

Activator for RFID Active DOT tags

TAG ACTIVATOR
Ref. ACIOM75B



- 👁️ **Activates tags** in the **DOT** product line
- 👁️ Covers zones with 0.5 to 20-meter radius
- 👁️ **High precision** stability and reliability (+/- 7% of activation radius)
- 👁️ **Very resistant to influence** from **surrounding environment** and **metal**
- 👁️ Compatible with TAG DOT and PUCK DOT series

TAG ACTIVATOR activates RFID emission on DOT series tags using its low-frequency magnetic field (125 KHz), and transmits its ID number along with a command code.



Principle

Architecture for the **DOT identification system** is comprised of the TAG ACTIVATOR module, emitting a stable and precise magnetic field periodically at low-frequency (LF), and the DOT TAG, whose long-range UHF RFID emission is activated in response to the magnetic field. All RFID receivers in the standard ELA Innovation product line can collect emissions from activated DOT TAGS.

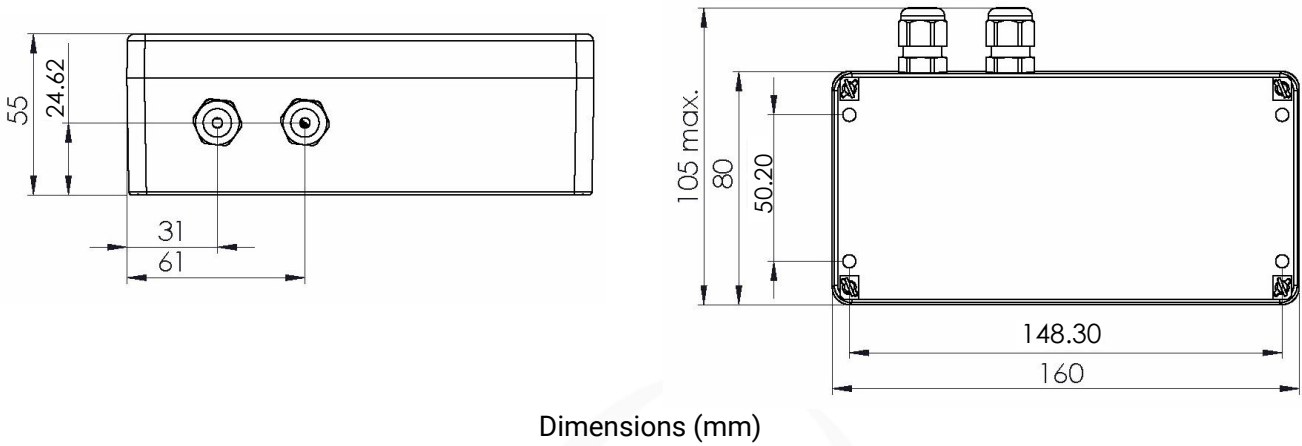
Two omnidirectional, 360°, LF antenna models are available for **TAG ACTIVATOR**: the medium range ACTIVATOR ANT reaching up to about 7 meters, and the long-range ACTIVATOR PANEL ANT for range up to 20 meters.

1 TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS

| | |
|-----------------------|---|
| Power | 12 or 24 VDC |
| Current draw | @12V – 25°C: 35mA continuous without emission @12V – 60°C: 1A continuous MAX @12V – 25°C: 4A in App (40 ms) |
| Frequency | 125 KHz |
| Wireless range | 4 settings levels: Proximity – Minimum – Medium - Maximum |
| Operating temperature | -20°C to +60°C |
| Configuration | EDOT software with SETUP CABLE accessory (ref. ACIOM89) |
| Antenna connectors | Screw-terminal on internal board, 2 x 2 points (plug-in terminal block, 3.81 thread) |
| Power connector | Screw-terminal on internal board, 1 x 4 points, 2 cable glands |
| Casing | White ABS: 160 x 80 x 55 mm |
| Weight | 230 g |
| Protection index | IP65 - Protected against water jets |
| Standards | EN 301 489 – 3: 2002 V1.4.1, EN 300 220 – 2007: V2.1.2, CE, RoHS |
| Interfaces | RS-232 TTL port for configuration Logical input for triggered emissions |
| Accessories | 2 x 2-point plugs for terminal block - Included 1 x 4-point plug for terminal block - Included Internal antenna – included for ACIOM123 12V external DC POWER2 (12V - 2.2A) - not included ACTIVATOR ANT external antenna (ref. ACIOM76) – not included ACTIVATOR PANEL ANT long-range external antenna Ref. ACIOM113) – not included |

