

# PRODUCT DATASHEET

## Confidex Ironside Plate™



Robust RAIN RFID tag with durable visual marking and excellent performance for challenging environments

### 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

NXP UCODE 8

#### Memory configuration

EPC 128 bit; TID 96 bit

#### EPC memory content

Unique 96bit EPC in every tag

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

On metal up to 10 m / 33 ft

On plastic up to 7 m / 23 ft

#### Applicable surface materials\*

Optimized for metal but works on any surface

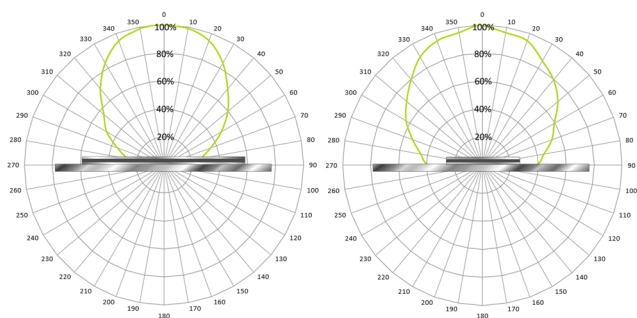
#### Attachment on curved surface

Label can be attached on a curved surface. Check installation instructions for more details.

\* Read ranges are theoretical values that are calculated for non-reflective environment. Different surface materials may have an effect on performance.

### RADIATION PATTERNS

Below radiation pattern is measured on metal. Pattern may be affected by the shape of the tagged item.



### MECHANICAL SPECIFICATION

#### Tag surface

Top: Aluminum with anti-corrosion coating

Backside: Stainless steel

#### Background adhesive

Standard product comes without adhesive. When background adhesive is ordered tag is delivered with high quality 3M VHB adhesive attached on the product.

#### Weight

68 g

#### Delivery format

80 pcs tags in a box

#### Tag dimensions

108 x 50.8 x 3.7 mm / 4.25 x 2 x 0.15"



Thickness with adhesive: 4.5 ± 0.3 mm / 0.18 ± 0.01"

### ENVIRONMENTAL RESISTANCE

#### Operating temperature

-35°C to +85°C / -31°F to +185°F

#### Peak temperature

+130°C / 266°F for 10min

#### Ambient temperature

-35°C to +85°C / -31°F to +185°F

#### Water resistance

IP68, tested for 5 hours in 1m deep water\*

#### 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
- 24h Salt water (salinity 10%) exposure
- 10min Sulfuric acid (10%, pH 2)
- 10min NaOH (10%, pH 13)

Acetone should be avoided.

#### Storage condition

1 year in +20°C / 50% RH

\*Vertical attachment is recommended to enable any possible water getting out faster. Performance may be slightly reduced right after prolonged water immersion for short period of time.

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 tag ensure the following

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

### Installation using background adhesive

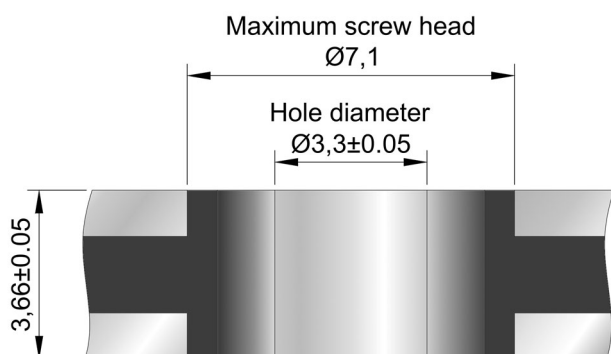
When mounting the tag with its adhesive, clean and dry the surface for obtaining the maximum bond strength. Typical cleaning solvents are heptane or acetone for oily surfaces or isopropyl alcohol for plastics. Do not use household cleaning solvents that contain oils. Carefully read and follow the manufacturer's 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 (>15 psi) and moderate heating up to +66°C (+150°F). Application at temperatures below 10°C (50°F) is not recommended. At room temperature, approximately 50% of the final strength is achieved in 20 minutes. Final bond strength is achieved in 72 hours.

### Installation using mechanical attachment

Mechanical attachment is recommended for the harshest of environments. Ironside Plate hole is designed for M3 screws and rivets. Hole is protected with metallic limiter for better tolerance against installation torque.

It is important that the screw/rivet head diameter does not exceed 7,1mm. Bigger head diameter would affect the performance of the tag.



Ironside Plate tolerates well different attachment positions but does provide slightly improved read range when there is metal left at both short ends of the tag.



## PERSONALIZATION OPTIONS

### Pre-encoding

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

### Laser engraving

- Customer specific layout including logo, text, numbers.

### Backside adhesive

- High quality 3M VHB adhesive attached on the product.

## ORDER INFORMATION

**Product number:** 3003806

**Product name:** Confidex Ironside Plate™ U8

For additional information and technical support, please contact Confidex

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