Seal Tag

RFID tags with integrated fasteners prevent tampering with the contents of sealed containers

HID Global® Seal Tag transponders are ideal for sealing commercial containers – bags, bins or boxes – to prevent unauthorized access to contents while in storage or during distribution. Seal Tag units integrate powerful RFID chips with high durability components, and secure, tamper-evident fasteners. Access to a sealed container's contents requires severing a tag's cable tie or wire loop – or breaching of the container itself – providing clear evidence of tampering.

VTAMPER TAGS

Each uniquely encoded Seal Tag vTamper RFID unit attaches anywhere a cable tie can be used, providing visual evidence when that seal is broken. Being waterproof, they have high resistance to aggressive liquids, UV rays, and temperature extremes. Thermoplastic polyurethane (TPU) housings tolerate repeated bending or torsion. Bright colors provide excellent contrast for optical identification when laser engraved or embossed with logos, barcodes or text. Highly rugged on-metal options exist as well.

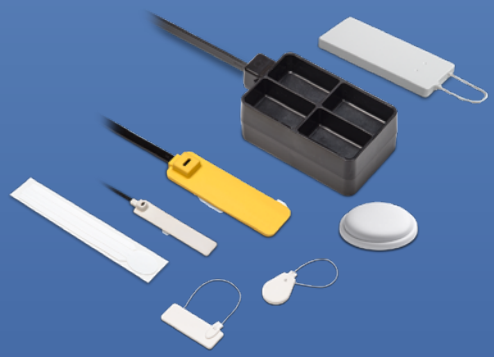
ETAMPER TAGS

Each Seal Tag eTamper NFC transponder becomes operational when its wire loop is securely closed or the disc sticker is applied. If the wire loop is broken, the tag is permanently unreadable, leaving evidence detectable both visually and via RFID. The printable coin form factor features the same eTamper functionality: The antenna breaks when the coin is removed - ideal for "proof of presence" applications or payment schemes.

eTamper tags may also be used as an "intelligent" seal for life safety device cabinets, including fire extinguishers, automated external defibrillators (AED) or other equipment.

EDTAMPER TAGS

Seal Tag edTamper are tamper evident passive contactless Trusted Tag NFC or RAIN RFID UHF transponders allowing detection of their seal status via RFID. Visualizing the tag is not necessary to identify broken seals. The edTamper tags- provide a digital notification if a seal has been compromised to quickly scan large sets of sealed items for integrity.



KEY BENEFITS:

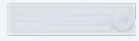
- Security – RFID tags integrated into visually tamper-evident container seals
- Adaptability – Small and flexible to serve a wide range of applications
- Easy application – Attach quickly with integrated cable tie or wire loop
- Clear evidence – Visual recognition of seal status, with option of RFID reader detection of seal security or breach

TECHNOLOGY HIGHLIGHTS:

- Integrated, secure fastening device
- HF 13.56 MHz version readable with ISO/IEC 15693 or ISO/IEC 14443A compatible devices incl. NFC and HID Trusted Tag® Services
- Broadband RAIN UHF version for worldwide use at 860 to 960 MHz
- Fully interoperable, standards compliant
- Visually, electrically and digitally tamper evident options
- Custom encoding or laser engraving on housing

APPLICATION AREAS:

- Asset tracking and logistics
  - — Industrial bags, sacks and containers
  - — Merchandise distribution and retailing
  - — Life safety equipment maintenance
- Returnable transport items
  - — Reusable shipping vessels, bottles, cartons, bags, and canisters
- Waste management
  - — Hazardous waste receptacles

	Seal Tag								
	eTamper		vTamper				edTamper		
	Coin	Teardrop	HF	UHF		UHF Mini	HF	UHF	
									
