

PVD875U20

5-Bank Flow Manifold



Installation Guide



1. Welcome & Congratulations

Congratulations on your purchase of a new PUREGAS PVD875U20 5-Bank Flow Manifold! We here at PUREGAS are very proud of our products and we are committed to providing you with the best value and service possible.

We are sure that you will be satisfied with your new Flow Manifold and would like to thank you for choosing PUREGAS for your monitoring requirements. We also hope that you will continue to choose us for your future air pressure and related product purchases.

For information about this and other PUREGAS products, please visit us on the web at:

www.puregas.com

2. Introduction

PLEASE READ THIS USER'S GUIDE THOROUGHLY AND SAVE FOR FUTURE REFERENCE.

This User's Guide is provided for the benefit of our customers and contains information and direction specific to the PUREGAS PVD875U20 5-Bank Flow Manifold. This guide will cover topics including: safety, specifications, installation, registration, operation, and service. Observation and compliance with this User's Guide will ensure the maximum life and efficiency of your Flow Manifold.

This User's Guide should be read thoroughly prior to installing or operating the Flow Manifold in order to become familiar with the recommended procedures. This will minimize the possibility of personal injury or damage to the unit due to improper operation or handling.

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4. Safety & Warning Information

This section contains general information about safety and warning points to consider and adhere to during installation, and operation of your Flow Manifold. PLEASE READ THIS SECTION BEFORE PERFORMING ANY OPERATION OR PROCEDURE ON YOUR FLOW MANIFOLD.

Additional warnings specific to an operation or procedure will also be presented throughout the following sections. These will include the  symbol as well as a label of “**WARNING!**”, “**CAUTION!**”, or “**IMPORTANT!**”. Please be sure to pay close attention for these warnings and read them as you encounter them.



WARNING!

For your safety, all the information in this User’s Guide must be followed to minimize the risk of electrical shock, and prevent property damage or personal injury.



CAUTION!

Proper Installation as outlined in this User’s Guide is extremely important to ensure the reliability and longevity of the equipment as well as prevent damage or personal injury.



IMPORTANT!

Removing the cover or performing procedures not described in this User’s Guide WILL VOID THE WARRANTY.

5. Overview & Specifications

5.1 Product Description

The PUREGAS PVD875U20 5-Bank Flow Manifold is remote monitored underground manifold that is intended to provide real-time pressure and flow information in air distribution networks which utilize PUREGAS monitoring systems. The device is capable of measuring manifold inlet pressure as well as the individual outlet flows of five outlet ports.

It is designed specifically for use in underground applications, and is compatible with PUREGAS PVD800V Monitoring Systems equipped with a PVD800VD/M card, as well as PVD818 Mini Monitoring Systems. The monitoring system connects to the manifold with a single twisted pair. Monitoring systems may be programmed to alarm when Pressure and Flow readings reach a user-programmed limit.

5.2 Key Features

- Inlet Pressure & 5 Cable Flow measurements
- Microprocessor based
- Easy to program
- Fully sealed, waterproof structure
- Drop-in replacement for ageing mechanical type flow manifold
- Compatible with PUREGAS PVD800V, PVD818, and upgraded Sparton Monitoring Systems.

5.3 Technical Specifications

Pressure Range	0 – 14.5 PSI
Flow Range	0 – 20 SCFH
Measurement Accuracy	Flow: +/- 2% of span Pressure: +/- 0.5 PSI
Inlet Connection	3/4" Air Pipe Fitting
Outlet Connections	(x5) 3/8" Tube Fittings
Monitoring	Real time readings with a PUREGAS Monitoring System
Power	50 VDC (supplied by Monitoring System)
Operating Temperature	Optimal: 32°–122°F (0°–50°C)
Dimensions	6.2"W x 7"H x 4.2"D
Weight	11.5 lbs.

6. Installing Your Flow Manifold

6.1 Before you Begin



CAUTION!

Proper Installation as outlined in this User's Guide is extremely important to ensure the reliability and longevity of the equipment as well as prevent damage or personal injury.



IMPORTANT!

Removing the cover or performing procedures not described in this User's Guide WILL VOID THE WARRANTY.

- 6.1.1 Carefully inspect the unit, including the shipping box as well as the Flow Manifold for ANY DAMAGE CAUSED BY SHIPPING. If any shipping damage is detected, it is important to file a claim with the shipping company prior to continuing the installation procedures.**
- 6.1.2** Read the entire *Installing Your Flow Manifold* Section to familiarize yourself with the components and procedures before performing the Flow Manifold installation.
- 6.1.3** Verify that your monitoring system meets the minimum requirement to be able to communicate with the PVD875U20 5-Bank Flow Manifold:
- Is a PUREGAS PVD818 Mini Monitoring System or a PVD800V Modular Monitoring System with Universal or Dedicated Modules installed
 - Is a Sparton Monitoring System that has been upgraded with a PUREGAS PVD855 and Dedicated Module boards
- 6.1.4** Verify there is an available Dedicated wire pair to connect to.
- 6.1.5** Verify the installation location of the Flow Manifold:
- 6.1.6** Notify the alarm center of the installation and potential for alarms during the process (if applicable).

