

Introduction

Before proceeding with the installation or operation of the control panel read all instructions thoroughly, as well as comply with all Federal, State and Local Codes, Regulations and Practices. The control panel must be installed by qualified personnel familiar with all applicable local electrical and mechanical codes. Refer to the National Electrical Code (NFPA 70). Failure to properly install and test this product can result in personal injury or equipment malfunction. All conduit connected to the panel must be sealed with conduit sealant to prevent moisture or gases from entering the panel. NEMA 1 enclosures are for indoor use only while NEMA 4X panel enclosures may be used indoor or outdoor. Refer to panel model name plate on inside of door for enclosure rating. Note: If options are ordered that affect the number of floats, refer to the panel schematic for complete information.

Safety Guidelines



1. DO NOT USE WITH FLAMMABLE OR EXPLOSIVE FLUIDS SUCH AS GASOLINE, FUEL OIL, KEROSENE, ETC. DO NOT USE IN EXPLOSIVE ATMOSPHERES. CONTROL PANEL SHOULD ONLY BE USED IN WATER AND WASTEWATER APPLICATIONS THAT ARE NOT RATED AS A HAZARDOUS LOCATION.
2. DO NOT WORK ON THE CONTROL PANEL WITH LIVE VOLTAGE APPLIED TO THE CONTROL PANEL WITH WET HANDS OR WHEN STANDING ON A WET SURFACE.
3. DISCONNECT ALL ELECTRICAL SERVICE BEFORE WORKING ON OR HANDLING THE CONTROL PANEL.
4. INCOMING VOLTAGE MUST MATCH THE CONTROL PANEL VOLTAGE. REFER TO THE PANEL SCHEMATIC FOR COMPLETE INFORMATION.

Installation of the Control Panel:

1. Determine mounting location for the control panel. Attach the 4 mounting feet to the control panel enclosure. If splicing is required between the level switches and the panel, we recommend an Alderon Junction box. CAUTION! Use conduit sealant and waterproof wire nuts for connections. Make sure all connections are water tight.
2. Determine conduit entrance locations on control panel and install per local codes. Check schematic and determine number of power sources required. Use conduit sealant on all conduits to prevent moisture and gases from entering control panel.
3. Connect control/alarm and pump power conductors to the proper terminals. The schematic and terminal blocks will be labeled for proper connection.
4. Verify correct panel operation after installation of panel, power and level switches are complete.

Check It™ Panel

1 Phase Simplex Demand Dose

Operation, Maintenance & Installation Manual

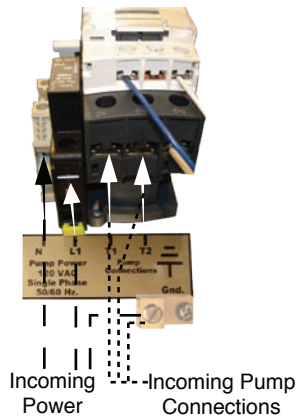


Incoming Power Configurations:

The Check It series control panels may be ordered with or without circuit breakers. Check schematic which will show exact configurations. Illustrations below shows how to connect power for the pump and the control circuits.

Pump Power Configurations

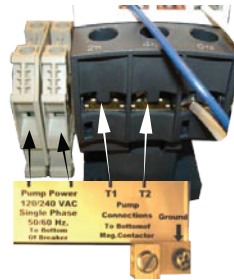
120 VAC with Circuit Breaker



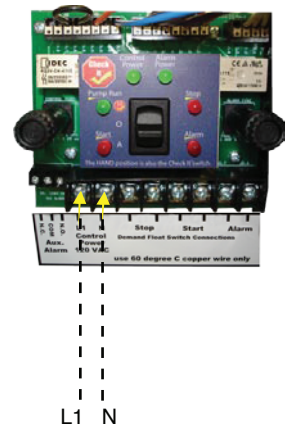
120/230 VAC with Circuit Breaker



120 VAC or 230 VAC without Circuit Breaker



Alarm/Control Power Configuration



Mounting Level Switches:

Float switches are most commonly used, but the Check It series control panels can be used with any dry contact type level or pressure switch. Illustrations show float switches installed for pump down applications. Reverse float order for Pump Up applications. Refer to float switch instructions for mounting of pipe clamp or weighted floats.





Simplex Circuit Board Command Center

There is one HOA (Hand-Off-Auto) switch. This HOA switch is also used as the Check It switch for diagnosing the control panel.



Two green power “on” indicators provide visual indication for the control and alarm fuses. Fuses must be replaced with 1 amp fast acting 5mm X 20mm fuses.



3.  The Pump Run indicator light is green. If this light is illuminated the pump is running.

4.  5.  6.  The Stop float, Start float and Alarm float indicator lights are red.

Alarm Mode Configurations:

All “e” (economy) series control panels will only have a combination “test-normal-silence” switch where automatic alarm reset is the only alarm configuration. When the panel goes into alarm, press the switch to “silence” and the buzzer will turn off but the alarm indicator will remain on until the alarm level switch deactivates and automatically resets the alarm system.

All other Check It series control panels employ separate “test” and “silence” switches. These panels can be field modified to have a “manual” alarm reset. Refer to figure for placement of an 18 AWG jumper wire to convert the panel from automatic reset to MANUAL reset. In the Manual Reset mode and when the panel goes into alarm, the panel will remain in alarm even if the alarm level switch is “opened” until the “silence” switch is activated. This feature allows alarms to be manually acknowledged before the alarm is cleared. In the event of a power failure, the alarm is also cleared.

Use 18 AWG wire approximately 4” long. Strip off 1/4” outer insulation. Insert jumper wire into the 2 position wire port (one wire per port). To remove jumper wire, press small screw driver or pointed object onto the “white” port block and remove wire as the wire is held in place by a spring cage terminal device.



