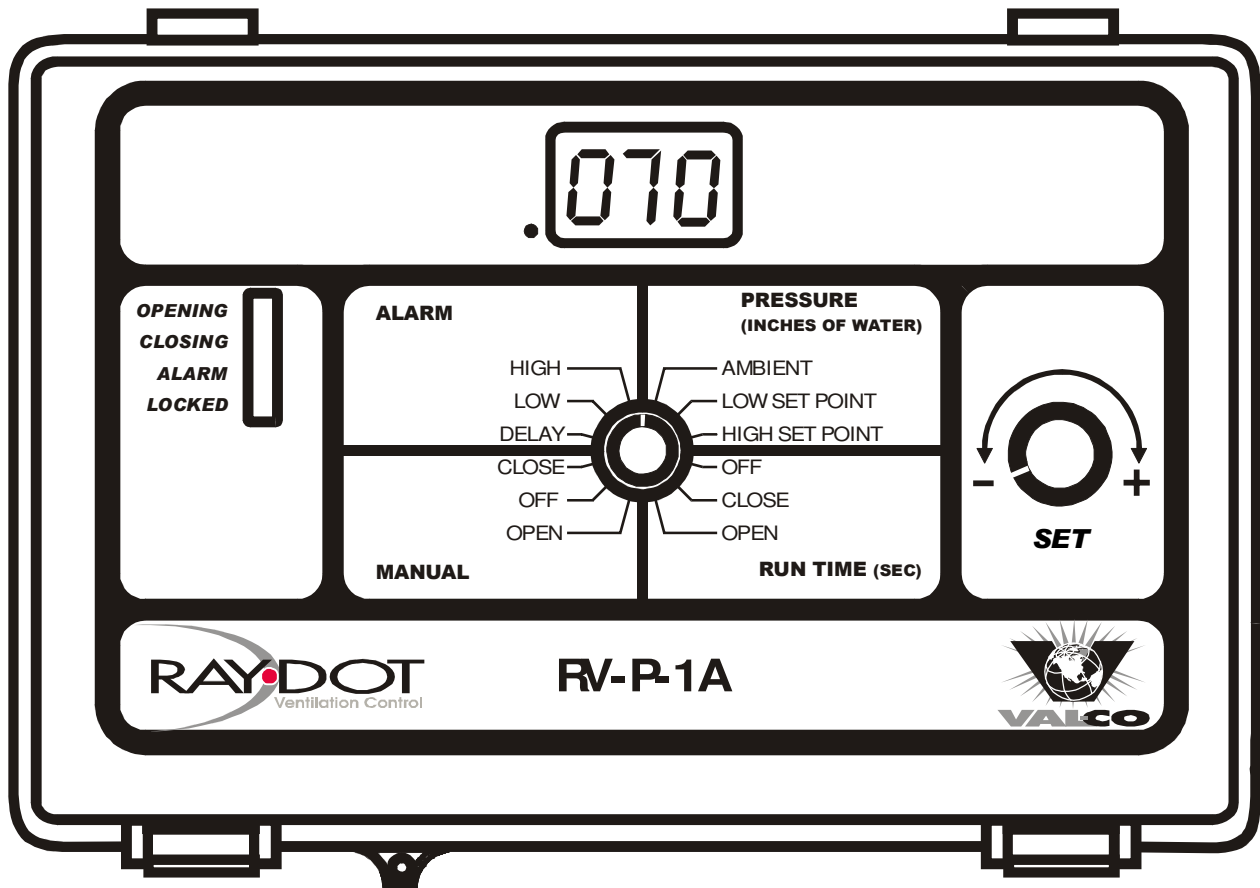

Combined Ventilation Controller

RV-P-1A

Static Pressure Control Applications
1 air inlet winch stage



User's & Installation Guide

Read this guide carefully before using the controller.

PRECAUTIONS

We strongly recommend connecting the controller to an alarm system, and installing a supplementary natural ventilation. Refer to the wiring diagram enclosed with this user's guide to connect the thermostat.

Inputs and outputs circuitry is protected against overload and overvoltage. However, we recommend installing an additional protection device on the supply circuit as well as an external relay on all ON-OFF stages to prolong the life of the controller.

To avoid exposing the controller to harmful gases or excessive humidity, it is preferable to install it in a corridor.

The room temperature where the controller is located **MUST ALWAYS REMAIN BETWEEN 32° AND 104°F (0° AND 40°C).**

DO NOT SPRAY WATER ON THE CONTROLLER.

