SERVICE BULLETIN SB3048
Rev. C 04/18

Balcrank®

Pump Sentinel

Model #3110-009

Patent Applied For

Thoroughly read and understand this manual before installing, operating or servicing this equipment.

OPERATION, INSTALLATION, MAINTENANCE AND REPAIR GUIDE

GENERAL SAFETY REQUIREMENTS

NOTE: THOROUGHLY READ AND UNDERSTAND THIS MANUAL BEFORE INSTALLING, OPERATING, OR SERVICING THIS EQUIPMENT.

⚠ IMPORTANT

Check equipment regularly and repair or replace worn and damaged parts.

Never alter or modify any part of this unit, doing so may cause damage to the unit and/or personal injury.

Always read and follow the fluid manufacturer's recommendations regarding the use of proper use, handling, and disposal.

⚠ WARNING

Pressure Relief Procedure:

Follow this procedure whenever you shut off the pump, when checking or servicing any part of the system and when installing, cleaning or changing any part of the system.

1) Disconnect the air to the pump.
2) Point dispensing valve away from yourself and others.
3) Open dispensing valve until pressure is relieved.

⚠ WARNING

DANGER: Not for use with fluids that have a flash point below 100°F (38°C). Examples: gasoline, alcohol. Sparking could result in an explosion which could result in death.

⚠ WARNING

High Voltage may be present when servicing this equipment.

Do not attempt to service the Pump Sentinel. Return defective unit to the factory.

Cable Color Code Chart

TERMINAL STRIP & CONDUCTOR #	COLOR	USE
1	White	Numbers 1-6 individual
2	Red	conductors for solenoid
3	Brown	valves.
4	Blue	
5	Orange	
6	Yellow	
7	Black	Common for solenoid
8	Green	Ground
	Red Terminal	Power Supply, Hot
	Black Terminal	Power Supply, Common

INTRODUCTION

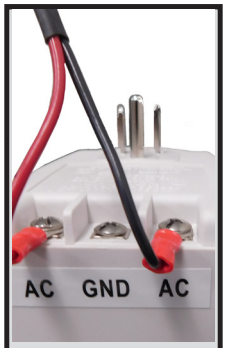
General Description

The 3110-009 Pump Sentinel allows for the controlled dispensing of fluids. The unit is capable of preventing fluid theft by utilizing rocker switches to enable or disable up to six pumps via a master key which is needed to turn on the system. The console also prevents fluid spills during non-working hours by using a built in timer which will turn off the air supply to all pumps at a predetermined time each day.

System Specifications

Power Required..... 120 VAC, 60/50 Hz, 50 Watts
Control Capacity.....6 Products
Operating Temperature..... 0° - 140° F (-17° - 60° C)
Solenoid Rating ..... 24 VDC, 5 Watts Max.
Dimensions.....3" H x 6.5" W x 5" D
Cable Length .....6 feet

INSTALLATION



This image shows how to properly connect the Pump Sentinel wiring harness to the power supply (GND is not used).

The 3110-009 Pump Sentinel is powered by 115 VAC power. Simply plug the power supply into a wall outlet and then plug the other end of the power cord into the back of the Pump Sentinel console.

Each pump is controlled by a 24 VDC air solenoid valve. Plumb this into the air inlet of the pump, BETWEEN the FRL and the pump air inlet.

Installation should be made in accordance with the National Electrical Code (NFPA 70) and the Flammable and Combustible Liquids Code (NFPA 30).

Power input to the Pump Sentinel must be uninterrupted 115 VAC. All control circuits are 24 VDC which are not normally restricted by electrical codes, however, local codes should be checked for applicability, and all electrical installations should comply with codes.

Place the console(s) where it will normally be used. All electrical connections are made through the multi-wire cable supplied with the unit. Some kind of pull box should be mounted within 5 feet of the console. A suitable place might be behind a desk or in the ceiling where the existing electrical system is likely located. Connect the supplied cable to a screw type terminal strip.

No. 18 AWG wire is recommended for all runs less than 400 feet. For runs from 400 to 625 feet, use wire no. 16 AWG or larger. Normally the 24 VDC wiring can be run around the overhead structure of the building without using conduit. This wire should be clamped or secured to the structure in such a way that it is not subject to any mechanical stress. Use a strain relieving clamp any time a cable enters a junction box. The cables from all the consoles in the system can be run to one junction box with conduit running to the 115 VAC circuit breakers and then

using multi-wire cable for the control circuit runs.

Another junction box or group of boxes should be mounted near the solenoid valves.

OPERATION

To set time of day (clock):

Push and hold the HOUR button for five seconds. The display will flash. Push the HOUR or MINUTE button to adjust. The “PM” LED will be “on” for PM and “off” for AM. When the time is correct, push the “SET” button. During normal operation the time of day will be displayed.

To set “OFF” time:

By setting the “OFF” time the Pump Sentinel will turn off power to the pump air solenoids at this time each day. This will prevent theft and accidental spills during non-working hours.

Push and hold the “SET” button for 5 seconds. Push the HOUR or MINUTE button to adjust.

To check “OFF” time setting:

Push the “SET” button and then release.

To turn unit on:

Turn the key to the “OFF” position and then rotate to the “ON” position.

NOTE: It is recommended that this key be removed from the console and secured during non-working hours.

To dispense fluid:

1) Turn key to “ON” position.
2) Turn on rocker switch for desired fluid. LED above rocker switch will light.
3) Dispense fluid.

NOTE: It is recommended that all rocker switches be kept in “OFF” position when fluid is not needed.

FACTORY SERVICE

Repair

No attempt to repair the Pump Sentinel should be made beyond the scope of this manual. The modular design of the unit, made possible by the use of integrated circuits, makes it necessary to have access to special test equipment if serious damage to the system is to be avoided. The unit should be returned to a Balcrank Authorized Service Center for repair or adjustment.

Parts List

Power Supply 832252

TROUBLESHOOTING CHART

In order to properly troubleshoot the system and perform proper replacement or repair of parts, it is necessary that the technician performing the work be thoroughly familiar with the equipment. Attempted repair by unqualified personnel could void the warranty. It is suggested that this manual be studied thoroughly before any troubleshooting is attempted.

It is suggested that whenever there is a problem with the system that a visual inspection first be made of the overall condition of the equipment. Here is a list of things to look for:

Symptom	Cause	Solution
1. No power at console.	a. Circuit breaker tripped. b. Unit not plugged in. c. Cable not connected or properly seated. d. Key lock switch off. e. Bad power supply	a. Reset breaker at main panel. b. Plug unit in. c. Plug in cable connector. d. Turn on key lock. e. Replace power supply
2. Display not illuminated or digit elements are incomplete.	Counter is defective.	Return the unit for repair.
3. Console controls the wrong fluid.	Control wires to the solenoid valves are improperly connected.	Rewire as specified.
4. System has power, but no fluid can be dispensed.	a. Pump is not operating. b. Out of fluid. c. Control solenoid valve not operating. d. Outlet of pump is blocked. e. Defective rocker switch. f. System not properly wired. g. Cable not connected or properly seated.	a. Check the air supply to the pump and the pump air solenoid valve. b. Check the fluid level in the storage container. c. Check valve for energized position. d. Check fluid outlet line. e. Return the unit for repair. f. Recheck electrical connections and rewire as specified. g. Plug in cable connector.

For Warranty Information Visit:
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Revision Log:

Rev. A - Rev. A - Wording change
Rev. B - Added parts list, updated troubleshooting chart.
Rev. C - Image added to define wiring of power supply