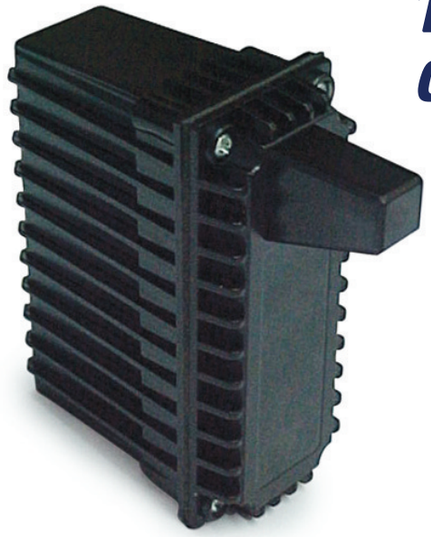
FP-200SAIN
TDMA Electronic Container Seal



Features

- Fully interoperable with existing CVISN TDMA systems:
  - Weigh-station bypass
  - Border crossing
  - Port Access and Gate Operations
- Suitable for trucking and railway applications
- Programmable at 2.44 GHz by Telematics Wireless' FP-200HH Handheld Reader/Terminal
- 5-year battery life
- Internal container installation
- Remote (RF) programming/setting
- Real time clock for event recording
  - Tampering events
  - Sealing events
- Encrypted RF data communications
- Reusable
- Ruggedized:
  - Casing/enclosure meets MIL spec
  - Hermetically sealed
- Shock/Vibration-proof installation
- Low Cost

Telematics Wireless FP-200SAIN TDMA Electronic Container Seal is an ideal solution for secure freight management systems. The TDMA seal identifies the cargo, records the sealing event and any subsequently detected tampering events, and communicates its stored data at highway speeds to a CVISN-compatible infrastructure of TDMA Readers. Existing Weigh-station bypass systems and expedited border crossing facilities could be used to provide and derive benefit from the automated in-motion identification of containers and the status of their seals.

The FP-200SAIN is fully compatible with the open standard TDMA ASTM v6 protocol. This protocol is used extensively by the existing infrastructure of Weigh-station bypass systems as well as
expedited border crossing operations. The same protocol allows for exceptionally widespread tracking of cargo containers and the status of their seals from the point of entry into the US, through an entire route until the final destination.

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Seal Characteristics

- Real time clock
- Integral magnetic door sensor
- 256 bits Read/Write Scratchpad
- 64 bytes of freight information
  - Readable by any TDMA Reader at 915 MHz
  - Writeable Only at 2.44 GHz by Telematics Wireless FP-200HH Handheld Reader/Terminal (writing to external memory by any TDMA Reader)
- Fast status report readable by any ASTM v6 Reader
- Seal specific information readable by seal Reader
  - Current time
  - Up to 8 sealing event records consisting of the following information: activation or deactivation of seal, user ID, mechanical seal number and time of event.
  - Up to 24 tampering event records consisting of the following information: tampered sensor, tampering start time and duration
- Handheld Reader programming/settings:
  - Seal time
  - Enable/Disable any sensor
  - Set sensor's polarity
  - Set freight information
  - Activate/Deactivate
  - Clear all or specific information
- Internal battery status
- 5 year battery operation

Seal Specifications

- Slotted Aloha protocol - compatible with ASTM v6
- Transmit & Receive frequencies of 915 MHz and 2.44 GHz (Frequency of operation is factory-set within the ISM band to 915 MHz and 2.44 GHz)
- Transmit & Receive data rate of 500 Kbps
- Built-in antennas
- Active Transmitters provide superior immunity to interference
- 5 year battery operation
- Programmable Link Validation code
- Programmable Agency Codes
- Small size: L3.5" x W1.5" x D2.5" (89 x 38 x 63) mm
- Operating temperature: -40°C – +85°C
- Mechanical shock:
  - 100g 2 msec per MIL-STD-810E Method 516.4
  - 40g 11 msec per MIL-STD-810E Method 516.4
- Mechanical vibration 2g, 5 - 500HZ per MIL-STD-810E Method 514.5 Procedure I Table 514.4-AII
- FCC approved

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