FOR CUSTOMER USE

Enter below the serial number located on the side of the controller and retain this information for future reference.

Model number: RV-P-1A

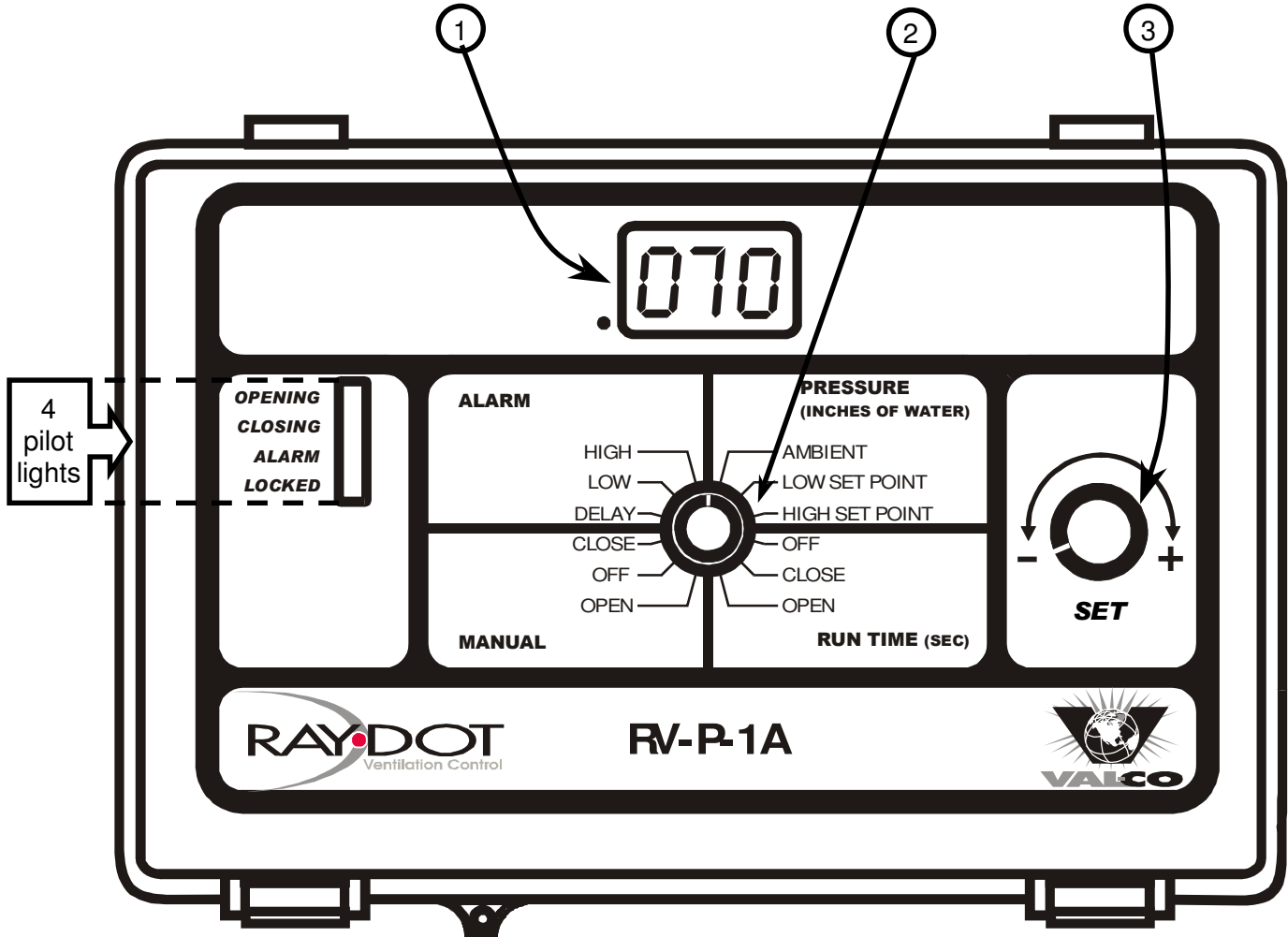
Serial number: _____

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CONTROL INTERFACE

COVER



Item	Name	Function
①	Digital display	Displays the value of the parameter selected.
②	Parameter selection knob	Used to select a parameter.
③	Adjustment knob	Used to adjust the value of the selected parameter.
4 pilot lights	Opening	Lights up when air inlet is opening.
	Closing	Lights up when air inlet is closing.
	Alarm	Lights up to signal an alarm.
	Locked	Is on when parameter settings are locked.

