



Model 9016 X-Purge User Manual



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1 Introduction

Thank you for selecting a DAISY solution for your hazardous area operator interface requirements!

This manual describes the general procedures for installing and operating DAISY Model 9016 X-Purge interface systems. The text portion of the manual also includes an overview of the theory behind the methods used to make electronic systems safe for hazardous areas. Section 9, Specifications, also contains an overview of system specifications, and Section 10 Drawings, includes mechanical drawings of each unit.

2 Hazardous Area Safety Methods: Theory of Operation

2.1 Division 1: X-Purge Protection

X-Purge systems are another option available for Division 1 hazardous areas. The installation of an X-Purge system on an enclosure in a Division 1 area renders the area within the enclosure to an essentially non-rated environment. Thus, normally rated equipment may be installed within the enclosure (within reasonable limits, such as complying with temperature and power restrictions).

An X-Purge system is fully automated. The system not only provides the protective purge and maintains positive pressure, but it also automatically controls the connection and disconnection of power supplies and signal paths. A well-designed X-Purge system also automatically control flow rates, internal pressure regulation, purge timing, and switching of states between purge flow and normal operation. DAISY X-Purge controls provide all of these features.

X-Purge controls must also satisfy the FM 3620: 4.2 specifications. DAISY X-Purged equipment has also been validated by Factory Mutual as meeting these requirements.

3 Pre-Installation Testing

Before installing your system in its final location, you may wish to test it to verify that the purge system is functioning correctly.

3.1 Division 1 X-Purge Test

IMPORTANT NOTE: Pre-installation testing should *always* be conducted in a safe area.

Equipment Required

- Clean, dry purge air, or an inert gas supply equipped with local water/oil separator or filter capable of supplying 40 to 300 SCFH at 30 to 60 PSI.
- Fittings and tubing for purge air or inert gas supply (0.25" NPT Male to connect to the inlet of the purge system).
- Local air pressure shutoff valve.
- 120V, 8A or 240V, 4A AC power (w/ Ground) with pigtails, tinned bare wire and stripped 0.25"

Procedure

- 1. PLACE UNIT in a safe area near a source of the purge gas to be used .
- 2. **Install pressure regulator**, along with a water/oil separator or filter, a shutoff valve, a pressure relief valve, and a pressure gauge in the pressurized purge air (or inert gas) line (see drawing P007).
- 3. **INPORTANT,** Bleed the pressurized purge air (or inert gas) line ensuring that any dirt, moisture, and contaminants are cleared from the line before connecting the pressurized purge air (or inert gas) line to the unit.
- 4. Connect the purge gas line to the inlet of the regulator on the Purge Unit.
- 5. **Remove cover** of the explosion-proof I/O casting (see drawing P007)
- 6. **Connect an AC power** line to the power interface board (see drawing P008). For connection, location, and wiring, see drawing E017 (NOTE1).
- 7. Close all access doors and covers.
- 8. **Apply purge gas to the system** by opening the shutoff valve. Adjust pressure regulator on the air-in box (see drawing P008) to 40 PSI.
- 9. Apply AC power to the unit.
- 10. When pressure inside the unit reaches 1.0" WC and \geq 40 SCFH, the Purge Status LED should illuminate yellow, indicating that it is purging.

IF THE INDICATOR DOES NOT ILLUMINATE a thorough inspection for leakage of the unit must be made. Panel gaskets can be checked with a soap solution. If leaks are not visually apparent, verify that the pressurized air is clean, dry and is 40 PSI at the inlet.

DO NOT ATTEMPT TO OPEN THE ENCLOSURE WHILE IT IS PRESSURIZED! OPENING PRESSURIZED ENCLOSURE CAN RESULT IN SERIOUS INJURY!

- Slowly increase air pressure with the regulator until the purge process stops. Note Pressure the pressure at which the purge process stops. The Purge Status LED will flash red and display an error code - [2 – 2] (over pressure) or [3 –2] (over-flow).
- Remove AC power from the enclosure for a minimum of 30 seconds. Decrease the pressure reading on the pressure gauge by 5 PSI. This change may vary slightly on some units; if in later testing the unit fails with an [3 –2] (over-flow) error code, decrease the inlet pressure by another 2 PSI. Note Pressure for use during start-up.
- 13. **Re-apply AC power.** The Purge Status LED will illuminate yellow and should purge for a minimum of 8 minutes. Time will vary according to the flow rate of the air into the enclosure.
- 14. After the purge is complete, the Purge Status indicator will illuminate green. AC power is now applied to the internal electronics to power on the display or PC.
- 15. If the purge status light blinks red, refer to Table 6.1 X-Purge Status Light Key on page 12 for error code details.

4 Installation

4.1 PAC-Seal Connection Instructions

A conduit seal is necessary for most equipment enclosures in hazardous areas. Consult your local codes for full guidance.

It is *very important* that knowledgeable personnel, familiar with national and local codes, supervise hazardous area equipment installations.

IMPORTANT

ALWAYS follow NEC, NFPA, and local codes when installing conduit and PAC-seals in hazardous areas!

The sealing compound generally used for PAC-seals is an inorganic, chemically setting, magnesium oxide base material, which develops a slight expansion while hardening into a porcelain-like body. Sealing Compound is supplied as a powder and need only be mixed with water to apply. Approximately one ounce of sealing compound is needed per cubic inch of space to be filled.

IMPORTANT

- The sealing compound powder has a shelf life of six months when stored in unopened, tightly sealed containers in a dry location at 70°F.
- Any equipment accidentally splashed with sealing compound should be cleaned with soap and water before the sealing compound cures.

