

TECHNICAL PERIMETER SECURITY SOLUTION

PERIMETER PROTECTION SENSORS

QUICKLY DEPLOYABLE TECHNICAL PERIMETER SECURITY SOLUTIONS

SECURITY LIGHTING

CONTROL PANELS

ALARM MONITORING AND CONTROL SYSTEM

ADDITIONAL EQUIPMENT

CATALOGUE

ABOUT US

SECURITY SENSOR is your fundamental perimeter security system!

Security Sensor specializes in development and production of Intrusion Detection Systems and provides complete solutions for perimeter protection of any objects.

Our products are made of the best components from the USA, Germany and Russia.

A wide range of the field-proven devices based on the state-of-the-art technologies provides unprecedented protection against intrusion to the site. Our equipment reliably protects objects in different climatic conditions from the tropical climate of the Equator to the harsh northern regions of Russia.

Security Sensor has been guarding more than a thousand objects from small private residences to industrial and corporate territories for over 20 years.



IS THE COMPANY TRADE MARK

OUR MISSION

Security Sensor`s mission is to provide the best solutions and advanced technologies, as well as unparalleled support of partners to ensure the safety and security.

OUR GUARANTEE

The perfect quality of our products, tested through the years, optimal integration solutions and professional training of partners are a reliable foundation for building a high-quality perimeter protection system.

Our goal is to provide comprehensive technical support to the client from design to delivery of the perimeter security and control system.

By providing state-of-the-art technologies, a wide range of perimeter security equipment (microwave, infrared and vibration sensors) and integrated monitoring and control systems, Security Sensor provides a solid foundation for long-term cooperation.

The Security Sensor reputation is built together with you, our partners.

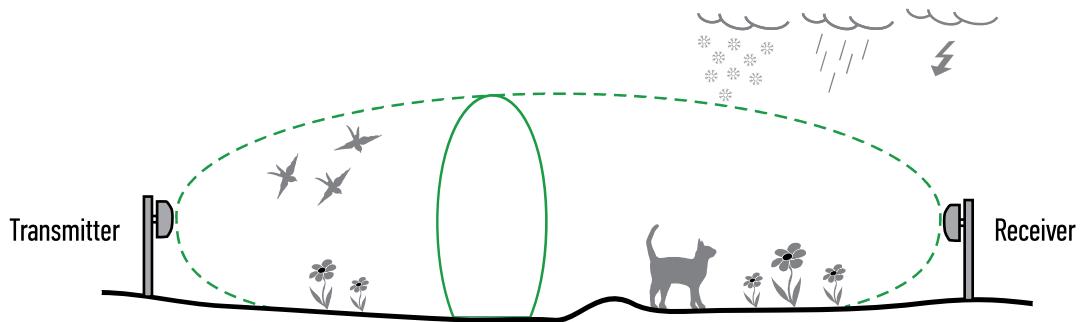
COOPERATION WITH US IS EASY AND PROFITABLE!

SECURITY SENSOR IS YOUR RELIABLE PARTNER

MICROWAVE BISTATIC SENSORS

The sensors are intended for the protection of direct perimeter sectors. The sites include industrial facilities, airports, sites of force structure, power plants, private premises, etc.

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.



Features of Microwave Bistatic Sensors

Taking into account many years of operation of the sensors we can mark their high detection probability and good interference immunity. The sensors are easy to mount and adjust and do not require significant expenses on seasonal maintaining.

The sensors are immune to the influence of rain, snow, fog, lightning, icing, solar radiation, electromagnetic field up to 500 kV, vegetation, small birds and animals.

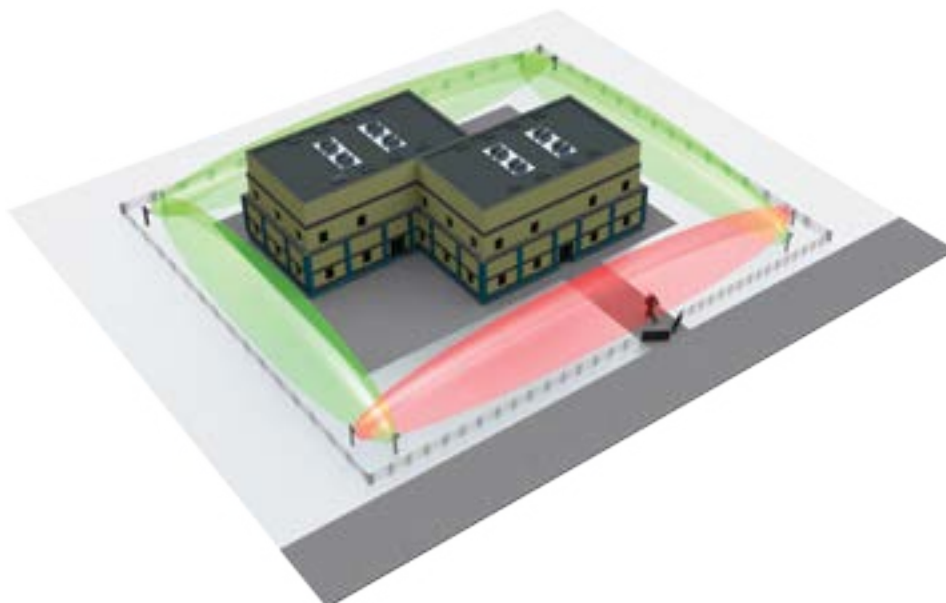
The wide choice of models differing in range, frequency and operational temperature allows to select the optimal variant for the perimeter protection in different climatic conditions.