PARAMETER DESCRIPTION

LOCKED PARAMETERS

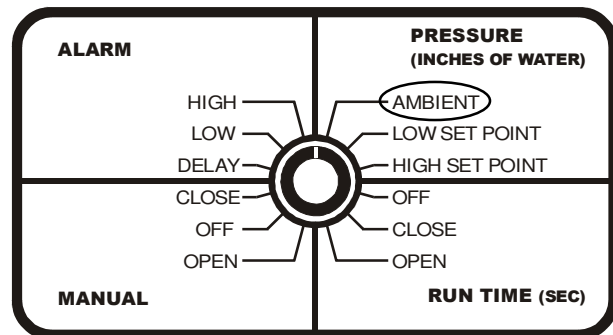
By setting DIP switch # 2 to the ON position, all parameters, except the **High Set Point**, **Low Set Point**, and **Manual Override**, are “locked” to prevent modifications. After the user has set parameters to the desired values, he may want to lock these values for safety.

PRESSURE AMBIENT

Pressure Ambient

This parameter displays the actual ambient pressure read by the sensor. This reading controls the air inlet output and alarm.

The **Pressure Ambient** is displayed to the nearest inch of water, from .000 to .250 inches of water.



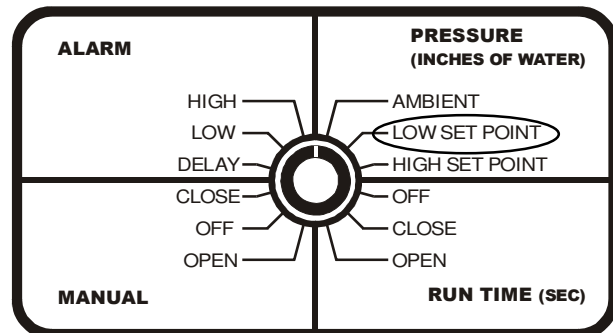
PRESSURE LOW SET POINT

Pressure Low Set Point

This parameter is the closing point for the air inlet. The **Pressure Low Set Point** can be adjusted in locked mode (see DIP switch table).

When **Pressure Ambient** is at or below the **Pressure Low Set Point**, air inlet will close according to its timer. The value of this parameter may never be higher than the **Pressure High Set Point**.

The **Pressure Low Set Point** is adjusted in .001 increments, from .000 to .199 inches of water.



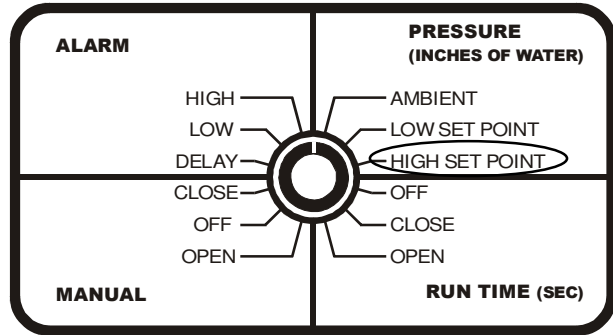
PRESSURE HIGH SET POINT

Pressure High Set Point

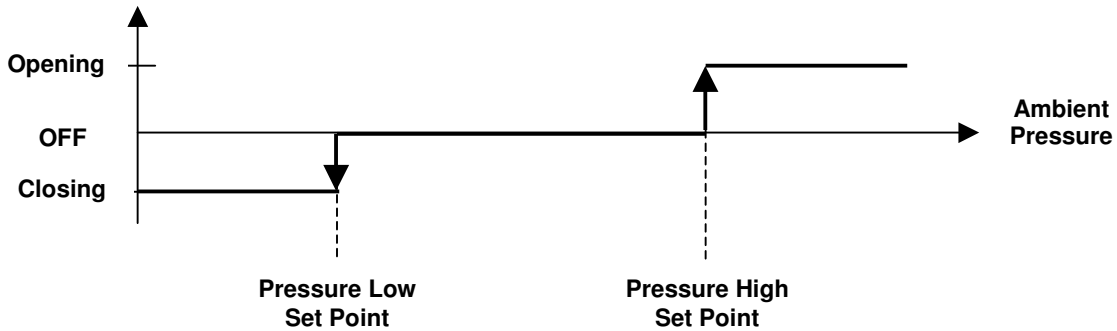
This parameter is the opening point for the air inlet. The **Pressure High Set Point** can be adjusted in locked mode (see DIP switch table).