Equipment Required

- Four PAC-Seal fittings, 1" NPT or 0.75" NPT for the X-Purge (2 for conduit connection at the enclosure or I/O casting, 2 for connection in the safe area), or sealing conduits. The PAC Seal and conduit size selected will depend on the size and number of conductors, which must be run to the unit. Check with NEC tables to determine the conduit size necessary
- Conduit for electrical signals and for electrical power (separate runs), NEC and NFPA approved for use in hazardous areas
- NEC and NFPA approved flexible conduit if needed for difficult installations
- Fittings as required for permanent conduit installation NEC and NFPA approved for use in hazardous areas
- Signal cables, power cables, and connectors as required to mate with the equipment within the enclosure or cast aluminum box
- AC power switch for use in the safe area

Procedure

- 1. Clean threaded surfaces and pour locations should be with soap and water and thoroughly dried before proceeding.
- 2. Install two conduit runs (one signal, one power) between the enclosure I/O casting and AC power source (located in a safe area or in an explosion-proof box). See drawing P011 for added details.
- 3. Shake the sealing compound powder well before mixing with water. The recommended mix ratio is 5 parts powder to 1-part clean water, by weight.
- 4. Place 25ml of 70°F water into a clean mixing container and gradually add powder to water while mixing with a slow-speed mixer or by hand with a spatula until a uniform consistency is obtained.
 - A minimum amount of water should be used. Excessive water reduces mechanical strength, increases shrinkage, and delays set time.
 - Failure of the cement to adhere indicates setting has begun. Do not attempt to re-temper by adding more water. Discard cement and start a new batch.
- 5. **Apply compound** by pouring, casting, or using a mechanical dispenser. The sealing compound hardens with an internal chemical-setting action in 18 to 24 hours at ambient temperature. Working time of the sealing compound when the powder is mixed with water is approximately 30 minutes at 70°F. If accelerated curing is desired, low temperature oven drying at 180°F can be used. Do not expose the sealing compound to higher temperatures, constant water immersion, or steam environments while curing. If high humidity resistance is required in the cured product, a moisture-resistant lacquer or silicone coating should be applied to the exposed surfaces.
- 6. **Place Packing fiber around the ends** of each individual wire or cable ends to create a dam for pouring the compound into the PAC Seal. This allows for the entire contents of the PAK Seal to be encapsulated by the compound with environmentally safe, non-asbestos material.
- 7. LUBT-2 lubricant is recommended for use on threaded joints. This lubricant is used to prevent galling of the pipe threads when threading into couplings, junction boxes, etc. It provides for undamaged male and female threads and a quick release when parts are being disassembled. The thread lubricant should be a high-quality lubricant used in temperatures ranging from -40° to +50° F, and is recommended for use in hazardous locations. The PAC Seal Compound, packing fiber and LUBT-2 are available from Killark at http://www.killark.com/.
- 8. For enhanced reliability of the Purge unit, an AC line conditioner is recommended. AC power lines should be no smaller than 14 gauge and have a TRUE EARTH GROUND.

4.2 Purge Air Line Connection Instructions

4.2.1 For Division 1 X-Purge Systems Model 9016

After the unit has been mounted in its final location in the hazardous area, it must be permanently connected to a purge air or inert gas line and checked for leaks and proper operation of the purge/pressurization system. Only when its pressure integrity has been established should electrical signals and power be brought "live" to the unit.

ALWAYS follow all NEC, NFPA, and local codes when installing purge systems in hazardous areas! It is *very important* that knowledgeable personnel, familiar with national and local codes, supervise hazardous area equipment installations.

Equipment Required

- Clean, dry purge air or inert gas supply equipped with local water/oil separator or filter capable of supplying 40 to 300 SCFH at 30 to 60 PSI.
- Fittings and tubing for purge air or inert gas supply (0.25" NPT Male to connect to the inlet of the purge system).
- Local air pressure shutoff valve.

Procedure

- 1. **Mount the enclosure** in the location in which it will be installed near the source of air or inert gas to be used for the purge system.
- 2. **Install** the pressure regulator, water/oil separator or filter, shutoff valve, pressure relief valve, and pressure gauge in the purge air or inert gas line (see drawing P011).
- 3. Bleed the purge air or inert gas line to ensure that dirt, moisture, and other contaminants are cleared from the line prior to connecting the line to the unit!
- 4. Connect the purge gas line to the inlet of the regulator on the Purge Unit.
- 5. The PAC-Seals bringing the power and signals to the explosion-proof I/O casting should already be installed. Connect the signal lines to the interlock system (see drawings E018, E019, E022, and E025).
- 6. Ensure that the power to the AC supply lines is disconnected. Connect the power line(s) to the X-Purge system (see drawing E017).
- 7. If the area can be made safe, you may want to test your connections before closing the explosion-proof I/O casting. If you test the system in place, it is VITAL that you ENSURE THAT THE AREA IS SAFE during the test and FOLLOW ALL APPLICABLE SAFETY PROCEDURES for "hot work" in a hazardous area! You can test connections without purging by holding down the "Bypass Purge" button (see drawing E020) while applying power; you must release the button within 30 seconds of power application to prevent a diagnostic error. When the button is released, power and signals are immediately "live" to the system; you can test operation to make sure that the connections have been made correctly. Disconnect power IMMEDIATELY upon completion of this test to ensure that the unit is not erroneously operated in bypass mode!
- 8. When the signal and power connections are complete, replace the cover on the I/O casting and secure with the supplied 14 hex-head bolts and torque to 7.5 ft. lbs.

5 Start-Up Operation

5.1 Division 1 X-Purge Start-Up Operation

- 1. Set DIP switches (see drawing P008, note 8 and drawing E029 note 3 to set the DIP switches for the size enclosure you are going to purge.
- 2. **Replace and close all access doors and covers** when the air, signal, and power connections are complete.
- 3. Apply AC power. The Purge Status LED will illuminate RED indicating power though the Intrinsic Safety Barrier to the purge/pressurization control circuit.
- 4. Apply purge gas to the system by opening the shutoff valve. Adjust pressure regulator if needed on the air-in box (see drawing P008) to 40 PSI.
- When pressure inside the unit reaches 1.0" WC and ≥40 SCFH, the Purge Status LED should illuminate YELLOW, indicating that it is purging.
 IF THE INDICATOR DOES NOT ILLUMINATE a thorough inspection for leakage of the unit must be made. Panel gaskets can be checked with a soap solution. If leaks are not visually apparent, verify that the pressurized air is clean, dry and is 40 PSI at the inlet.

DO NOT ATTEMPT TO OPEN THE ENCLOSURE WHILE IT IS PRESSURIZED! OPENING PRESSURIZED ENCLOSURE CAN RESULT IN SERIOUS INJURY!

