universal Style with 2 boards current loop
PA0261X000011	Universal Style with 1 board RS422
PA0261X000021	Universal Style with 2 boards RS422
PA0306X010	Gsite Style with 1 board RJ45 connector
PA0306X020	Gsite style with 2 boards RJ45 connector
PA0242	TS1000 Style

Diagram: PIE Product to PI Configurator to Gilbarco Dispenser

PUMP

PIE
Product

PIE Product
Specific Cable

PI
Configurator

Gilbarco
DBox

Universal DBox Cable
9000-15-0005

Note:
Universal DBox Cable is reversible.
If Reverse Loop LED is on, reverse
the cable.

Dispenser Specific Installation
Wayne/Dresser Electronic Dispenser

⚠ Note all warnings in System Installation Warnings section.

Installation instructions in this manual refer to the specific DBoxes supplied by dispenser manufacturers, used in conjunction with the PI Configurator, in a Progressive International product installation. If using Progressive International's PI DBox (which replaces both the dispenser manufacturer's DBox and the PI Configurator), refer to the PI DBox Installation Guide.

PIE ships the Multi-Configurator as standard for use with Wayne/Dresser DBoxes.

Follow instructions in the installation section of the accompanying product manual before connecting PI Configurator as follows:

1. Disconnect the Wayne/Dresser console (if applicable) from the distribution box and connect the Wayne/Dresser style PI Configurator to the Wayne/Dresser DBox using the Wayne Config Cable (9000-15-0007) supplied by PIE. Refer to Diagram: Wayne/Dresser DBox Connection Guide following this section.

2. Connect the PI Configurator to the PIE product using the appropriate cables supplied by PIE. Refer to Diagram: PIE Product to PI Configurator to Wayne/Dresser Dispenser following this section.

3. On PI Configurator board, locate jumper P11and select WAYNE. Locate jumper P9 and select CL. Locate position SW1 and select HIGH. Move the Blue Harness to P12 (CURRENT LOOP). *Note: the wires should come out of the connector toward the center of the pc board.*

4. Proceed with programming of system.

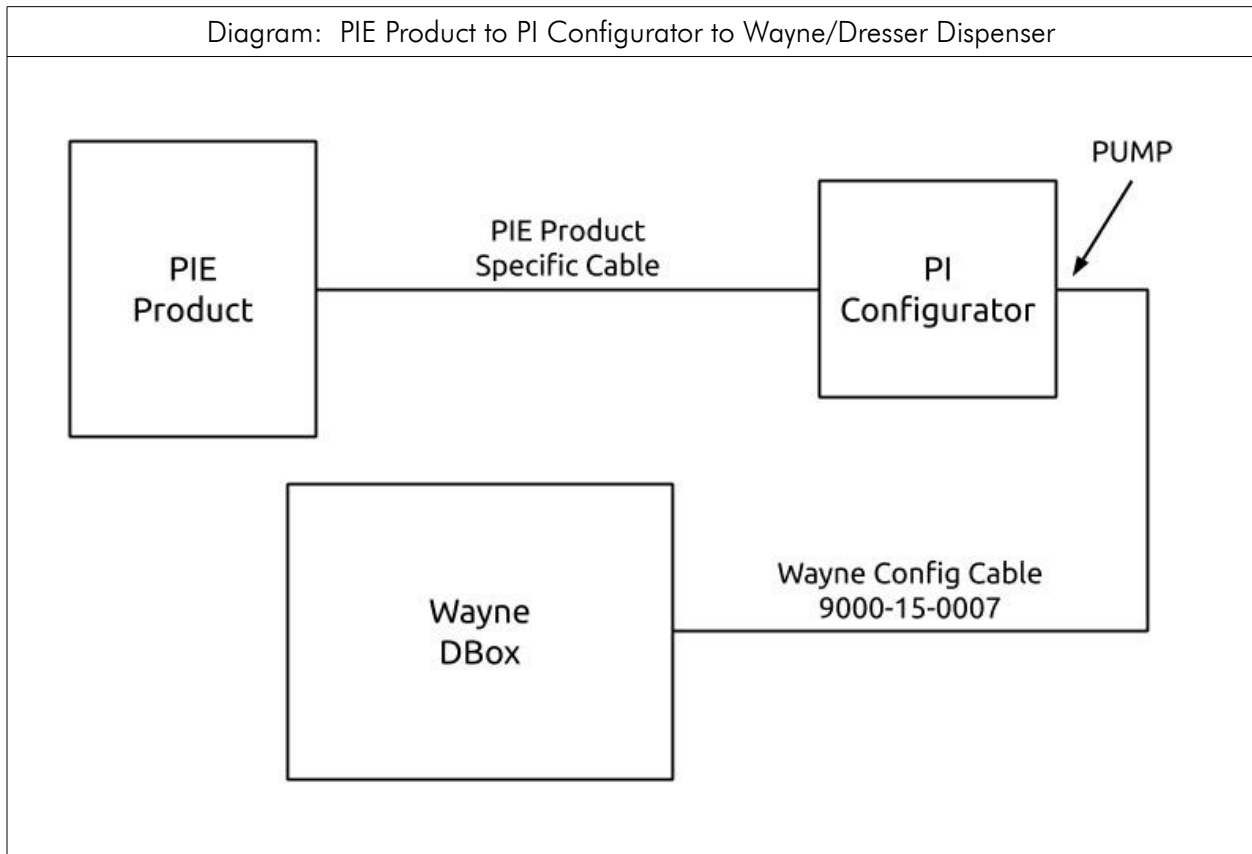Diagram: PIE Product to PI Configurator to Wayne/Dresser Dispenser

