



# Jensen Instrument Co.

643 SO. DUGGAN AVENUE • AZUSA, CALIFORNIA 91702-5185  
(626) 969-7991 • (661) 324-3378 • FAX (626) 969-4991

## RAINSWITCH INSTALLATION/OPERATION MANUAL

### Sequence of Operation

#### #JIC-RS100-B Rainswitch

The rainswitch is made of stainless steel to ensure long life against harsh environments. The rainswitch is designed with a 14" funnel to collect the falling rain. Once a 1/10<sup>th</sup> of an inch of rain has fallen, the level chamber will be filled to the point that the capacitive level switch will sense the level, and change state (switch). This signal will then start the sequence described below.

#### #JICATIPB2L-C Pilot Station with Auto-Reset

NOTE: (not accepted by L.A. County Sanitation)

#### Normal Mode (No Rain):

The pump or valve is in its normal mode, with flow into the sewer system. The green light is on, displaying "normal condition". The automatic timer actuates and opens the solenoid valve (draining the rainswitch) for 15 minutes, every 10 hours. When in the normal mode, this function has no effect on the system.

#### Divert Mode (Raining):

Once a 1/10<sup>th</sup> of an inch of rain has fallen, the rainswitch will change the state of the pump or valve, diverting the rainwater to the storm drain system. The green light goes off, the red light will go on, once the valve has reached it's divert position, indicating the system is in the "divert mode". Again the automatic timer will reset the rainswitch every 10 hours, causing the pump or valve to return to its normal mode. This will return the flow to the sewer system until a 1/10<sup>th</sup> of an inch of rain is again detected. This sequence repeats itself until it stops raining, and the system returns to the "normal mode" referenced above.

#### #JIC1PB2L-C Pilot Station with Manual Reset

It functions the same as above except after it stops raining, an operator will depress the reset pushbutton on the station, causing the solenoid valve to open (draining the rainswitch). The pushbutton must be depressed until all water is completely drained from the rainswitch. This will return the system to the "normal mode" position.



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## Installation

### **Mechanical-**

The rainswitch should be located in an area that is free of any overhead obstruction, and have a safe perimeter away from any tall vertical structure or tree, to assure rainfall from any direction will not be obstructed from entering the funnel.

The most common location is on the roof of a building, however this can make routine servicing and cleaning difficult. If you desire to have the rainswitch located at ground level for ease of access, the funnel may be located anywhere that will give it clear access to rainfall, and plumbed back to the rainswitch.

The solenoid drain valve and “Y” strainer should not be plumbed remotely from the rainswitch, as this will add additional volume which will cause the rainswitch to actuate at some rainfall level great than the 1/10<sup>th</sup> of an inch for which it is designed.

### **Electrical-**

Jensen Instrument Co. does provide wiring schematics for the valves we supply, and typical wiring diagrams for a typical pump installation.

The valve drawings depict the valve in the “closed position” in the “normal – no rain” mode.

The pump drawing depicts the pump “on” in the “normal – no rain” mode.

The wiring changes necessary to “reverse” the valve/pump operation are on the appropriate drawing.

***WARNING: Make sure the drawing you are using references the valve actuator model you received. While working on the system, if the valve actuator cover is removed, the power to the heater must be disconnected or the heater will be HOT. This could burn personnel working on the valve, and will eventually burn out the heater.***

**NOTE:** The drawings supplied by Jensen Instrument Co. are to be used as reference/guidelines **ONLY!** These drawings should not be used without review and approval by the design engineer responsible for the project system design. It is the contractor’s responsibility to assure proper installation.

Jensen Instrument Co. will also provide the diversion valves (2 & 3-way butterfly or ball valves). We do not supply sump pumps or clarifiers, the following company can help you with your clarifier requirements.

Jensen Precast 909-350-4111



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## **Troubleshooting:**

Upon powering up of the system, if the “Green indicator” is lit but the valve is in the wrong position/or the pump operation is opposite of what you require, change the wiring as described on the drawing provided.

**Fuse:** #BAF 10A

### **Valve Installation-**

Once the system orientation is correct, fill the rainswitch with water until the water exits the vent hole on top of the level chamber. This should actuate the level sensor and start the valve to the “Divert” position. The green light will go off and remain off during mid-travel. The red light will turn on once the valve has reached its final position.

### **Pump Installation-**

Once the system orientation is correct, fill the rainswitch with water until the water exits the vent hole on top of the level chamber. This should actuate the level sensor and will change the pump operation to the “Divert” mode. The green light will go off, the red light comes on, and the pump will change state.

### **Rainswitch Check-out-**

Check voltage reading between terminals #1 and #8 located inside the pilot station, it should read 120vac when there is no water in the chamber, with water in the chamber there should be 120vac between #1 and #9. If the voltage is not correct, return the pilot station and rainswitch to Jensen Instrument Co. for evaluation.

Automatic Reset Timer Settings:

OFF (Green) - 10 HRS

ON (Orange) - 15 MIN

## **Maintenance:**

There is very little maintenance required due to the fact there are no moving parts in the rainswitch. Periodic cleaning of the funnel and the “Y” strainer for removal of debris is recommended. If the solenoid valve on the bottom of the rainswitch does drain the rainwater, the “Y” strainer is probably fouled with debris.