- 6. If the Pre-installation Test (Section 3) was completed successfully and the same results were seen up to this point in the procedure, you may skip the remaining steps of this procedure. If not, continue to Step **Error! Reference source not found.**
- Slowly increase air pressure with the regulator until the purge process stops. Note Pressure the pressure at which the purge process stops. The Purge Status LED will flash red and display an error code - [2 – 2] (over pressure) or [3 –2] (over-flow).
- Remove AC power from the enclosure for a minimum of 30 seconds. Decrease the pressure reading on the pressure gauge by 5 PSI. This change may vary slightly on some units; if in later testing the unit fails with an [3 –2] (over-flow) error code, decrease the inlet pressure by another 2 PSI. Note Pressure for use during start-up.
- 9. **Re-apply AC power.** The Purge Status LED will illuminate yellow and should purge for a minimum of 8 minutes. Time will vary according to the flow rate of the air into the enclosure.
- 10. After the purge is complete, the Purge Status indicator will illuminate green. AC power is now applied to the internal electronics to power on the display or PC.
- 11. If the purge status light blinks red, refer to Table 6.1 X-Purge Status Light Key page 12 for error code details.

6 Operation Notes

6.1 Division 1 X-Purge

X-Purge systems are fully automatic. The system disconnects power and signal in the enclosure in the event of a purge failure. The DAISY purge control also performs automatic self-diagnostics and can report other errors. Table 6.1 X-Purge Status Light Key details both the normal conditions and the errors (fatal and non-fatal) that are reported by the purge status LED (see drawing P008, Note 9).

NOTE: Blink Codes can be read in Forward or Reverse. For example, **Code [2 – 3]** is the same as **Code [3 – 2]**. A ["0"] in the code column indicates a steady (non-blinking) light.

The Status Column indicates the nature of the information being given:

- "Informative" is simply a status indication with no action needed.
- **"Non-fatal"** is a condition that can be corrected, and operation will then proceed normally.
- **"Fatal"** Errors require the purge system be SHUT DOWN before correcting the problem and restarting the purge cycle.

Color	Code	Meaning	Status	Recommended Action
Green	0	Operate, purge complete	Informative	N/A
Yellow		Purge in progress	Informative	N/A
Yellow	1-1	Minor overflow	Non-fatal	Reduce PSI via air-regulator
Red	0	Waiting to begin purge	Non-fatal	Verify Purge air supply is on. If still not indicating needed pressure, verify all doors and access panels are closed and tightly sealed. Increase air pressure with air- regulator as needed after all doors and seals have been verified.
Red	1-1	System Error	Fatal	Contact DAISY Customer Service (See Section 7) Review Customer Service on page 14 and Troubleshooting Section page 15.
Red	2-1	Under pressure	Fatal	Loss of pressure. Verify proper door seal and Purge Gas supply.
Red	2-2	Over pressure	Fatal	Reduce air pressure 5 PSI min. via air regulator. Continue to reduce pressure until purge completes without error. If problem continues, contact DAISY customer service (See Section 7).
Red	3-2	Major overflow	Fatal	Reduce air pressure 5 PSI min. via air regulator.

Table 6.1 X-Purge Status Light Key

Color	Code	Meaning	Status	Recommended Action
Red	3-3	Water detected	Fatal	Occurs if Water Sensor option installed. If indicated, the unit must be SHUT DOWN, MADE SAFE, OPENED AND DRIED OUT COMPLETELY! VERIFY no water remains in the unit and no damage has occurred to internal components resulting from the water. IN CASES OF SERIOUS WATER INCURSION, DO NOT ATTEMPT TO REAPPLY POWER TO THE EQUIPMENT! Equipment should be returned to DAISY for evaluation.
Red	4-1	Faulty pressure sensor	Fatal	Purge System component failure. Contact DAISY Customer Service (See Section 7) Review Customer Service on page 14 and Troubleshooting Section page 15.
Red	4-2	Faulty flow sensor	Fatal	Purge System component failure. Contact DAISY Customer Service (See Section 7) Review Customer Service on page 14.
Red	4-3	Short purge switch is stuck	Fatal	The "SHORT PURGE" switch on the DIP switch mounting board (drawing E020) is shorted, stuck, or was held down too long while beginning a test. VERIFY nothing is holding the switch closed or shorting the circuit. If you continue to experience problems, Contact DAISY Customer Service (See Section 7) Review Customer Service on page 14.
Red	4-4	Bypass purge switch is stuck	Fatal	The "BYPASS PURGE" switch on the DIP switch mounting board (drawing E020) is shorted, stuck, or was held down too long while beginning a test. VERIFY nothing is holding the switch closed or shorting the circuit. If you continue to experience problems, Contact DAISY Customer Service (See Section 7) Review Customer Service on page 14.

7 Customer Service

All Daisy systems pass detailed quality control configuration and inspection before being shipped. Daisy strives to create the highest quality systems and chooses top quality parts. However, like most electronic devices, units may experience issues over time. Should you experience problems, or have any inquiries or comments, please contact Daisy's Customer Service Department:

Business Phone: (717) 796-9999 ext.222 Fax: (717) 796-9990 Email: support@daisydata.com



Equipment returned to DAISY for service must be accompanied by a valid Return Merchandise Authorization (RMA) number. Anything shipped to DAISY without a valid RMA number will be refused. Please contact customer service for an RMA number; **be prepared to provide model AND serial numbers to help identify your equipment**. Typical I.D label shown below with Serial and Model numbers highlighted.

You may be able to trouble shoot problems yourself. To save time and money, please consult the trouble-shooting guide in this manual.



8 Trouble-Shooting Guide

8.1 Division 1 X-Purge Trouble-Shooting

PROBLEM	POSSIBLE CAUSE	SUGGESTED SOLUTION
When power is applied, the	Power is not connected to the unit	Connect AC power to the power connection on the purge system. Ensure that the power switch is on. Ensure that AC power is on.
does not come on	Improper line voltage selection	Ensure that the 120/240 VAC switch on the purge control is set appropriately for your power source.
	No air supply to unit	Ensure that a purge gas line is connected to the unit and that the supply line is "on." The pressure gauge on the air-in box should indicate a higher pressure than 20 PSI
After power is applied, the purge status indicator stays	Restrictions in air line	Ensure that supply line and inlet connect have no restrictions and that the supply line is not kinked
yellow or blink	Restrictions in main purge line inside enclosure	Ensure that the main purge line (terminating in a brass tee fitting) is not kinked or disconnected
	Leaks in the enclosure	Ensure that all access doors are closed and latched. Ensure that all access panels are closed and sealed. There should be no holes or openings in the enclosure.
The purge status indicator is yellow, but the enclosure	Low purge gas supply pressure	Increase purge gas inlet pressure at the air-in regulator or on the main supply line
takes an excessively long time to complete the purge (when the status indicator turns green)	Restriction in the main purge line	Ensure that the main purge line within the enclosure (ending in a brass tee fitting) is not kinked or obstructed
Purge status indicator flashes yellow and purge takes an excessively long time to complete.	Low purge gas supply pressure	Increase purge gas inlet pressure at the air-in regulator or on the main supply line
Purge or operation stops and purge status indicator flashes red code	Fatal purge error	See Table 6.1 X-Purge Status Light Key on page 12.