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

We use up-to-date effective algorithms for digital signal processing. Many years of manufacture and operation of our sensors allowed us to analyze the reliability of the equipment and correct the algorithms. As a result we achieved the maximal interference immunity and reliability of the signal processing.

We do not stop. We develop new functional which will increase the reliability and comfort of work.

FOR NOW THESE ARE THE MOST POPULAR SENSORS FOR PERIMETER PROTECTION



BARRIER-M50, BARRIER-M100, BARRIER-M200 BARRIER-M300, BARRIER-M500



Frequency of 24,15 GHz enables:

- to use it as the most permitted frequency;
- a narrow detection zone thus extending applications of sensors;
- to minimize different interferences.

The sensors are configurable with a special program (running on Windows or Android) via USB or Bluetooth allowing to set an optimal operation mode including remote configuration via RS-485.

Eight frequency letters eliminate interferences of adjacent sensors and extend their applications in a limited space. A frequency letter is chosen using the configuration program.

Information about an unauthorized access to the USB-slot (located under the cover of Tx and Rx) is transmitted simultaneously via NC and RS-485.

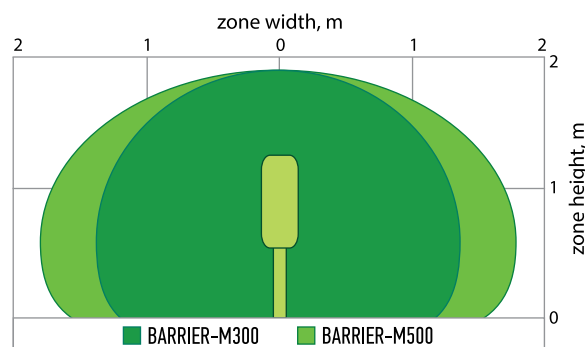
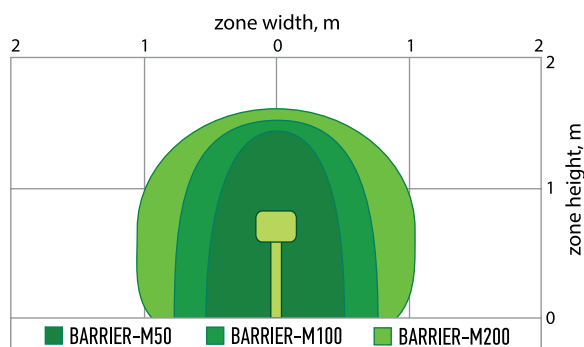
New and more convenient bracket for alignment.

Specifications	BARRIER-M50	BARRIER-M100	BARRIER-M200	BARRIER-M300	BARRIER-M500
Operational frequency	24,15 GHz				
Range	5 ÷ 50 m	10 ÷ 100 m	10 ÷ 200 m	10 ÷ 300 m	10 ÷ 500 m
Width of the detection zone	1,0 m	1,5 m	2,1 m	2,7 m	3,5 m
Height of the detection zone	1,3 m	1,5 m	1,6 m	1,8 m	1,8 m
Supply voltage	9...30 V				
Current consumption	0,045 A				
Detection probability	minimum 0,98				
Operational temperature	-50...+80 °C				
Interfaces	relay contacts, RS-485, USB, upon request Bluetooth or Ethernet				
Dimensions	195,5x154,5x100 mm			395x182x100 mm	
Weight	1,4 kg			2,9 kg	

Modifications:

«Bluetooth» - wireless configuration via Bluetooth.

«Ethernet» - capability of connection via Ethernet.



BARRIER-M detection zones

BARRIER-9-50, BARRIER-9-100, BARRIER-9-200, BARRIER-9-300

Available and effective sensor for the protection of different sites with maximum number of positive testimonials.