PUMP

PIE
Product

PIE Product
Specific Cable

PI
Configurator

Wayne
DBox

Wayne Config Cable
9000-15-0007

Diagram: Wayne/Dresser DBox Connection Guide

Pump
Communication
Connections

Data In   Data Out   Data In   Data Out
+ -   + -   + -   + -

From PI Configurator

Data +
Data -

| 1 | 2 | 3 | 4 | 5 | 6 | 1 | 2 | 3 | 4 | 5 | 6 |
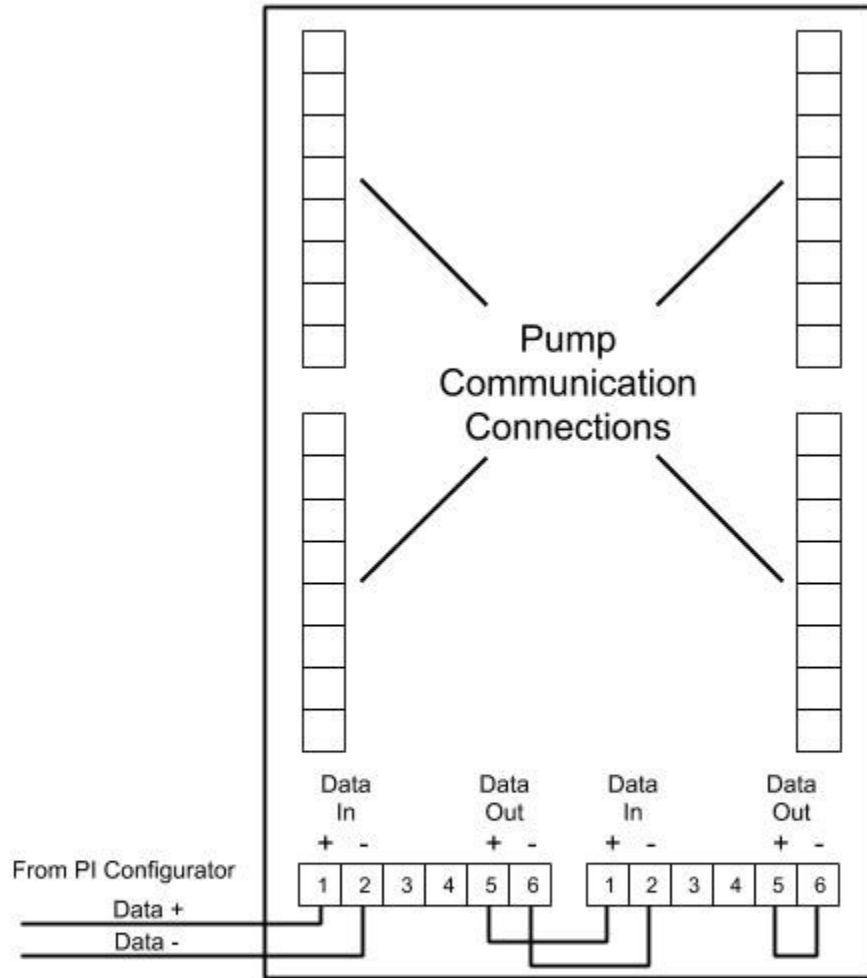
Wayne Config Cable (9000-15-0007) Wire Color:
Data +   RED
Data -   BLACK

