



PC-101

Mini-Sling Tag

TECHNOLOGIES ROI, LLC



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1 PRODUCT DESCRIPTION

The patented (US Patent # 7,928,922) **PC-101Mini-Sling** RFID tag provides automatic identification and tracking capabilities never-before available in such a unique package designed for rugged or hazardous use-areas.

The PC-101 tag is designed to be mounted to any metallic surface by simply looping the plastic-covered stainless steel wire rope over or through an object and then crimping the aluminum ferrel to securely fasten the tag.

The tag can withstand unprecedented high temperature (consistent temperatures of 180 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 (-63) HF: EPCGlobal Class1Gen2 / ISO/IEC 18000-6B (-62)
Operational frequency	Standard: UHF 865-869 MHz (EU), 902-928 MHz (US) Optional: HF 13.56 MHz
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 Lab environment: 7 meters
Tag material	HVP rubber
Tensile strength	2500 psi minimum
Elongation	400% minimum
Durometer	Shore A 60-70
Cable specifications	Black nylon-coated stainless steel rope Aluminum ferrel for crimp-type retention
Drop test to asphalt	2 meters with 5 Kg's attached @ 100+ times (competition fails at 20) 2 meters with 8 Kg's attached @ 5+ times (competition fails immediately)
Applicable surfaces	Any metallic material
Product RoHS compliant?	Yes
Standards compliancy	ATEX-compliant
US Patent Number	7,928,922



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1.2 DIMENSIONS

Overall (with loop): Varies from ~305 mm (12 inches) to ~380 mm (15 inches)

Tag:

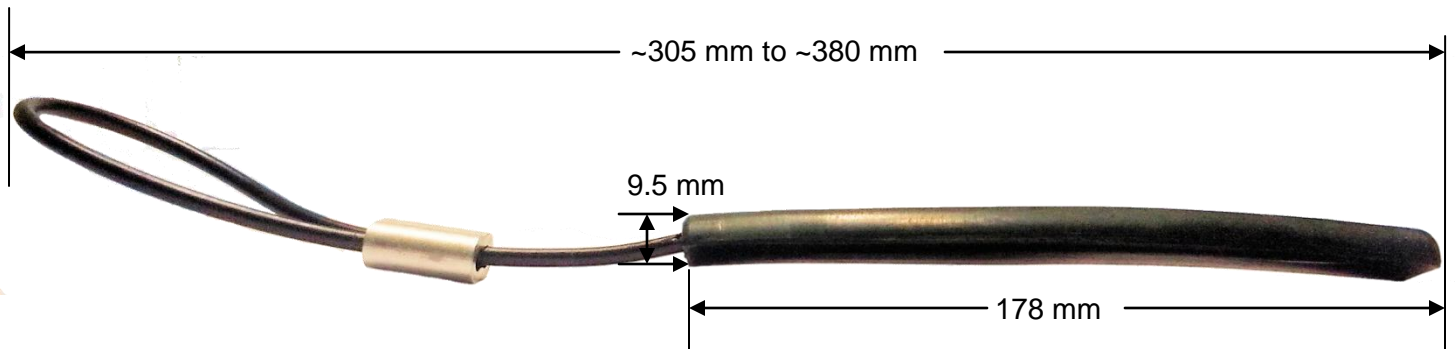
L 178 mm (7 inches)

W 19 mm (0.75 inches)

H 9.5 mm (0.375 inches)

Plastic-covered wire rope diameter: 4 mm (0.16 inches)

SIDE VIEW



BOTTOM VIEW





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1.3 READ RANGE

	UHF max read-range on metal with 4W ERP
PC-101 GLOBAL (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 (-50°F) to +180°C* (356°F)
Temperature Cycling Test	-25°C to +85°C continuous for 7 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 it 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

Wrap the stainless steel wire rope around or through the object; push the wire rope into the ferrel on the tag and crimp the ferrel to secure the tag to the object.

3 CONTACTING TROI LLC

For additional information and technical support contact:

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