READ THIS FIRST

STOP

Paperless Process Recorder (PPR)

with Legendary™ Cloud Software

Version 1.3   Document 10034

ANDERSON-NEGELE

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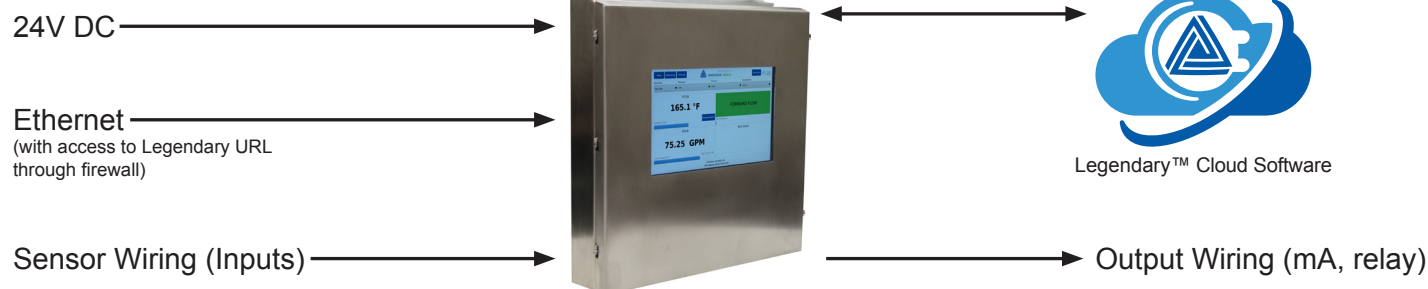Fax: 518-922-8997

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PRODUCT DESCRIPTION

The Anderson-Negele Paperless Process Recorder(PPR) and Legendary™ cloud software is an innovative solution to help you streamline recording of process data, creation and management of legal records, and secure storage of those records for state and third-party audit.
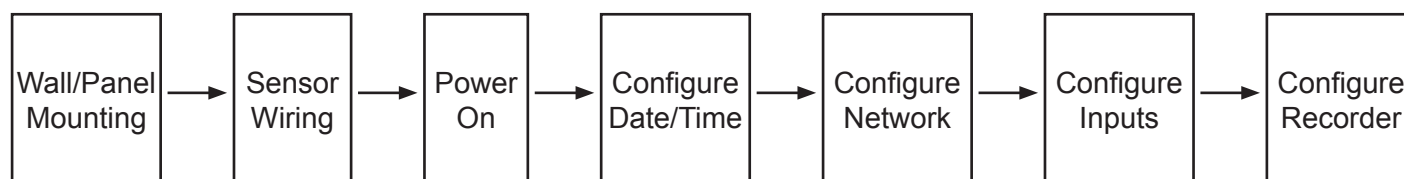
The PPR and Legendary™ cloud software provides a unique digital solution which is much more than a data trends being tracked in a data logger or historian solution. By providing workflows to create digital charts embedded with digital annotations and providing intuitive process to review and approve records, PPR and Legendary™ helps your plant and quality team get audit ready for internal, state or third-party audits.
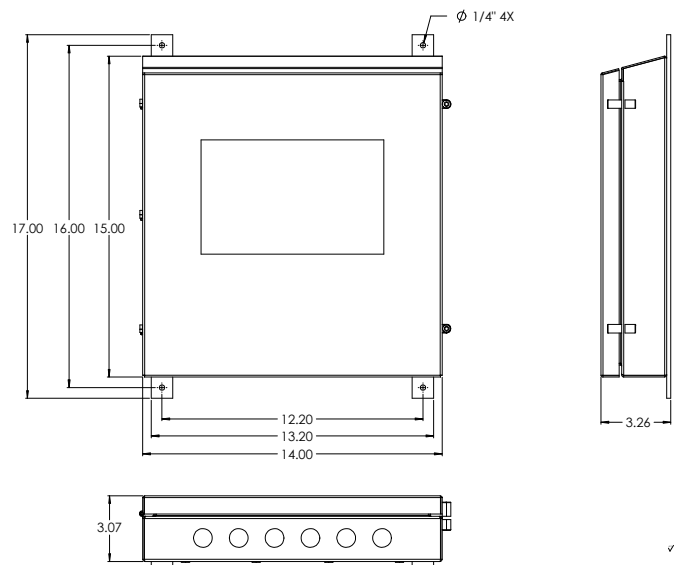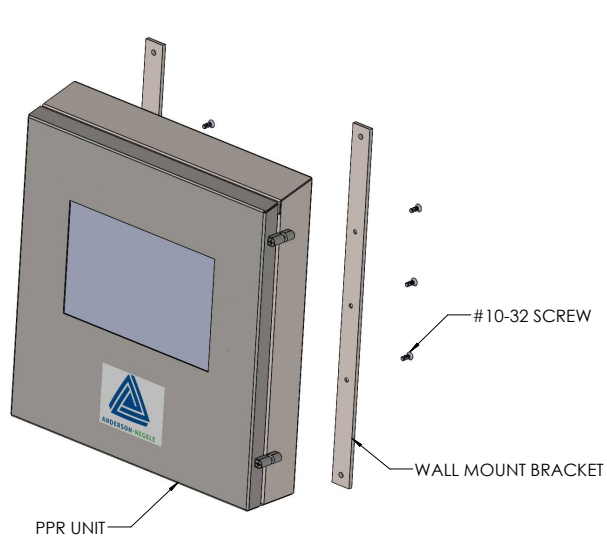
For additional resources, visit the PPR™ & Legendary Quick Start Page

