INSTALLATION MANUAL

APB

Spartan

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Safety Instructions

Read this manual carefully to learn how to safely install and operate your pump. Throughout this manual there are a number of SAFETY HAZARDS that must be read and adhered to in order to prevent possible personal injury and/or damage to the equipment.

Three keywords, “DANGER” ,“WARNING”, and “CAUTION”, are used to indicate the potential severity of the hazard, and are preceded by a SAFETY ALERT SYMBOL. Failure to follow the safety-related instructions may result in a safety hazard.

DANGER Indicates an imminently hazardous situation which, if not avoided, WILL result in serious injury or death.

WARNING Indicates a potentially hazardous situation which, if not avoided,

Could result in serious injury or death.

CAUTION Indicates a potentially hazardous situation which, if not avoided,

May result in minor or moderate injury.

THOROUGHLY REVIEW ALL INSTRUCTIONS AND WARNINGS PRIOR TO PERFORMING ANY WORK ON THIS PUMP.

Introduction:

Because panel installations are seldom identical, this manual cannot possibly provide detailed instructions and precautions for each specific application. Therefore, it is the responsibility and the duty of all personnel involved in the installation, operation and maintenance of the equipment to ensure that applications not addressed in this manual are performed only after establishing that neither operator safety nor panel integrity are compromised by the installation.

Pre-Installation Check:

Open all cartons and inspect for shipping damage. Report any damage to your supplier or shipping carrier immediately. Always verify that the panel nameplate Voltage, Phase, and HP ratings as well as Amps rating on panel match your pumps and power supply. Warranty does not cover damage caused by connecting panels to an incorrect power source (i.e., voltage and phase).

Installation:

Electrical connections are to be made by a qualified electrician in accordance with the National Electrical Code (NEC) or the Canadian Electrical Code, as well all national, state and local codes. Code questions should be directed to your local electrical inspector. Failure to follow electrical codes and OSHA safety standards may result in personal injury or equipment damage. Failure to follow manufacturer’s installation instructions may result in electrical shock, fire hazard, personal injury or death, damaged equipment, provide unsatisfactory performance, and may void the manufacturer’s warranty.

Motor must have a properly sized starter with a properly sized heater to provide overload and under voltage protection unless motor meets following two conditions: single phase and motor horsepower is 1HP or less. Motors that satisfy these two conditions have built-in thermal overload protection.

Operating personnel should be trained in the operation of the pump and any associated system.

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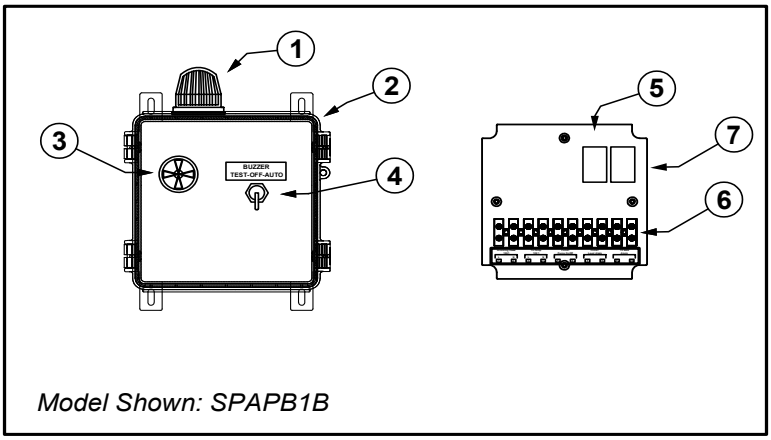
Panel Components

1. Alarm Beacon
2. TYPE 4X Enclosure
3. Alarm Buzzer
4. Alarm Toggle Switch
5. Control Relays
6. Terminal Blocks
7. Back plate



Model Shown: SPAPB1B

Sequence Of Operation

Remote Alarm Operation

Connect power feed to terminals 1 & 2
Connect normally open alarm switch to terminals 7 & 8