9 Specifications

MATERIAL

Purge Control main panel, Interface Box,	
and all mounting screws	. 304 Stainless Steel
I/O Casting and lid	. Cast Aluminum
I/O Casting bolts	. Irradiated Steel

PHYSICAL

Purge Controller	. 17.5	Height (H)
-	11.5″	Width (W)
	10.81"	Depth (D)
	4.0"	D-Inside
	5.63"	D-Outside
	25 lbs.	
Interface Box	. 17.5″	Height (H)
	11.5″	Width (W)
	5.0"	Depth (D)
	5 lbs.	



ENVIRONMENTAL

Operating Temperature	32-122°F
Storage Temperature	32-158°F
Relative Humidity	10-95% Non-condensing

ELECTRICAL

Power Usage	. 5 watts maximum
Switching Capacity (power)	. 120V/8A or 240V/4A (Max)
Switched contacts (signal)	. 36
Contact ratings	. 24VDC @ 1A
FCC Class A computing device	
Alarm Contacts	. SPDT
	120V/8A or 240V4A (Max)

PRESSURE AND AIR REQUIREMENTS

Incoming Air Pressure

(Customer Air Input)	20-60 psi
Operating Pressure	1" - 4" of water column
Air Flow During Purge	40-300 SCFH

CONTROLS MONITORING

Microprocessor based

For current options and for special requirements, consult factory.



10 Drawings

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DIMENSIONS ARE IN INCHES	Daisy Data Displays Inc.	CABLE & CON	DUII ENIRI 15" • 19"	ENCL
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DAISY DATA IN WRITING. SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.	ELECTRICAL BLOCK DIAGRAM DRAWING		P007	Α

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- NOTES:
- REGULATOR, 5 100 PSI: THE PRESSURE REGULATOR GIVES THE USER CONTROL OVER THE AIR PRESSURE, & THEREFORE, THE FLOW GOING INTO THE ENCLOSURE. THE PRESSURE SHOULD BE SET BETWEEN 20 & 60 PSI. AN ADJUSTMENT OF 60 PSI WILL GIVE A FLOW RATE OF APPROVIMENTED TO SUCH WITH AN INTERNAL PRESSURE INSIDE THE ENCLOSURE ന OF 8" OF WATER COLUMN.
- PRESSURE METER: READS THE PRESSURE OF THE AIR INPUT FOR THE ENCLOSURE. 0
- 3
- EXPLOSION PROOF SOLENOID: THIS ALLOWS THE PURGED AIR INTO THE ENCLOSURE. OPERATES ON +24 Volta DC. ④
- 1/0 CASTING SCREWS: FOURTEEN 1/4-20, 7/16" hex, BOLTS THAT HOLD THE COVER ON THE CAST ALUMINUM BOX.
- POWER INTERFACE BOARD: SEE DRAWING "E017" FOR DETAIL INFORMATION. 6
- 6
- 1/0 conduit connection: A 3/4" NPT entrance into the cast aluminum box. See drawing "poo7" for conduct connection to the enclosure.
- SIGNAL SWITCHING BOARD: SEE DRAWNG "E018" FOR DETAIL INFORMATION. Ø
- DIP SWITCH MOUNTING BOARD: SEE DRAWING "E020" FOR DETAIL INFORMATION. 8
- 9
- SEE DRAMING ECCO FOR DETAIL INFORMATION. PURCE STATUS CABLE: THE CABLE, 1100-000705, IS THE TRI-COLORED LED STATUS INDICATOR USE TO RELAY INFORMATION TO THE USER. A STEADY RED AT STARTUP INDICATED THE INTERNAL PRESSURE and/or AIR FLOW IS TOO LOW FOR ADEQUATE PURGING. A STEADY YELLOW INDICATES THE PURGE IS IN PROGRESS. A FLASHING YELLOW INDICATES OVERFLOW, THE REGULATOR SHOULD BE TURNED DOWN SUGHTLY. A STEADY GREEN INDICATES THE PURGE IS COMPLETE. A FLASHING GREEN INDICATES THE PURGED IS BYPASSED. IF AN ERROR OCCURS DURING OR AFTER THE PURGE THE LED MULL FLASH RED IN A CODE. THE ERROR CODES ARE LISTED BY THE BUNKING OF THE RED LED. 1-1: SYSTEM ERROR, (CONSULT FACTORY) 2-1: UNDER PRESSURE

- 2-2: OVER PRESSURE
- 3-2: OVER FLOW
- 3-3: WATER DETECTED (ONLY WITH WATER COOLER OPTION ON ENCLOSURE) 4-1: FAULTY PRESSURE SENSOR

- 4-1: FAULTY FILOW SENSOR 4-2: FAULTY FLOW SENSOR 4-3: SHORT PURGE BUTTON IS STUCK CLOSED 4-4: PURGE BYPASS BUTTON IS STUCK CLOSED
- 0

INTRINSIC SAFETY BARRIERS: THE 3 I.S. BARRIERS LIMIT THE CURRENT & VOLTAGE TO A CIRCUIT WHICH MUST OPERATE IN A HAZARDOUS ENVIRONMENT, (THE INSIDE OF THE ENCLOSURE PRIOR TO COMPLETING THE PURGE), TO A LEVEL WHICH ENSURES THAT A SHORT OR FAULT CAN NOT CAUSE A SPARK LARCE ENOUGH TO IGNITE A FLAMMABLE GAS OR VAPOR. ALL SGINALS & POWER WHICH ENTER OR RETURN FROM THE ENCLOSURE PRIOR TO THE COMPLETION OF THE PURGE MUST BE ISOLATED WITH I.S. BARRIERS.

EXHAUST VALVE ASSEMBLY KIT: THIS VALVE OPENS DURING PURGE TO EXHAUST THE PURGE AIR. ONCE THE PURGE IS COMPLETE THE VALVE CLOSES & WILL NOT REOPEN UNLESS THE INTERNAL PRESSURE RISES ABOVE 8" WC OR THE PURGE IS LOST.