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24V DC

Ethernet
(with access to Legendary URL through firewall)

Sensor Wiring (Inputs)

Legendary™ Cloud Software

Output Wiring (mA, relay)

INSTALLATION STEPS

Wall/Panel Mounting → Sensor Wiring → Power On → Configure Date/Time → Configure Network → Configure Inputs → Configure Recorder

WALL MOUNTING

#10-32 SCREW

WALL MOUNT BRACKET

PPR UNIT

Ø 1/4" 4X

17.00 16.00 15.00

12.20
13.20
14.00

3.26

3.07

PANEL MOUNTING

#10-32 SET SCREWS

#10-32 HEX. NUT

PANEL MOUNTING BRACKET

CUSTOMER PANEL

GASKET

PPR UNIT

15.00

14.00

3.07

4.23
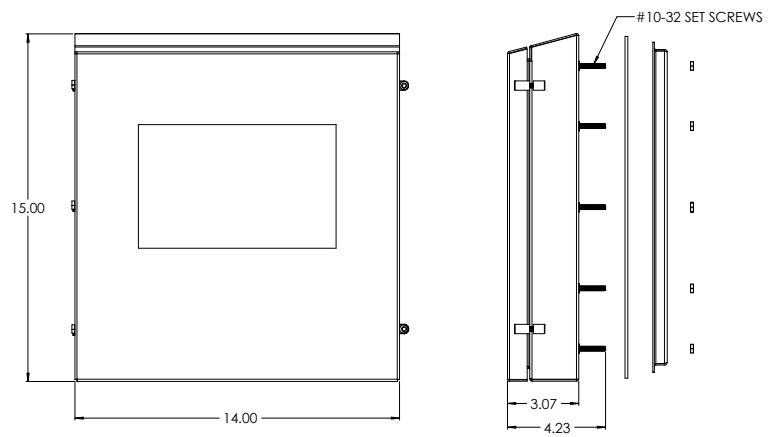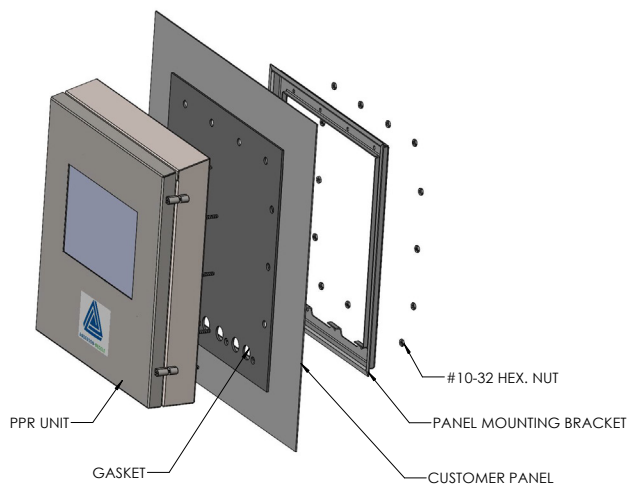
CIRCUIT BOARD and TERMINAL LOCATIONS for Non-STLR (PPR-X... models)