When **Pressure Ambient** is at or above the **Pressure High Set Point**, air inlet will open according to its timer. The value of this parameter may never be lower than the **Pressure Low Set Point**.

The **Pressure High Set Point** is adjusted in .001 increments, from .001 to .200 inches of water.



High and Low Set Points



RUN TIME OFF

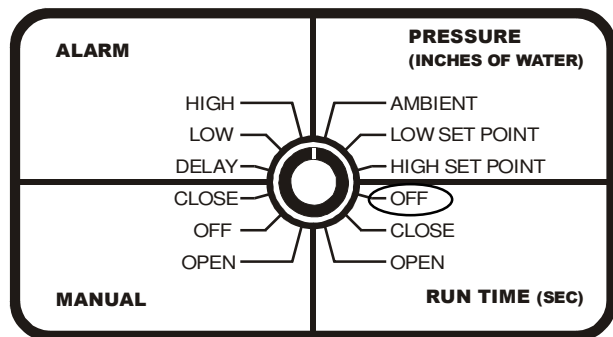
Run Time Off

This parameter defines the amount of time the air inlet will be at rest during an opening or closing cycle.

When **Pressure Ambient** exceeds the high or low set points, air inlet timer will start by waiting for this amount of time and, if **Pressure Ambient** is still outside those limits, will then move in the appropriate direction.

Once the opening or closing movement is finished, air inlet will again be immobile for **Run Time Off** and so on until **Pressure Ambient** returns within the **Pressure High Set Point** and **Pressure Low Set Point**.

Run Time Off is adjusted in 5-second increments from 0:05 to 9:55.



RUN TIME CLOSE

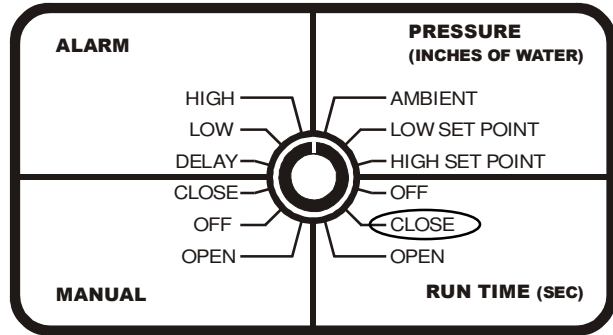
Run Time Close

The **Run Time Close** sets the amount of time for which air inlet will move during a closing cycle. When **Pressure Ambient** drops to **Pressure Low Set Point** and the **Run Time Off** is elapsed, air inlet will close for this amount of time.

The air inlet will not interrupt the closing movement even if **Pressure Ambient** returns above **Pressure Low Set Point**.

Once a closing movement is finished, air inlet will again be immobile for **Run Time Off** and close again if **Pressure Ambient** has not risen above **Pressure Low Set Point**.

Run Time Close is adjusted in 1-second increments from 0:01 to 1:59.



RUN TIME OPEN

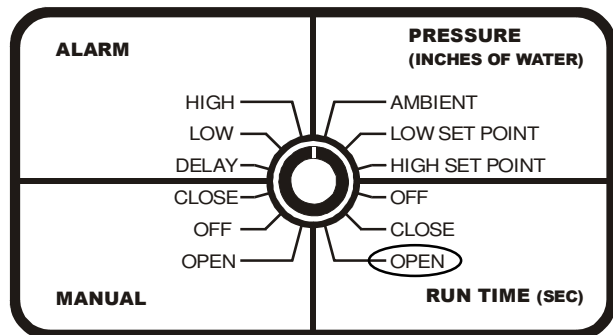
Run Time Open

The **Run Time Open** sets the amount of time for which air inlet will move during an opening cycle. When **Pressure Ambient** rises to **Pressure High Set Point** and the **Run Time Off** is elapsed, air inlet will open for this amount of time.

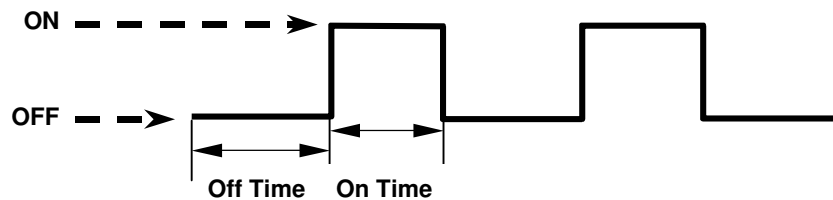
The air inlet will not interrupt the opening movement even if **Pressure Ambient** returns below **Pressure High Set Point**.

