PRODUCT DATASHEET

Confidex Ironside Classic™

The most durable tag for challenging industrial asset management applications

ELECTRICAL SPECIFICATION

Device type
RAIN RFID / EPCglobal Gen2v2
Operational frequency
Global: 865 - 928 MHz
ETSI: 865 - 869 MHz
FCC: 902 - 928 MHz
IC options and memory configuration
Impinj M780™
- EPC 496 bit; User 128 bit; TID 96 bit

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

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

Impinj Monza R6-P™
- EPC 96/128 bit; User 32/64 bit; TID 96 bit

EPC memory content
Unique number encoded as a default
Read range (2W ERP)*
M780 (Global)
- On metal up to 20 m / 65 ft
- On plastic up to 8 m / 26 ft

M4E / M4QT (Global)
- On metal up to 9 m / 30 ft
- On plastic up to 3 m / 10 ft

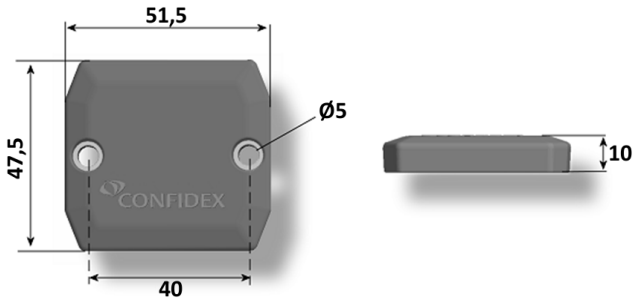
R6-P (ETSI and FCC)
- On metal up to 15 m / 50 ft
- On plastic up to 7 m / 23 ft

Applicable surface materials*
Works on any material but optimized for metal.

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

MECHANICAL SPECIFICATION

Tag materials
High quality engineering plastics. Surface thermoplastic elastomer.
Weight
22 g
Delivery format
Single
Amount in box
500pcs
Dimensions
51,5 x 47,5 x 10 mm / 2.03 x 1.87 x 0.39 in



ENVIRONMENTAL RESISTANCE

Operating temperature
-40°C to +85°C / -40°F to +185°F
Ambient temperature
-55°C (for 3h) to +105°C /-67°F (for 3h) to +221°F
Peak temperature
+125°C /+257°F 1h duration
IP classification
IP68
Weather ability
Excellent, including UV-resistance and sea water
Vibration resistance
- JESD22-B103B, service condition 2; vibration that is aligned with tag thickness (z-axis)

Chemical resistance
No physical or performance changes in:
- 168 hour Motor oil exposure
- 168 hour Salt water (salinity 10%) exposure
- 168 hour Sulfuric acid (10%, pH 2) exposure
- 24 hour NaOH (10%, pH 13) exposure

Generally good against: Methanol (moderate concentrations), ethanol (moderate concentrations), glycerine, ethylene glycol, consistent grease, most acids, bases and tensides such as sulfuric acid 96%, nitric acid 10%, NaOH 50%, soap solution 30%. Testing recommended for hydrocarbons and carboxylic acids. Acetone 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.

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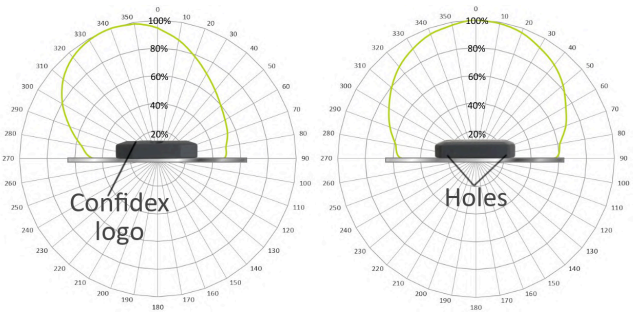
RADIATION PATTERNS



PERSONALIZATION OPTIONS

Pre-encoding

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

Customized laser engraving

- Customer specific layout including logo, text, numbers.

INSTALLATION INSTRUCTIONS

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

1. 3M 300LSE high performance acrylic adhesive

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. Structural adhesive

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 holes. Insert maximum 2mm layer of adhesive under the tag. Please contact adhesive supplier for exact fixing instructions.

3. Mechanical fixing
   - Screws (size M4)
   - Pop rivets (size 4mm)

Mechanical fixing is always recommended for applications that includes risk for high mechanical stress or low temperature during the fixing. Make sure there is no air gap left in between the metal surface and tag.

4. Adidtional fixing tools
   - Welding bracket

When the application is too demanding for adhesives, but the metal surface cannot be punched for screw or rivet fixing, welding the tag with special bracket is an option for attachment. Welding bracket is made of stainless steel and allows attachment on both flat and curved surfaces.

With all attachment methods the optimal performance is achieved when there is metal left above the tag. Tag orientation as shown with arrow should be considered when using linear reader antennas.

ORDER INFORMATION

Product number: 3004166
Product name: Confidex Ironside Classic™ M780

Product number: 3000319
Product name: Confidex Ironside Classic™ M4QT

Product number: 3000616
Product name: Confidex Ironside Classic™ M4E

Product number: 3003443
Product name: Confidex Ironside Classic™ MR6-P ETSI

Product number: 3003444
Product name: Confidex Ironside Classic™ MR6-P FCC

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

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