DISPLAY LVDS CABLE (BOTTOM SIDE)

SD CARD

MAIN BOARD

RTC BATTERY

+

-

DISPLAY BRIGHTNESS

RTC

-

+

TOUCH SCREEN USB

ETHERNET PORT

DISPLAY POWER

MODE SHUNT - JUMPER J21 INPUT 5-8

RUN MODE

J21

PROGRAM MODE

MOTHER BOARD

RELAY OUTPUT CARD

NO C NC   RELAY OUTPUT 4
NO C NC   RELAY OUTPUT 3
NO C NC   RELAY OUTPUT 2
NO C NC   RELAY OUTPUT 1

mA OUTPUT CARD 3,4

UNIVERSAL INPUT CARD 8

UNIVERSAL INPUT CARD 6

UNIVERSAL INPUT CARD 4

UNIVERSAL INPUT CARD 2

MODE SHUNT - JUMPER J9 INPUT 1-4

RUN MODE

J9

PROGRAM MODE

mA OUTPUT CARD 1,2

UNIVERSAL INPUT CARD 7

UNIVERSAL INPUT CARD 5

UNIVERSAL INPUT CARD 3

UNIVERSAL INPUT CARD 1

24 VDC TRANSMITTER POWER SUPPLY CARD 2

24 VDC TRANSMITTER POWER SUPPLY CARD 1

P4   P3   P2   P1

P4   P3   P2   P1

+ - + -   + - + -

+ - + -   + - + -

OUTPUT TERMINAL BLOCKS

INPUT TERMINAL BLOCKS

24 VDC

+ -

PPR POWER SUPPLY

| mA OUT 2 12C 12D 12E 12F | mA OUT 1 11C 11D 11E 11F | INPUT 8 8C 8D 8E 8F | INPUT 7 7C 7D 7E 7F | INPUT 6 6C 6D 6E 6F | INPUT 5 5C 5D 5E 5F | INPUT 4 4C 4D 4E 4F | INPUT 3 3C 3D 3E 3F | INPUT 2 2C 2D 2E 2F | INPUT 1 1C 1D 1E 1F |

