Tesco Controls, Inc.

OPTI-FLOAT® Level Detector

Mercury and lead free fiber optic level float

- Lead Free
- Mercury Free
- Fiber Optic design
- Non-Electrical
- 6,000,000+ Operations
- Intrinsically safe

Combining new technology with a familiar device, the **Opti-Float®** level detector is a revolutionary innovation in discrete level detectors. It's made of safe, recyclable materials. It's mercury and lead free and is built to last for years of service.

The design of the **Opti-Float®** level detector is amazingly simple. Using fiber optic cable, it transmits a beam of light from an LED in a remote transceiver down to the float, where the beam makes and breaks depending on the tilt of the float. When the transceiver detects the presence or absence of light, it activates a relay in the transceiver, which can then operate other devices. The transceivers are all dual din rail mounted units, that can connect to two floats. Additional transceivers can be used for additional floats.

The fiber optic cable, created specifically for the **Opti-Float®** level detector, requires no special tools for connection. And while it looks similar to other float cables, there is one huge exception: No electrical wires and inherently safe!

So now, for the first time, floats can be used directly without special equipment in hazardous locations.

Features

FLOAT:

Housing material: Polypropylene

Cable: PVC over dual plastic fibers

Standard cable lengths: 30' and 60'
(contact factory for other lengths)

Ambient liquid operating temperature:
+32 to +130F (0 to +55C)

Ambient air standby operating temperature:
-15 to + 155F (-25 to +70C)

Storage temperature:
-15 to + 155F (-25 to +70C)

Operating Wavelength: 400 to 1200 nm

DUAL TRANSCEIVER:

Operating voltage: 12 VDC +/-10%

Power consumption: 1.2 VA max.

Output : Relay SPDT 3 amp @ 240VAC, each channel

Ambient operating temperature:
-15 to +130F (-25 to +55C)

Storage temperature: to +155F (-25 to +70C)

UL Listed and RoHS Compliant

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Recommended Specifications

The Contractor shall furnish and install a float switch level detection system. The floats shall use fiber optic cable to transmit a beam of light from a transmitter in the control panel to the float where the beam makes and breaks depending on the tilt of the float. The receiver in the control panel shall detect the presence or absence of light and operate a relay in the receiver. The float shall have no electrical components or metallic wires that could cause arcs and sparks in an explosive atmosphere.

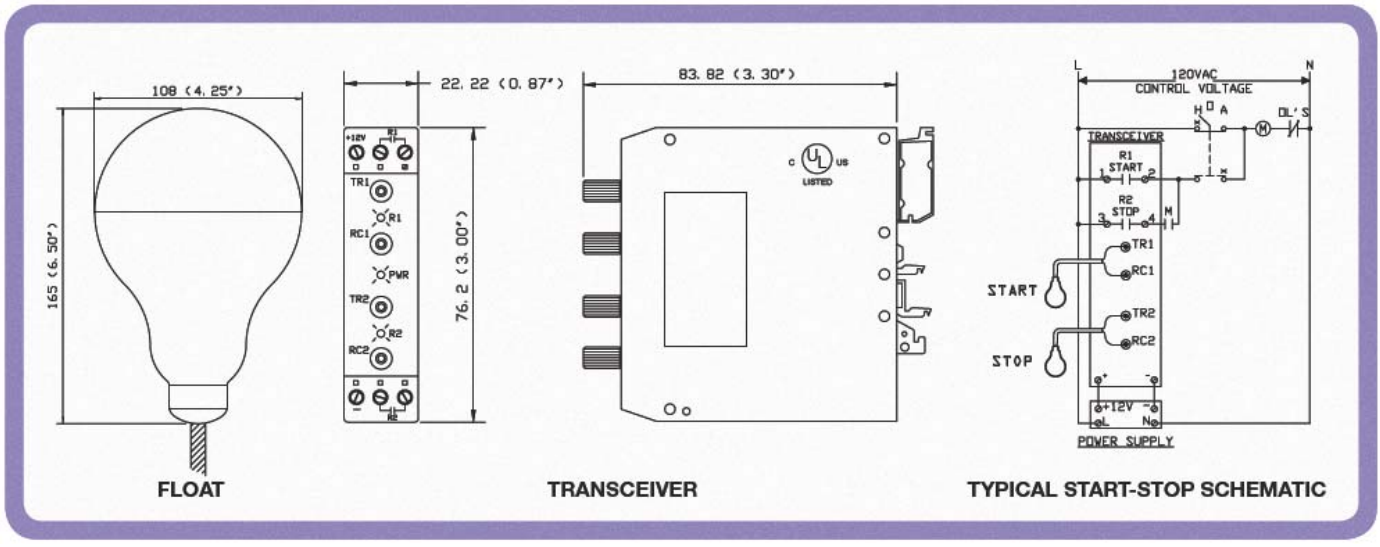
The float switch shall be mercury and lead free and shall be made of all safe, recyclable materials. The float switch housing shall be polypropylene. It shall be a simple robust device designed for many years of dependable service. The beam eclipser shall be stainless steel in an inert non-toxic dampening fluid that prevents chatter due to wave action. The viscosity of the fluid shall not change significantly over the range of -50 to +155F (-45 to +70C). The transceivers (transmitter and receiver combination) shall be dual din rail mounted units capable of connection to 2 floats. Provide one dual transceiver for every 2 floats. The fiber optic cable shall be custom made for the float and shall consist of dual plastic fibers with an overall specially blended PVC sheath for flexibility. No special tools or experience shall be required for connection of the optical cable to the transceivers. The cable shall be connected and sealed at the float housing using a double seal method that will prevent water from entering the float even if the outer sheath is damaged. The float color shall be two tone with the lighter color on the dome for easier viewing underwater when tilted up.

The transceivers shall operate in ambient temperatures of -15 to +130F (-25 to +55C). The transceivers shall operate at 12 VDC and shall be protected against accidental polarity reversal. The system shall operate in the visible and infrared light region with wavelengths between 400 and 1200 nm. The output relays in the receivers shall have the capability of being connected normally open or normally closed. The transceivers shall have a green LED power-on light and red LED lights on each channel indicating that the light beam is being received – float tilted up. The floats shall operate in liquid temperatures of +32 to +130F (0 to +55C). The floats shall have an ambient air standby operating temperature rating of –15 to +155F (-25 to +70C). The transceiver shall be UL listed.

The float switches and transceivers shall be the Optical Float® level detection system. The dual transceivers shall be model TR2 and the floats shall be Opti-Float® model F1.

As of June 2008 California, along with many other states, began to reduce Mercury (Hg) in products like floats.

Opti-Float is Mercury and Lead Free.



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To contact a Tesco Controls sales representative call 916.395.8800
Tesco Controls, Inc. 3409 52nd Avenue, Sacramento, CA 95823-9012
www.tescocontrols.com