Circuit Board Terminal Blocks:

The Check It series control panel uses two terminal blocks. An 8 position main terminal block is for power and level switch connections. A separate 3 position terminal block are for dry auxiliary contacts. A 5 amp, 120 VAC max load can be applied to the auxiliary terminals. The auxiliary contacts are Form C, Single Pole, Double Throw. (Common, Normally Open, Normally Closed). Contacts change state when in alarm condition.



8 position terminal block

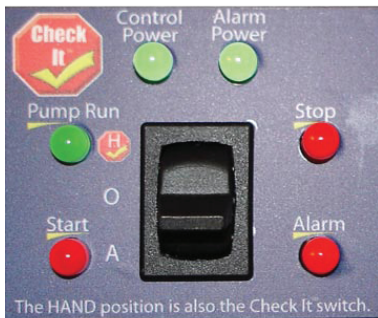


Auxiliary contact terminal block



Check It Panel Self Diagnosing Instructions:

#1. Check the incoming power on the top of the command center.



Fuses are good.

If the indicator lights are illuminated the fuses are good.

If one or both of the indicators are not illuminated the fuse or fuses need to be replaced. If the fuse or fuses do not fix the problem the incoming power needs to be examined.

Alarm Fuse needs to be replaced

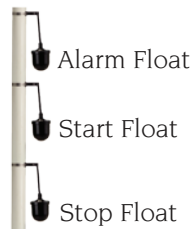
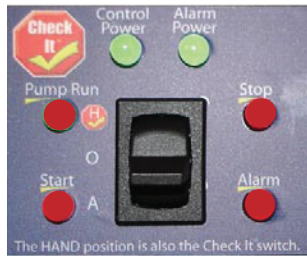


Control Fuse needs to be replaced



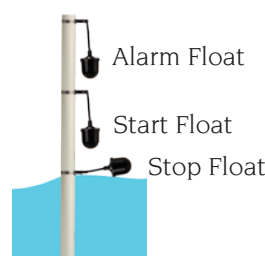
#2. View the current status of your system. The indicator lights are illuminated as each float rises with the liquid level in the tank.

#1.



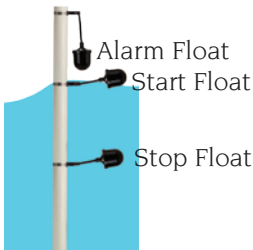
All three floats are not activated. Only the Control Power and Alarm Power indicator lights should be illuminated.

#2.



If the Stop float is activated the Stop light will illuminate.

#3.



The Stop float and the Start float are activated so the Stop float and the Start float indicator lights are illuminated.

#4.



All floats are up so all indicators are illuminated.

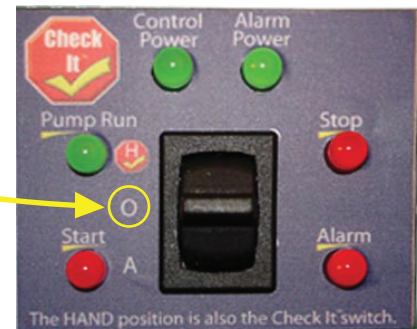
Check It Panel Self Diagnosing Instructions:

#3. Operating the pump manually with the HOA (Hand-Off-Auto)

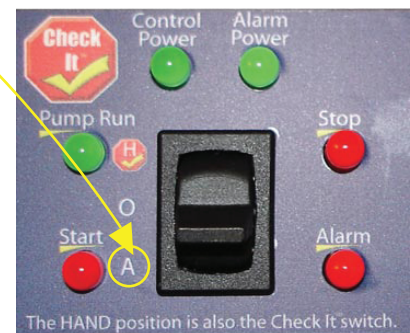
Place the HOA (Hand Off Auto) switch in the **H** "Hand" position to turn the pump on manually.



Place the HOA (Hand Off Auto) switch in the **O** "Off" position to turn off the pump from operation completely.



Place the HOA (Hand Off Auto) switch in the **A** "Auto" position to turn on the pump with float control. When the water level raises the stop and start float the pump turns on and stays on until the stop float drops down. If the liquid raises the high level float a visual and audio alarm will trigger.



Check It Panel Self Diagnosing Instructions:

#4. Using the Check It feature to troubleshoot your control panel.

Fig #1.




Place the HOA (Hand-Off-Auto) switch into the  (Hand) position. The Pump Run indicator light will illuminate and turn on the pump.



Fig #2.


If the HOA (Hand-Off-Auto) switch is in the  (Hand) position you will be automatically checking the true status of the floats. EXAMPLE: Fig#2. The green pump run light is illuminated because the HOA switch is in the hand mode.

Fig #2A.



EXAMPLE: Fig#2A.



The Start float indicator is illuminated.



The Stop float indicator light is not.

Fig #2B.



EXAMPLE: Fig#2B. The same indicator lights are illuminated.

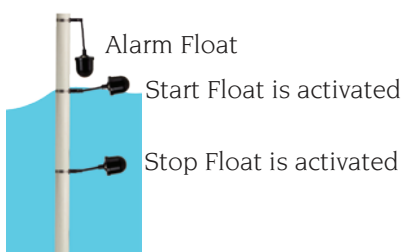


The Start float indicator is illuminated.



The Stop float indicator light is not.

Illustration (Fig#3A) shows the Stop float is activated, but the indicator light on the command center in (Fig#2A) is not illuminated. The Stop float is not working properly and should be replaced.



However, the example below (Fig#3B) shows that the same float is not working, but for a different reason. In this example the float is hung up in the tank.

