



InterOcean



SLICK SLEUTH™

REMOTE OIL SPILL MONITOR & ALARM

System Overview: InterOcean's Slick Sleuth™ Oil Spill Detection Stations monitor and detect oil-on-water in real-time. Should a spill occur, Slick Sleuth™ provides instant notification enabling personnel to respond immediately and initiate spill containment, thus averting environmental damage, costly cleanup, and possible fines or regulatory penalties.

Slick Sleuth™ is designed and manufactured for deployment in rugged settings such as on offshore structures, in harbors and coastal/inland waterways, industrial spillways, sumps and retention ponds, and other environments where oil spills are of concern. Structures such as piers and posts provide simple, convenient installation opportunities for each monitor to remotely detect oil on the surface of the water. These optical non contact oil detection stations are conveniently mounted **above the water** (typically between 1-5 meters) facilitating ease of installation and operation while eliminating in-water damage due to leaking or contact with vessels or debris. This simple above water attachment method does not require complicated moorings, is not subject to biological aquatic/marine fouling, and makes the system virtually maintenance free.



The Slick Sleuth™ system typically consists of a (any) number of monitors located strategically around the area to be monitored. Each monitor is linked to a single 'central base station' (typically located at the user's operations center) via RF modem, cell phone link, or other preferred modem as appropriate to the location. When a monitor detects the presence of oil, it immediately notifies the Base Station, which in turn alerts the user to the location of the detection.



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Monitoring Station: A Slick Sleuth™ Oil Spill Detection System is comprised of any number of Detection Stations and an *optional* Base Station configured with Slick Sleuth™ Software. Each Detection Station is completely self contained and incorporates sensor, *optional* wireless telemetry link, and *optional* power supply, all within a compact NEMA 4x weatherproof enclosure (housings for explosive environments also available).

Each station monitors for oil on a selected pre-set schedule (user selectable 1-99 minute interval). Data communication is via RS232 serial interface (or alternatively the sensor station may be factory configured to output a 4-20mA analog signal, useful for signal/data integration at facilities with existing data acquisition or SCADA type systems). In either configuration (RS232 serial interface or direct 4-20 mA output signal) oil is detected remotely at the Detection Station and reported in real time.

Each detection station is powered by rechargeable batteries and a solar panel (standard), or may be configured to utilize customer supplied power. Each system offers wireless data communication using unlicensed spread spectrum radio (standard), or may be configured for customer' s preferred radio/cellular/satellite telemetry mode, or hard-wired. Please specify power and data communication preferences when requesting quotation.

Base Station: The *optional* Base Station consists of a wireless network controller which polls each of the spill monitoring sensor locations, and a display system indicating the location of the spill, with available audio alarms, pager/phone auto-dial, and output to additional display locations or actuation switches. Slick Sleuth™ Software is used to control all user interface, graphic display, alarm, and data logging functions. Software also provides 2-way communication with remote stations, and provides built-in diagnostic/test capabilities so if a system fault occurs; it is immediately reported and logged at the base station.

Detection Process: The downward looking Slick Sleuth™ sensor detects petroleum products (commonly referred to as Poly Aromatic Hydrocarbons or PAH/BTEX compounds), which include diesel/fuel oil, lube oil, motor oil, and many more. Detection is based on the fluorescence of oil using a collimated pulsed UV light source, and InterOcean's proprietary optical photo detector. The sensor system automatically filters out ambient 'background noise', providing highly reliable detection (sensitivity to 0.5 microns) and resultant alarm at the first appearance of an oily on-water sheen, day or night, in all light and water conditions.



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Slick Sleuth™ Remote Oil Spill Monitor & Alarm

System Components

Remote Oil Spill Monitoring Stations

- Self-contained in NEMA 4X IP66 Weatherproof Enclosure *
- Solid State Electronics and Optics
- Integral Detection Sensor
- Fully Automated Detection
- 24/7/365 Operation -All Weather -Night or Daylight
- 4 Hole Flange for Convenient Above-Water Attachment

110/220 VAC or *Optional* DC Power Supply

- Sealed Maintenance-Free Rechargeable Battery
- Solar Cell Backup and Recharging System

***Optional* Wireless Communication**

- Integral Monitoring Station RF Transceiver
- Bi-Directional, Real-Time, Secure Communication Link
- UHF 450-470 MHz. Spread Spectrum Radio 900 MHz or 2.4 GHz
- 10-Mile Radio Range min. (*other telemetry options available*)

Optional* Base Station *

- Windows Compatible Laptop or Panel PC
- Parallel Ports for Data I/O
- Configured w/Slick Sleuth Software and Communication Interface

***Includes* Slick Sleuth Software**

- Installed at Base Station for Monitoring, Alarm, and Data Logging/Output
- Diagnostics, and System/Network Control Functions