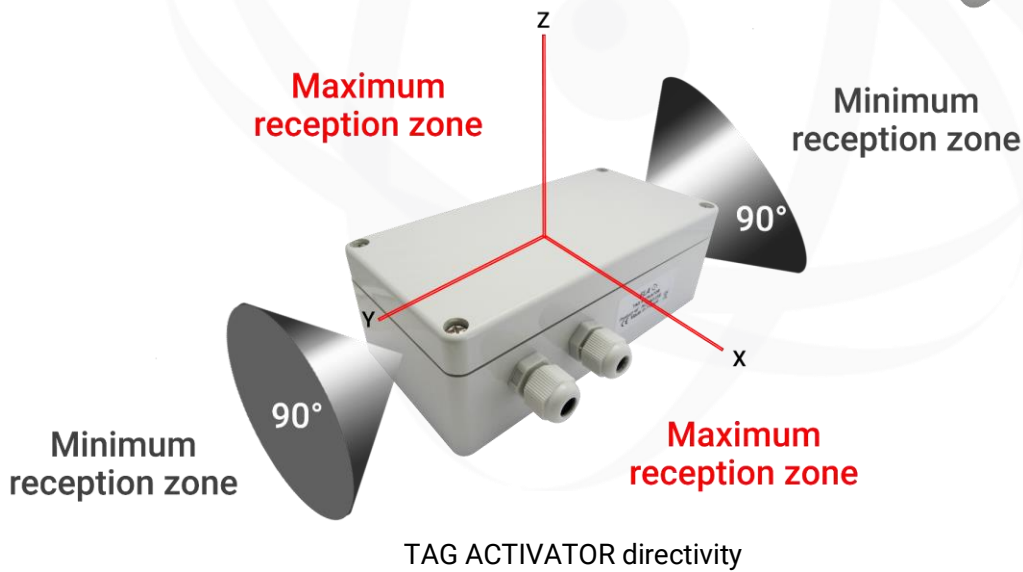
2 MECHANICAL SPECIFICATIONS



3 AVAILABLE VERSIONS

3.1 TAG ACTIVATOR STANDALONE / ACIOM123

- ⑥ 1 integrated LF antenna, model ACTIVATOR ANT / ACIOM76
- ⑥ For controlling a 2nd external LF antenna
- ⑥ Directivity

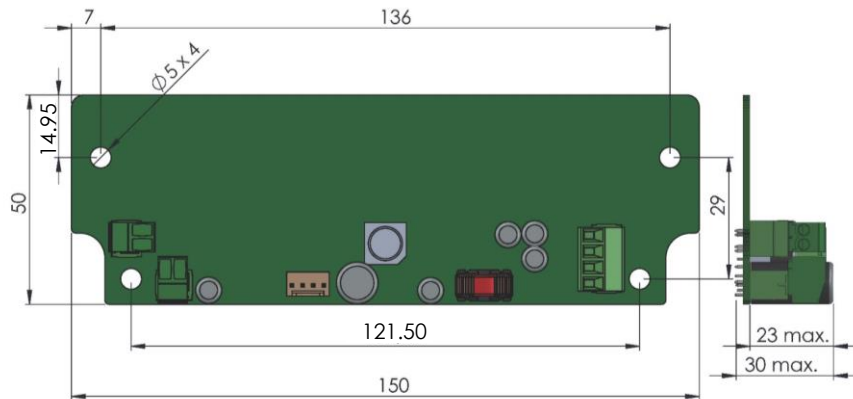


3.2 TAG ACTIVATOR OEM / ACIOM43

- ⑥ Electronic board without casing
- ⑥ 1 integrated LF antenna
- ⑥ For controlling a 2nd LF antenna
- ⑥ Weight: 40 g



