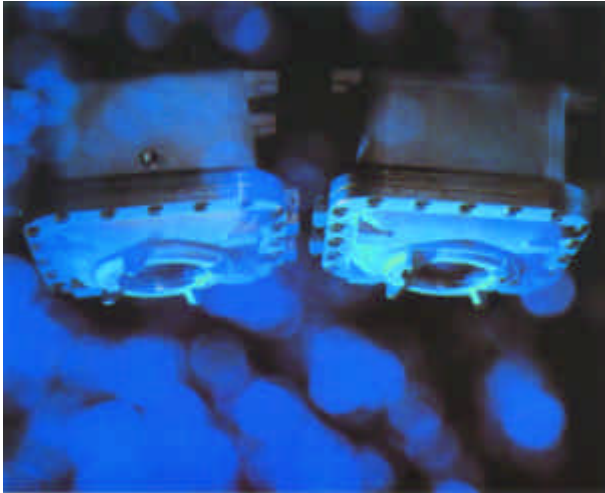


SLICKWATCH™

Reliable Non Contact Oil Sheen Detector



PRESENTING A NEW LEVEL OF CONVENIENCE AND RELIABILITY IN OIL SHEEN DETECTION



F E A T U R E S

- Reliably detects and annunciates the presence of oil on water.
- Non contact detection method means no fouling or cleaning.
- Continuous remote monitoring, day and night.
- Superior detection capability: detects the presence of an oil slick approximately 0.1 micron thick.
- Processing option offers alarm flexibility for varying leak severity.
- Internal fault alarm relay contact. No false oil alarms.
- Rugged, watertight (CSA 4) construction.
- Modular design for easy service.
- CSA approved.

The Ionics Slickwatch optical oil slick detector makes it possible to monitor for unacceptable discharges of oil with complete reliability and convenience. As state and federal regulatory agencies develop new and tougher clean water laws, the Slickwatch can help meet environmental water regulations.

The Slickwatch is ideal for use by utilities, petrochemical plants, offshore applications, potable water intake plants, steel mills and any place that processes hydrocarbon oil or uses oil in their equipment.

CONVENIENCE

WITHOUT CLEANING

The Slickwatch consists of a transmitter and receiver, mounted side by side above the waterway that needs to be monitored. The transmitter projects a beam down onto the water surface. The beam is reflected from the water into the receiver. However, if the water has an oil covering on it, the reflection characteristics of the beam will be substantially different. The receiver senses the difference in the reflected beam, and an alarm is sounded if the difference exceeds the preset threshold.

The key to the Slickwatch's convenience is the fact that it is a non-contact instrument. The only part of the detector that actually touches the oil is a beam of light. As a result, Slickwatch can monitor a water stream continuously without being fouled by the pollution it is designed to detect, and there is instant recovery after a spill has passed. The transmitter, receiver and signal processing remain safely inside an explosion proof housing, well removed from the oil. The only cleaning required is occasional maintenance of the detector's optical surfaces.



ADVANCED ALARM

FLEXIBILITY

Slickwatch features a high level of detection capability. It will detect an oil slick long before it is visible to the naked eye, with thicknesses as slight as 0.1 micron. However, if your application does not require this level of sensitivity, Slickwatch can be ordered with the **Selectable Criteria Alarm** option which delays activating the alarm until the time of uninterrupted hydrocarbon detection exceeds a preset time limit, or until the percentage of accumulated time exceeds a preset threshold measured over a 1000 second interval.

This option offers advanced alarm flexibility that allows you to program your detection sensitivity to meet the needs of your application.

EASY TO APPLY

Slickwatch can be used to remotely and automatically detect oil spills on rivers, open channels, retention lakes and many other applications. It is designed to be bolt mounted to any convenient structure spanning or overhanging the water surface, such as a bridge, catwalk, trestle or I-beam.