***Includes* 2-Way Wireless Communication**

- Integral Base Station RF Transceiver

* *Suitable for use with purge system rated for use in explosive environments*

** *Purchase 10 or more Slick Sleuth Monitoring Stations & Receive Free Base Station*



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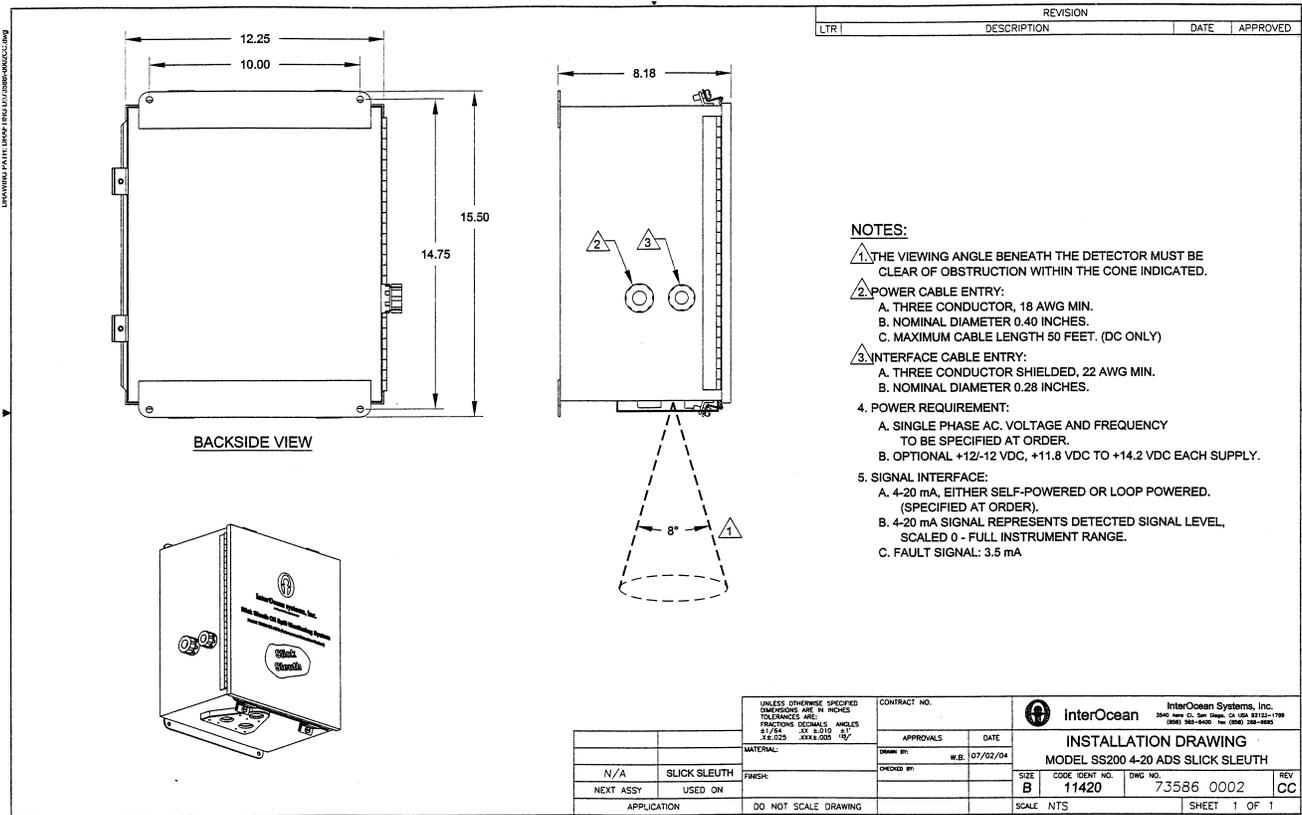
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Slick Sleuth® Installation Drawing

Example of Installation Drawing for an Autonomous Slick Sleuth Detection Station System.
Configuration Shown here is for a system with 110/220 VAC power input and 4-20mA Output.



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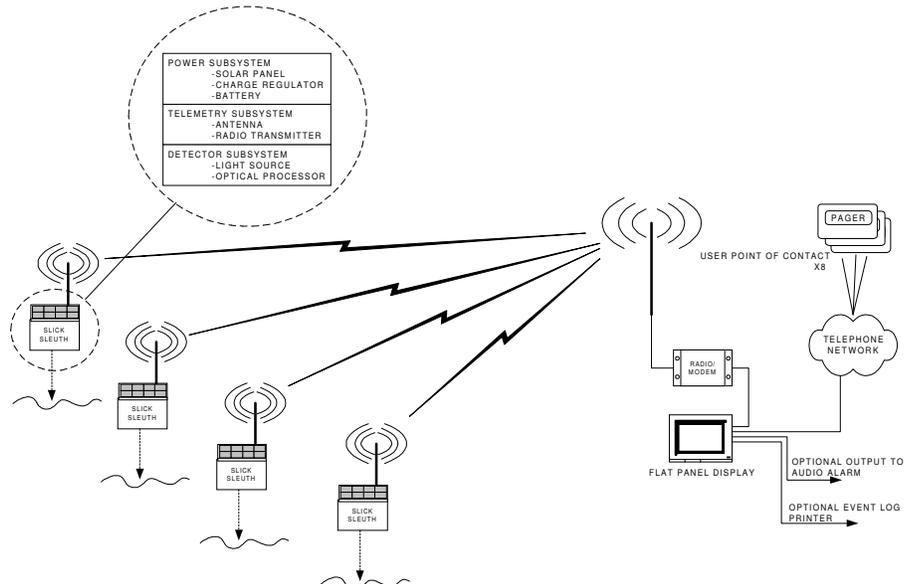
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Slick Sleuth® Software

Simple-to-Operate: Display, Interface, and Alarm for Slick Sleuth Oil Spill Detection System



Below: **Typical Installation Overview** w/ 4 Monitoring Stations & 900MHz Spread Spectrum Radio Telemetry



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