LIGHTLOC® UNIVERSAL SMARTSWITCH SENSOR

BARRIER INTRUSION DETECTION

Highly adaptable contact sensor

Collins Aerospace Universal SmartSWITCH is a non-electrical, contact based sensor in the LightLOC® family designed for monitoring manholes and handholes. In addition, this highly adaptable sensor offers a host of other monitoring solutions such as cabinet doors, junction boxes and anywhere else movement of a barrier is necessary to gain access to an asset. It was developed to overcome the distance and environmental limits of copper-based contact switches. Monitoring devices include any of the LightLOC Express processors.

Like all the LightLOC sensors and monitoring systems, the Universal SmartSWITCH was designed to be a near zero false alarm solution. It is extremely tamper resistant, rugged and corrosion resistant to survive in submerged environments. As a fiber-optic based security system, it is immune to EMI. No electrical power is needed at the location of the sensor, allowing it to be installed where there is no power available or where power cannot be safely delivered.

Inside the sensor, a loop of fiber is positioned in between a set of pins. When the lever arm is depressed by the lid or door, the fiber is unaffected. When the lever arm rises, the fiber is deflected by the pins, creating a specific bend that is detected by the monitoring system.

KEY FEATURES AND BENEFITS

- No power required at sensor location
- Effective for use in manholes, cabinets, doors and more
- Near zero false alarm rates
- Long range monitoring to 25+ km standard
- Designed for harsh environments including exposure to salt water and fertilizer
- Constructed from corrosion resistant metals and engineered polymer
- Water submersible to 30+ ft.
- Minimum time required to trip <1 seconds
- May be installed in conjuction with a locking pan to provide both detection and delay
- Simple installation and maintenance
  - Installed directly onto a continuous fiber line without the need for splicing
  - Captive fastener protective cover

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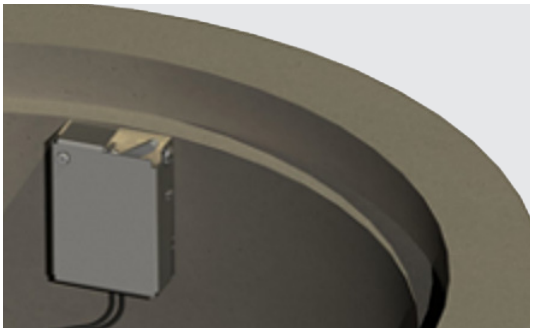
SPECIFICATIONS

Monitoring systems	Works with all LightLoc processors
Power requirements	None in field Monitoring system powered as specified
Sensor shell material	316 Stainless steel/fiber reinforced polymer
Sensor component material	Constructed from corrosion resistant metals and engineered polymer
Minimum movement detected	½"
Minimum time required to trip	<1 second
Sensor dimensions	4-3/8" W x 5-1/8" H x 1-9/16" D
Fiber type	LightLOC 3mm single mode
Monitored wavelength	1550 nm
Operating temperature	-46° C to 85° C
Humidity	Immune/submersible to 30+ feet
Sensor life	>10,000 cycles



LIGHTLOC OVERVIEW

Collins LightLOC is a patented, fiber-optic based security system for optimum perimeter and access security. The system provides monitoring of remote access points and perimeters using a family of sensors and cables. Monitored items can include manholes, gates, doors, underground pathways, perimeter vehicle detection systems, and custom applications. Monitoring is possible at distances of up to 30+ km without the need for electrical power at the monitored locations. The robust system eliminates false alarms commonly seen with other fiber-based security systems. Our system is inherently tamper resistant since altering or destroying optical components triggers an alarm automatically.

Specifications subject to change without notice.

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