Base Model Number	7A1941-001 (DESFire) 7H5941-101 (TTS)	629960	729990-202	6H2990-500	7F2900	69899A-202	6I6503-101	6E5961	6K2963
	ELECTRONIC								
Operating Frequency	13.56 MHz		860-960 MHz (Worldwide)				13.56 MHz	860-960 MHz (Worldwide)	
Chip Type	MIFARE DESFire EV1 HID Trusted Tag (TTS)	ICODE SLIx	Monza R6-P	Higgs 4	Higgs 3		HID Trusted Tag (TTS)	UCODE G2iM+	EM | AURA-SENSE
Memory	4.096 bytes (DESFire) 8.096 bytes (TTS)	1024 bit EEPROM	96 bit | 48 bit, 64 bit	128 bit user memory + 128 bit EPC + 64 bit TID	512 bit user memory + 96 bit EPC + 64 bit TID		144 byte EEPROM	112 bit user memory + 256 bit EPC + 96 bit TID	2 kbit user memory + 416 bit EPC + 48 bit TID
Anti-Collision	Yes								
Reading Distance 2 W reader ERP, free space	N/A		20 ft (6 m)	Up to 32.8 ft (10 m)	Up to 16.4 ft (5 m)		N/A	Up to 6.6 ft (2 m)	Up to 13.1 ft (4 m)
	PHYSICAL								
Dimensions	1.5 × 1.5 × 0.3 in (39 × 39 × 8.5 mm)	Tag: 0.9 × 0.7 × 0.1 in (23 × 18 × 3 mm) Seal wire: 2.5 in (65 mm)	Tag: 3.3 × 1.0 × 0.1 in (85 × 25 × 3 mm) Cable tie: 15.0 × 0.3 × 0.1 in (380 × 6 × 2 mm)	Tag: 3.5 × 2.2 × 1.4 in (89 × 56 × 35 mm) Cable tie: 17.1 × 0.4 × 0.08 in (450 × 9 × 2 mm)	Tag: 2.4 × 0.5 × 0.08 in (60 × 12 × 2 mm) Cable tie: 7.8 × 0.1 × 0.05 in (200 × 2.5 × 1.2 mm)		4.6 × 0.9 in (118 × 23 mm)	Tag: 1.53 × 0.55 × 0.14 in (39 × 14 × 3.6 mm) Seal wire: 3.07 in (78 mm)	Tag: 3.74 × 1.67 × 0.31 in (95 × 42.5 × 8 mm) Seal wire: 3.15 in (80 mm)
Mounting Method	Sticker	Integrated wire loop	Integrated cable tie				Self-adhesive	Integrated wire loop	
Affixes To	Any material (hanging in free air)								On metal
Housing Material	Polycarbonate		Tag: TPU / Cable tie: Nylon 6.6	Tag: High-impact plastic / Cable tie: Nylon 6.6	Tag: TPU / Cable tie: Nylon 6.6		Paper	PC/ABS	ABS
Color	Black (DESFire) White (TTS)	White	Tag: Yellow (Pantone 108) Cable tie: black	Black	Tag: White Cable tie: Black		White		
Weight	0.18 oz (5.25 g)	0.04 oz (1 g)	0.42 oz (12 g)	2.33 oz (66 g)	0.08 oz (2.2 g)			0.07 oz (2 g)	1.13 oz (32 g)
	CHEMICAL AND MECHANICAL RESISTANCE								
Water	IP65		IP68, 68° F (20° C), 6.6 ft (2 m) x 24 h				IP67, 68° F (20° C), 3.3 ft (1 m) x 35 min		
Withstands Exposure To			Mineral oil, petroleum, salt mist, vegetable oil, HCL (10%), Bleach (5%); UV light						
Environmental Test Conditions	68° F (20° C), 100 h								
Flame Resistance								UL94V0 (self-extinguishing)	
Vibration	IEC 68.2.6 [10 g, 10 to 2000 Hz, 3 axis, 2.5 h]								
Shock	IEC 68.2.29 (40 g, 18 ms, 6 axis, 2000 times)								
Impact			IEC 62262-IK06	IEC 62262-IK08	IEC 62262-IK06				IEC 62262-IK06
Axial / Radial Force			1000 N, 10 sec					500 N, 10 sec	100 N, 10 sec
Pull Resistance	> 150 N	> 10 N	> 550 N	> 780 N	> 65 N		N/A	> 10 N	> 30 N
Tag Bending	N/A		5.9 in (150 mm)	N/A	5.9 in (150 mm)		N/A		
	THERMAL								
Storage	-40° to +194° F (-40° to +90° C)		-40° to +158° F (-40° to +70° C)				On reel, Shelf life max. 1 year at 14° to 104°F (-10° to +40°C)	-40° to +158° F (-40° to +70° C)	
Operating	-13° to +158° F (-25° to +70° C)	-40° to +185° F (-40° to +85° C)	-40° to +158° F (-40° to +70° C)				-4° to +158° F (- 20 °C to +70 °C)	-40° to +158° F (-40° to +70° C)	
Shock / Fatigue		-40° to +194° F (-40° to +90° C) 100 x 5 min with 30 sec transition	-40° to +158° F (-40° to +70° C) , 100 x 5 min with 30 sec transition					-40° to +158° F (-40° to +70° C), 100 x 5 min with 30 sec transition	
	OTHER								
Standards	ISO/IEC 14443A, NFC Forum Type 4	ISO/IEC 15693, 18000-3 Mode 1, NFC Forum Type 5	UHF EPC Class 1 Gen 2, ISO 18000-6C				ISO/IEC 14443A, NFC Tag Type 2	UHF EPC Class 1 Gen 2, ISO 18000-6C	
Options	Printed Logo, Encoding, Color	Encoding, laser engraving, alternate colors						Encoding, laser engraving, alternate colors	
Box Size	1,000 pcs	300 pcs	1,000 pcs.	100 pcs	1,500 pcs.		1,000 pcs	800 pcs	150 pcs
Warranty	2 Years								

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