Once an opening movement is finished, air inlet will again be immobile for **Run Time Off** and open again if **Pressure Ambient** has not dropped below **Pressure High Set Point**.

Run Time Open is adjusted in 1-second increments from 0:01 to 1:59.



Opening or Closing Cycle



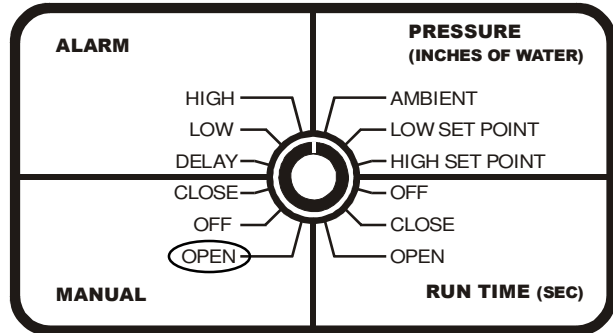
MANUAL OPEN

Manual Open

When selected, this parameter forces the air inlet to open after a 3-second delay regardless of **Pressure Ambient** and set points.

This parameter always displays **OPn** and will not flash, indicating that no adjustment may be made.

Manual Open may be used even if parameters are locked.



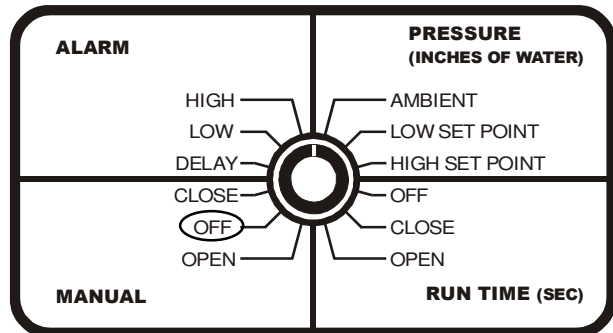
MANUAL OFF

Manual Off

When selected, this parameter forces the air inlet to remain immobile regardless of **Pressure Ambient** and set points.

This parameter always displays **OFF** and will not flash, indicating that no adjustment may be made.

Manual Off may be used even if parameters are locked.



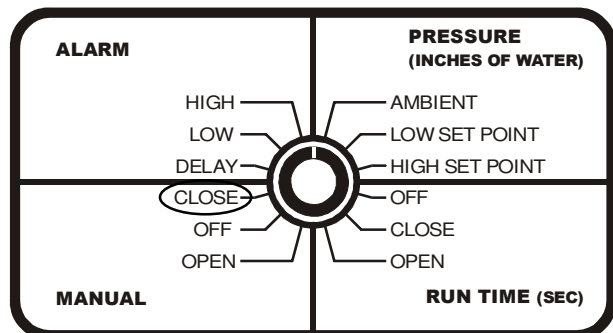
MANUAL CLOSE

Manual Close

When selected, this parameter forces the air inlet to close after a 3-second delay regardless of **Pressure Ambient** and set points.

This parameter always displays **CLO** and will not flash, indicating that no adjustment may be made.

Manual Close may be used even if parameters are locked.

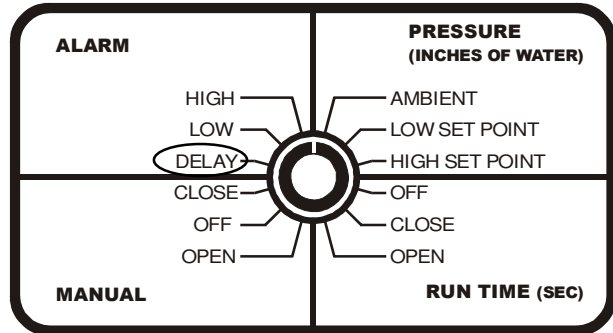


ALARM DELAY

Alarm Delay

This parameter sets the amount of time the controller will wait before activating the alarm. **Pressure Ambient** must remain outside the **Alarm High** and **Alarm Low** limits throughout this delay to activate the alarm. As soon as **Pressure Ambient** returns within these limits, the alarm deactivates and this delay is reset.