Ø

<u>AIR INPUT CONNECTION:</u> THE ATTACHMENT POINT FOR THE ENCLOSURE'S PURGE AIR IS 1/4" NPT FEMALE FITTING. THE AIR SOURCE MUST BE CLEAN DRY INSTRUMENT GRADE AIR/NIERT GAS CAPABLE OF SUPPLYING 40 – 300 SCFH \oplus 30 – 60 PSI. THE ENCLOSURE IS PURGED AFTER 4 VOLUMES OF AIR HAVE PASSED THOUGH IT. AFTER THE PURGE IS COMPLETE THE SYSTEM WILL REQUIRE ONLY ENOUGH AIR TO MAINTAIN THE ENCLOSURE PRESSURE ABOVE 1.0" OF WC.

DIMENSIONS ARE IN INCHES	Daisy Data Displays Inc.	X-PURGE FRONT PANEL	
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- NOTES:
- REGULATOR, 5 100 PSI: THE PRESSURE REGULATOR GIVES THE USER CONTROL OVER THE AIR PRESSURE, & THEREFORE, THE FLOW GOING INTO THE ENCLOSURE. THE PRESSURE SHOULD BE SET BETWEEN 20 & 60 PSI. AN ADJUSTMENT OF 60 PSI WILL GIVE A FLOW RATE OF APPROXIMATELY 300 SCFH WITH AN INTERNAL PRESSURE INSIDE THE ENCLOSURE OF 8" OF WATER COLUMN.
- PRESSURE METER: READS THE PRESSURE OF THE AIR INPUT FOR THE ENCLOSURE.
- EXPLOSION PROOF SOLENOID: THIS ALLOWS THE PURGED AIR INTO THE ENCLOSURE. OPERATES ON +24 Volta DC.
- 1/O CASTING SCREWS: FOURTEEN 1/4-20, 7/18" hex, BOLTS THAT HOLD THE COVER ON THE CAST ALUMINUM BOX.
- POWER INTERFACE BOARD: SEE DRAWING "E017" FOR DETAIL INFORMATION.
- 1/0 conduit connection: A 3/4" NPT entrance into the cast aluminum box. See drawing "po11" for conduct connection to the enclosure.
- SIGNAL SWITCHING BOARD: SEE DRAWING "E018" FOR DETAIL INFORMATION.
- DIP SWITCH MOUNTING BOARD: SEE DRAWING "E029" FOR DETAIL INFORMATION.
- PURGE STATUS CABLE: THE CABLE, 1000-000705, IS THE TRI-COLORED LED STATUS INDICATOR USE TO RELAY INFORMATION TO THE USER. A STEADY RED AT STARTUP INDICATED THE INTERNAL PRESSURE and/or AIR FLOW IS TOO LOW FOR ADEQUATE PURGING. A STEADY YELLOW INDICATES ond/or air flow is too low for adequate purging. A steady yellow indicates the purge is in progress. A flashing yellow indicates overflow, the regulator should be turned down slightly. A steady green indicates the purge is complete. A flashing green indicates the purged is bypassed. If an error occurs during or After the purge the led will flash red in a code. The error codes are usted by the bunking of the red led. 1-1: System error, (consult factory) 2-1: Under pressure 2-2: over pressure

 - 2-2: OVER PRESSURE 3-2: OVER FLOW 3-2: WATER DETECTED (ONLY WITH WATER COOLER OPTION ON ENCLOSURE) 4-1: FAULTY PRESSURE SENSOR 4-2: FAULTY FLOW SENSOR 4-3: SHORT PURGE BUTTON IS STUCK CLOSED 4-4: PURGE BYFASS BUTTON IS STUCK CLOSED

INTRINSIC SAFETY BARRIERS: THE 3 I.S. BARRIERS LIMIT THE CURRENT & VOLTAGE TO A CIRCUIT WHICH MUST OPERATE IN A HAZARDOUS ENVIRONMENT, (THE INSIDE OF THE ENCLOSURE PRIOR TO COMPLETING THE PURGE), TO A LEVEL WHICH ENSURES THAT A SHORT OR FAULT CAN NOT CAUSE A SPARK LARGE ENOUGH TO LONITE A FLAMMABLE GAS OR VAPOR, ALL SIGNALS & POMER WHICH ENTER OR RETURN FROM THE ENCLOSURE PRIOR TO THE COMPLETION OF THE PURGE MUST BE ISOLATED WITH I.S. BARRIERS.

- EXHAUST VALVE ASSEMBLY KIT. THIS VALVE OPENS DURING PURGE TO EXHAUST THE PURGE AIR. ONCE THE PURGE IS COMPLETE THE VALVE CLOSES & WILL NOT REOPEN UNLESS THE INTERNAL PRESSURE RISES ABOVE 8" WC OR THE PURGE IS LOST.

AR INPUT CONNECTION: THE ATTACHMENT POINT FOR THE ENCLOSURE'S PURGE AIR IS 1/4" NPT FEMALE FITTING. THE AIR SOURCE MUST BE CLEAN DRY INSTRUMENT GRADE AIR/INERT GAS CAPABLE OF SUPPLYING 40 – 300 SCFH \oplus 30 – 60 PSI. THE ENCLOSURE IS PURGED AFTER 4 VOLUMES OF AIR HAVE PASSED THOUGH IT. AFTER THE PURGE IS COMPLETE THE SYSTEM WILL REQUIRE ONLY ENOUGH AIR TO MAINTAIN THE ENCLOSURE PRESSURE ABOVE 1.0" OF WC.

NOTES:

