

# PRODUCT DATASHEET

## Confidex Flex™



Global and compact UHF RFID label optimized for metallic surfaces with flexible attachment on curved assets.

### ELECTRICAL SPECIFICATION

#### Device type

Class 1 Generation 2 passive UHF RFID transponder

#### Air interface protocol

EPCGlobal Class1 Gen2 ISO 18000-6C

#### Operational frequency

Global 865 – 928 MHz

#### IC type

Impinj Monza 4E™

#### Memory configuration

EPC 496 bit, User 128 bit, TID 96 bit

#### Read range (2W ERP)\*

- On flat metal up to 5 m / 16 ft
- On Ø70mm radius metal up to 4 m / 13 ft
- On Ø50mm radius metal up to 5 m / 16 ft
- On Plastic ETSI 1 m / 3 ft
- On Plastic FCC 5 m / 16 ft

#### Applicable surface materials\*

All surfaces but performance optimized for metal

#### Attachment on curved surface\*

Label can be attached on a curved surface with smallest diameter of 50mm.

\* Read ranges are theoretical values that are calculated for non-reflective environment, in where antennas with optimum directivity are used with maximum allowed operating power according to ETSI EN 302 208 (2W ERP). Different surface materials may have an effect on performance. Note that when attached on curved surface the length of curved asset also has an effect on read range.

### MECHANICAL SPECIFICATION

#### Label surface

White specially coated PP for high printing quality. Resin ribbon recommended.

#### Background adhesive

High tack adhesive with excellent adhesion to all surfaces including low surface energy plastics and painted metal.

#### Weight

1 g

#### Delivery format

250 pcs good labels on reel, bad ones marked with "XXX" printing. Typical yield >95%

#### Pitch on reel

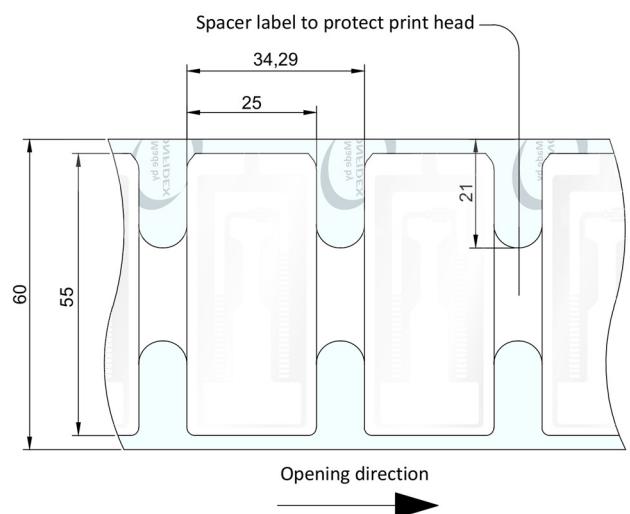
34,29 mm / 1.35"

#### Reel core inner diameter

76 mm / 3"

#### Tag dimensions

55 (+0,5/-1,5) x 25 x 2.2 mm / 2.17 x 0.98 x 0.087"



### ENVIRONMENTAL RESISTANCE

#### Operating temperature

-35°C to +85°C / -31°F to +185°F

#### Ambient temperature

-35°C to +85°C / -31°F to +185°F  
Short periods (minutes) +120°C / 248°F

#### Water resistance

IP68

#### Washing resistance

Tolerates industrial washing with standard solvents. Washing process should be tested in final application.

#### Chemical resistance

No physical or performance changes in:

- 168h Motor oil exposure
- 168h Salt water (salinity 10%) exposure
- 2h Sulfuric acid (10%, pH 2) exposure
- 30min NaOH (10%, pH 13) exposure
- Wiping with acetone

#### Storage condition

1 year in +20°C / 50% RH

*Environmental values are the best recommendations; resistance against different 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.*

## INSTALLATION INSTRUCTIONS



When attaching the label ensure the following

- Select a smooth surface without uneven areas below tag
- Avoid touching the background adhesive and IC location

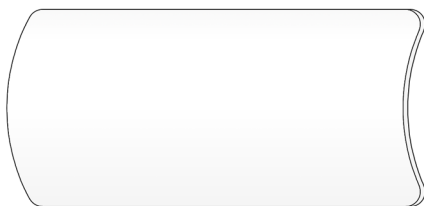
When mounting the label with its adhesive, clean and dry the surface for obtaining the maximum bond strength. Typical cleaning solvents are heptane or acetone for oily surfaces or isopropyl alcohol for plastics. Do not use household cleaning solvents that contain oils. Carefully read and follow the manufacturer's precautions and directions for use when working with solvents.

Ideal application temperature is from +21°C to +38°C (+70°F to +100°F). Bond strength can be improved with firm application pressure and moderate heating up to +54°C (+130°F). Application at temperatures below 10°C (50°F) is not recommended.

Optimal read range is achieved when label is attached close to the edge of metal asset, like shown in below picture.



Smallest recommended bending diameter of the Confidex Flex™ is 50mm. For optimal read range please bend the label in the orientation shown below. Note that with smaller assets it is recommended to bend the label to other direction for optimal adhesion.



## PRINTER COMPATIBILITY

The Confidex Flex™ is designed to work with the **Custom Zebra ZT410 RFID Silverline** printer. Other printers are not recommended or supported. For more information please contact Confidex.

## ORDER INFORMATION

**Product number:** 3001568

**Product name:** Confidex Flex™ M4E

For additional information and technical support, please contact Confidex Ltd.

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