Alarm Delay is adjusted in 5-second increments from 0:05 to 9:55.

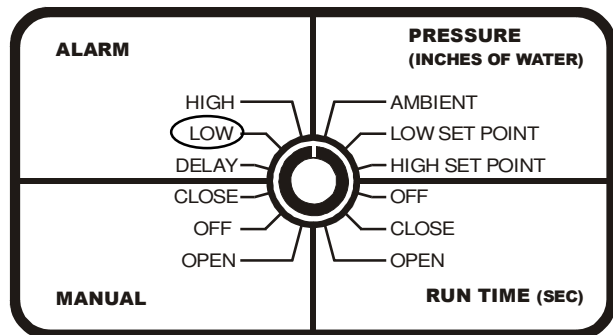


ALARM LOW

Alarm Low

This parameter sets the low-pressure alarm limit. When **Ambient Pressure** drops to this value or below, **Alarm Delay** is activated. If **Ambient Pressure** stays below this value throughout the **Alarm Delay**, the alarm will be activated.

Alarm Low is adjusted in .001 increments, from .000 to .200 inches of water.

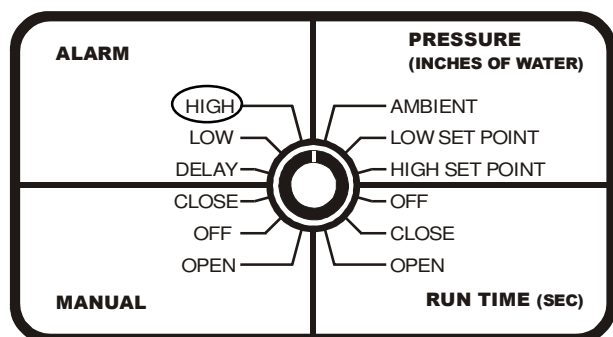


ALARM HIGH

Alarm High

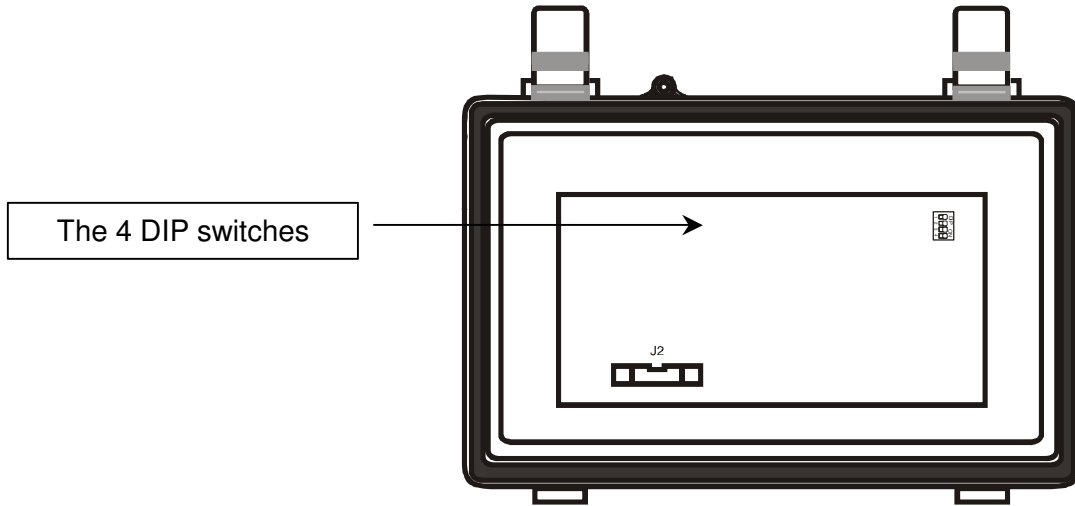
This parameter sets the high-pressure alarm limit. When **Ambient Pressure** rises to this value or above, **Alarm Delay** is activated. If **Ambient Pressure** stays above this value throughout the **Alarm Delay**, the alarm will be activated.

Alarm High is adjusted in .001 increments, from .000 to .200 inches of water.



DIP SWITCHES

These internal switches, located on the electronic card attached to the back of the cover, are used to set the operating modes described in the table below. When the controller is shipped from the factory, all the switches are set to off.



