

Hi-G-Tek

Hi-G-Lock



The Hi-G-Lock is a portable, reusable, wireless electronic sealing and sensing device that provides robust physical security as well as automatic processing and real-time monitoring of secured cargo both in transit and in storage.

The Hi-G-Lock uses Highly Intelligent RFID (Radio Frequency Identification) wireless technology and includes a transmitter/ receiver unit, read/write capability, real-time clock, memory and patented sensing circuitry for sealing verification.

The physical protection provided by the Hi-G-Lock is equivalent to that of a security bolt seal. Encrypted and embedded sensors prevent any attempt at opening, bypassing, or tampering with the Hi-G-Lock. The system detects any such attempt, records the event, and sends an alert as needed. At the core of every Hi-G-Tek device is the patented and trademarked "DataLock™" sensing system.

The Hi-G-Lock is powered by an internal battery which uses patented energy management technology to provide years of maintenance free operations.

In low-frequency short-range mode, the Hi-G-Lock logs and communicates data through a handheld data terminal and can also be inspected and/or set by a small key-fob unit called the MicroReader. The Hi-G-Lock can store customer specific information electronically in memory. The information can include vehicle ID, container and invoice numbers, cargo descriptions, quantities and destinations.

The high frequency long-range mode provides full two-way read/write data communication capabilities at a distance of 100+ meters with fixed or mobile readers. The Hi-G-Lock transmits the information in reply to an interrogation by the Hi-G-Tek DataReader or when it detects an unauthorized event. Many Hi-G-Tek devices such as Hi-G-Locks, Hi-G-Tags and Hi-G-Seals, can be monitored simultaneously by one DataReader.

This long-range capability makes the Hi-G-Lock ideal for protecting, tracking, sealing, and verifying of assets such as containers, fuel and rail tankers.

Successful monitoring can also include stationary objects such as ingress/egress portals, yard/gate management systems, refineries, fuel depots, and finally, pump and tank delivery systems at gas/petrol stations.



Features:

- Reusable wireless electronic lock
- Extended maintenance-free operation with no recharging
- Secure short- and long- range wireless communication
- Comprehensive environmental and RF certifications
- Approved for use on fuel tanker trucks and associated environments

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Technical Specifications:

Communications:

- Full 2 way Duplex Frequency Ranges:
- Low frequency: 125 KHz
- High frequency: 916.5 MHz, 433.92 MHz (ISM Band)

Physical Dimensions:

- Seal size: 63 x 49 x 37 mm excluding bolt
- Seal weight: 150g
- Lock weight: 285g
- Bolt dimensions: 76mm long, 9mm diameter
- Standard Protective Silicon or NBR Casing

Power Requirements:

- Power Source: 3.6V internal Lithium battery

Environmental:

- Operating Temperatures: -40°C to +70°C
- Storage Temperature: -40°C to +80°C
- Installation Environment: Designed for extended outdoor use
- Vibration and Shock: Complies with MIL-STD 810D for mobile equipment and SAE J1455

Read Range:

- Low frequency is 40cm
- High-frequency is 100+ meters in open space

Antenna Characteristics:

Beam Divergence:

- Omni-directional on non-metal wall
- Hemispherical on metal wall

Software Features:

Memory:

- User Memory: 3K Bytes
- Events Memory: up to 100 events

Life Expectancy:

- Service Life: 4-5 years at 50 readings per day

Hi-G-Tek Inc.
1445 Research Blvd.
Suite 150
Rockville, MD 20850,
U.S.A
www.higtek.com
Info@higtek.com
Ofc. +1-301-279-0022
Fax +1-301-279-0055