



PT-0 Tie-Wrap Tag



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PT-0

Tie-Wrap Tag



1 PRODUCT DESCRIPTION

The patent-pending **TROI PT-0 Tie-Wrap** RFID tag provides automatic identification and tracking capabilities never-before available in such a unique package designed for rugged or hazardous use-areas. The plastic-covered tag is designed to be mounted to any metallic surface by slipping the tag onto a tie-wrap and then wrapping the tie-wrap around any pipe or round metal object. It can withstand unprecedented high temperature (consistent temperatures of 100 degrees Centigrade), high pressure and severe environmental conditions.

1.1 SPECIFICATIONS

Device type	Passive RFID tag
Air interface protocol	UHF: EPCGlobal Class1Gen2 / ISO/IEC 18000-6C
Operational frequency	Standard: UHF (865-869 MHz (EU), 902-928 MHz (US))
IC options - UHF	Standard: Alien Higgs 3 (others on request) Optional: EM, Fujitsu, Impinj, NXP (others on request)
EPC memory - UHF	Standard: 128 bit Optional: Up to 240 bit
EPC memory content	Unique 96-bit number encoded
Extended memory - UHF	Standard: 512 bit
TID - UHF	Factory-programmed, non-changeable, unique 64-bit ID.
Read range - UHF	Real-world: 1 – 2 meters
Size	Body: <ul style="list-style-type: none">• 9.525 mm (3/8 inch) Long• 9.525 mm (3/8 inch) Wide• 6.35 mm (1/4 inch) High Slot: <ul style="list-style-type: none">• 9.525 mm (3/8 inch) Long• 4.76 mm (3/16 inch) Wide• 1.59 mm (1/16 inch) High
Tag material	Polyolefin thermoplastic
Tensile strength	2500 psi minimum
Applicable surfaces	Any material
Product RoHS compliant?	Yes
Standards compliancy	ATEX-compliant

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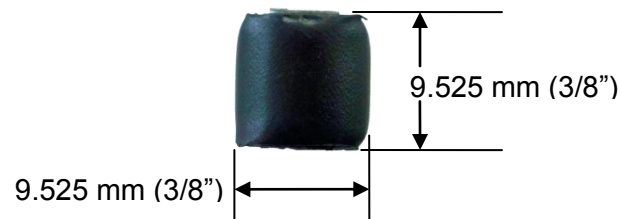
1.2 DIMENSIONS

NOTE: Any length plastic tie-wrap that fits the slot in the tag will work.

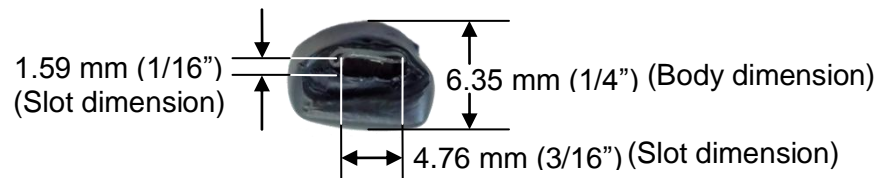
PLAN VIEW – on tie-wrap



PLAN VIEW



END VIEW





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1.3 READ RANGE

	UHF max read-range on metal with 4W EIRP
PT-0 (915 MHz)	660.4 cm / 260 inches (6.63 m / 21.75 feet)

The read range listed above was obtained from a lab test environment. Actual test results may be different. Testing in actual use environments is strongly recommended.

1.4 ENVIRONMENTAL SPECIFICATIONS

Operating temperature	-50°C to +100°C*
Temperature Cycling Test	100 deg C, continuous for 30-days
IP classification	IP69K
Weather resistance	Excellent, including UV-resistance and sea water immersion
Chemical resistance	No physical or performance changes in: <ul style="list-style-type: none"> - Salt water - NaOH (depending on concentration) - Sulfuric acid (depending on concentration) - Motor oil (tested in 168 hour exposure) Generally good against: <ul style="list-style-type: none"> - Most solvents - Most acids and bases

* **NOTE:** The RFID tag will not be functional if the PT-0 tag is left at the maximum indicated temperatures such that the internal soak temperature exceeds +80 deg C. The RFID tag itself will (resume) function between -50 deg C and +80 deg C.

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1.5 SUPPORTED SERVICES

- Tag pre-encoding

For further details, please contact **TROI LLC**.

1.6 POSSIBLE APPLICATIONS

Metal surfaces	Metal returnable containers, metal canisters, metal pallets, metal pipes, high value metal items, aerospace applications, military applications, etc.
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2 INSTALLATION INSTRUCTIONS

Slide a tie-wrap through the PT-0 and then wrap the tie-wrap around the metal surface and firmly pull the tie-wrap to secure the tag – done!

3 CONTACTING TROI LLC

For additional information and technical support contact:

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ADVISORY

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