

# HEAVY DUTY RFID TAGS CABLE TIE TAGS



## APPLICATIONS

- High Value Metal Applications
- Aerospace Applications
- Military Applications
- Chemical Areas

## FEATURES

- Passive RFID Tags
- Reading Ranges  
UHF: Up to 2 m | HF: Up to 1.5 m
- Plastic covered Tag mounted to either a Metal or Nylon Tie-Wrap
- IP69K Protection Class
- ATEX Compliant

## RFID OPTIONS

- UHF: EPC Global Class1Gen2  
ISO/IEC 18000-6C
- HF: EPC Global Class1Gen2  
ISO/IEC 18000-6B
- ISO 17665
- ISO 11135

## PRODUCT DESCRIPTION

The Cable Tie Tags from iDTRONIC provide automatic identification and tracking capabilities in a cable tie. They are compliant to the EU directives on explosion protection with ATEX. It covers equipment and protective systems intended for use in explosion-hazard atmospheres.

The Tags consist of plastic and are mounted to either a metal or a nylon tie-wrap and are particularly resistant against most acids, solvents and bases. They were designed for temperatures from - 50 °C up to + 150 °C. Thanks to the IP69K Protection Class it has an excellent resistance against UV and continuous sea water immersion.

The Metal Version works in the UHF Frequency 865 – 928 MHz and has a reading range of up to 2 meters. The Nylon Version works in the HF Frequency 13.56 MHz and has a reading range of up to 1.5 meters. The supported Standards are EPC Global Class1Gen2 ISO 18000-6C, ISO 18000-6B, ISO 17665 and ISO 11135.

The Cable Tie Tags are designed to be mounted to any metallic surface like returnable containers, canisters, pallets, pipes, high value items, aerospace applications, military applications, etc. by just securing the tie-wrap around it.

## TECHNICAL DATA

\* READING DISTANCE DEPENDS ON TAG TYPE AND ORIENTATION.

ELECTRICAL SPECIFICATIONS		
	METAL TIE	NYLON TIE
Operating Frequencies	UHF: 865 – 928 MHz	HF: 13.56 MHz
Interface Protocol	EPC Global Class1Gen2	
Operating Mode	Passive	
Reading Range	Real-world: 1 – 2 meters*	Real-world: 1.5 meters*
IC Types	<u>Standard:</u> Alien Higgs 3™ (128 Bytes) <u>Optional:</u> EM, Fujitsu, Impinj, NXP (Up to 240 Bytes)	
Memory Content	Unique 96-bit number encoded	
Extended Memory	512 Bytes	
TID	Factory-programmed, non-changeable, unique 64-bit ID	

MECHANICAL SPECIFICATIONS		
	METAL TIE	NYLON TIE
Dimensions	<u>Overall</u> Length: 360 mm Height: 5 mm <u>Tag Body</u> Length: 26 mm Height: 7 mm	<u>Overall</u> Length: 300 mm Height: 5 mm <u>Tag Body</u> Length: 33 mm Height: 17 mm
Weight	5 g	4 g
Housing Material	Metal	Nylon
Housing Colour	Cable Tie: Silver Tag Body: Black	Cable Tie: Black Tag Body: Red
Applicable Surfaces	Returnable containers, canisters, pallets, pipes, high value items, aerospace applications, military applications, etc.	
Mounting Option	Mounting to any metallic surface by just securing the tie-wrap around it	

ENVIRONMENTAL SPECIFICATIONS	
Operating Temperature	- 50 °C to + 150 °C
Temperature Cycling Test	+ 150 °C continuous, for 30 days
Protection Class	IP 69K
Weather Resistance	Excellent, incl. UV-resistance and continuous sea water immersion
Chemical Resistance	<u>No physical or performance changes in:</u> - Salt water - NaOH - Sulfuric acid - Motor oil <u>Generally good against:</u> - Most solvents - Most acids and bases

APPLICABLE STANDARDS	
ISO 18000-6B	
ISO 18000-6C	E.g.: Alien Higgs 2/3/4, Fujitsu Impinj Monza, NXP UCODE, etc.
ISO 17665	Sterilization of Health Care Products – Moist Steam
ISO 11135	Sterilization of Health Care Products – Ethylene Oxide
RoHS 2	2011/65/EU
ATEX Compliant	

PERSONALIZATION OPTIONS
<ul style="list-style-type: none"> <li>• Tag Pre-Encoding</li> <li>• Laser Engraving</li> </ul>

## APPLICATION EXAMPLES

### CHEMICAL AREAS



The Cable Tie Tags of iDTRONIC are especially suitable for harsh environments at chemical areas with high temperatures.

