PRODUCT DATASHEET

Confidex Windshield Label™

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1. PRODUCT DESCRIPTION

1.1 OVERVIEW

Introduction

Confidex Windshield Label is specially designed for fast and reliable vehicle identification. The passive UHF label is optimized to work on car windshield glass and suitable for a wide selection of automatic vehicle identification applications such as access control, parking permit, road toll collection or insurance information verification.

Confidex Windshield Label is non-transferable and cannot be removed without being destroyed. The user memory is password protected and can hold encrypted user data.

The labels are delivered in reel format and can be printed and encoded with common RFID printers. Confidex Windshield labels are customizable with surface printing, security markings or special programming. They can be delivered with special production data and delivery forms to integrate in customer issuing procedures.

The Confidex Windshield Label offers a reliable and tamper-evident solution for cost efficient traffic and vehicle management systems.

Target applications

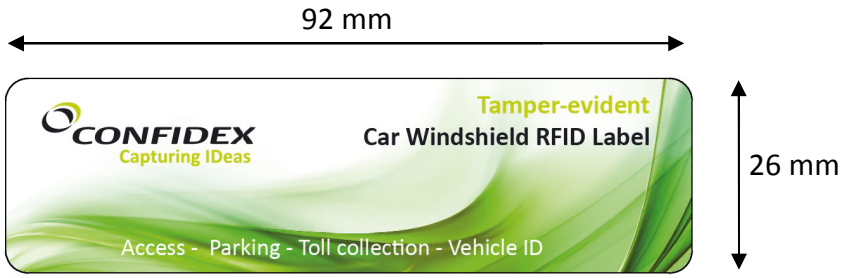
- Taxation, Road toll
- Access control, Parking permits
- Fleet management, Vehicle registration
- Insurance verification
- Tracking of glass based Assets

1.2 SPECIFICATION DATA

Device type	Class 1 Generation 2 passive UHF RFID transponder
Air interface protocol	EPCglobal Class1 Gen2, ISO 18000-6C
Operational frequency	860-960 MHz
EPC memory	up to 496 bit
Extended memory	TID: unique 96 bit (factory programmed) USER MEMORY: 128 bit
Read range	up to 8m / 26ft, reader power 2W ERP (dependent on application)
Face material	Paper
Background adhesive	Strong industrial adhesive
Weight	1 g
Delivery format	On reel
Pitch on reel	33.866 mm
Amount on reel	2500 pcs
Reel core inner diameter	76mm / 3''
Product is RoHS compliant	Yes

1.3 DIMENSIONS

General dimensions (Width x Height x Thickness)	92 mm x 26 mm x 0.2 mm



Delivery in reel format

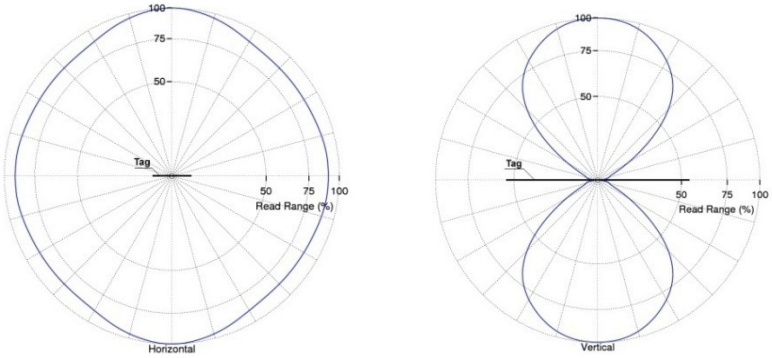
1.4 ELECTRICAL PERFORMANCE

Confidex Windshield Label	Read range on glass	up to 8 meters

* Read ranges may vary depending on the used frequency and reader power. Presented reading ranges are calculated values in non-reflective environment, in where antennas with optimum directivity are used with maximum allowed operating power: EU 865-868 MHz (2W ERP), US 902-928 MHz (4W EIRP), and JPN 952-954MHz (4W EIRP).

1.5 RADIATION PATTERNS

Estimated radiation pattern when tag orientation towards reader antenna is optimized.



1.6 RESISTANCE AGAINST ENVIRONMENTAL CONDITIONS*

Operating temperature	-35°C to +85°C (-31°F to +185°F)
Ambient temperature	-35°C to +85°C (-31°F to +185°F)
Storage condition	2 years in +20°C / 50% RH (shelf life for adhesive)
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, product's final suitability for certain environmental conditions is recommended to be tested. Contact Confidex for more specific information.*

1.7 SUPPORTED SERVICES

There is several personalization options available for Confidex Windshield Label in order to "fine tune" the tag to match with the application requirements:

- Customer specific dual-sided full-color artwork
- Pre-encoding
- Customer specific visual printing (barcodes, human readable text, etc.)
- Data encryption

1.8 INFORMATION OF USED MATERIALS

Back side adhesive	Adhesive designed to have excellent adhesion on glass surfaces, good adhesion on other surfaces.
Back side material	PP material with strong adhesion to other layers.
Paper face material	Inkjet and thermal transfer printable. For thermal transfer printing, resin ribbon is recommended.

2. INSTALLATION INSTRUCTIONS

2.1 LABEL ORIENTATION

Confidex Windshield Label polarization is along the tag's longest dimension:

The installation should be done ideally in +20'C/50%RH conditions. For exceptional conditions, please contact Confidex. The adhesive of the label has been selected to provide best adhesion in 24 hours after the installation.

Label antenna parts should not be in contact with metal to enable best possible performance of the label. Note that metallized UV-protection films have strong effect on RFID performance.

2.2 PROTECTION OF TAG DURING USAGE

Minimum bending diameter of the Confidex Windshield Label is defined to be 50mm. Do not bend the label above the limit. Never touch on the location of the IC. IC chip is sensitive electrical component and can be damaged if unexpected pressure is applied on the chip. Try to avoid mechanical impacts to the Confidex Windshield Label. IC and antenna may be damaged due to mechanical shocks.

3. ORDER INFORMATION

Product number	Product name
3000485	Confidex Windshield Label
3000498	Confidex Windshield Label (blank)

For additional information and technical support contact Confidex Ltd.

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