6.2 Included Contents



- (1) PVD875U20 5-Bank Flow Manifold
- (1) User's Guide (not shown)
- (3) Mounting Bolts (not shown)
- (3) Mounting Nuts (not shown)
- (6) Mounting Washers (not shown)

6.3 Required Tools and Materials

- Medium/Large adjustable wrench
- Flathead screwdriver
- Frame Block spin-down tool
- PGComm or PGEEditor program
- PVD860D Transducer Calibrator / Tester

6.4 Calibrating the Pressure

6.4.1 Connect the test pair of the PVD860D Transducer Calibrator / Tester to the wire pair of the PVD875U20 Flow Manifold.

6.4.2 Power ON the PVD860D.



6.4.3 In sequence:

Press the “W” button
then the “2” button
then the “W” button to set
the zero points.



- If the text “**WARNING...**” appears on the screen, press the “**ENT**” button to continue.
- When “**Finished! ZeroP=123***” appears on the display, the calibration was successful.

***NOTE:** This notification may not show “123”, but may instead show another number. This is normal.

6.4.4 Press the **ESC** key twice to get back to the main screen.



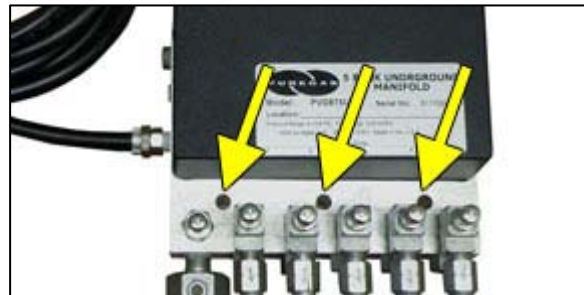
6.4.5 Power OFF the PVD860D and remove test pair.



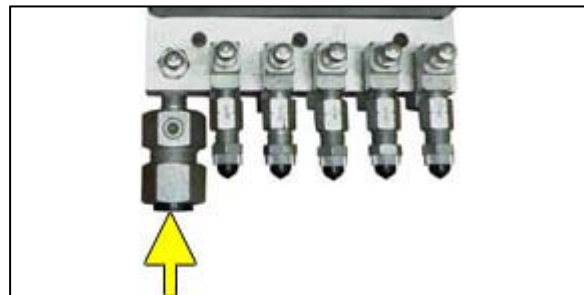
6.5 Installing and Connecting the Flow Manifold

6.5.1 Place the Flow Manifold at the operating location.

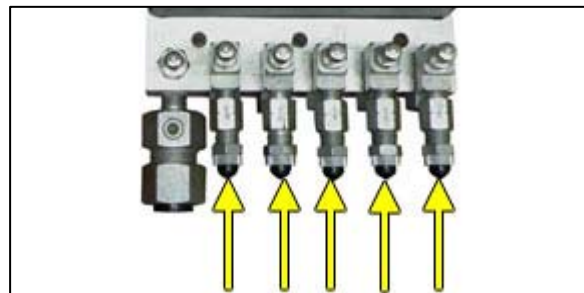
6.5.2 Use the included hardware to secure the Flow Manifold.



6.5.3 Connect the source air pipe to the Inlet Fitting.

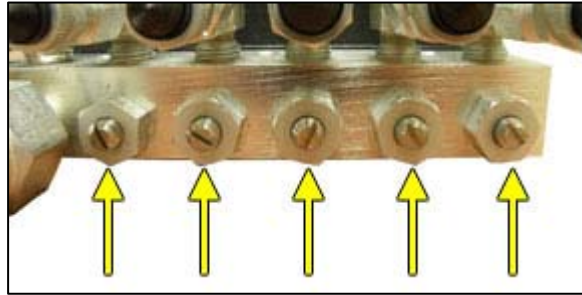


6.5.4 Connect up to (5) Cable Supply Lines to the Outlet Fitting(s).



6.5.5 Use a flathead screwdriver to Open / Close the Outlet Ports as required:

Clockwise to **CLOSE**
Counter-Clockwise to **OPEN**



6.5.6 Connect the wire pair from the PVD875U20 Flow Manifold to an available Dedicated wire pair in the cable



6.6 Wiring the Flow Manifold to the Monitoring System

NOTE: If wiring to an existing Sparton monitoring system, that system must be upgraded with PUREGAS modules:

Control Module – PVD855

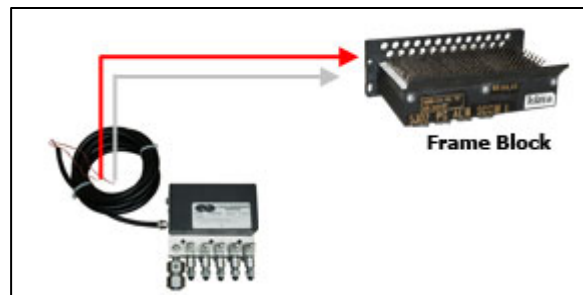
Dedicated Modules – P580502 & P580503's

Also, because of the communication method used by the PVD875U20 Flow Manifold, it is necessary to use the highest Dedicated wire pair supported by your Sparton system.

For Example: If your system has the capabilities of monitoring 108 Dedicated points, wire the PVD875U20 Flow Manifold to position 108 on the frame block.

6.6.1 Locate an available Dedicated wire pair position on the Dedicated frame block.

6.6.2 Connect the cable pair from the PVD875U20 Flow Manifold to the available wire pair frame block location.



6.7 Programming Your Flow Manifold Points

Use PUREGAS' PGComm or PGEEditor to program the following into a new or existing Unit:

6.7.1 Add the necessary Thresholds, with Low, High, and Trend Alarm values set specific to your system (as required)

- Add type 58 – PRES 95 *Used for Pressure*
- Add type 61 – FLD 95 *Used for Flow*

6.7.2 Determine the Input Numbers to be programmed for each individual point.

The PVD875U20 Flow Manifold uses one (1) Actual** input number and up to five (5) virtual input numbers to monitor each of the six points. They are determined as follows:

Inlet Pressure - Actual** =

Outlet Flow #1 - Actual + 25 =

Outlet Flow #2 - Actual + 50 =

Outlet Flow #3 - Actual + 75 =

Outlet Flow #4 - Actual + 100 =

Outlet Flow #5 - Actual + 125 =

Input number examples:

	Wired to Frame Block Location			
Inlet Pressure <i>(Actual)</i>	1	2	108	1001**
Outlet Flow #1 <i>(Actual + 25)</i>	26	27	133	1026
Outlet Flow #2 <i>(Actual + 50)</i>	51	52	158	1051
Outlet Flow #3 <i>(Actual + 75)</i>	76	77	183	1076
Outlet Flow #4 <i>(Actual + 100)</i>	101	102	208	1101
Outlet Flow #5 <i>(Actual + 125)</i>	126	127	233	1126

****NOTE:** If your system is a PUREGAS PVD800V Modular Monitoring system, please refer to the Input Number Conversion Table specific to your system to determine the “Actual” input. This will be the “**800V Input#**” that corresponds to the frame block location (access#) used.

6.7.3 Add each of the Flow Manifold points to the system.

6.7.3.1 Use the appropriate Threshold

6.7.3.2 Use the appropriate determined Input Number

6.7.3.3 Each point should be identified as Dedicated (Ded) for Module type

6.7.3.4 Name each point accordingly (Inlet Pressure, Flow #1, Flow #2, Flow #3, Flow #4, Flow #5 for example)

7. Limited Warranty Agreement

PUREGAS products carry a one (1) year warranty against defective workmanship and material. This period starts at date of shipment. Not included are the components subject to normal replacement during a year's operating time.

No claims for labor in replacing defective parts or for consequential damages will be allowed. Replacement parts will be invoiced in the regular way, with invoices subject to adjustment after the parts claimed defective are examined at our factory. In addition, no material or parts will be accepted at our factory for in-warranty repairs or credit without previous authorization from PUREGAS.

Responsibility for damages incurred in transit will be borne by the user and the user in turn should file any damage claim against the carrier. All warranty items are F.O.B. Broomfield, Colorado. Freight charges are the responsibility of the user.

This warranty shall not apply to any PUREGAS product which shall have been repaired or altered in any way by anyone other than PUREGAS or authorized personnel so as to affect, in our judgment, its proper functioning or reliability, neither will it apply to any product which has been subject to misuse, negligence, or accident. The installation of unauthorized non PUREGAS parts will void the warranty on those PUREGAS products.

8. Contacting PUREGAS

8.1 General

PUREGAS, LLC
226A Commerce Street
Broomfield, Colorado 80020

(800) 521-5351

(303) 427-3700

Fax – (303) 657-2233

info@puregas.com

www.puregas.com

8.2 Sales

(800) 521-5351 (**option 2**)

Fax – (303) 657-2205

sales@puregas.com

parts@puregas.com

8.3 Service

(800) 521-5351 (**option 3**)

Fax – (303) 657-2205

8.4 Technical Support

(800) 521-5351 (**option 1**)