- purge air inlet: This is the purge air will enter the enclosure. The 1/4" tube should be free of dirt & kinks. ന
- EXHAUST VALVE ASSEMBLY KIT: THIS VALVE OPENS DURING PURGE TO EXHAUST THE PURGE AIR. ONCE THE PURGE IS COMPLETE THE VALVE CLOSES & WILL NOT REOPEN UNLESS THE INTERNAL PRESSURE RISES ABOVE 8" WC 0 OR THE PURGE IS LOST.
- ATMOSPHERE SENSE: Allows the pressure sensor on the purge control board to measure the differential pressure between the enclosure & the surrounding environment. 3
- INTERNAL SIGNAL INTERFACE BOARD: SEE DRAWING "sib" FOR DETAIL INFORMATION ④
- 6 PURGE CONTROL BOARD: LOCATED UNDER THE RF SHIELD BOX. SEE DRAWING "sape" FOR DETAIL INFORMATION.
- DIP SWITCH MOUNTING BOARD: SEE DRAWING "dmb" FOR DETAIL INFORMATION. 6
- RF SHIELD BOX: PROTECTS THE PURGE CONTROL BOARD FROM RF RADIATION THAT WOULD RESET THE PURGE SYSTEM. Ø
- POWER I/O PAC SEAL: THIS PAC SEAL CONTAINS THE AC POWER CABLE FOR THE INTERNAL EQUIPMENT, +24V CABLE FOR THE SOLENDID & 3 DATA CABLES WITH 6 PAIRS IN EACH CABLE. THE PAC SEAL HAS THE SEALING COMPOUND THOUGH IT'S LENGTH & CAN NOT BE RE-POSISTIONED. 8
- 9
- LS. PAC SEAL: THIS PAC SEAL CONTAINS THE INTRINSICALLY SAFE POWER CABLE & THE ENCLOSURE REDUNDANT GROUND WIRES. THE PAC SEAL HAS THE SEALING COMPOUND THOUGH IT'S LENGTH & CAN NOT BE RE-POSISTIONED.
- 0
- PILOT AIR FEED: THIS AIR LINE PROVIDES THE PILOT PRESSURE FOR THE EXHAUST SOLENOID.

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INNER EDGE OF BOARD

NOTES:

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MAIN AC POWER INPUT: THE CONNECTION POINT FOR THE CUSTOMER SUPPLIED 115/230 VAC. THIS INPUT LINE WILL SUPPLY THE INTERNAL EQUIPMENT WITH AC POWER WHEN THE ENCLOSURE IS SAFELY PURGED. IT CAN ALSO SUPPLY VOLTAGE TO RUN THE PURGE SYSTEM IF S1 IS CLOSED (TO OUTER EDGE OF BOARD). SEE OPTION #1.

0

BARRIER CROUNDS: THE CONNECTION POINT FOR THE INTRINSIC SAFETY BARRIERS MOUNTING RAIL GROUND. TWO OF THE FOUR CONNECTIONS WILL BE MADE BY DAISY DATA. THE OTHER TWO MUST BE CONNECTED TO WITHIN 1 OHM OF TRUE EARTH GROUND.

ALARM RELAY: \bigcirc

THE CONNECTION POINT FOR AN EXTERNAL ALARM. THE CURRENT RATING FOR THIS IS 10 AMPS. THE "NC" CONTACT IS OPEN WHEN THE PURGE CYCLE IS COMPLETE OR IN BYPASS MODE. THE "NO" CONTACT IS CLOSED WHEN THE PURGE CYCLE IS COMPLETE OR IN BYPASS MODE.

④

AUXILIARY AC POWER INPUT: THE CONNECTION POINT FOR THE CUSTOMER SUPPLIED 115/230 VAC. THIS INPUT WILL PROVIDE VOLTAGE TO RUN THE PURGE SYSTEM WHEN S1 IS OPEN (TO THE INNER EDGE OF THE BOARD). THIS MAY BE CONNECTED TO AN UNINTERRUPTABLE POWER SUPPLY IN A SAFE AREA. THIS WILL ENSURE THE PURGE IS NOT LOST DURING SHORT POWER FAILURES. SEE OPTION #2.

TO INSERT WIRES INTO THE CONNECTORS SUPPLIED FOR MAIN AC POWER, BARRIER GROUNDS, ALARM RELAY & AUXILIARY AC POWER, STRIP THE WIRE INSULATION OFF 1/4" & TIN. UNSCREW THE TERMINAL UNTIL THE WIRE WILL FIT IN & SCREW TILL THE WIRE IS SECURE. 6

6

S1: S1 SHOULD BE OPEN (TO THE INNER EDGE OF THE BOARD) WHEN USING THE AUXILIARY POWER CONNECTION. S1 SHOULD BE CLOSED (TO THE OUTER EDGE OF THE BOARD) WHEN USING THE MAIN AC POWER CONNECTION FOR BOTH THE PURGE CONTROL & INTERNAL AC POWER.

Ø

 $\underline{S2:}$ This is the input voltage selector switch for both the main & auxiliary inputs. IT IS FOR 115 OR 230 VAC.

8

 $\underline{F1:}$ This is a 0.5a 0 115V or a 0.25a 0 230V fuse. F1 controls the i.s. power to the purce control board.

0 F2: THIS IS A 10A @ 115V OR A 5A @ 230V FUSE. F2 CONTROLS THE AC POWER TO THE INTERNAL EQUIPMENT.

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SSB			PAC-SEAL	SIB				
JA	J13	BNC	Wire Color	J13	J10	J11/14	BNC	JA
1	12		WHITE/ORANGE	12	1	J11-1		1
2	11		ORANGE/WHITE	11	2	J11-2		2
3	10		WHITE/GREEN	10	3	J11-3		3
4	9		GREEN/WHITE	9	4	J11-4		4
5	8		WHITE/BLUE	8	5	J11-5		5
6	7		BLUE/WHITE	7	6	J11-6		6
7	6	J6 center	GREEN	6	7	J14-1	J6 center	7
8	5	J6 shield	YELLOW	5	8	J14-2	J6 shield	8
9	4	J4 center	RED	4	9	J14-3	J4 center	9
10	3	J4 shield	BLACK	3	10	J14-4	J4 shield	10
11	2	J5 center	WHITE/BROWN	2	11	J14-5	J5 center	11
12	1	J5 shield	BROWN/WHITE	1	12	J14-6	J5 shield	12
13	110	DNG	GROUND	11.0	17	10.70	DNG	13
JB	JIZ	BINC		12 12	J/ 1	J8/9	BINC	JB
1 2	12			12	 	J9-1		ן ר
2	10			10	2	J9-2		2
3	0			0	3 1	J9-3		3
4 5	9 Q			9 Q	4 5	J9-4 IQ 5		4 5
6	7		GREEN/WHITE	7	6	19-6		6
7	6		WHITE/ORANGE	6	7	19-7		7
8	5		ORANGE/WHITE	5	8	19-8		, 8
9	4		ORANGE/RED	4	9	19-9		9
10	3		RED/ORANGE	3	10	J8-1		10
11	2		WHITE/BROWN	2	11	J8-2		11
12	1		BROWN/WHITE	1	12	J8-3		12
13			GROUND					13
JC	J3	BNC	Wire Color	J3	J10	J2/8	BNC	JC
1	12		BLUE/RED	12	1	J8-4		1
2	11		RED/BLUE	11	2	J8-5		2
3	10		WHITE/BLUE	10	3	J8-6		3
4	9		BLUE/WHITE	9	4	J2-1		4
5	8		WHITE/GREEN	8	5	J2-2		5
6	7		GREEN/WHITE	7	6	J2-3		6
7	6		WHITE/ORANGE	6	7	J2-4		7
8	5		ORANGE/WHITE	5	8	J2-5		8
9	4		ORANGE/RED	4	9	J2-6		9
10	3		RED/ORANGE	3	10	J2-7		10
11	2		WHITE/BROWN	2	11	J2-8		11
12	1		BROWN/WHITE	1	12	J2-9		12
13			GROUND	torrelie	tod by F			13
Grey shaded connections are terminated by D.D.								
Blue shaded wires are CATE cables								
			Dide Shaded wires are					
Red snaded wires are hook-up wire								

