

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	6M6990-500	7F2900	69899A-202	616503-101	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		M730	Higgs 4	Higgs 3	HID Trusted Tag (TTS)	UCODE G2IM+	EM I AURA-SENSE	
Memory	4.096 bytes (DESFire) 8.096 bytes (TTS)	1024 bit EEPROM		128 bit EPC	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 2W 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 x 1.5 x 0.3 in (39 x 39 x 8.5 mm)	Tag: 0.9 x 0.7 x 0.1 in (23 x 18 x 3 mm) Seal wire: 2.5 in (65 mm)		Tag: 3.3 x 1.0 x 0.1 in (85 x 25 x 3 mm) Cable tie: 15.0 x 0.3 x 0.1 in (380 x 6 x 2 mm)	Tag: 3.5 x 2.2 x 1.4 in (89 x 56 x 35 mm) Cable tie: 17.1 x 0.4 x 0.08 in (450 x 9 x 2 mm)	Tag: 2.4 x 0.5 x 0.08 in (60 x 12 x 2 mm) Cable tie: 7.8 x 0.1 x 0.05 in (200 x 2.5 x 1.2 mm)	4.6 x 0.9 in (118 x 23 mm)	Tag: 1.53 x 0.55 x 0.14 in (39 x 14 x 3.6 mm) Seal wire: 3.07 in (78 mm)	Tag: 3.74 x 1.67 x 0.31 in (95 x 42.5 x 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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