

PRODUCT DATASHEET

Confidex ESD On Metal Label™



Optimized for ESD plastics with excellent performance and durability

ELECTRICAL SPECIFICATION

Device type

UHF RFID / EPCglobal Gen2v2

Operational frequency

ETSI 865 – 869 MHz
FCC 902 – 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

Applicable surface materials*

All surfaces, optimized for ESD plastics

Attachment on curved surface*

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

Read range (2W ERP)*

See table below. Note that ETSI tag is readable also on FCC frequency band.

Surface	On ETSI frequency		On FCC frequency	
	ETSI Tag	ETSI Tag	ETSI Tag	FCC Tag
Metal	9m / 30ft	4m / 13ft	9m / 30ft	9m / 30ft
ESD Plastic	7m / 23ft	4m / 13ft	7m / 23ft	7m / 23ft
Plastic	4m / 13ft	2m / 7ft	6m / 19ft	6m / 19ft
Liquid container	5m / 16ft	2m / 7ft	5m / 16ft	5m / 16ft

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

MECHANICAL SPECIFICATION

Label surface

White PET with good printability. Resin ribbon recommended for best durability

Background adhesive

High tack adhesive with excellent adhesion to all surfaces including ESD plastics

Weight

1,5 g

Delivery format

300 pcs good labels on reel, bad ones marked with “XXX” printing.

Pitch on reel

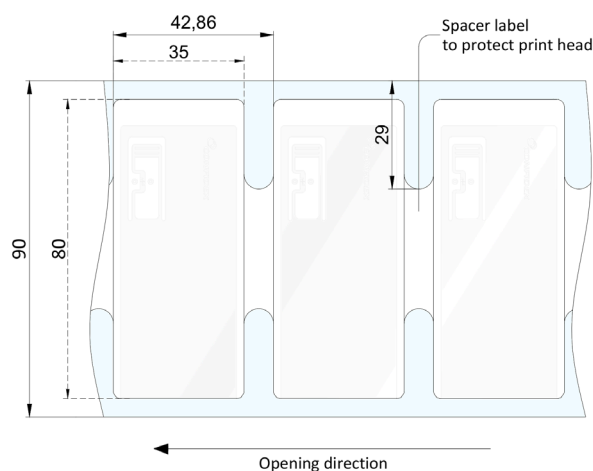
42,86 mm / 1.67”

Reel core inner diameter

76 mm / 3”

Tag dimensions

80 x 35 x 1.2 mm / 3.15 x 1.38 x 0.047”



ENVIRONMENTAL RESISTANCE

Operating temperature

-35°C to +85°C / -31°F to +185°F

Peak temperature

+110°C / 230°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. Printing durability can be improved with optional protective film.

Chemical resistance

No physical or performance changes in:

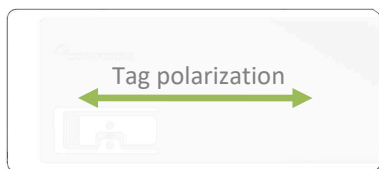
- 168h Sulfuric acid (10%, pH 2) exposure
- 168h Motor oil exposure
- 168h Salt water (salinity 10%) exposure
- 30min NaOH (10%, pH 13) exposure

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.

INSTALLATION INSTRUCTIONS



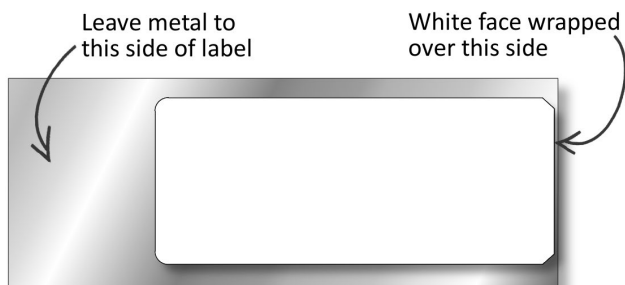
When attaching the label ensure the following

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

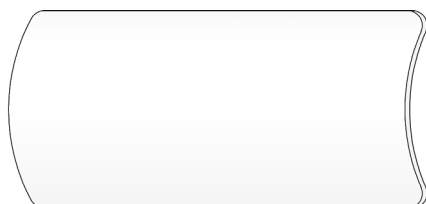
When mounting the label with its adhesive, clean and dry the surface for obtaining the maximum bond strength. Typical cleaning solvents are heptane or acetone for oily surfaces or isopropyl alcohol for plastics. Do not use household cleaning solvents that contain oils. Carefully read and follow the manufacturer’s precautions and directions for use when working with solvents.

Ideal application temperature is from +21°C to +38°C (+70°F to +100°F). Bond strength can be improved with firm application pressure and moderate heating up to +54°C (+130°F). Application at temperatures below 10°C (50°F) is not recommended.

Optimal read range is achieved when label is attached close to the edge of metal asset, like shown in below picture.



Smallest recommended bending diameter of the Confidex ESD On Metal Label™ is 100mm. For optimal performance please bend the label in the orientation shown below.



PRINTER COMPATIBILITY

The Confidex ESD On Metal Label is tested and verified to work with the following printers:

- Zebra ZT411 On Metal
- Zebra ZT410 Silverline
- Sato CL4NX
- Printronix Auto ID T6000e
- Printronix Auto ID T4000

For printing instructions please contact Confidex Ltd.

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.

Over-lamination

- Pre-printed labels may be protected with optional protective PET film on top of the label.

ORDER INFORMATION

Product number: 3003354

Product name: Confidex ESD On Metal Label™ 80x35mm M4E ETSI

Product number: 3003359

Product name: Confidex ESD On Metal Label™ 80x35mm M4E FCC

Protective over-lamination: Contact Confidex for item details.

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

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