

SPECIFICATIONS

Special Features:

- Reusable seal body made of durable polycarbonate
- Barrier-type bolt seal that communicates ID and integrity via ZigBee to GlobalTrak Asset Monitoring Units (AMUs). AMU reports status with location and other sensor data
- Tamper signal transmitted when attempt is made to violate the seal
- Seal complies with ISO/PAS 17712:2003
- Seal provides more than 2,000 lbs (907 kgs; kN) of pull out strength – bolt cutters required for removal
- Each seal contains unique ID number, electronically hard coded into the seal's data bank
- Bolt is made of 5/16" (8mm) steel
- Steel lock nut is encased in durable, impact-resistant, plastic housing
- Tag is completely asleep until bolt insertion. Once bolt is inserted, the circuit card will wake up and tag can be registered and associated to the AMU

Communications:

- 2.4 GHz ZigBee Wireless
- Ember EM250 chipset
- 250m outside LOS range
- Tx power: up to 5dBm
- Rx sensitivity: -95dBm
- Proprietary Protocol

Environmental:

- Operating Temp: -40°F to +158°F (-20°C to +70°C)
- Humidity: 95% non-condensing at +158°F (+70°C)
- Assembled seal meets/exceeds Mil-Std-108E section 4.10 requirements for 'splash-proof' and 'spray-tight'

Power:

- Non-rechargeable lithium thionyl chloride battery
- Battery has shelf life of 3 years; 6 months minimum transmitting

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Worldwide Patents Pending

The Brooks GlobalTrak Hercules Bolt eSeal provides enhanced security capability to the GlobalTrak Asset Monitoring Units using a CT-PAT electronic barrier seal. Users have the ability to monitor real-time location and seal status of their assets/containers.

Applications:

The Brooks GlobalTrak Hercules Bolt eSeal provides cargo seal status on a variety of assets including intermodal containers, trailers, semi-trailers, and rail cars.

Compatibility/Expandability:

The Brooks GlobalTrak Hercules Bolt eSeal can communicate with any of the GlobalTrak Asset Monitoring Units. Together, real-time location and cargo condition monitoring is provided. The GlobalTrak AMUs include:

- GlobalTrak+ - GPS plus GSM Cellular, Orbcomm satellite, and ZigBee communications
- GlobalTrak Covert – Assisted GPS plus GSM cellular and ZigBee communications. GlobalTrak Covert allows AMU to be hidden in cargo. Communicates with Remote Sensor Nodes and other ZigBee based devices (EJ Brooks C-TPAT E-seal)

All AMUs report to the GlobalTrak Information Management Bureau (IMB) where information is stored, displayed, analyzed, and transmitted to other client systems. The Remote Sensor Node has open interfaces for adding additional sensors as required.

Design Considerations:

The use of ZigBee for wireless communications allows the Brooks GlobalTrak Hercules Bolt eSeal to maintain a long battery life (minimum 180 active days) while providing a long communications range (250 meters outside line of site (LOS)). Additionally, ZigBee allows the use of multiple seals paired with each AMU.

