RFID Security Seal Tags

- 10 Newton (2.25 lbs. per sq. in.) pull force
- Up to 8 ft. read range
- Tamper evident security

Description

Unlike tamper evident labels that need to be visually inspected in order to check the tamper status, the RFID Aircraft Security Seal Tag allows tamper detection via RFID. The digital tamper detection allows for an entire aircraft to be scanned and verified in minutes, resulting in a huge time savings over manual inspections.

The chip indicates a secured status when the tamper loop is closed and a tampered state when the loop is opened/broken. The 10 Newton pull strength prevents the loop from opening during normal use but allows it to be broken by hand when needed. If the wire is open/broken, the chip's status will change, indicating tamper evidence.

The RFID Security Seal Tag makes use of a technology that changes a bit when the seal is broken. Bit 512 of the EPC block is set to 1 when the seal is intact, but once it breaks the bit changes to a zero. This corresponds to word 32 of the EPC changing from 8040 to 0040. UHF readers may then use software to identify the EPCs of broken seals out of a large group with a simple wave, saving time and effort.

Additional information

Model Number	WF-SM-STV RFID Security Seal Tag
Applications	Identification Labeling, Tamper Evident Seals, Asset Marking, Asset Tracking
Size	1.53" x 0.55" (3.07" cable)
Overall Thickness	0.14"
Temperature Service Range	-40º F to 180º F
Water Resistance	Good
Solvents Resistance	Excellent

RFID Performance

RFID Protocol	EPC Class 1 Gen 2; ISO 18000-6C
Tag Type	Passive Read/Write
Frequency Range	860 – 960 MHz (Global)
User Memory	112 bits
EPC Memory	256 bits
IC	NXP UCODE G2iM+

*Other single record and dual record chips available.

Tested Polarization:

Tag performance was experimentally measured in an anechoic chamber with a known set of experimental variables. The antenna used for measurements was linearly polarized and of monostatic configuration. The

direction of tested polarization is as follows.

Optimal Read Range* on Different Material Surfaces:
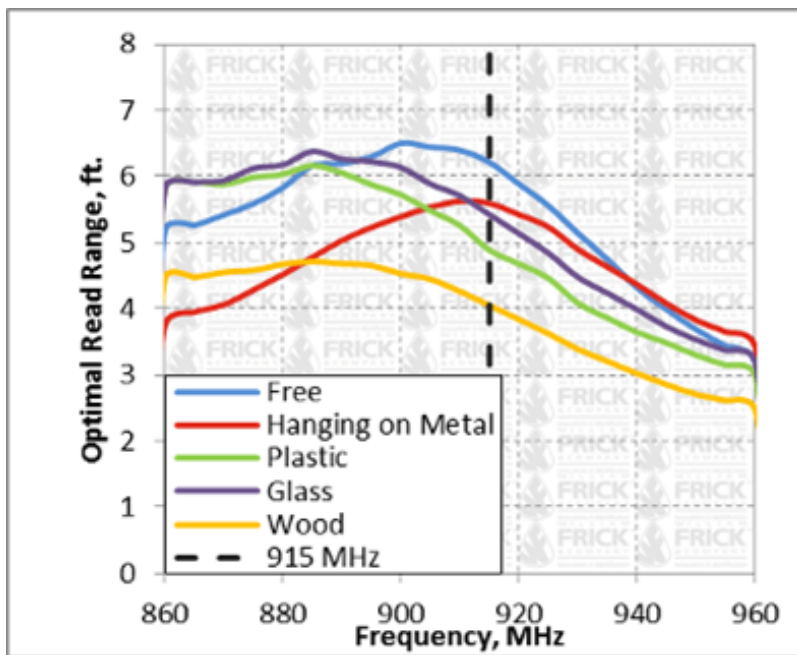
*Tag performance was measured free of material influence. Actual read ranges may differ depending on conditions such as environment, tag placements, hardware, etc.