Low cost, rugged 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 optional materials, 316 SS, polysulfone and PFA provide application flexibility. Compact switch can be quickly mounted horizontally or vertically for each installation.

Principles of Operation
The optical level switch employs an 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.

APPLICATIONS
- Food and beverage systems
- Liquid holding tanks
- Hydraulic reservoirs
- Sumps
- Pharmaceutical systems
- Air conditioning systems

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: 1175°F (79.4°C), OLS-12: 120°F (48.9°C).
- Pressure Limit: OLS-11, 12: 1200 psig (8.4 bar); OLS-12: 1000 psig (6.9 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.

Series OLS
Optical Level Switch
Low Cost, Compact, LED Indication, No Moving Parts

Series B-190
Liquid Level Switches-Controls
Top Mounted Displacer Type, Adjustable Setpoints,
Magnetic Operation, Optional Hermetically Sealed Snap Switch

SPECIFICATIONS
- Service: Compatible liquids.
- Temperature Limit: 32 to 200°F (0 to 93.3°C). Higher ratings available.
- Pressure Limit: 125 psig (8.6 bar). Higher ratings available.
- Enclosure Rating: NEMA 4X. Optional general purpose or explosion-proof.
- Switch Type: SPDT snap switch, hermetically sealed snap switch, or mercury switch. Optional DPDT or two stage.
- Electrical Rating: Snap switch: 12A @ 120 VAC, 5A @ 240 VAC, 0.5A @ 125 VDC resistive, 0.25A @ 250 VDC resistive; Hermetically sealed snap switch: 5A @ 240 VAC, 5A @ 30 VDC resistive; Mercury switch: 4A @ 120 VAC/DC, 2A @ 240 VAC/DC. Higher contact ratings available for the mercury switch.
- Power Requirements: 10 to 28 VDC.
- Conduit Connection: 3/4˝ female NPT.
- Process Connections: 4” 125 cast iron flange. Other material, size, and rating flanges are available.
- Mounting Orientation: Vertical.
- Set Point Adjustment: Adjustable by moving displacers see dimension chart for minimum and maximum values.
- Weight: 25 lb (11.34 kg).
- Agency Approvals: UL (None on HM switch).
- Deadband: Adjustable by moving displacers see dimension chart for minimum and maximum values.
- Specific Gravity: Standard is 1.0. Specify when ordering by replacing 1.0 in model number with specific gravity setting desired. Settable range is 0.5 to 1.2.
- Cable Length: 10’ (3 m) standard. Optional up to 100’ (30.5 m).
- Inconel® is a registered trademark of Huntington Alloys Corporation.

<table>
<thead>
<tr>
<th>Model</th>
<th>Wetted Materials</th>
<th>Price</th>
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<tbody>
<tr>
<td>B190-0T-4S10-P-A-1.0-2</td>
<td>316 SS/Polymer</td>
<td>$884.00</td>
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<tr>
<td>B190-0T-7810-P-A-1.0-2</td>
<td>Polysulfone</td>
<td>$973.00</td>
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<tr>
<td>B190-0T-7810HM-P-A-1.0-2</td>
<td>PFA</td>
<td>$1114.00</td>
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<table>
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<tr>
<th>Model</th>
<th>Switch Type</th>
<th>Price</th>
</tr>
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<tbody>
<tr>
<td>B190-0T-4S10-P-A-1.0-2</td>
<td>Snap</td>
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<tr>
<td>B190-0T-7810-P-A-1.0-2</td>
<td>SPDT</td>
<td>$973.00</td>
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<tr>
<td>B190-0T-7810HM-P-A-1.0-2</td>
<td>SPDT Hermetically Sealed Snap</td>
<td>$1114.00</td>
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