Dispenser Specific Installation
Tokheim Electronic Dispenser

⚠ Note all warnings in System Installation Warnings section.

Installation instructions in this manual refer to the specific DBoxes supplied by dispenser manufacturers, used in conjunction with the PI Configurator, in a Progressive International product installation. If using Progressive International's PI DBox (which replaces both the dispenser manufacturer's DBox and the PI Configurator), refer to the PI DBox Installation Guide.

PIE ships the Multi-Configurator as standard for use with Tokheim. A 67B DBox must be either converted or have appropriate RS422 configurators and cable (supplied by PIE). If converting an RS422 67B DBox to Tokheim-standard communication, contact your Tokheim representative.

Follow instructions in the installation section of the accompanying product manual before connecting PI Configurator to specific Tokheim DBox as follows:

For Dispensers Using Model 98/94 Computer/Power Center

1. Disconnect the Tokheim 98/94 console (if applicable) from the distribution box.

2. Connect the PI Configurator to the PIE product using the appropriate cables supplied by PIE. Refer to Diagram: PIE Product to PI Configurator to Tokheim 98/94 Power Center following this section.

3. Connect the Tokheim STD Config Cable (9000-15-0006) supplied by PIE to the Tokheim style PI Configurator using the DB9S hooded connector end.

4. Connect the round connector from the Tokheim STD Config Cable to the Power Center data cable. *Cables must be screw-locked together. The connection must be in a sheltered environment, protected from harsh elements such as water, extreme heat or cold, etc.*

   ● <u>For systems with 8 dispensers or less</u> — Connect the Power Center data cable directly to the Model 98/94 Computer/Power Center. Refer to Diagram: PIE Product to PI Configurator to Tokheim 98/94 Power Center.

   ● <u>For systems with more than 8 dispensers (2 Model 98/94 Computer/Power Centers)</u> — Use a Tokhiem "Y" DBox Cable (9000-15-0013) supplied by PIE between the Tokheim STD Config Cable (9000-15-0006) and the Model 98/94 Computer/Power Centers.

5. On PI Configurator board, locate jumper P9 and select TOK. Locate SW1 and select LOW. Move the Blue Harness to P13 (TOKHEIM). *Note: the wires should come out of the connector toward the center of the pc board.*

6. If new installation, install the Model 98/94 Computer/Power Center according to Tokheim's installation manual. Dispensers must work in stand-alone before proceeding. *Program dispensers as if connecting to a Tokheim Model 179 or Model 184 Console.*