DESCRIPTION	DIP SWITCH NO.	POSITION	OPERATING MODE
Reaction Time	1	ON OFF	Fast Normal
Locking the parameters	2	ON OFF	Locked parameters Unlocked parameters
Reserved	3		Reserved
Reserved	4		Reserved

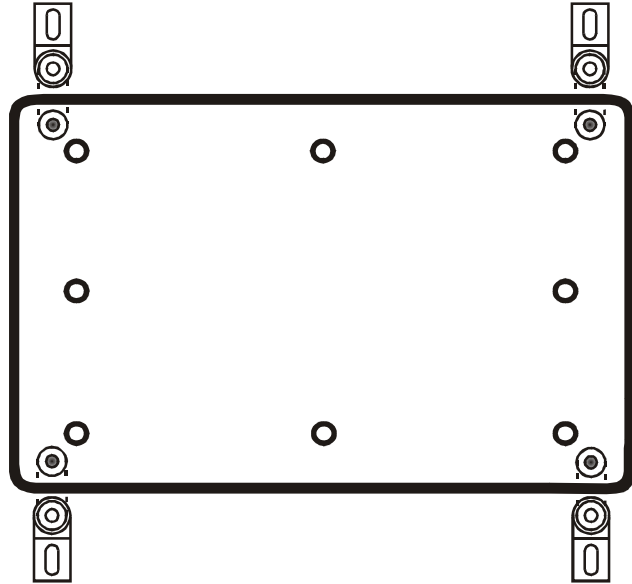
INSTALLATION

MOUNTING INSTRUCTIONS

The enclosure must be mounted in a location that will allow the cover to be completely opened right up against the wall.

Fasten the four brackets to the four mounting holes on the back of the enclosure, using the four screws provided with the brackets. Then mount the enclosure on the wall by inserting screws through the brackets' adjustment slots, into the wall. Make sure to position the enclosure so that the power supply cord extends out of the bottom section of the enclosure.

The bracket slots also serve to adjust the position of the controller. Once you have adjusted the controller position, tighten the four mounting screws.



CONNECTIONS

To connect the controller, refer to the wiring diagram enclosed with this installation manual.

1. Set the voltage switch to the appropriate line voltage.
2. Drill access holes on the bottom of the enclosure only. Do not drill holes on the side or the top of the enclosure.

Alarm Connection

There are two types of alarms on the market. One type sets off when current is cut off at its input; the other sets off when current is supplied at its input. For the first type of alarm, use the NO terminal as shown on the wiring diagram. For an alarm of the second type, use the NC terminal.



ALL WIRING MUST BE DONE BY AN AUTHORIZED ELECTRICIAN AND MUST COMPLY WITH APPLICABLE CODES, LAWS AND REGULATIONS. BE SURE POWER IS OFF BEFORE DOING ANY WIRING TO AVOID ELECTRICAL SHOCKS AND EQUIPMENT DAMAGE.

