PRODUCT DATASHEET

Confidex Ferrowave Flag™

Versatile on metal label for item-level asset and part tracking with excellent performance.

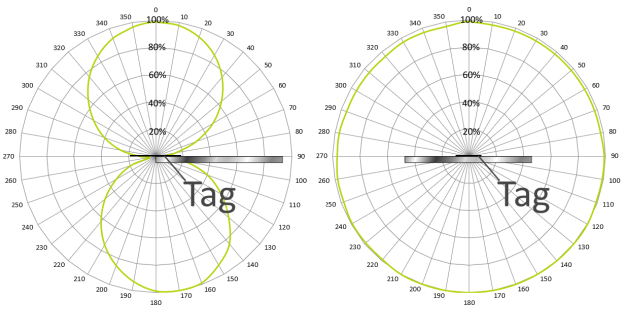
ELECTRICAL SPECIFICATION

Device type
UHF RFID / EPCglobal Gen2v2
Operational frequency
Global 865 – 928 MHz
IC type
Impinj Monza 4E™
Memory configuration
EPC 496 bit; User 128 bit; TID 96 bit
EPC memory content
Same EPC by default
Read range (2W ERP)*
On metal up to 12 m / 30 ft
Off metal up to 4 m / 13 ft
Applicable surface materials*
Works on all surfaces but optimized for metal
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 with maximum allowed operating power according to ETSI EN 302 208 (2W ERP). Read range is measured on 15x10cm metal plate. The asset shape and location of tag on the asset will influence the read range.

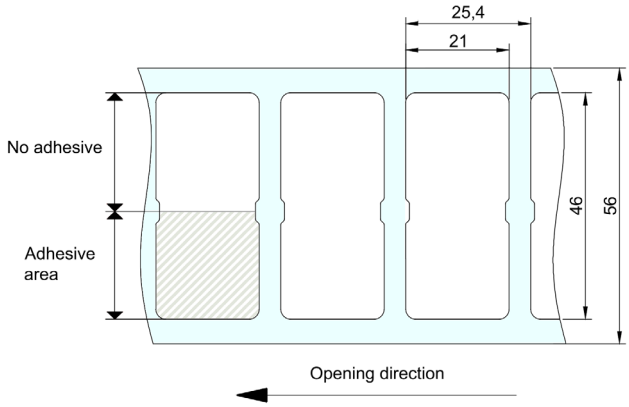
RADIATION PATTERN

Radiation pattern is heavily affected by the shape of the tagged asset. Testing in real environment is recommended to find the best orientation and location for the tag.



MECHANICAL SPECIFICATION

Label surface
White PET with good printability. Resin ribbon recommended for best durability
Background adhesive
Permanent adhesive for general purpose use
Weight
0,2 g
Delivery format
2000 pcs good labels on reel, bad ones marked with "XXX" printing.
Pitch on reel
25,4 mm / 1"
Reel core inner diameter
76 mm / 3"
Tag dimensions
46 x 21 x 0.2 mm / 1.81 x 0.83 x 0.01"



ENVIRONMENTAL RESISTANCE

Operating temperature
-35°C to +85°C / -31°F to +185°F
Water resistance
IP68
Washing resistance
Tolerates cleaning with standard solvents. Industrial pressure washing not recommended.
Chemical resistance
No physical or performance changes in:

- 168h Sulfuric acid (10%, pH 2)
- 168h Motor oil
- 24h Salt water (salinity 10%)
- 2h NaOH (10%, pH 13)
- 30min Acetone exposure

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.

PERSONALIZATION OPTIONS

Pre-encoding

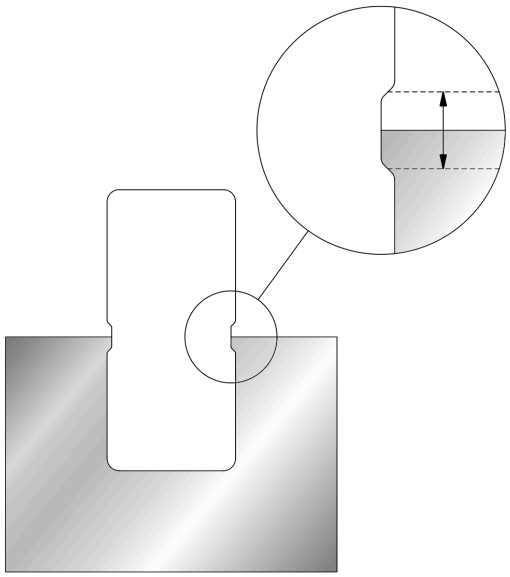
- Customer specific encoding of EPC or user memory. Locking permanently or with password.

Customized printing

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

INSTALLATION INSTRUCTIONS

For easier installation Ferrowave Flag has a shape that indicates the optimal position for the metal edge. When attaching the tag ensure that metal edge is within the indicated area for optimal performance.



For optimal attachment

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

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 +20°C to +30°C (+68°F to +86°F). Bond strength can be improved with firm application pressure. Application at temperatures below 10°C (50°F) is not recommended.

Standard polarization is along the tag's longest dimension. As the Confidex Ferrowave Flag™ uses metallic asset as part of the antenna the asset may also affect the polarization.

Performance of the tag will vary depending on the installation location. Therefore it is recommended to test the optimal location for the tagged asset. You may also contact Confidex for recommendations

Smallest recommended bending diameter of the Confidex Ferrowave Flag™ is 50mm. Smaller radius might have an effect on adhesion depending on the surface material.

ORDER INFORMATION

Product number: 3003441
Product name: Confidex Ferrowave Flag™ M4E

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