SENSOR WIRING - INPUTS

xC, xD, xE, xF and P1...P4 are terminal labels representing unique input numbers that are wired interdependently. Terminal label details are shown in the label attached in the inside of the PPR door and also in the manual.
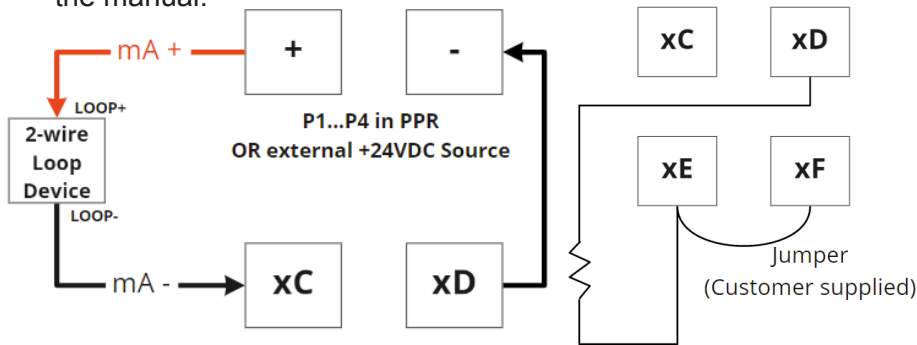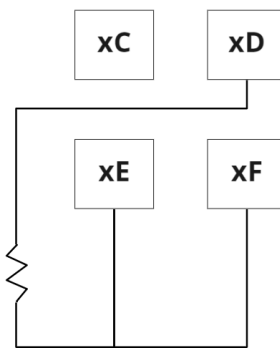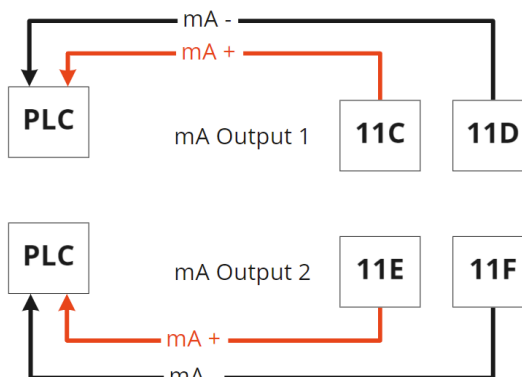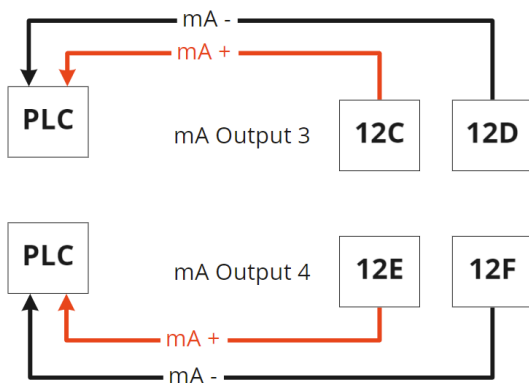

Singled-Ended or 2-wire Loop Device
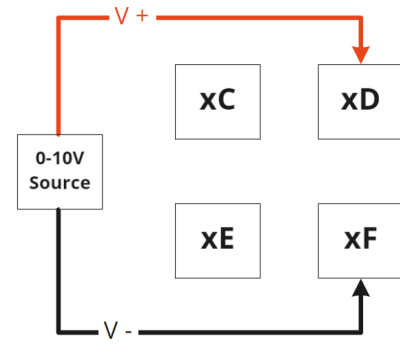
2-wire RTD

Voltage Input
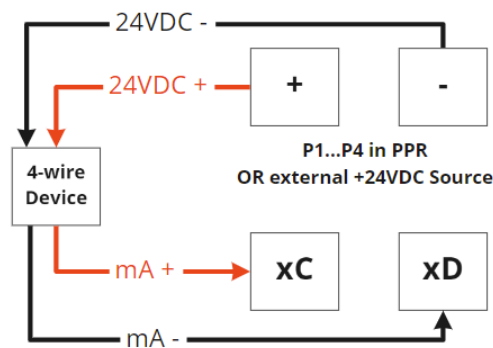
Differential or 4-wire Device
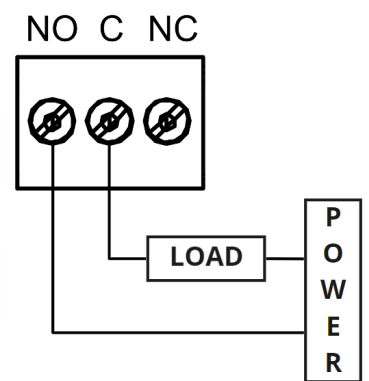
3-wire RTD

SENSOR WIRING - OUTPUTS

mA Outputs

Relay Outputs

ETHERNET CONNECTION

Connect your Ethernet cable to the Ethernet port on the PPR Main Board. When installed correctly to a live Ethernet cable the port will light up green as shown below. If Ethernet Port is not blinking, contact your network administrator for further information.