🔍 Mechanical dimensions:

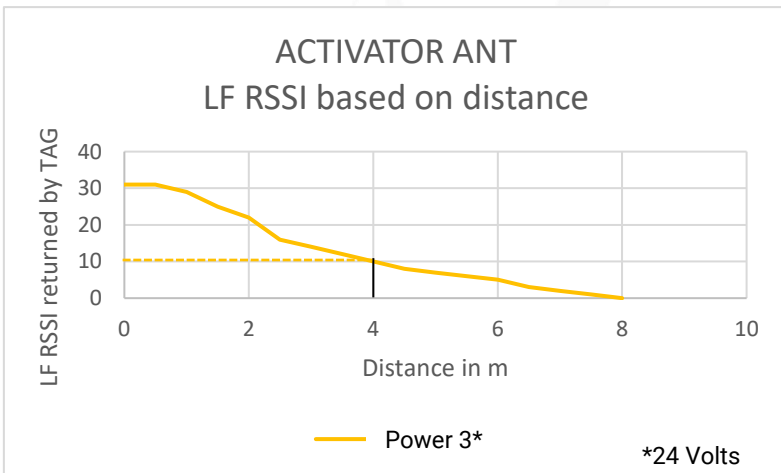


4 ACCESSORIES

4.1 ACTIVATOR ANT / ACIOM76



4.1.1 Low-frequency activation distance



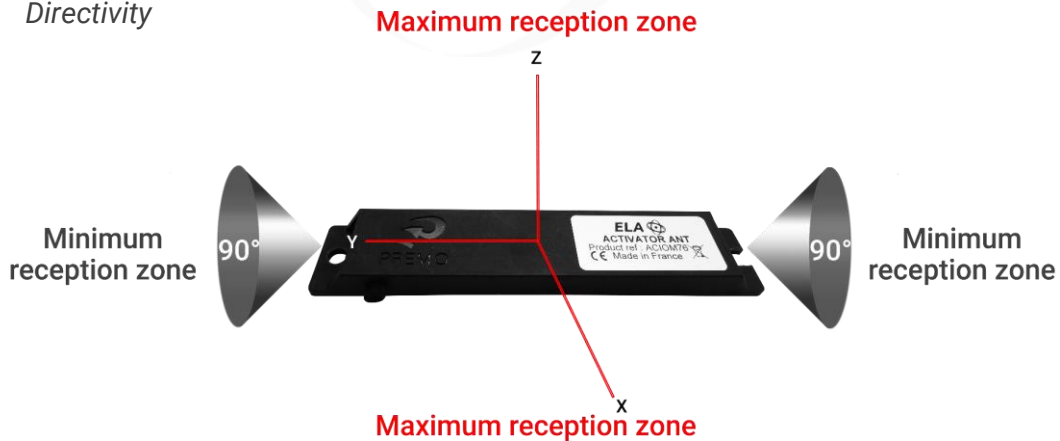
Sample calculation of LF RSSI level for ACTIVATOR ANT