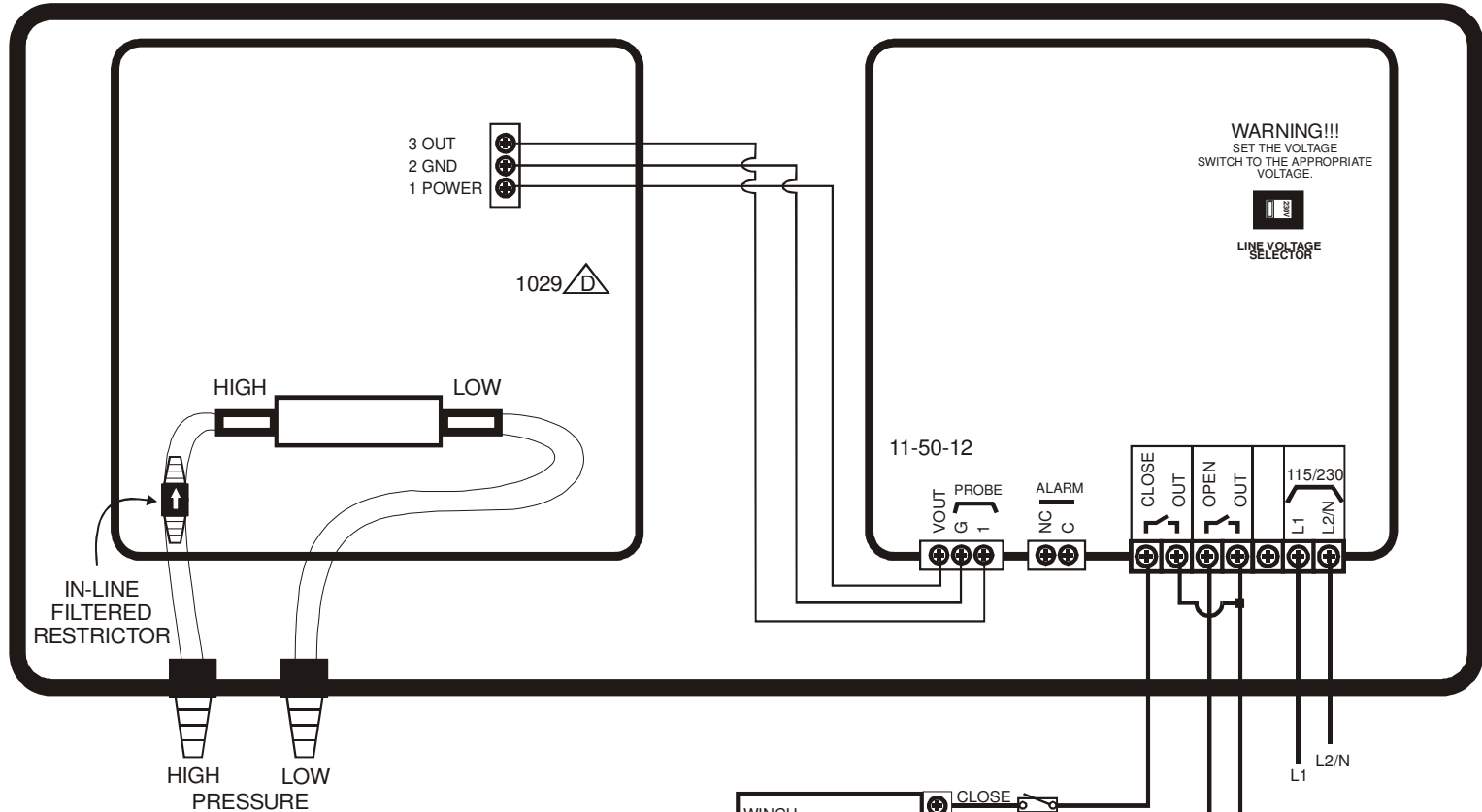
TECHNICAL SPECIFICATIONS

DESCRIPTION	VALUE
Input power	6 W
Power source (line)	115/230 VAC, -15%, +10%, 60 Hz
Alarm relay	3 A @ 30 VDC
Storage temperature	32°F to 158°F (0°C to 70°C)
Operating temperature	32°F to 120°F (0°C to 50°C)
Pressure range – pressure probe	.000 to .250 inches of water
Weight	3.7 lbs. (1.7 kg)
Dimensions	11" X 7" X 6" (27.9 X 17.8 X 15.2 cm)
Air inlet	½ HP @ 115 V; 1 HP @ 230 V 5 A @ 30 VDC

FACTORY SETTINGS

	Position	Unit	Factory Setting	Range of Values
Pressure AMBIENT	1	Inches of water	—	.000 to.250
Pressure LOW SET POINT	2	Inches of water	.050	.000 to.199
Pressure HIGH SET POINT	3	Inches of water	.060	.001 to.200
Run Time OFF	4	m:ss	0:10	0:05 to 9:55
Run Time CLOSE	5	m:ss	0:03	0:01 to 1:59
Run Time OPEN	6	m:ss	0:03	0:01 to 1:59
Manual OPEN	7	—	OPn	OPn
Manual OFF	8	—	OFF	OFF
Manual CLOSE	9	—	CLo	CLo
Alarm DELAY	10	m:ss	0:15	0:05 to 9:55
Alarm LOW	11	Inches of water	.000	.000 to.200
Alarm HIGH	11	Inches of water	.100	.000 to.200

WIRING DIAGRAM RV-P-1A



- ⚡ For routing cable into the controller housing, drill holes at the bottom of the housing. Do not drill holes on the sides of the housing.
- ⚡ Required clearance: 12" above controller housing, to allow for cover opening.
- ⚡ Installation of a good quality alarm system is strongly advised to warn of power failures and high / low pressure.
- ⚡ Provide surge protection (to include protection from lightning) from power supply to control and from control to output extended probe. Consult a certified electrician for specific recommendations.
- ⚡ Set the voltage switch to the appropriate voltage.
- ⚡ Cut the vinyl clear tube into two different lengths totaling 10 feet.



REV. A01

WIRING DIAGRAM

