ISBC

Make identification unique

ISBC Tags Reflect42

RFID-tag for metal object identification

www.isbc-rfid.com

In general, metal objects near RFID tag make problems for reading. As a rule, reading distance could be reduced extremely; sometimes tag could stop to work. The RFID tag **designed by Russian company ISBC** make this «negative effect» from metal «positive».
ISBC Tags™ Reflect42 uses metal as a «booster shield» to redirect electromagnetic waves to core of its. We offer our customers perfect reading distance – up to **42 meters** while its location on metal surfaces.

ISBC Tags™ Reflect42 features:

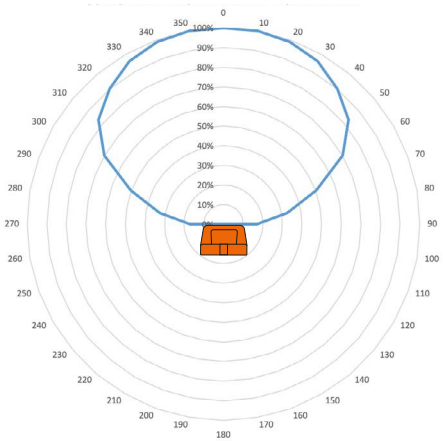
- **IP69K** - high protection against dust and moisture,additional protection against high temperature and jets of high pressure water
- Extreme **mechanical durability**
- **Chemicals resistance** (mineral & vegetable oil, petroleum, salt mist)
- Option - **fine tuning for regional usage** to work up to 42 meters, but **wide frequency range** to work worldwide with stable 15 meters of reading distance
- **Lifetime -** More 10 years in case of normal usage

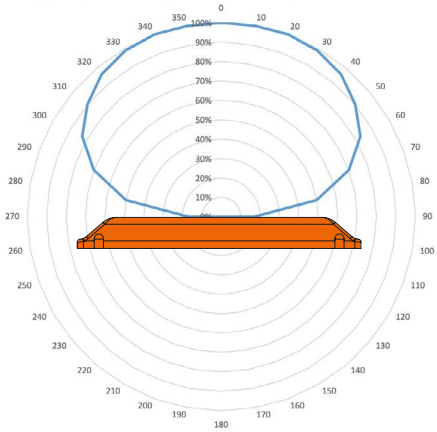
ISBC Tags™ Reflect42 could improve many processes at many kinds of applications like:

- **Industry** and **logistics**
- **Railway**, **trucks** and **containers** identification
- **Automation of technological processes** including vehicle manufactures
- Telecommunication **expensive device registration and inventory**

Radiation Patterns

On Metal





Technical specification

UHF RFID tag Reflect42 designed for worldwide usage to work up to 15 meters of stable reading while locating on metal surfaces. Tag operates on frequency range 860 – 930 MHz. Optionally it could be fine-tuned to have an excellent reading distance at concrete region rules, according to Radio Regulation committee:

- **Russia**, **Europe**, **Africa**, **India** 865 MHz – 868 MHz
- **America** 902 MHz – 928 MHz, **China** 920 MHz – 924 MHz
- Other regional tuning up to request.

ELECTRONIC

RFID IC & memory	**NXP UCODE8** **NXP UCODE 8m** **NXP UCODE DNA** **NXP UCODE City** **NXP UCODE Track** **NXP UCODE 7** **NXP UCODE 7m** **NXP UCODE 7xm (2k)**
Anti-collision	Yes
Reading distance (on metal surface)	· **Theoretical distance* of stable reading up to 25 m** · **Experimental distance** of stable reading up to 42 m, maximum reading distance up to 54 m** Pay attention. Reading distance depends of many factors, including type of material of surface and its linear sizes. ** 1 Wt measure station with antenna 8.5 dBi ** 2Wt ERP (tests with RFID reader FEIG Electronic LRU1002 UHF EU with 9 dBi antenna)

PHYSICAL AND PERSONALIZATION OPTIONS

Material	Polypropylene
Size, weight	138.4 x 25.6 x 14.7 mm, 33 gr.
Installation	· by screws (holes 5.2 mm dia) · with glue / adhesive · clamp
Colors	Orange, grey
Personalization by customer request	· electronical encoding · laser engraving, durable inkjet logo · database uploading