When alarm switch connected to terminals 7 & 8 closes the following will occur:

- Alarm Red LED Beacon will illuminate
- Alarm Buzzer will sound
- General Alarm Auxiliary contact for the BAS will close

The alarm buzzer can be silenced by placing the Alarm Silence 3-position switch in the “OFF”, center, position; however, the alarm beacon will remain on and the auxiliary alarm contact will remain closed until the alarm switch resets (opens)

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Sump Pump Operation

Single Float Operation with High Level Alarm

Connect power feed to terminals 1 & 2
Connect pump motor leads to terminal 3 & 4
Install jumper on terminals 6 & 8
Wire float to terminals 7 & 8

One wide angle tilt type float switch operation. The Pump Float switch will provide On/Off for the Pump call-to-run and the High Level Alarm.

*****Note: The Pump Float for this application must be selected to handle the motor full load amp rating.**

Should the level in the wet well rise to the actuation point of the wide angle float, the following will occur:

- Pump Will Run
- Alarm Red LED Beacon will illuminate
- Alarm Buzzer will sound
- General Alarm Auxiliary contact for the BAS will close

The alarm buzzer can be silenced by placing the Alarm Silence 3-position switch in the “OFF”, center, position; however, the alarm beacon will remain on, the pump will run and the auxiliary alarm contact will remain closed until the level in the wet well pumps down and the high level alarm float resets

Single Float Operation No Alarm

Connect power feed to terminals 1 & 2
Connect pump motor leads to terminal 3 & 4
Wire float to terminals 5 & 6

One wide angle tilt type float switch operation. The Pump Float switch will provide On/Off for the Pump call-to-run.

*****Note: The Pump Float for this application must be selected to handle the motor full load amp rating.**

Should the level in the wet well rise to the actuation point of the wide angle float, the following will occur:

- Pump Will Run

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Sequence Of Operation

Two Float Operation

Connect power feed to terminals 1 & 2
Connect pump motor leads to terminal 3 & 4
Connect Float 1 (Pump Run) to terminals 5 & 6
Connect Float 2 (High Level) to terminals 7 & 8

The system shall be configured for two wide angle tilt type float switch operation. The Pump Float switch shall provide On/Off for the Pump call-to-run. Field Terminals 5 and 6.

*****Note: The Pump Float for this application must be selected to handle the motor full load amp rating.**

Should the level in the wet well rise to the actuation point of the High Level Alarm wide angle float field Terminals 7 and 8, the following will occur:

- Alarm Red LED Beacon will illuminate
- Alarm Buzzer will sound
- General Alarm Auxiliary contact for the BAS will close

The alarm buzzer can be silenced by placing the Alarm Silence 3-position switch in the “OFF”, center, position; however, the alarm beacon will remain on and the auxiliary alarm contact will remain closed until the level in the wet well pumps down and the high level alarm float resets

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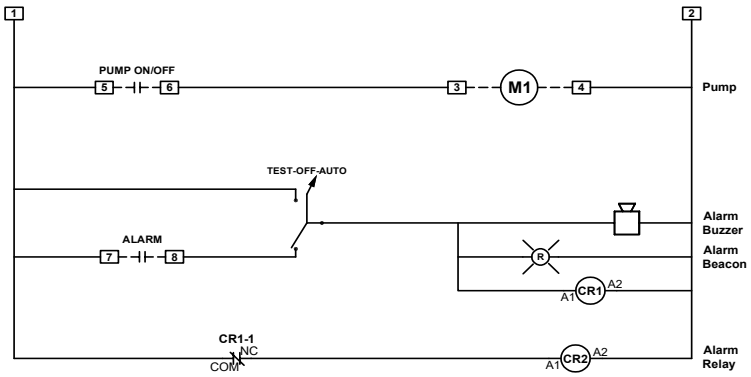
The Lone Star in Water Control

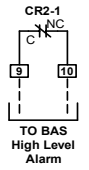
Controls Diagram

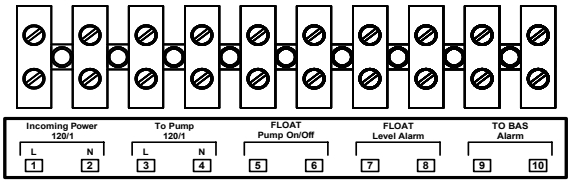
CAUTION - DISCONNECTING MEANS AND BRANCH CIRCUIT PROTECTION BY OTHERS

Standard Incoming Power Service of 115/120vac - 1 phase. All components are 115/120vac rated. (Figure 1).