NETWORK CONFIGURATION

Network configuration must be properly set for the PPR to sync records, annotations, approvals, task status and users with Legendary™. Seek support from your IT department when needed.

By default, all PPRs will ship with DHCP configuration using public DNS. To change IP method or DNS please follow the steps below

1. Press the **MENU** button from the home screen
2. Press **Configure Network**
3. Press **Unlock**, enter user credentials, and press Submit
4. Press **Configuration** button at the bottom right corner
5. PPR can be set with static or Dyanmic IP address:
   For Dynamic IP, select DHCP for **IP Method** and enter **Primary DNS** and **Secondary DNS**
   For Static IP, select Manual for **IP Method** and enter **IP Address, Netmask, Gateway, Primary DNS,** and **Secondary DNS**
6. Press **Save**

If the plant's network administration team does not specify the DNS to use, there are multiple public DNS options available such as Google's 8.8.8.8 & 8.8.4.4.

Current Legendary Connection Status
At all times the PPR HMI display displays one of the following Cloud icons in the Navigation bar

Connected - There was a successful API call to the Legendary™ server within the last 15 minutes

Not connected - the API call to the Legendary™ server failed (for troubleshooting see Firewall setup below

FIREWALL SETUP

It is typical for the network team to block all traffic by default and explicitly enable only specific traffic to known services. For the PPR to Connect to the Legendary™ cloud server your network team may need to create rules to allow the following access through the firewall.

Access to Destination Domains: https://clients.intelex.com, https://preprod-na.intelex.com (and their sub-domains)

TCP and UDP Ports Used: HTTP(80), HTTPS(443), DNS(53), SSH(22)

PPR Device IP Address: Static and DHCP are configurable through HMI (see above)

Encryption Method: HTTPS / TLS 1.2 or above

Finding the PPR MAC (if required): The unique PPR MAC address can be seen on the inside of the door label as shown below.

MODEL NO: _____
SERIAL NO: _____
MAC Address: _____

Showing inside of PPR enclosure
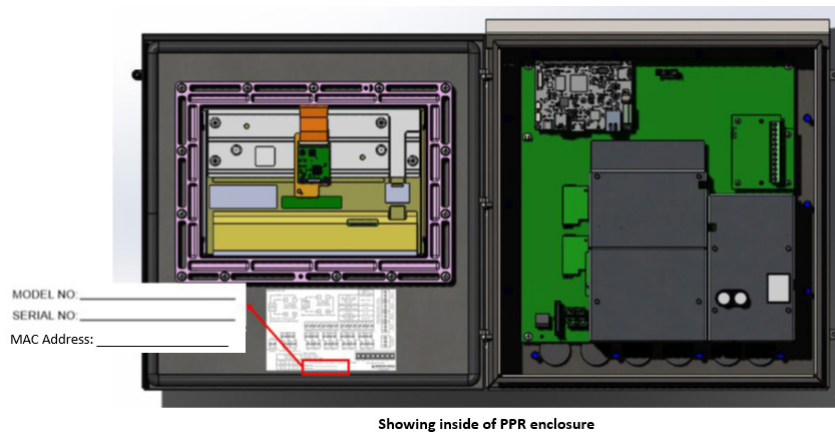
Wall Port used: May need to know what specific ethernet wall port the PPR is connected to

DATE/TIME CONFIGURATION (REQUIRES NETWORK STATUS: CONNECTED)

1. Press the **MENU** button from the home screen
2. Press **Date and Time Configuration**
3. Press **Unlock**, enter user credentials, and press **Submit**
4. Select **Time Format, Date Format,** and **Time Zone**
5. To sync with Legendary™, press **Sync Time and Date with Legendary Cloud** button
6. Press **Save**