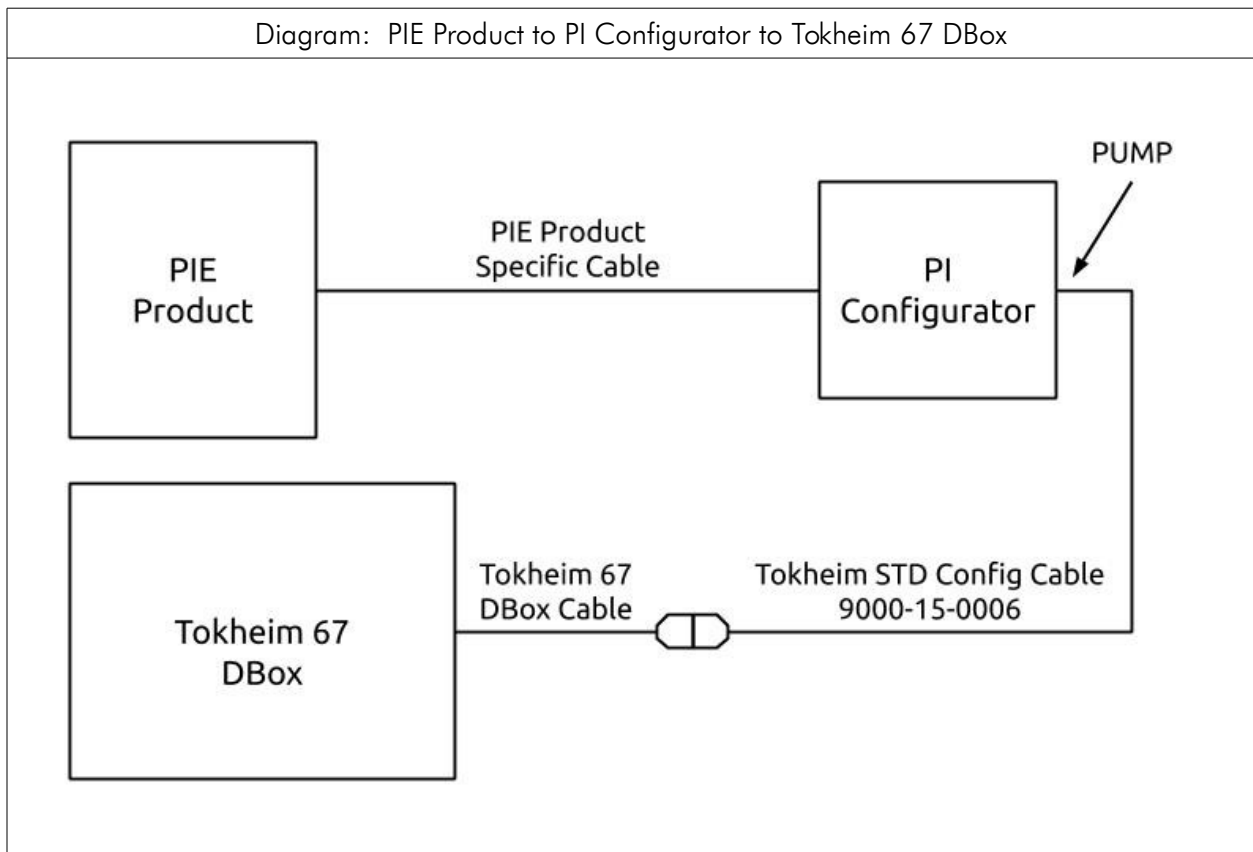7. Proceed with programming of system.

Diagram: PIE Product to PI Configurator to Tokheim 98/94 Power Center
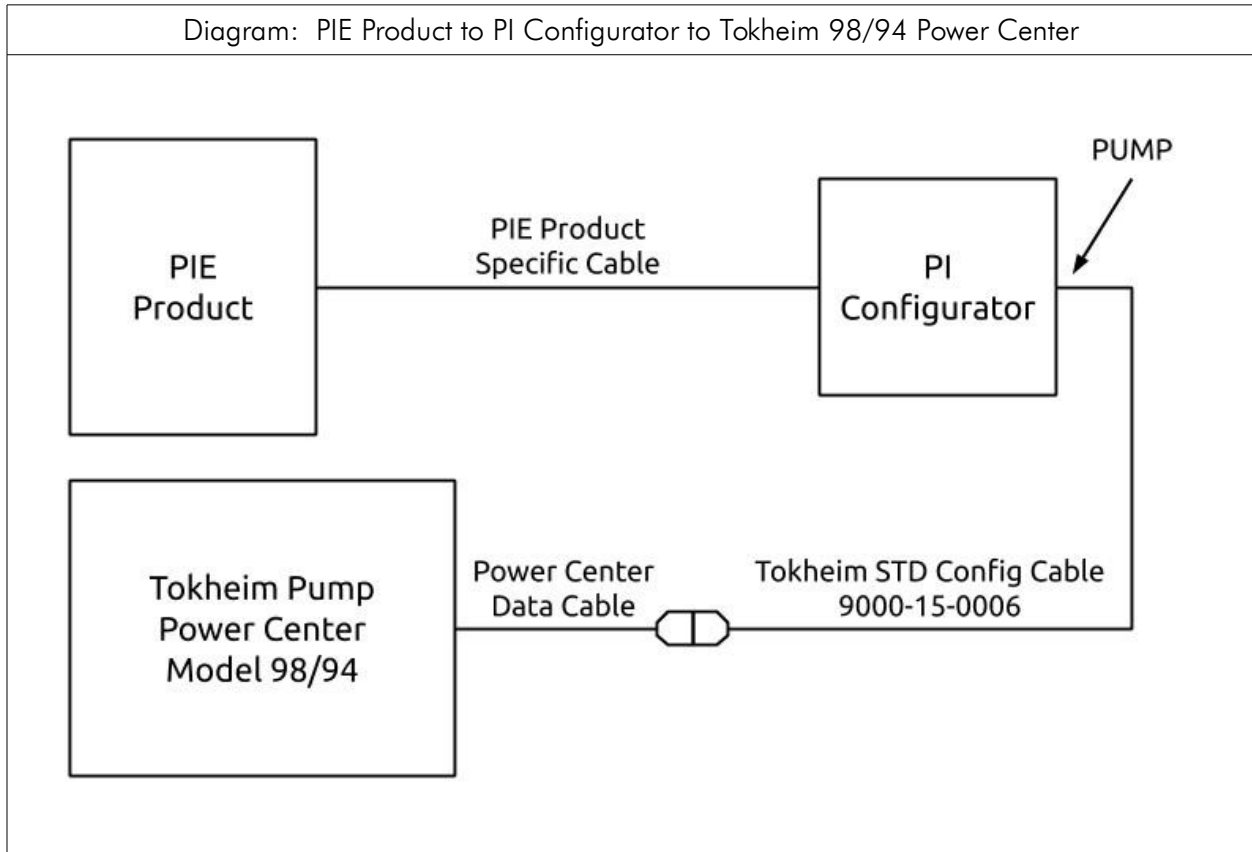
For Dispensers Using Model 67 or 67B DBox