Figure 1



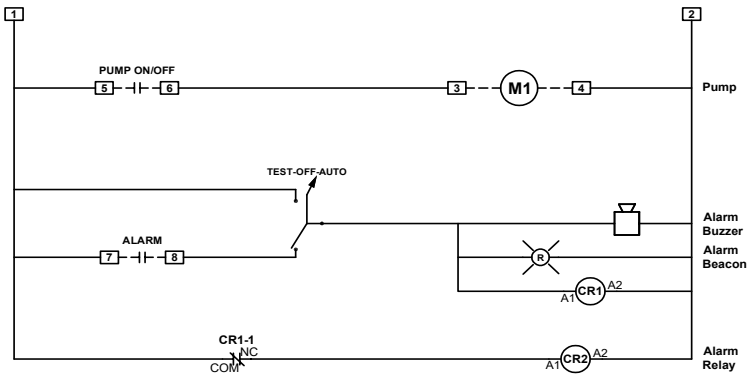


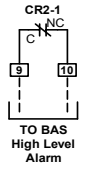


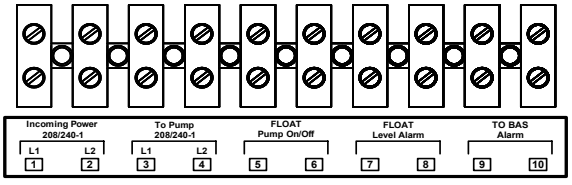
CAUTION - DISCONNECTING MEANS AND BRANCH CIRCUIT PROTECTION BY OTHERS

Standard Incoming Power Service of 208/240vac - 1 phase. All components are 208/240vac rated. (Figure 2).