SIGNAL SWITCHING BOARD and INTERNAL SIGNAL INTERFACE BOARD CONNECTIONS

NOTES:

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(7)

D JA: JA IS CONNECTED TO J13 ONE TO ONE. SEE THE SSB-SIB CONNECTION TABLE FOR A MORE DETAILED PIN-OUT. J13 IS CONNECTED TO JA ON THE INTERNAL SIGNAL INTERFACE BOARD THOUGH THE PAC-SEAL.

<u>JB:</u> JB IS CONNECTED TO J12 ONE TO ONE. SEE THE SSB-SIB CONNECTION TABLE FOR A MORE DETAILED PIN-OUT. J12 IS CONNECTED TO JB ON THE INTERNAL SIGNAL INTERFACE BOARD THOUGH THE PAC-SEAL.

- JC: JC IS CONNECTED TO J3 ONE TO ONE. SEE THE SSB-SIB CONNECTION TABLE FOR A MORE DETAILED PIN-OUT. J3 IS CONNECTED TO JC ON THE INTERNAL SIGNAL INTERFACE BOARD THOUGH THE PAC-SEAL.
- TO INSERT WIRES INTO THE CONNECTORS SUPPLIED AT JA, JB & JC, STRIP THE WIRE INSULATION OFF 1/4" & TIN. UNSCREW THE TERMINAL UNTIL THE WIRE WILL FIT IN & SCREW TILL THE WIRE IS SECURE.
- 5 $\frac{J7:}{SHORT}$ when Net3 (J5) is used for arcnet.
- 0 $\frac{\text{J15 & J16:}}{\text{SHORT BOTH WHEN NET1 (J6) & NET2 (J4) ARE USED FOR THINNET.}$
 - J1 & J2: FOR ARCNET NETWORK LOOPBACK. CONSULT FACTORY FOR MORE INFOMATION.

<u>1053-000000</u> SIGNAL SWITCHING BOARD

NOTES:

1)

- JA: JA IS CONNECTED TO J13 ONE TO ONE. SEE THE SSB-SIB CONNECTION TABLE FOR A MORE DETAILED PIN-OUT. J13 IS CONNECTED TO JA ON THE SIGNAL SWITCHING BOARD THOUGH THE PAC-SEAL.
- DE: JB IS CONNECTED TO J12 ONE TO ONE. SEE THE SSB-SIB CONNECTION TABLE FOR A MORE DETAILED PIN-OUT. J12 IS CONNECTED TO JB ON THE SIGNAL SWITCHING BOARD THOUGH THE PAC-SEAL.
- JC: JC IS CONNECTED TO J3 ONE TO ONE. SEE THE SSB-SIB CONNECTION TABLE FOR A MORE DETAILED PIN-OUT. J3 IS CONNECTED TO JC ON THE SIGNAL SWITCHING BOARD THOUGH THE PAC-SEAL.
- TO INSERT WIRES INTO THE CONNECTORS SUPPLIED AT JA, JB & JC, STRIP THE WIRE INSULATION OFF 1/4" & TIN. UNSCREW THE TERMINAL UNTIL THE WIRE WILL FIT IN & SCREW TILL THE WIRE IS SECURE.

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		S1 S2 S1 S2 BYPASS SHOR PURGE PURG	T	
		0	0	
		I <u>071-C</u> DIP SWITCH MC	000000 DUNTING BOARD	-
NO D	TES: <u>BYPASS PURGE:</u> <u>THIS TEST MUST BE DONE IN A SAFE EN</u>	VIRONMENTI BYPASS PUR	<u>GE IS FOR TEST ONLY!</u>	
	THE PURGE CONTROL SYSTEM IS COMPLET IMMEDIATELY, APPLYING POWER & SIGNAL THE PURGE STATUS LED ON THE FRONT F IS REQUIRED. REMOVE MAIN AC POWER. P MAIN POWER IN TO THE XPI BOARD (SEE THE SWITCH WITHIN 30 SECONDS. NOW TH THE UNIT'S INTERNAL ENVIRONMENT WILL	TELY BYPASSED & THE IS S TO ANY CONNECTED IN PANEL WILL BE ILLUMINAT PRESS & HOLD THE BYPA NOTES 1 & 4 ON DRAWI HE UNIT IS IN BYPASS PU NOT BE SAFE UNLESS A	OLATION RELAYS CLOSE TERNAL ELECTRONICS. 'ED FLASHING GREEN. NO SS PURGE SWITCH & AF NG "E017"). THEN RELEA IRGE. <u>NORMAL PURGE CYCLE</u>) purge air 'Ply Ase <u>Is done.</u>
2	SHORT PURGE SWITCH: THIS TEST MUST BE DONE IN A SAFE ENV THE PURGE CONTROL SYSTEM WILL SET T THE SETTING ON THE ENCLOSURE SIZE SE CONTINUE AS NORMAL. THE PURGE STATU	VIRONMENT! SHORT PURG HE PURGE TIME TO 30 S ELECT DIP SWITCHES. THE JS LED WILL BE ILLUMINA	<u>E IS FOR TEST ONLY!</u> ECONDS REGARDLESS OF PURGE WILL THEN TED GREEN. PURGE AIR	- IS

REQUIRED. REMOVE MAIN AC POWER IN. PRESS & HOLD THE SHORT PURGE SWITCH & APPLY

MAIN POWER IN TO THE XPI BOARD (SEE NOTES 1 & 4 ON DRAWING "E017"). THEN RELEASE THE SWITCH WITHIN 30 SECOND . CLOSE THE SWITCH COVER & THE ENCLOSURE DOOR. APPLY

CUBIC FOOT AREA OF THE ENCLOSURE THAT THE 9016 IS ATTACHED TO. USE TABLE 1

FOR THE CORRECT SETTING OF THE SWITCHES. SWITCHES 5, 6, 7 & 8 ARE ALWAYS ON.