Adjustment level of magnetic LF field range
Power 3*: Max from 0 to 7 m

Sample RSSI LF value returned by badge at 4 meters
Power 3*: 10

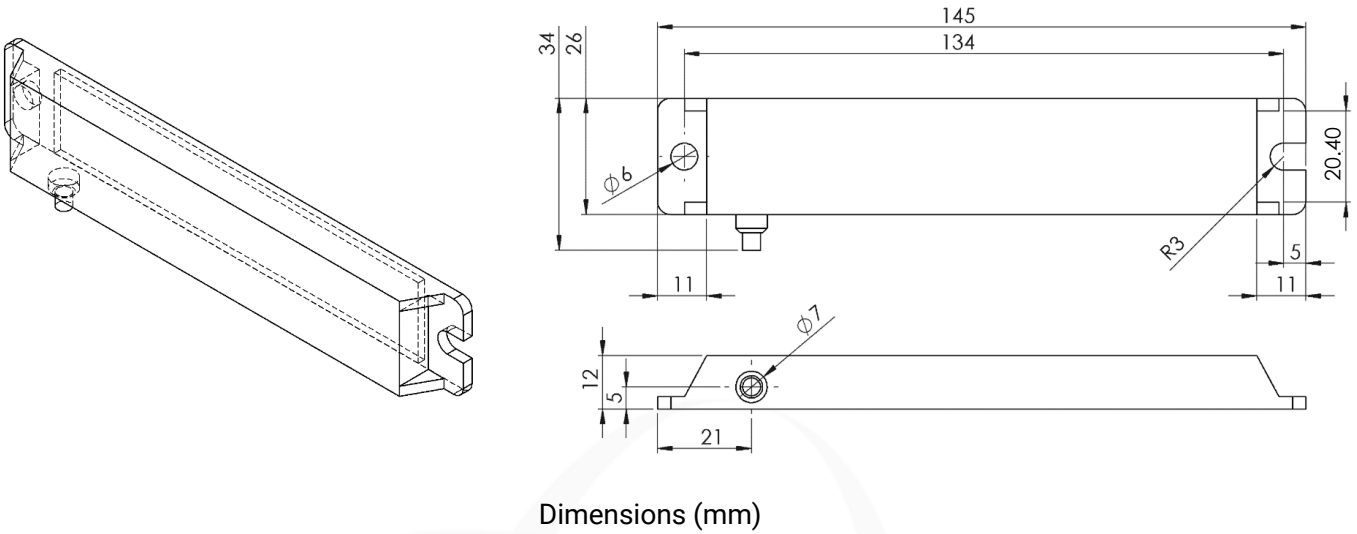
* Power curve 3 available only for ACTIVATOR powered by 24 VDC
 RSSI: LF signal strength received by badge
 Maximum values measured in unconstrained laboratory conditions