Slickwatch monitoring the discharge from a power station in Holland

Application Example: Detection of major spills

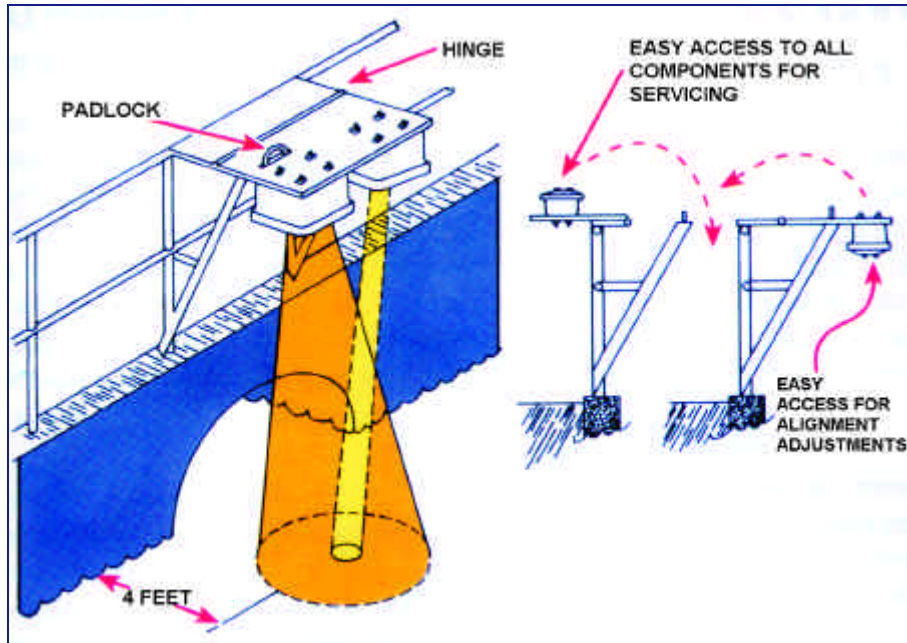
A Slickwatch is mounted upstream of a small spillway that is part of a holding pond. The oil alarm relay is connected to a sluice gate downstream that automatically closes when oil is detected. The same relay is also connected to an alarm in a guard house to alert personnel when a slick occurs.

Since an alarm requires a significant operational response, the response time of the Slickwatch was set at the slowest level to enable it to ignore small quantities of oil. The water flow directly below the instrument is consistently at least several feet per second. Only a major spill, with oil constantly passing over the spillway, will cause an alarm.

Application Example: High sensitivity monitoring

A Slickwatch detector monitors a heat exchanger. The saltwater that is pumped in to cool the petroleum products in the heat exchanger slowly corrodes the metal and causes leaks. The detector is set at maximum sensitivity to sense the presence of pinhole leaks long before a catastrophic leak occurs, so the leak can be repaired during the next scheduled maintenance shutdown period. This eliminates costly unscheduled shutdowns of the entire plant.

TYPICAL INSTALLATION



SPECIFICATIONS

Pollutant Detected

Hydrocarbon films floating on the water's surface.

Housing Size

Transmitter and receiver are identical: 12¼ W x 11½ H x 9½ D inches

Weight

Transmitter: 34lb (15.4kg)
Receiver: 39lb (17.7kg)

Mounting

8 x 3/8" bolts (four per housing) to user supplied mounting platform.

Operating Voltage

105-125 VAC, (230 VAC)50-60Hz

Power Consumption

Transmitter: 250 watts
Receiver: 60 watts

Operating Temperature

(ambient air with instrument shaded from direct sunlight)
-4°F to +110°F (-20°C to +43°C)

Operating Distance

5 to 12 feet above water surface, depending on surface turbulence. Contact Ionics for distances greater than 12 feet.

Water Level Variation

Typically ±10% of operating distances for calm water.

Water Velocity

From dead calm to 5 feet per second

Sensitivity

Minimum film thickness detected: approximately 0.1 micrometer average thickness.

Response Time

Approximately 63% of final reading within 20 seconds after a step change in water surface condition.

Alarm Relays

SPST relay, rated ½ ampere continuous, 120VAC/230VAC or 28VDC. Also rated at 1/3 HP at 120VAC, ½ HP at 230VAC

Status (Fault) Alarm: Normally energised coil, normally closed contact, non-latching.

Oil Alarm

Normally de-energised coil, normally closed contact, non-latching.

Approvals

Canadian Standards Association (CSA) Certified for operation in Class 1, Division 1, Group C and D environments and CSA enclosures 3 and 4. Temperature Code T2A.

Slickwatch is a registered Trademark of Det-Tronics