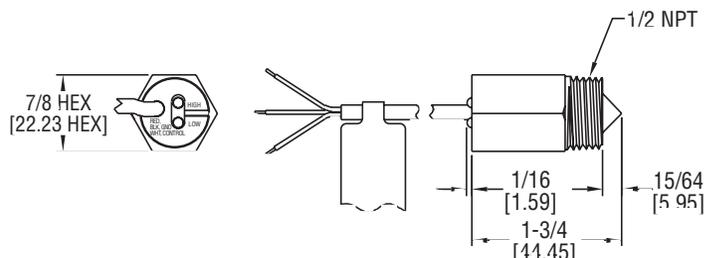
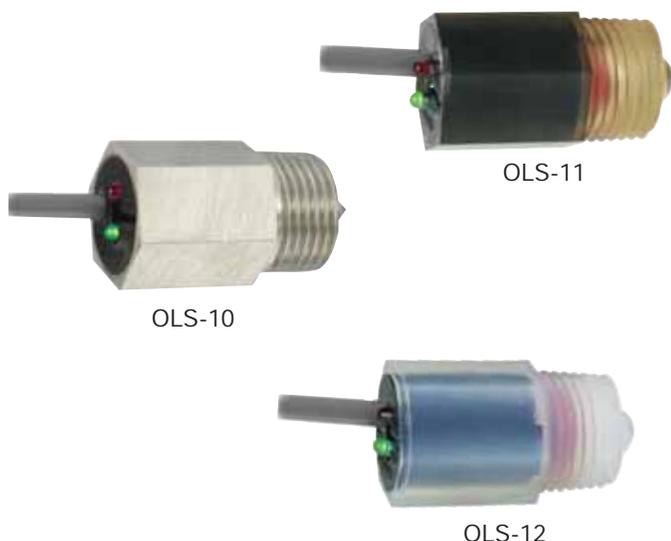




## Model OLS Optical Level Switch

### Specifications - Installation and Operating Instructions



**Compact and rugged** this optical level switch provides rapid response while employing no moving parts for stable process control. The bright red and green LED's indicate the presence or absence of liquid for true, local indication. Three material options, 316SS, Polysulfone and PFA, provide application flexibility. Compact switch can be easily mounted horizontally or vertically.

#### APPLICATIONS

The model OLS Optical Level Switch maintains predetermined levels in liquid holding tanks, sumps, air conditioning systems, hydraulic reservoirs, pharmaceutical and beverage systems.

#### PRINCIPLE OF OPERATION

The optical level switch employs an infrared LED which transmits infrared light. This light is sent through a prism and reflected back to a photo-transistor utilizing two 90° light reflections. With the prism surrounded by a gas, the light source is cast back to the photo-transistor. When a translucent liquid is introduced to the prism at or above the point where the light source makes contact with the prism, the light is reflected into the liquid, not allowing the photo-transistor to energize.

Model No.	Wetted Materials
Model OLS-10	316 SS/Polysulfone
Model OLS-11	Polysulfone
Model OLS-12	PFA

#### SPECIFICATIONS

**Service:** Noncoating compatible liquids.

**Wetted Materials:** See model chart.

**Temperature Limit:** Process: OLS-10, 11: 200°F (93.3°C), OLS-12: 120°F (48.9°C); Ambient: OLS-10, 11: 175°F (79.4°C), OLS-12: 120°F (48.9°C).

**Pressure Limit:** OLS-11, 12: 200 psig (13.8 bar), OLS-10: 1000 psig (69 bar).

**Repeatability:** ±0.02" (0.5 mm).

**Switch Type:** NPN open collector.

**Power Requirements:** 10 to 28 VDC.

**Output Signal:** Vout (max) = 28 VDC, Isink (max) = 100 mA.

**Current Consumption:** 35 mA maximum.

**Electrical Connections:** 38" (965.2 mm) 3 conductor cable, 22 AWG wire.

**Process Connection:** 1/2" male NPT.

**Mounting Orientation:** Can be mounted in any position.

**Weight:** 3 oz (0.085 kg).

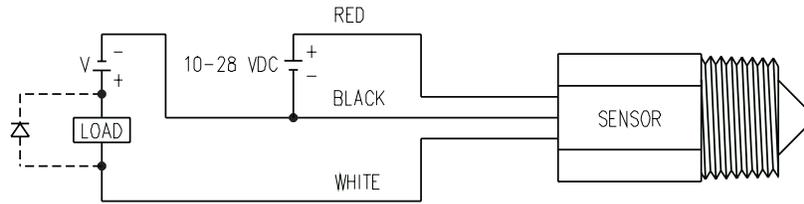
**Specific Gravity:** No minimum.

#### INSTALLATION

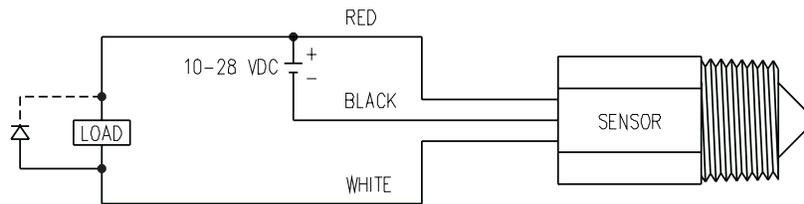
- Carefully unpack switch and remove any packing material from unit. Prism surface must be clean for proper operation.
- Level Switch may be installed in any position. NOTE: Do not install near infrared light sources.
- Prism surface must be at least 2" from any reflective surfaces.
- Apply thread tape or sealant to 1/2" male NPT thread. To prevent damage to threads, avoid overtightening. NOTE: Sealant must not come in contact with prism surface.
- Connect (+) 10-28 VDC power to red lead; return (-) to black lead. CAUTION: Do not connect output to supply.
- Inspect and clean lens at regular intervals. Level switch not recommended for use with liquids that leave deposits.

# WIRING DIAGRAMS:

EXTERNAL LOAD WITH 2 SUPPLIES



EXTERNAL LOAD WITH 1 SUPPLY



OPEN COLLECTOR OUTPUT

