PRODUCT DATASHEET
Confidex Ironside Micro™

On-metal tag with square inch foot print for various metal asset tracking applications.

ELECTRICAL SPECIFICATION

Device type
RAIN RFID / EPCglobal Gen2v2
Operational frequency
Global 865-928MHz
IC options and memory configurations
Impinj M780™
- EPC 496 bit; User 128 bit; TID 96 bit

Impinj Monza 4QT™
- EPC 128 bit; User 512 bit; TID 96 bit

Impinj Monza 4E™
- EPC 496 bit; User 128 bit; TID 96 bit

EPC memory content
Unique number encoded as a default
Read range (2W ERP)*
M780
- On metal up to 7 m / 23 ft
- On plastic up to 2 m / 7 ft

M4QT / M4E
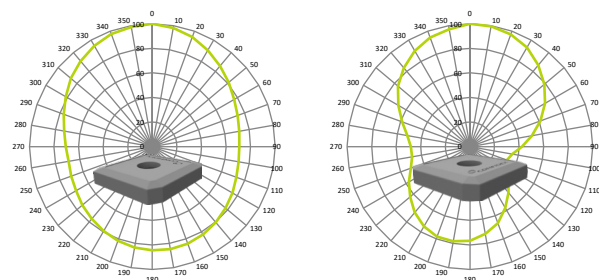- On metal up to 5 m / 16 ft
- On plastic up to 1 m / 3 ft

Applicable surface materials*
Works on any material but optimized for metallic items

* Read ranges are theoretical values that are calculated for non-reflective environment. Different surface materials may influence performance.

RADIATION PATTERNS

On metal

MECHANICAL SPECIFICATION

Tag materials
High quality engineering plastics
Weight
4,3 g
Delivery format
Single
Amount in box
500pcs
Dimensions
27 x 27 x 5,5 mm / 1.06 x 1.06 x 0.22 in

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
IP classification
IP68
Chemical resistance
No physical or performance changes in:
- 168h Motor oil exposure
- 168h Salt water (salinity 10%) exposure
- 5h Sulfuric acid (10%, pH 2) exposure
- 1h NaOH (10%, pH 13) exposure
- Acetone, contact should be avoided

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

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

INSTALLATION INSTRUCTIONS

Confidex Ironside Micro™ can be attached with several fixing methods:

1. 3M 300LSE high performance acrylic adhesive (not included by default)

When background adhesive is ordered the tag is delivered with adhesive attached. Clean and dry the surface for obtaining the maximum bond strength. 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). Installation at temperatures below 10°C (50°F) is not recommended.

2. Other adhesive fixings
    • Polyurethane adhesives
    • Epoxies
    • Silicone sealants

Structural adhesives such as 3M DP110 and SikaFast 5215 provide very high bond strength and resistance against mechanical stress. When tag is attached with structural adhesive, insert a layer of adhesive under the tag and press the tag on the surface. Increase the bond by adding extra sealant from the tag hole. Insert maximum 2mm layer of adhesive under the tag. Please contact adhesive supplier for exact fixing instructions.

3. Mechanical fixing
    • Screws (size M3)
    • Pop rivets
    • Plastic rivets (size 3mm)

Mechanical fixing is recommended to be used in every application that includes risk for high mechanical stress or low temperature during tag fixing. During fixing make sure there is no air gap left in between the metal surface and tag.
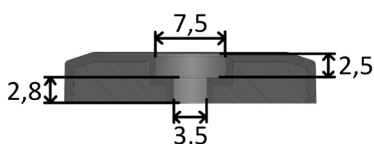
Polarization of Confidex Ironside Micro™ is in 45° angle to the Confidex logo like shown in following picture. This should be taken into account when linearly polarized reader antennas are used.

To achieve the optimal performance please locate the tag on metal like shown below. Ideally the tag is placed on large even metal surface with direct metal contact underneath the whole tag.

Leave metal here

This corner near to the metal edge

ORDER INFORMATION

Product number: 3004169
Product name: Confidex Ironside Micro™ M780

Product number: 3000448
Product name: Confidex Ironside Micro™ M4QT

Product number: 3000449
Product name: Confidex Ironside Micro™ M4E

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