# Microwave Bistatic Sensors
# Forteza FMC Series

## WHAT IS IT?

The sensors are intended for the protection of direct perimeter sectors, the surrounding territory of the object. An intruder will be detected before the entering in to the important object territory. Security personnel can respond immediately to violations and stop the intruder before he committed a crime.

## WHERE IS IT USED?

The sensors can be used to protect industrial facilities, airports, sites of force structure, power plants, private premises, etc.

## HOW DOES IT WORKS?

The principle of operation is based on generation of an invisible volumetric detection zone between the transmitter and the receiver. When the intruder is crossing the detection zone, the receiver registers its alteration and generates the alarm.

## WHY TO CHOOSE IT?

USER FRIENDLY - The sensors are easy to mount and adjust and do not require significant expenses on seasonal maintaining.

HIGH QUALITY – We use up-to-date electronic components, which has mean lifetime up to 8 years. Each piece of products is subjected to 100% final inspection.

HIGH EFFECTIVE ALGORITHMS – We use up-to-date effective algorithms for digital signal processing. As a result, we achieved the maximal interference immunity and reliability of the signal processing. The sensors are immune to the influence of rain, snow, fog, lightning, icing, solar radiation, electromagnetic field up to 500 kV, vegetation, birds and animals.

HIGH LEVEL OF INTEGRATION - We make it easy to combine our sensors with many modern integrated security systems and popular control panel. We use traditional dry relay contacts as well as RS-485 and USB interfaces to control the sensors and to transmit the alarm signal.

## THE PRINCIPLE OF OPERATION



## PERIMETER PROTECTION OF THE OBJECT



## INSTALLATION VARIANTS

**TECHNICAL SPECIFICATIONS**
**is available on our website**
www.forteza.com or www.forteza.eu

# Microwave Bistatic Sensors
# Forteza FMC 24 Series
FMC 24 (50m), FMC 24 (100m), FMC 24 (200m)

*MADE IN LITHUANIA*

CE

## DISTINCTIVE FEATURES:

Sensor can be used in many countries all over the world without getting approval for frequency use.

Minimize the influence of different types of interference.

Narrow detection zone and make it possible to use the sensors on different sites.

**GHz** Operation on 24.050-24.250 GHz provide narrow detection zone and make it possible to use the sensors on different sites.

The easiest configuration using control units on-board of the Rx and Tx does not require high qualification of stuff. Screwdriver enough for configuration.

More accurate configuration of sensors using special software (under Windows or Android) via USB or wirelessly via bluetooth allows to set the optimal operation mode, also remotely from the guard room via RS-485 interface.

4 channels of sensors eliminate the influence of adjacent sensors. Like this it is possible to put several sensors near each other.

The sensor is successfully used on outdoor perimeter sectors more than 5 years free from buildings and big vegetation. The sensor assures reliable protection of the site under control.

Improved design and signal processing algorithms used to provide the reliable detection of the intruder and high interference immunity.

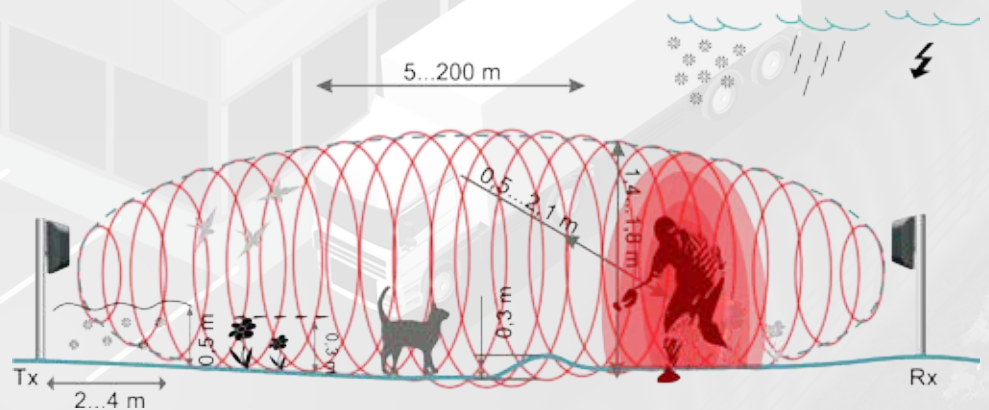### NO FALSE ALARM ON:

### SENSOR COMPONENTS:

## THE PRINCIPLE OF OPERATION

5...200 m

0,5...2,1 m

1,4...1,8 m

0,5 m

0,3 m

Tx  2...4 m

Rx

## DIMENSIONS OF THE DETECTION ZONES OF THE SENSORS FMC 24

FMC 24 (50 m)  zone length 50 m.

FMC 24 (100 m)  zone length 100 m.

FMC 24 (200 m)  zone length 200 m.
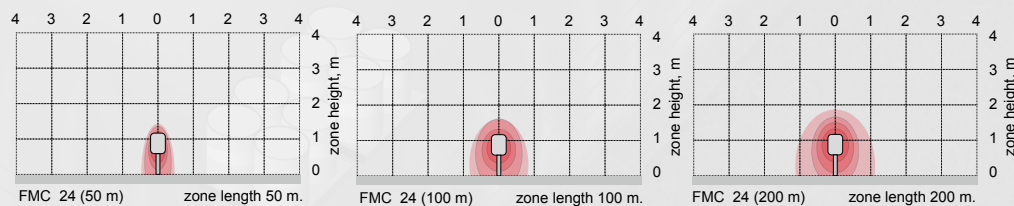
## MAIN SENSORS SPECIFICATIONS

| Specification | FMC 24 (50m) | FMC 24 (100m) | FMC 24 (200m) |
|---|---|---|---|
| Operational frequency | 24.050-24.250 GHz | | |
| Range | 5…50 m | 10…100 m | 10…200m |
| Width of the detection zone | 0,5…1 m | 0,7…1,5 m | 0,7…2,1 m |
| Height of the detection zone | 0,8…1,4 m | 1…1,6 m | 1…1,8 m |
| Supply voltage | 9…30 V DC | | |
| Current consumption | 45 mA (Tx 10 mA, Rx 35 mA) | | |
| Detection probably | not less than 0,98 | | |
| Operational temperature | minus 40…+65°C | | |
| Housing protection level | IP-55 | | |
| Alarm output | NC relay contacts (100 Ohm) | | |
| Interfaces | RS-485, Bluetooth (using RS-BL conventer) | | |
| Dimensions | 207x133x50 mm | | |
| Channels | 4 independent channels | | |