Rugged RFID tag for electronic license plates

**ELECTRICAL SPECIFICATION**

Device type  
Class 1 Generation 2 passive UHF RFID transponder  
Air interface protocol  
EPCGlobal Class1 Gen2 ISO 18000-6C  
Operational frequency  
EU 865 - 869 MHz  
US 902 - 928 MHz  
IC type  
Impinj Monza 4E™

Memory configuration  
EPC 496 bit; User 128 bit; TID 96 bit  
EPC memory content  
Unique number encoded as a default  
Read range (2W ERP)*  
EU on metal up to 8 m / 26 ft  
US on metal up to 7 m / 23 ft  
Applicable surface materials*  
Metallic surfaces

* Read ranges are theoretical values that are calculated for non-reflective environment, in which antennas with optimum directivity are used with maximum allowed operating power according to ETSI EN 302 208 (2W ERP), EU = 865 - 868 MHz, US = 902 - 928 MHz. Different surface materials may have an effect on performance.

**RADIATION PATTERNS**

On metal

**MECHANICAL SPECIFICATION**

Tag materials  
High quality engineering plastics.  
Weight  
12 g  
Delivery format  
Single  
Amount in box  
960 pcs  
Dimensions  
58 x 44 x 5 mm / 2.28 x 1.73 x 0.20 in

**ENVIRONMENTAL RESISTANCE**

Operating temperature  
-30°C to +60°C / -22°F to +140°F  
Ambient temperature  
-30°C to +60°C / -22°F to +140°F  
IP classification  
IP65  
Weather ability  
Suitable for outdoor use  
Impact resistance  
Very good protection against physical impacts  
Chemical resistance  
Tolerates vehicle washing process with typical solvents  
Expected lifetime  
Years in normal operating conditions

Values in the table are the best recommendations; resistance against environmental conditions depends on the combination of all influencing factors, exposure duration and chemical concentrations. Thus, products final suitability for certain environmental conditions is recommended to be tested. Contact Confidex for more specific information.
PERSONALIZATION OPTIONS

Pre-encoding
- Customer specific encoding of EPC or user memory. Locking permanently or with password.

Customized tampoprinting
- Customer specific layout including logo or static text.

Customized laser engraving
- Customer specific layout including logo, text, numbers, barcodes.

INSTALLATION INSTRUCTIONS

Tag is designed to be attached on metallic license plate

Fixing procedure:
1. Make 3.3 - 3.4 mm hole to the license plate
2. Add thin layer max 0.5mm of silicone sealant or adhesive on two locations of the tag backside like shown in picture below. Sealant will both help the attachment process and it will prevent possible vibrations caused by resonances in vehicle. In long term, such vibrations can cause tag attachment to lose and eventually RFID-tag may fall off. Sealant can be silicon, epoxy or other elastic adhesive material.

3. Place the tag firmly on the correct location on the plate and attach it with 3,2 mm / 6 mm pop rivet. Choose the rivet material according to license plate to avoid rivet corrosion. Rivet will not be visible from the front of the tag.

Polarization of Confidex License Plate Tag™ is according to its longest dimension.

ORDER INFORMATION

Product number: 3000517
Product name: Confidex License Plate Tag™ ETSI M4E

Product number: 3000518
Product name: Confidex License Plate Tag™ FCC M4E

For other versions, additional information and technical support contact Confidex Ltd.

For more information, visit:
www.rfidcanada.com
Email: info@rfidcanada.com
+1 905-513-8919

DISCLAIMER
The materials, products and services are sold subject to its standard conditions of sale, which are included in the applicable distribution or other sales agreement. Although any information, recommendations, or advice contained herein is given in good faith, Confidex makes no warranty or guarantee, express or implied, that the results described herein will be obtained under end use conditions. Or as to the effectiveness or safety of any design incorporating its products, materials, services, recommendations or advice. Except as provided in Confidex standard conditions of sale, Confidex and its representatives shall in no event be responsible for any loss resulting from any use of its materials, products or services described herein.

Each user bears full responsibility for making its own determination as to the suitability of Confidex products, materials, services, recommendations, or advice for its own particular use. Each user must identify and perform all tests and analyses necessary to assure that its finished systems incorporating Confidex products, materials, or services will be safe and suitable for use under end-use conditions. Nothing in this or any other document, nor any oral recommendation or advice, shall be deemed to alter, vary, supersede, or waive any provision of this Disclaimer, unless any such modification is specifically agreed to in a writing signed by Confidex.