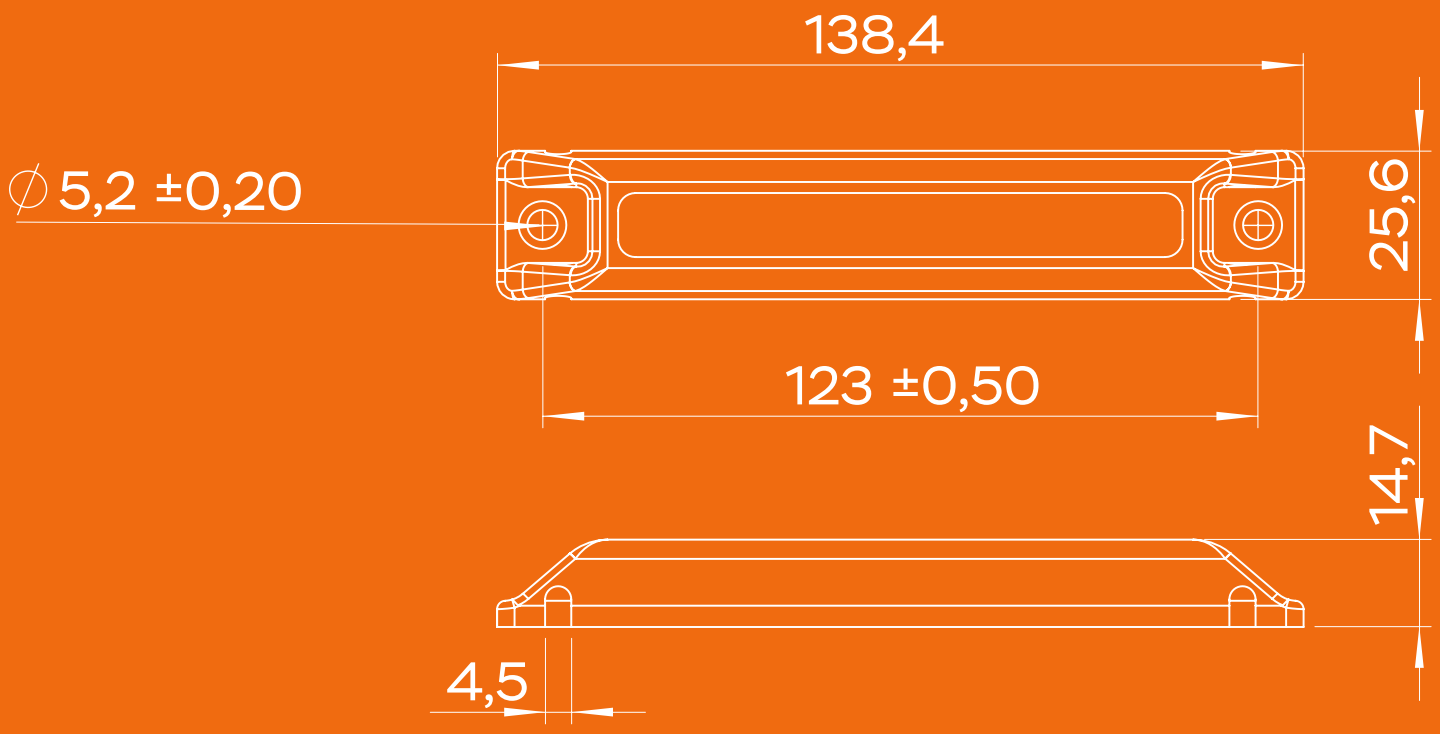
CHEMICAL AND CLIMATIC RESISTANCE

- high resistance to UV radiation;
- high resistance to acids, alcohol, vegetable and mineral oils, petroleum;
- housing material retains its characteristics at high temperatures, in conditions of high humidity, when impacted to salt mist;
- environmental stress crack resistance

THERMAL CONDITIONS

Storage	From -55°C to +125°C
Operating	From -25°C to +85°C stable reading distance From -35°C to +125°C still work, but the reading distance could be reduced. To be sure, please test in your application conditions.
Extremal operating tests	· heating up to +100°C boiling (about 10 minutes) · ice frosting on -35°C climatic chamber (days)

Technical drawing



All linear dimensions are in millimeters

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«ISBC RFID» Technologies of RFID Identification
(Research and design, Manufacturing, Sales)

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