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SBS**SUBMERS-A-BULB CONTROLLER**

**photo
coming
soon**

Primarily used to control submersible sewage and sump pumps. Available for use with single or duplex pump units.

HIGHLIGHTS

-  Control of Submersible Sewage and Sump Pumps
-  Available for Single and Duplex Pump Units
-  Available in NEMA-1 and NEMA-4 Enclosures
-  Includes Pilot Device with Required Number of Bulbs

FEATURES

SBS CONTROLLER: The Federal SBS Controller is primarily designed for the control of submersible sewage and sump pumps. However, it can also be used for level control of other types of pumps as well. SBS Controllers are available for use with single and duplex pump units. The SBS Controller includes a wall-mounting Control Panel plus a Pilot Device.

SBS CONTROL PANEL: The SBS Control Panel is furnished in a NEMA-1 general purpose enclosure or a NEMA-4 watertight enclosure. Other enclosure types are available when required by special job conditions. The panel includes pump-on and pump-off relays, automatic alternator (to alternate the operating pump on each cycle and to provide simultaneous two-pump operation if required by the in-flow rate), a pump-run light for each pump, a high water alarm light and an alarm bell with silencing button. The basic SBS circuitry is solid state and epoxy encapsulated. The printed circuit board is of plug-in modular design for easy replacement.

SBS PILOT DEVICE: The SBS Pilot Device includes the required number of mercury tube bulbs with a mounting bracket and junction box. The Pilot Device is available in three styles.

INSTALLATION

1. Type SBS Submers-a-bulbs consist of a mercury tube switch embedded in a polyurethane float. For duplex pump units, the four bulbs function as follows:

Bulb A: Both pumps off. **Bulb C:** Pump No. 2 on.
Bulb B: Pump No.1 on. **Bulb D:** High Water Alarm.

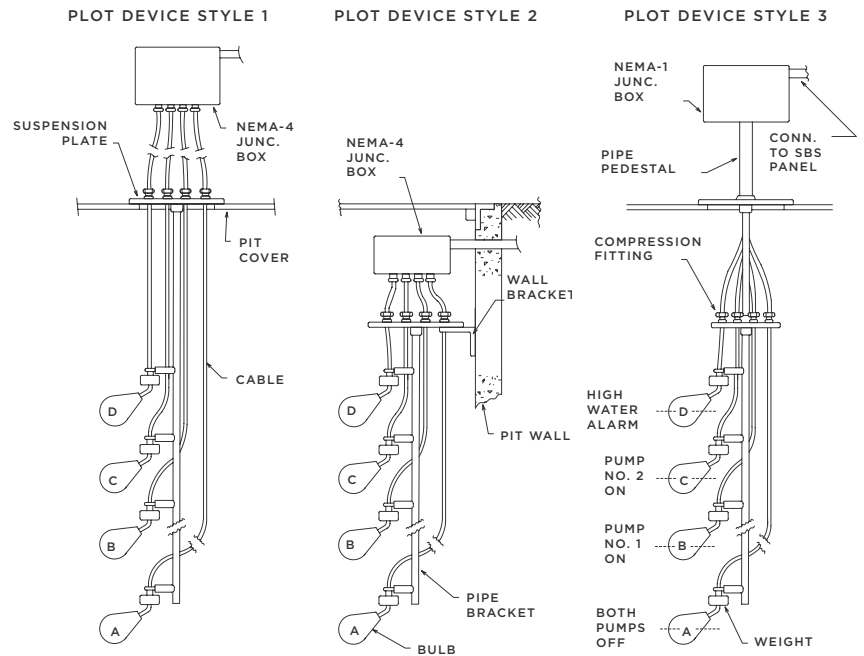
- When installing the bulbs, allow 2 inches of cable between the weight and the steadying bracket.
- The bottom bulb (Bulb A - Both pumps off) should be at a level equal to the top of the motors, when used with Submersible Pumps.
- Set Bulb D (High Water Alarm) approximately 6 inches below pit inlet level.
- Switch 3-phase power leads, if necessary, to insure correct pump rotation at start-up.
- If the Submers-a-bulb panel is out of sight of the pit, it is recommended that NEMA-4 unfused disconnect switch be installed at the pit, for each motor.
- For STYLE 2 installations, where the NEMA-4 junction box is below the pit cover, install the junction box as high as possible above flood level, since NEMA-4 enclosures are rated watertight but are not designed for submerged service. All connections to the box should be watertight.

SUGGESTED SPECIFICATIONS FOR ENGINEERS:

Pumps shall be controlled by a Federal Type SBS Submers-a-bulb Controller, which shall include a wall-mounting duplex control panel in a NEMA-1 general purpose enclosure. The control panel shall include a magnetic starter and a fusible disconnect switch for each motor, pump-on and pump-off relays, an automatic alternator to alternate the pumps on each cycle and provide simultaneous operation if required, pump-run lights, high water alarm light and an alarm bell with silencing button.

The SBS Controller shall also include four submersible float switches on a wall-mounting (or pit cover-mounting) bracket and a NEMA-4 junction box.

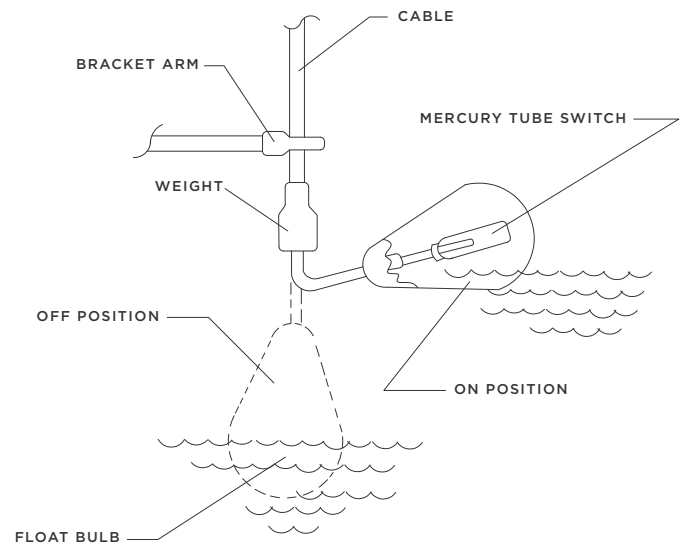
The SBS Pilot Device consists of submersible float switches, permanently sealed in solid polyurethane floats. They are mounted in the pit in any one of three styles as follows:



The bulbs are mounted on a round suspension plate which sets on the pit cover. A NEMA-4 junction box is furnished for separate mounting.

The bulbs are mounted on a bracket for side wall mounting. A NEMA-4 junction box is furnished for separate mounting.

The bulbs are mounted on a round suspension plate which sets on the pit cover, and NEMA-1 junction box is pedestal mounted on the same suspension plate. (This style is generally used to control non-submersible pumps.)



Bulb Operation