The robust housings of the Tags are very resistant to chemicals like salt water, NaOH, sulfuric acid, motor oil and most solvents, acids and bases.

It can be securely wrapped around any pipe or (round) metal object using an easy to install, low profile, self-locking ball bearing head. The smooth rounded edges ensure safe, efficient handling.

### MILITARY AREAS



The Cable Tie Tags can be used for military purposes within harsh environments under high pressures.

The RFID Tags are particularly resistant to the most common chemicals. The identification of pipes with metallic surfaces can be secured with this cable tie Tag.

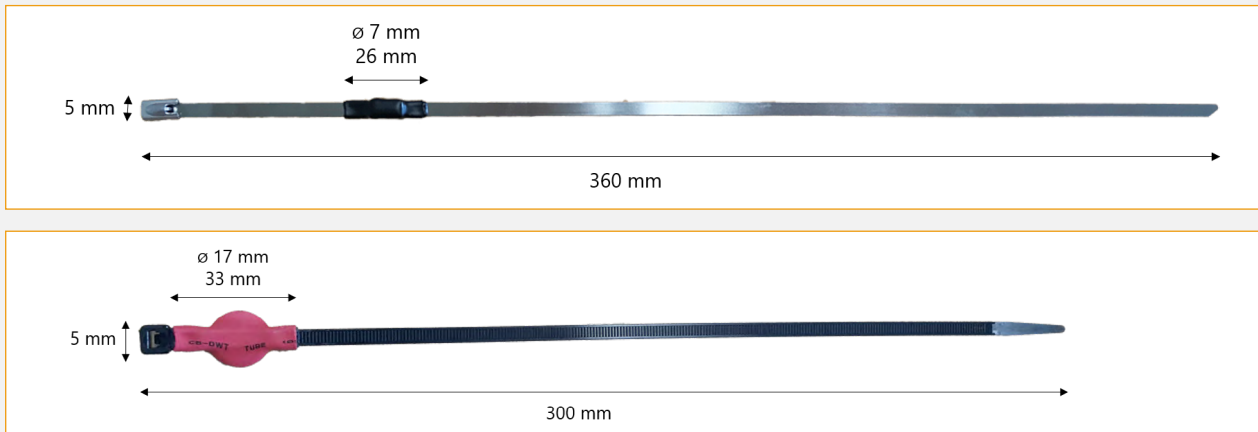
It can be securely wrapped around any pipe or (round) metal object using an easy to install, low profile, self-locking ball bearing head. The smooth rounded edges ensure safe, efficient handling.

## INSTALLATION INSTRUCTIONS

Wrap the tie-wrap around the surface, insert the tail of the tie-wrap into the head of the tie-wrap and firmly pull the tie-wrap to secure the tag to the object.

The plastic-covered tag is molded onto either a metal or plastic tie-wrap and is designed to be mounted to any metallic surface by just securing the tie-wrap around it.

## MECHANICAL VIEWS



## ORDER CODES

VERSION	ORDER CODE
<b>METAL CABLE TIE – UHF (865 – 928 MHz)</b>	
Alien Higgs 3™ (128 Bytes)	ST-UHF-TR-PT-102-ALIEN
EM (Up to 240 Bytes)	ST-UHF-TR-PT-102-EM
Fujitsu (Up to 240 Bytes)	ST-UHF-TR-PT-102-FU
Impinj (Up to 240 Bytes)	ST-UHF-TR-PT-102-IM
NXP (Up to 240 Bytes)	ST-UHF-TR-PT-102-NXP
Extended Memory: 512 Bytes	ST-UHF-TR-PT-102-EXM
<b>NYLON CABLE TIE – HF (13.56 MHz)</b>	<b>ST-HF-TR-PT-102</b>

iDTRONIC GmbH  
Donnersbergweg 1  
67059 Ludwigshafen  
GERMANY

Phone +49 (0) 621 66 90 09 4-0  
Fax +49 (0) 621 66 90 09 4-9  
E-Mail: [info@idtronic-rfid.com](mailto:info@idtronic-rfid.com)  
Web: [idtronic-rfid.com](http://idtronic-rfid.com)

For further information & prices, please contact [info@idtronic-rfid.com](mailto:info@idtronic-rfid.com)

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