Figure 2







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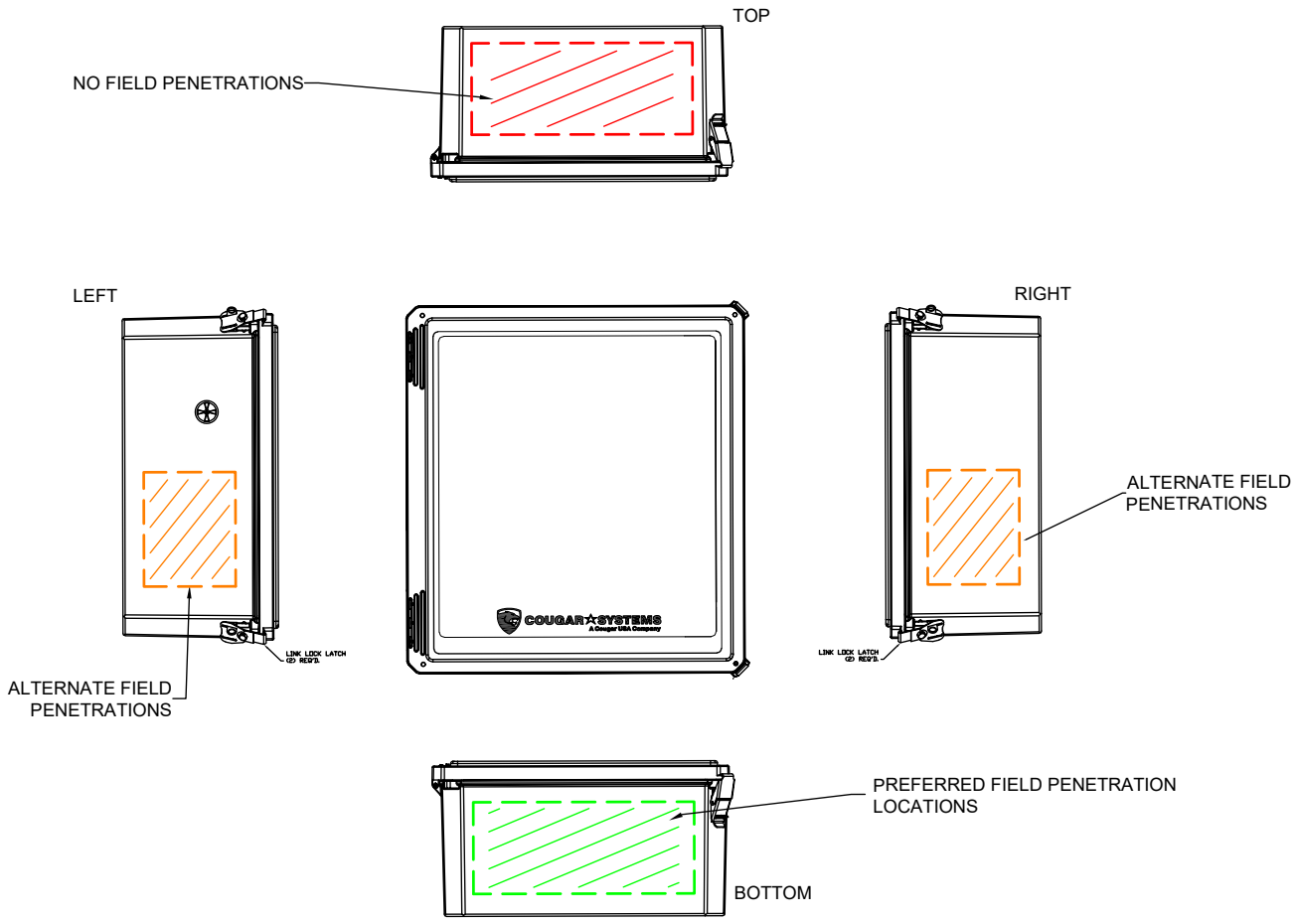
Field Penetration

*** URGENT ***
ANY FIELD PENETRATIONS IN LOCATIONS OTHER THEN FACTORY AUTHORIZED AREAS WILL ***VOID MANUFACTURERS WARRANTY*** OF ALL INTERNAL COMPONENTS.



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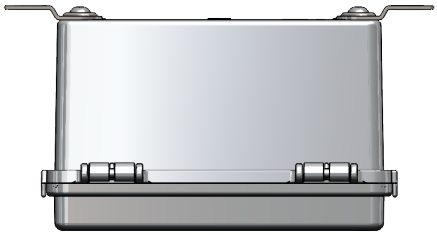
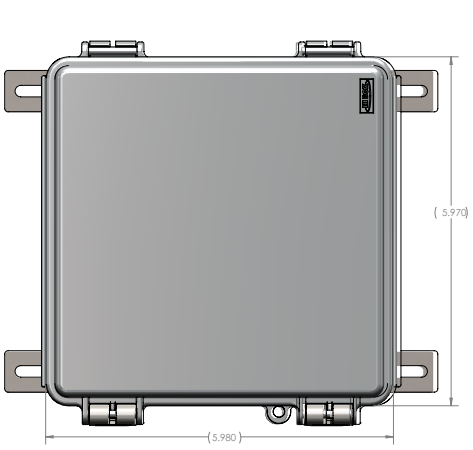
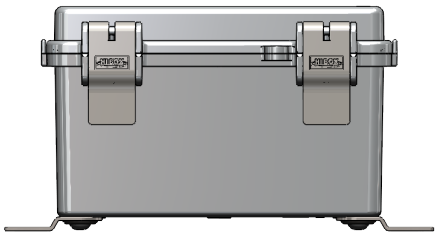
Mounting Dimensions







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