FREQUENTLY ASKED QUESTIONS

1. Q. How long will the float last?

   A. We have run extensive tests on them and found that the floats, as well as the controllers, consistently last well over 15 million operations without failure. Electrical floats consistently fail at the point of maximum repeated bending stress of the copper wires, which is near the float housing. Copper wire has a much higher modulus of elasticity and fatigues very quickly. The Opti-Float® level detector uses plastic fiber cable and is nearly indestructible in float switch applications. It has a life of 10 or more times that of conventional electrical floats.

2. Q. Having a fiber optic cable, are there any special precautions that we have to take to avoid problems?

   A. No. The fiber optic cable used with the Opti-Float® level detector was custom designed for the application. The fibers are plastic, not glass, and can be tied in knots, although not recommended, without harm. The cable jacket can be stripped with standard coax cable strippers or simple strippers that we can supply. The ends of the fibers are not to be stripped. They are only to be cut with a sharp instrument such as a razor or a cutter that we can supply. The ends do not need to be polished, and push easily into the controller connector without tools.

3. Q. Are there any special requirements for hanging the floats in a wet-well?

   A. No. Attach them as you would any other float. We do have recommendations as to the best methods of attachment to cables, chains and pipe that will give you the least amount of trouble with slippage, etc. These methods can be applied with any type of hanging cable, even with electrical floats. You can see them on our web site or call us and we will send you a booklet.

4. Q. Is the controller rated for use directly with motor starters or do we need to have interface relays in the circuit?

   A. We conservatively rate the controller at 3 amps, 120 volts for the Opti-Float® Mini and 120/240 volts for the Opti-Float® Original. We have tested the controller to over 15 million operations, without failure, energizing and de-energizing a size 2 motor starter which will start a 25 HP, 480 volt motor. For size 3 and above we recommend the interface relays. We do not recommend connecting the controller directly to a motor where full motor current will pass through it.

5. Q. What is the maximum length of cables that are available?

   A. The Opti-Float® Mini, is stocked in 15, 25, 50 and 75 foot cable lengths. For the Opti-Float® Original, we stock 30, 60, and 100 foot cables but can supply longer cables. Call us with your special request.

6. Q. In how deep of water has the float been tested?

A. It has been tested in a water filled pressure chamber with the optical cables exiting the chamber to 300 feet of water pressure without failure or deformation of the float or the cable. The unique shape of the float distributes the forces of compression equally around the float and produces its strength.

7. Q. How do you keep the float from chattering in turbulent water?

A. We have designed it that way. The controller is designed with a small inherent time delay before operating the relays. This feature eliminates the problems associated with float chatter.

8. Q. Why is the Opti-Float® level detector two-tone in color?

A. The 2 tone patented feature has a purpose. It is light in color on the dome so that you can easily see, by looking down into the water, if the float is tilted up or down.

9. Q. How rugged is the float from abuse?

A. For testing purposes only, the Opti-Float® level detector has been tested with abuse with everything from sledge hammers to base ball bats to slamming them into concrete at high velocity, all without failure. However we do not recommend abuse and specifically caution against it.

10. Q. How do we convert an existing electrical float panel to optical floats?

A. There are 3 ways to do this. First there is an external retro-fit package consisting of the controllers, power supply, circuit breaker and terminal strips all inside of an outdoor NEMA 4X non-metallic or stainless steel enclosure. Simply mount this enclosure adjacent to your existing control panel. Remove the existing floats and wire from the terminals in the retro-fit enclosure to the terminals in the existing control panel on which the electrical float wires were connected. Power with 120 vac from the existing control panel. Install the Opti-Float® level detectors and you are done. The second method is to use an open assembly consisting of the same components, except without the enclosure, all pre mounted on a small aluminum plate that may fit into existing space inside of your existing control panel. Connections are made similarly. The third method is to mount the individual components inside of your existing control panel and again wire similarly.

11. Q. What types of accessories do you have?

A. We have many accessories including external weights, cable strippers, cutters, splice kits and unique hanging devices. You can find our catalog and other information on these devices on our web site.

12. Q. Can the optical cable be spliced?

A. Yes. Although it is best to order the floats with the correct length of cable, the cable can be easily spliced if necessary. See our web site for more information or give us a call.

13. Q. How much do they cost?

A. Opti-Float® systems cost about the same and in many cases less than standard intrinsically safe systems with electric floats and interface relays. Nearly all waste water pump stations require compliance with NFPA Standard 820 which classifies most wet-wells as a Class 1, Division 1 hazardous area. Combining this with the extremely long life of 10 or more times that of conventional electrical floats, and even using them in less stringent Class 1, Division 2 or Unclassified areas, the cost of changing out conventional electrical floats makes the Opti-Float® level detectors by far the best value.

14. Q. Can we get quantity discounts?

A. Yes. Contact us with your requirements.

15. Q. How can the Opti-Float® level detectors lower our maintenance cost?

A. The Opti-Float® level detectors and accessories have been tested without failure to well over 15 million operations. Most electrical floats will fail with less than 100,000 operations. This means that you will probably change out 10 electrical floats before you change out 1 optical float. This is due primarily to the use of the plastic fiber cable instead of metallic wires. The plastic fiber cable can be bent through full 180 degree cycles many times more than copper wires.

16. Q. Is the float RoHS compliant?

A. Yes. It is considered “Green” technology. It is all recyclable and RoHS compliant. RoHS is the European Union “Restriction of Hazardous Substances Directive” which took effect July 1, 2006.

17. Q. What is the angle of operation of the float?

A. The Opti-Float® is a narrow angle float. It will operate with as little as 1 degree of tilt from horizontal.

18. Q. Are the floats sensitive to rotation?

A. No. The activating device is on the center axis to the float and is thus independent of the rotation of the float.

19. Q. What is the overall diameter of the cable?

A. 0.31” O.D. (heavy wall)

20. Q. What are the materials of construction?

A. The float body is polypropylene. Cable jacket is polyurethane.