THE UNIT'S INTERNAL ENVIRONMENT WILL NOT BE SAFE UNLESS A NORMAL PURGE CYCLE IS DONE.

THE DIP SWITCHES CONTROL THE TIMING OF THE NORMAL PURGE CYCLE. DETERMINE THE INTERNAL

AIR TO THE PURGE SYSTEM. THE UNIT IS NOW OPERATING NORMALLY.

ROUND THE CUBIC UP TO THE NEAREST NUMBER LISTED IN THE TABLE.

ENCLOSURE SIZE DIP SWITCHES:

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(2)

(3)

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SIZE 2 3 4 1 1fť OFF ON ON ON 2fť OFF OFF ON ON 3fť OFF ON ON ON 4fť OFF ON OFF ON 5fť OFF OFF ON ON 6fť OFF OFF OFF ON 7fť ON OFF ON ON 8ft³ OFF ON ON OFF 9fť ON OFF ON OFF 10ft³ OFF OFF ON OFF 15fť ON ON OFF OFF 20fť OFF ON OFF OFF 25ft ON OFF OFF OFF 30ft³ OFF OFF OFF OFF

TABLE 1 SWITCH NUMBER

		0			0							
		S1 S1 BYPASS PURGE	SHORT PURGE	Image: Non-State State	MARY LOSURE S SOR TYPE ONDARY LOSURE		FOF	8 50	FTW	\RF	VFR	SIC
								<u>S3</u>	00 - 00	0120	<u>132</u>	
		0			0		<u>USI</u> UP	<u>-D</u> F TO	<u>130</u>		<u>0501</u> IC F	<u>EE</u>
		107	71–000	0000					TAB	<u>LE 1</u>		_
		DIP SWITCH	H MOUN	TING B	OARD			sv	NITCH	NUMB	ER	
							SIZE	1	2	3	4	
NO	TES:						5fť	ON	OFF	ON	ON	
\bigcirc	D BYPASS PURGE: THIS TEST MUST BE DONE IN A SAFE ENVIRONMENTI BYPASS PURCE IS FOR TEST ONLY						10fť	OFF	OFF	ON	ON	
THE PURGE CONTROL SYSTEM IS COMPLETELY BYPASSED & THE ISOLATION RELAYS CLOSE IMMEDIATELY, APPLYING POWER & SIGNALS TO ANY CONNECTED INTERNAL ELECTRONICS. THE PURGE STATUS LED ON THE FRONT PANEL WILL BE ILLUMINATED FLASHING GREEN. NO PURGE AIR IS REQUIRED, REMOVE MAIN AC POWER, PRESS & HOLD THE BYPASS PURGE SWITCH & APPLY						20fť	ON	ON	OFF	ON		
						30fť	OFF	ON	OFF	ON		
	MAIN POWER IN TO THE XPI BOARD (SEE THE SWITCH WITHIN 30 SECONDS NOW TH	NOTES 1 & 4 ON D	DRAWING	"E017").	THEN RELEAS	SE	40ft ³	ON	OFF	OFF	ON	
	THE UNIT'S INTERNAL ENVIRONMENT WILL I	NOT BE SAFE UNLES	SS A NO	RMAL PUR	RGE CYCLE IS	<u>S DONE.</u>	50ft ³	OFF	OFF	OFF	ON	
2	SHORT PURGE SWITCH: THIS TEST MUST BE DONE IN A SAFE ENV	IRONMENT! SHORT F	PURGE IS	S FOR TES	T ONLY!		60ft ³	ON	ON	ON	OFF	
	THE PURGE CONTROL SYSTEM WILL SET THE PURGE TIME TO 30 SECONDS REGARDLESS OF					70ft ³	OFF	ON	ON	OFF		
	CONTINUE AS NORMAL. THE PURGE STATUS LED WILL BE ILLUMINATED GREEN. PURGE AIR IS						80ft ³	ON	OFF	ON	OFF	
	MAIN POWER IN TO THE XPI BOARD (SEE	NOTES 1 & 4 ON D		"E017").	THEN RELEAS	SE	90ft ³	OFF	OFF	ON	OFF	
	AIR TO THE PURGE SYSTEM. THE UNIT IS	NOW OPERATING NC	CORMALLY.		- DOOR. APP	′L⊺	100ft	ON	ON	OFF	OFF	
Ā	THE UNIT'S INTERNAL ENVIRONMENT WILL NOT BE SAFE UNLESS A NORMAL PURGE CYCLE IS DONE.						110ft	OFF	ON	OFF	OFF	
S	ENCLOSURE SIZE DIP SWITCHES: THE DIP SWITCHES CONTROL THE TIMING OF THE NORMAL PURGE CYCLE. DETERMINE THE INTERNAL CUBIC FOOT AREA OF THE ENCLOSURE THAT THE 9016 IS ATTACHED TO. USE TABLE 1 FOR THE CORRECT SETTING OF THE SWITCHES. SWITCHES 5, 6, 7 & 8 ARE ALWAYS ON. ROUND THE CUBIC UP TO THE NEAREST NUMBER LISTED IN THE TABLE.					120fť	ON	OFF	OFF	OFF		
						130fť	OFF	OFF	OFF	OFF]	
	ONS ARE IN INCHES		D									77

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PURGE CONTROL BOARD

NOTES:

- D EPROM: THIS IS THE FACTORY SUPPLIED EPROM WITH THE SOFTWARE FOR THE PURGE SYSTEM.
- D JUMPER SETTINGS: ALL JUMPERS ARE SET AT THE FACTORY! DO NOT CHANGE!
- FLOW & PRESSURE ADJUSTMENTS: ALL POTENTIOMETERS ARE SET AT THE FACTORY! DO NOT CHANGE!
- FLOW SENSOR: THIS IS THE SENSOR THAT MEASURES THE AIR FLOW INTO THE ENCLOSURE. THE RED HOSE IS CONNECTED TO PORT "A".
- PRESSURE SENSOR: THIS IS THE SENSOR THAT MEASURES THE AIR PRESSURE INSIDE OF THE ENCLOSURE. THE BLUE HOSE IS CONNECTED TO PORT "A".