4.1.2 Directivity

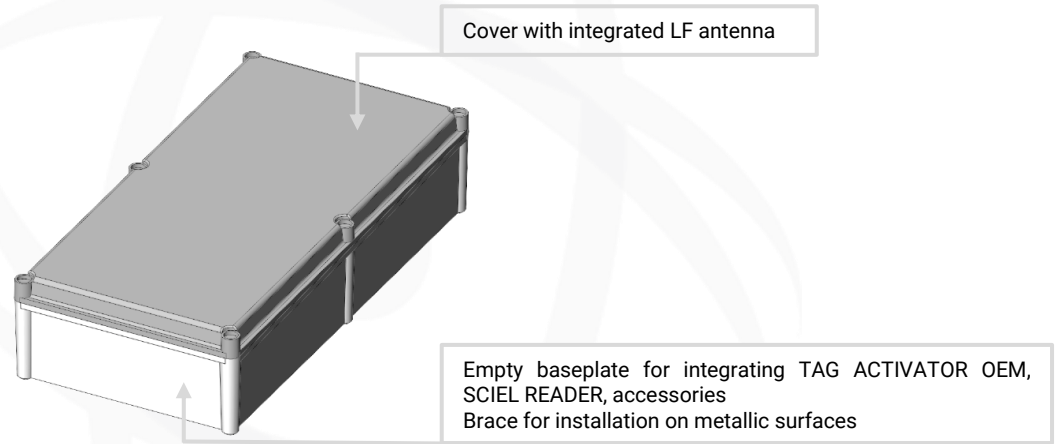


ACTIVATOR ANT directivity

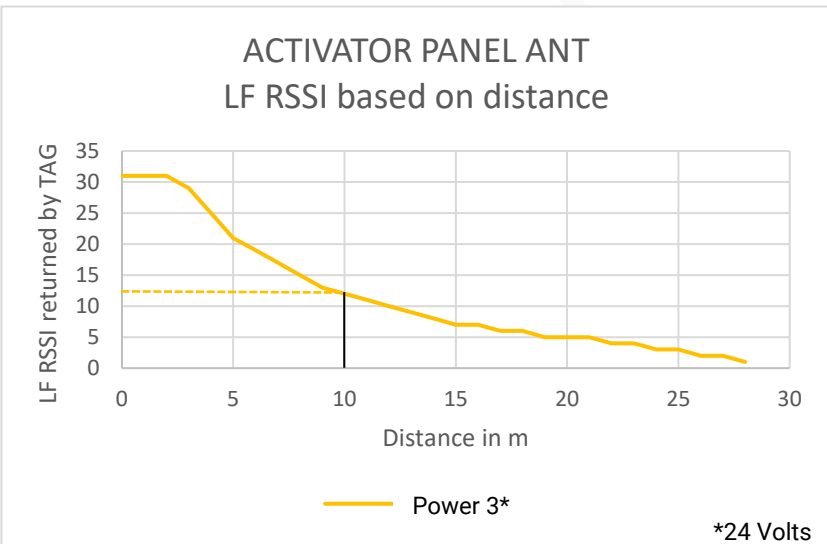
4.1.3 Mechanical dimensions



4.2 ACTIVATOR PANEL ANT



4.2.1 Low-frequency activation distance



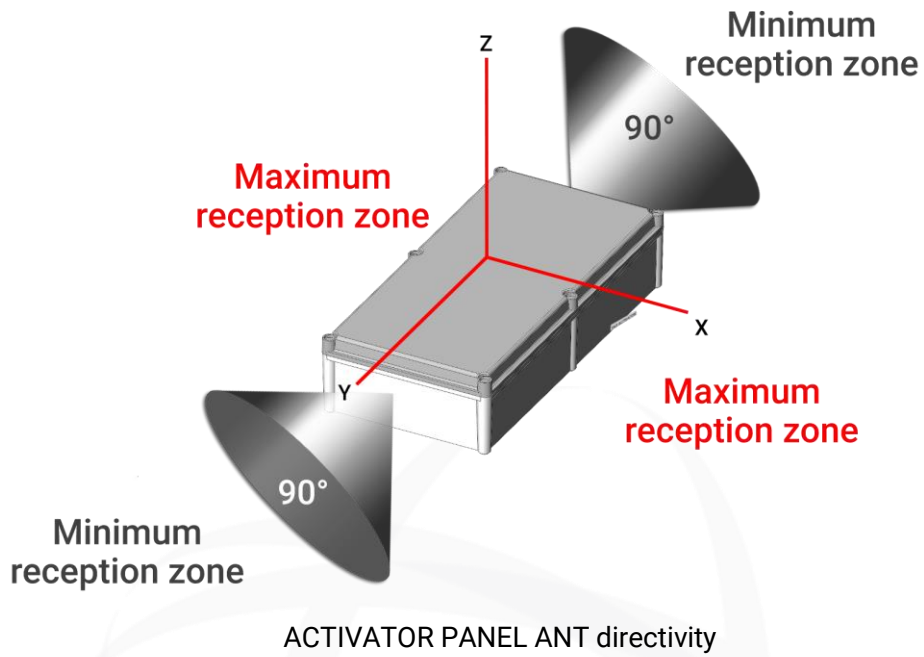
Sample calculation of LF RSSI level for ACTIVATOR PANEL ANT

