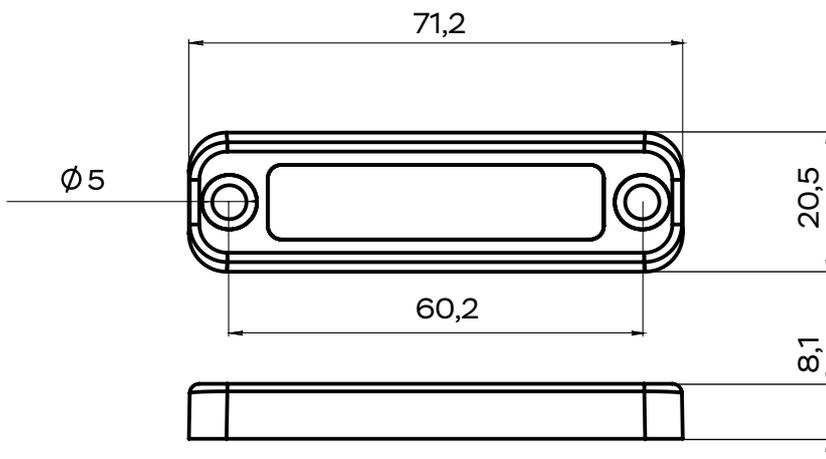


Technical drawing



All linear dimensions are in millimeters

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™ Reflect20** uses metal as a «booster shield» to redirect electromagnetic waves to core of its. We offer our customers perfect reading distance – up to **20 meters** while its location on metal surfaces. The tag is passive (without batteries), does not require maintenance.

ISBC Tags™ Reflect20 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 20 meters, but **wide frequency range** to work worldwide with stable 16 meters of reading distance
- **Lifetime** - More 10 years in case of normal usage

ISBC Tags™ Reflect20 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**

Technical specification

UHF RFID tag Reflect20 designed for worldwide usage to work up to 16 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 – 925 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)	<ul style="list-style-type: none">• Theoretical distance* of stable reading up to 16 m• Experimental distance** of stable reading up to 20 m, maximum reading distance up to 30 m <p>Pay attention. Reading distance depends of many factors, including type of material of surface and its linear sizes.</p> <p>** 1 Wt measure station with antenna 8.5 dBi</p> <p>** 2Wt ERP (tests with RFID reader FEIG Electronic LRU1002 UHF EU with 9 dBi antenna)</p>	

PHYSICAL AND PERSONALIZATION OPTIONS

Material	Polypropylene
Size, weight	71,2 x 20,50 x 8,10 mm, 8.40 g
Installation	<ul style="list-style-type: none">• by screws• with glue / adhesive• with nylon ties
Colors	<ul style="list-style-type: none">• orange, grey• any color (on order)
Personalization by customer request	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• heating up to +100°C boiling (about 10 minutes)• ice frosting on -35°C climatic chamber (days)