

# PRODUCT DATASHEET

## Confidex Carrier Tough™



Thin tag solution for reliable plastic container and returnable transit item tracking.

### 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

#### EPC memory content

Unique number encoded as a default

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

EU on plastic up to 11,5 m / 37 ft

EU on dry wood up to 8,5 m / 28 ft

US on plastic up to 12,5 m / 41 ft

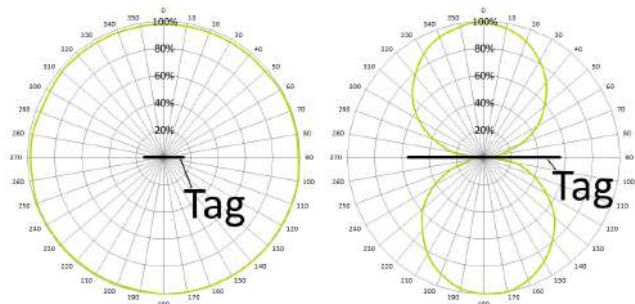
US on dry wood up to 10 m / 33 ft

#### 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, scratch resistant engineering plastics

#### Background adhesive

High performance acrylic adhesive specifically for low surface energy plastics

#### Weight

0,1 g

#### Delivery format

Single

#### Amount in box

500 pcs

#### Tag dimensions

120 x 30 x 2 mm / 4.72 x 1.18 x 0.08 in



### ENVIRONMENTAL RESISTANCE

#### Operating temperature

-20°C to +70°C / -4°F to +158°F

#### Ambient temperature

-20°C to +70°C / -4°F to +158°F

#### Water resistance

IP68

#### Washing resistance

Excellent, tested 1000 cycles with water at 175bar / 80°C

#### Chemical resistance

No physical or performance changes in:

- 168h Salt water (salinity 10%) exposure
- 168h NaOH (10%, pH 13) exposure
- 70h Motor oil exposure
- 70h Sulfuric acid (10%, pH 2) exposure
- 4h 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

Confidex Carrier Tough™ polarization is along the longest dimension of the tag like shown below.



When selecting the location ensure the following

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

When mounting the tag with its adhesive background, clean and dry the surface for obtaining the maximum bond strength. Remove the liner and place the tag on the correct location. 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 from +38°C to +54°C (+100°F to +130°F). Application at temperatures below 10°C (50°F) is not recommended

Confidex Carrier Tough™ can also be attached mechanically through the holes in the tag's structure with:

- Screws (size M3)
- Pop rivets (size 3mm)

When using mechanical attachment please add also washer with more than 9mm outer diameter like shown below. Also avoid using unnecessary force during the attachment.



## ORDER INFORMATION

**Product number:** 3000447

**Product name:** Confidex Carrier Tough™ M4QT

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

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