

# PRODUCT DATASHEET

## Confidex Carrier™



Special washable label for returnable plastic containers with strong adhesive.

### ELECTRICAL SPECIFICATION

#### Device type

Class 1 Generation 2 passive UHF RFID transponder

#### Air interface protocol

EPCGlobal Class1 Gen2 ISO 18000-6C

#### Operational frequency

Global 860-960MHz

#### IC type

Impinj Monza 4QT™

Impinj Monza 4E™ (upon special request)

#### Memory configuration

With Monza 4QT: EPC 128 bit; User 512 bit; TID 96 bit

With Monza 4E: EPC 496 bit; User 128 bit; TID 96 bit

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

EU on plastic up to 10 m / 33 ft

EU on cardboard up to 4 m / 13 ft

US on plastic up to 8 m / 26 ft

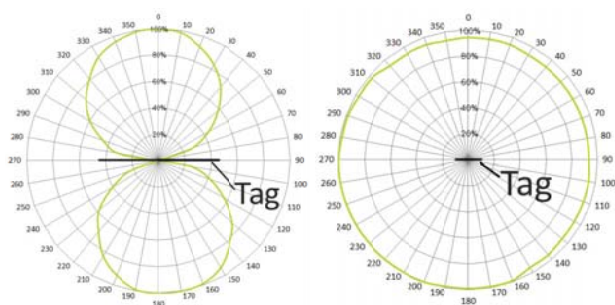
US on cardboard up to 8 m / 26 ft

#### Applicable surface materials\*

Non-metallic surfaces.

\* 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). EU = 865 - 868 MHz, US = 902 - 928 MHz. Different surface materials may have an effect on performance.

### RADIATION PATTERNS



### MECHANICAL SPECIFICATION

#### Tag materials

Printable white PET, resin ribbon recommended

#### Background adhesive

High performance acrylic adhesive specifically for low surface energy plastics

#### Weight

0,1 g

#### Delivery format

2000 pcs on reel

#### Pitch on reel

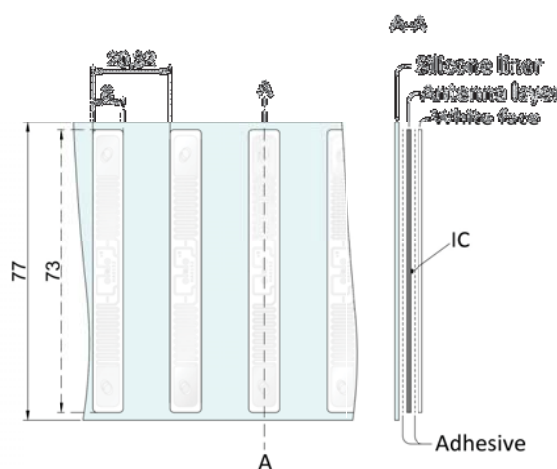
20,32 mm / 0.8"

#### Reel core inner diameter

76 mm / 3"

#### Tag dimensions

73 x 8 x 0,2 mm / 2.87 x 0.31 x 0.01 in



### ENVIRONMENTAL RESISTANCE

#### Operating temperature

-35°C to +85°C / -31°F to +185°F

#### Ambient temperature

-35°C to +90°C / -31°F to +194°F

#### Water resistance

Good, tested 5 hours in 1m deep water (IP68)

#### Washing resistance

Good, tested 300 cycles with water at 175bar / 80°C

#### Chemical resistance

- No physical or performance changes in:
  - 168h Salt water (salinity 10%) exposure
  - 168h Motor oil exposure
  - 24h NaOH (10%, pH 13) exposure
  - 24h Sulfuric acid (10%, pH 2) exposure
  - 30min Acetone exposure

#### Storage condition

1 year 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.

## PERSONALIZATION OPTIONS

### Pre-encoding

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

### Customized printing

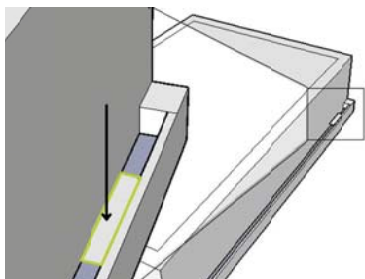
- Customer specific layout including logo, text, numbers, barcodes etc.

## INSTALLATION INSTRUCTIONS



Tag polarization

While planning the installation, most recommended location for the Confidex Carrier™ label is in a position, where the structure of the identified asset provides protection against mechanical stresses such as impacts or jet streams. There's no need for line of sight between reader and label so it can be installed for example like shown in picture below.



Ideal installation conditions are +20°C (+68°F) / 50% RH. For exceptional conditions, please contact Confidex. Adhesive of the label will provide best adhesion in 24 hours after the installation. Bond strength can be improved with firm application pressure. Always clean and dry the surface for obtaining the maximum bond strength.

During attachment to the identified asset, please avoid touching the background adhesive. If the location on the asset needs to be changed, please use a new tag instead of re-placing the used one; the adhesion will suffer from the re-placement.

Minimum bending diameter of the Confidex Carrier™ 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.

## ORDER INFORMATION

**Product number:** 3000394

**Product name:** Confidex Carrier™ M4QT

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

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