



LightLOC® Manhole Lid Sensor

The LightLOC® Manhole Lid Sensor is a non-electrical, non-contact sensor used to monitor the presence of manhole lids, manhole security pans, and even composite or concrete hand hole covers. In addition, the 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.

The sensor is fiber-optic based and is monitored with the LightLOC® monitoring system OTDRs and software or LightLOC® Express. Since no electrical power is needed at the location of the sensor, the sensor can be installed where there is no power available or where power cannot safely be delivered. Also, since it is fiber based, it is immune to EMI and RFI transmissions. Typically, up to 25 discrete sensors are installed in a single line, and lines can be combined for large systems. Line lengths can be as long as 20km. For added security and redundancy, standard systems are monitored bi-directionally to maximize visibility of the entire sensor system. This is beneficial in cases of many sensors being tripped at the same time or

in the event of a fiber or cable break.

Sensors are linked via standard, communications-grade fiber optic cable, and splices are stored in sealed splice enclosures, which are pre-loaded and included with each sensor. In demanding environments, the sensor is installed in a stainless steel shroud for superior mechanical protection (pictured).

Technical Details

Minimum Movement Detected	½ inch
Minimum Time Required to Trip	0.7 Seconds
Sensor Dimensions (without shroud)	1 ¾" W, 4" H, 7/8" Thick
Maximum System Length	~20km
Maximum Sensors per Line	25 (typ)
Fiber Type	Singlemode
Monitored Wavelength	1550nm
OTDR Dynamic Range	36dB
Operating Temperature	-32C to 50C
Humidity	Immune/Submersible
Sensor Life	>10,000 Trips

For additional information on the LightLOC® system, please contact Tom Browning at 864.967.1759 or tom.browning@wovenelectronics.com. Specifications are subject to change.