Adjustment level of magnetic LF field range
Power 3*: Max from 0 to 28 m

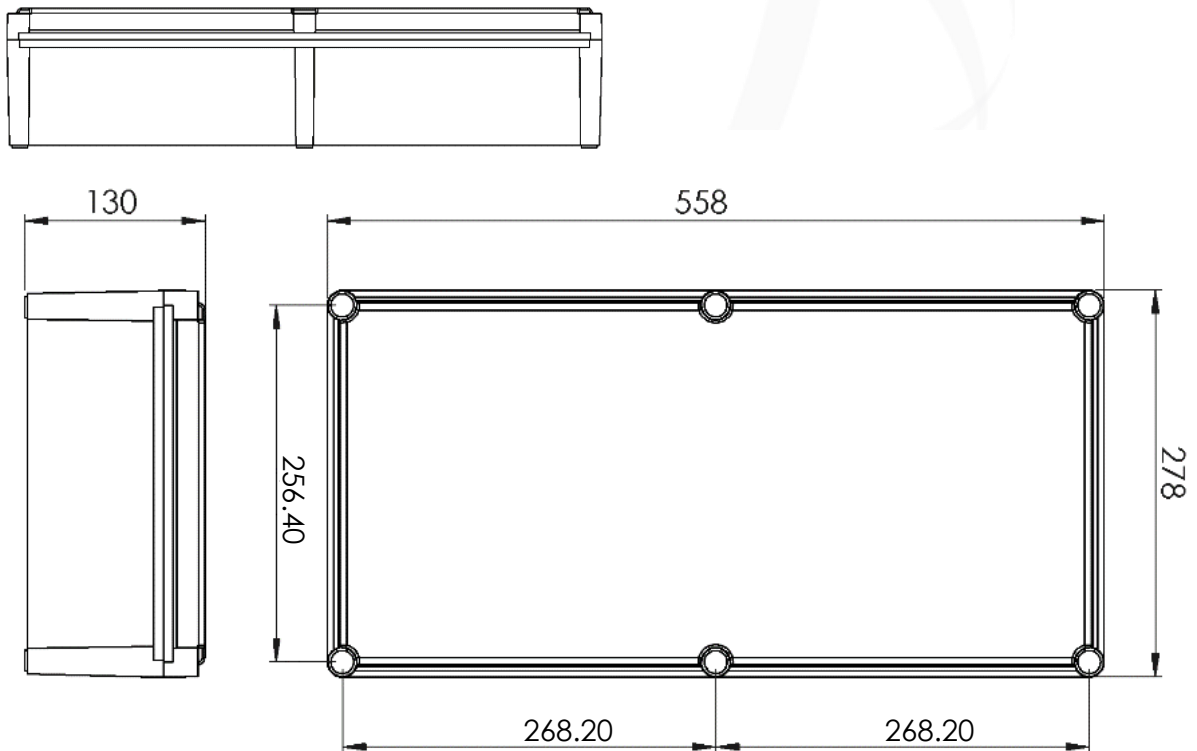
Sample RSSI LF value returned by badge at 10 m
Power 3*: 12

* Power curve 3 available only for ACTIVATOR powered by 24 VDC
RSSI: LF signal strength received by badge
Maximum values measured in unconstrained laboratory conditions

4.2.2 Directivity



4.2.3 Mechanical dimensions



Dimensions (mm)

5 REFERENCES AND VERSIONS

| MODEL | P/N REFERENCE | SPECIFICATIONS |
|---|--------------------------|--|
| <u>TAG ACTIVATOR STANDALONE</u> | ACIOM123B | Electronic DOT badge activation module; 1 integrated antenna; 2 antenna outputs with cable glands; 12 or 24 VDC power supply; IP65 waterproof polycarbonate casing, 160 x 100 x 60 mm; configuration with USB setup cable and EDOT software |
| <u>TAG ACTIVATOR</u> | ACIOM75B | Version in casing, without antenna |
| <u>TAG ACTIVATOR OEM</u> | ACIOM43B | Electronic board version without casing, with mounted antenna |
| <u>TAG DOT</u> | IDF2470 | LF and UHF 433 MHz dual-band activatable badge; ABS casing, 60 x 40 x 18 mm; user-replaceable battery; key ring or neck strap loop; LED activation indicator; configuration using SCIEL PROG IR tool and EDOT software |
| <u>PUCK DOT</u> | IDF2570 | LF and UHF 433 MHz dual-band activatable tag; long-range UHF emission up to 150 meters; long battery life; LF detection range from 7 to 15 meters, depending on the antenna; white DELRIN casing; IP68 waterproof; diameter 56 mm; thickness: 19 mm; 2 mounting holes; configuration with SCIEL PROG IR tool and EDOT software |
| <u>ACTIVATOR ANT</u> | ACIOM76 | Activation antenna with 5-meter cable; 2-point terminal connector; dimensions 145 x 26 x 12 mm; 2 mounting holes; black ABS casing, potted, waterproof |
| <u>ACTIVATOR PANEL ANT</u> | ACIOM113 | DOT Activator Antenna; long-range; ABS casing; dimensions 130 x 278 x 558 mm; 4 antenna adjustment switches; IP67 waterproof; 2 cable glands; 1 SMA connector for RFID antenna |
| <u>SETUP CABLE</u> | ACIOM89 | USB configuration cable for Tag ACTIVATOR |