System Time: 22:22:04

Time Format: HH:MM:SS (24-Hour ▼

Date Format: MM/DD/YYYY ▼

Date: 04/29/2021

Time Zone UTC+00:00 UTC ▼

Sync Time and Date with Legendary Cloud

INPUT CONFIGURATION

1. Press the **MENU** button from the home screen
2. Press **Configure Inputs**
3. Press **Unlock**, enter user credentials and press **Submit**
4. Press tab corresponding to input number
5. Select **Input Type**, based on whether corresponding sensor input is mA, RTD or voltage
6. Select **Display Unit**. Select Custom and enter **Custom Display Unit** if required option is not available in the dropdown list.
7. Enter **Display Name, Upper Range Value and Lower Range Value** corresponding to upper and lower end of sensor input.
8. Select **Sensor Break Recording** to indicate how the sensor break should be indicated in the chart
9. Select **Decimal Position** to indicate how many decimal places should be shown in the home screen for input value.
10. Select **Dampening (sec)**, if needed, to minimize high frequency noise/variation in the input and smoothen the trend.
11. Press **Save** on each Input configuration tab as updates are made

| STLR | STLR | SFLR | Not Used |

Status

Card Status	Card Not Detected	Input Type	Dual PT1000 .003750 °C ▼
Display Value	°C	Display Unit	°C ▼
Raw Value	°C	Custom Display Unit	
Display Name	STLR	Upper Range Value	250.0
Lower Range Value	-200.0	Sensor Break Recording	Record-Sensor Break ▼
Decimal Position	1 digit ▼	Dampening (sec)	0 ▼

Process data is invalid

RECORDER CONFIGURATION

1. Press the **MENU** button from the home screen
2. Press **Configure Recorder**
3. Press **Unlock**, enter user credentials and press **Submit**
4. Press **Recorder Setup** tab
5. Enter **Equipment Tag**
6. Select **Number of Records Generated** - up to 4 or 1 per input
7. Select **Rate of Data being Recorded** in seconds
8. Select **Record Start Time** to select day and time
9. Select **Time Period of Record** with options from 6 hours to 7-days
10. Enter **Plant Info - Name, Location and ID Number**
11. Enter **Major** and **Minor Divisions** for both x-axis (Time) and y-axis (Process Value)
12. Press **Save**

	Recorder Setup	STLR / SFLR Setpoints	Record 1
Equipment Tag	STLR#1		
Number of Records Generated	1 Record	▼	
Rate of Data being recorded (Secs)	3	▼	
Record Duration Period	Time Based		
Record Start Time	Monday @ 12:00		
Time Period of record (Hours)	12	▼	
Plant Info - Name	Anderon-Negele Dairy		
Plant Info - Location	156 Auriesville Rd		
Plant Info – ID Number	00-000		
Y Axis Major Divisions	10		

STLR/SFLR SETPOINT CONFIGURATION

This is only applicable for PPRs configured for STLR and SFLR applications. In SFLR control applications the PPR controls the SFLR Relay Output based on the Loss of Signal (low flow) Alarm and High Flow Alarm Set Points.

1. Press the **MENU** button from the home screen
2. Press **Configure Recorder**
3. Press **Unlock**, enter user credentials and press **Submit**
4. Press **STLR/SFLR Setpoints** tab
5. For SFLR, enter **Loss of Signal** and **High Flow Alarm** setpoints
6. For STLR, enter **Setpoint Decimal Places, Setpoint Deadband** and up to 15 **Setpoints**
7. Press **Save**

	Recorder Setup	STLR / SFLR Setpoints	
Loss of Signal Alarm SP	10	GPM	
High Flow Alarm SP	85	GPM	
STLR SP Deadband	4		
STLR SP1	168	°F	
STLR SP2	0	°F	

RECORD 1 THROUGH 4 CONFIGURATION

PPR can generate up to 4 records and each of those records can have any of the Input 1 through Input 4 enabled or disabled.