The 67 and 67B DBoxes are similar. Be sure to determine model number from nameplate before attempting to connect to this device or damage may occur.

1. Disconnect the Tokheim console (if applicable) from the 67/67B distribution box.

2. Connect the PI Configurator to the PIE product using the appropriate cables supplied by PIE. Refer to Diagram: PIE Product to PI Configurator to Tokheim 67 DBox following this section.

3. Connect the Tokheim STD Config Cable (9000-15-0006) supplied by PIE to the Tokheim style PI Configurator using the DB9S hooded connector end.

4. Connect the round connector from the Tokheim STD Config Cable to the cable from the 67 DBox. *Cables must be screw-locked together. The connection must be in a sheltered environment, protected from harsh elements such as water, extreme heat or cold, etc.*

5. Connect wires to the 67 connection box according to Tokheim's instructions. Program the dispensers as though they were connected to a MIMS-IV.

6. On PI Configurator board, locate jumper P9 and select TOK. Locate SW1 and select LOW. Move the Blue Harness to P13 (TOKHEIM). *Note: the wires should come out of the connector toward the center of the pc board.*

7. Proceed with programming of system.

Diagram: PIE Product to PI Configurator to Tokheim 67 DBox

PUMP

PIE Product

PIE Product
Specific Cable

PI
Configurator

Tokheim 67
DBox

Tokheim 67
DBox Cable

Tokheim STD Config Cable
9000-15-0006

Dispenser Specific Installation
Generic Dispenser

⚠ Note all warnings in System Installation Warnings section.

For development purposes, PIE ships the Multi-Configurator for use with PIE's Pump Simulator.

Follow instructions to connect the PI Configurator as follows:

1. Connect the PI Configurator to the PIE product using the appropriate cables supplied by PIE. Refer to Diagram: PIE Product to PI Configurator to Pump Simulator following this section.

2. Connect the USB end of a USB to Serial Adapter to the development PC, and using a gender changer, connect the DB9 end to the PUMP port of the PI Configurator. Refer to Diagram: PIE Product to PI Configurator to Pump Simulator following this section.

3. On PI Configurator board, locate jumper P9 and select RS232. Locate SW1 and select LOW. Move the Blue Harness to P15 (RS232). *Note: the wires should come out of the connector toward the center of the pc board.*

4. Install and configure PIE's Pump Simulator according to instructions.

Diagram: PIE Product to PI Configurator to Pump Simulator