1. Press the **MENU** button from the home screen
2. Press **Configure Recorder**
3. Press **Unlock**, enter user credentials and press **Submit**
4. Press **Recorder 1, 2, 3 or 4** tab
5. For each input in the tab, select enable or disable for **Enable Recording**
6. Select **Trendline Color**
7. Enter **Recording Lower Range Value** (y-axis low value)
8. Enter **Recording Upper Range Value** (y-axis high value)
9. Select **Print Recording Scale on Record** to display y-axis scale on left or right
10. Select **Print Y-axis Label** to disable or to display Input Name with or without measurement unit
11. Press **Save**

Recorder Setup	STLR / SFLR Setpoints	Record 1	Record 2

Input 1	Input 2	Input 3	Input 4

| Display Unit | pct | DLR | 0 | DUR | 100 |

Enable Recording	Enable ▼
Trendline Color	
Recording Lower Range Value	0.00
Recording Upper Range Value	100.00
Print Recording Scale on Record	Left ▼
Print Y Axis label	PV1[pct] ▼

STLR RUN/PROGRAM JUMPER

The PPR is equipped with a **Run/Program jumper J9** located on the PPR motherboard.

When a **Run/Program jumper J9** is in Run mode it disables software updates, any change recorder configuration, and any change to Input 1 through Input 4 configuration and calibration. On a **STLR PPR**, it includes **STLR and SFLR Inputs**.
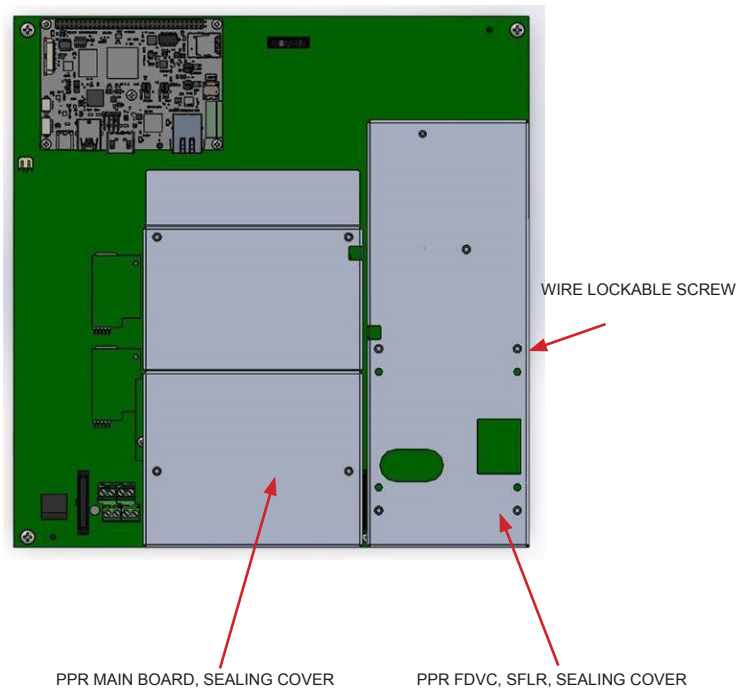
NOTE: Moving the **Mode Shunt Jumper J9** to the PROGRAM position will immediately force the unit to DIVERT flow. If already in DIVERT flow, the unit will remain in that mode even if the hot product temperature rises above the active setpoint.

MODE SHUNT - JUMPER J9
INPUT 1-4 OR STLR/SFLR

RUN MODE

J9

PROGRAM MODE
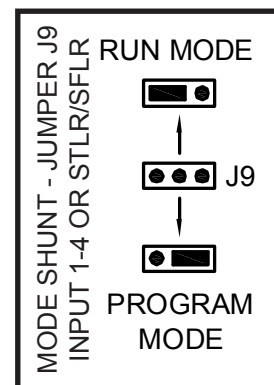
SEALING COVERS

Sealing Covers and Health Authority Tamper Evident Seals can be used to ensure the Run/Program Jumper (J9) position changes are tamper evident.

Additionally, the PPR electronically records all changes of the J9 position in the system activity log. Sealing covers also prevent access to input and STLR, SFLR relay output wiring terminals.

WIRE LOCKABLE SCREW

PPR MAIN BOARD, SEALING COVER

PPR FDVC, SFLR, SEALING COVER

Notes

CSI

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