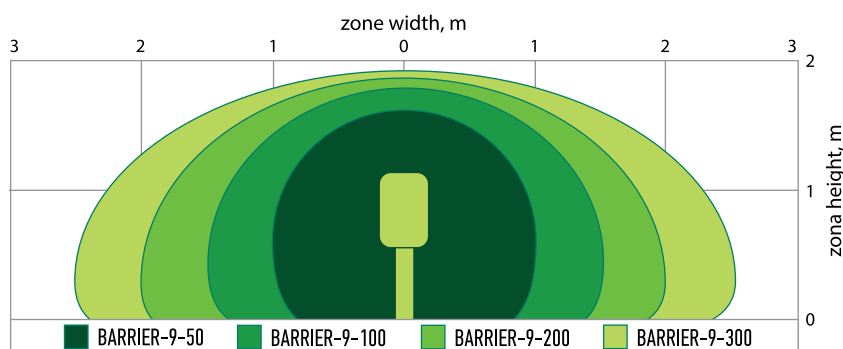
Operation on 9,375 GHz allows to increase the width of the detection zone. Like this we make it difficult for the intruder to cross it.

The easiest configuration using control units on-board of the Rx does not require high qualification of staff. Multimeter and screw driver are enough for configuration.

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



Specifications	BARRIER-9-50	BARRIER-9-100	BARRIER-9-200	BARRIER-9-300
Operational frequency	9,375 GHz			
Range	5 ÷ 50 m	10 ÷ 100 m	10 ÷ 200 m	10 ÷ 300 m
Width of the detection zone	2 m	3 m	4 m	5 m
Height of the detection zone	1,4 m	1,6 m	1,7 m	1,8 m
Supply voltage	9...30 V			
Current consumption	0,035 A			
Detection probability	minimum 0,98			
Operational temperature	-40...+80°C			
Housing protection level	IP-55			
Alarm output	relay contacts			
Dimensions	140x122x47 mm	211x135x75 mm	213x213x70 mm	
Weight	0,8 kg	2 kg	2,4 kg	



BARRIER-9 detection zones

MICROWAVE MONOSTATIC SENSORS

The sensors are intended for the protection of separate perimeter sectors where it is difficult or impossible to use Bistatic sensors, for example: blind streets, marshlands, ravines, communication passages over the fence, stock areas, tunnels, overpasses, viaducts, etc.

The principle of operation: the sensor has one electronic unit containing the transceiver. The sensor transmitter radiates the linear frequency modulated signal. The sensor receiver registers the level of the signal received. In case there are moving objects in the detection zone the receiver registers the alteration of the signal received and generates the alarm. The sensor works on the Doppler effect.

Special software allows to make it easy to start-up the sensor and assures the correct configuration of the sensor parameters.

The configuration is made:

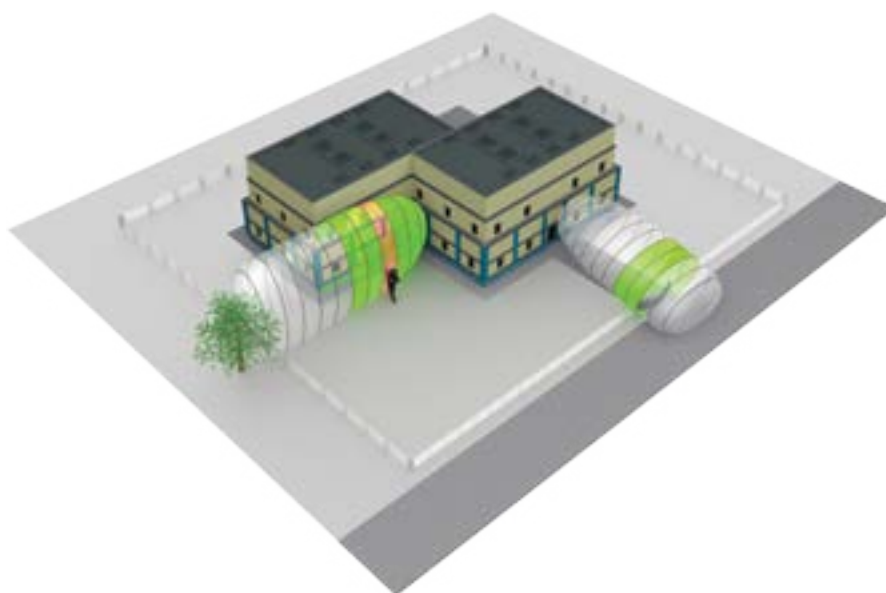
- using the laptop (Windows) via USB interface in field;
- using the tablet or smartphone (Android) via Bluetooth wireless interface or USB;
- via Ethernet using PC;
- remotely from the guard room via RS-485 interface.

Division into 12 sub zones allows to configure the sensitivity separately in every sub zone. Antenna gain and thresholds levels are set separately in every sub zone. Like this we adapt the sensor to the given interference situation on the site.

One or several sub zones can be disconnected. Disconnecting the sub zones we can provide «secured» passages on the protected site for free moving of people through the checkpoint and free moving of transport through the gates. In order to increase the interference immunity we recommend to disconnect the sub zones where detection is not required.

Equalization of sensitivity throughout the length of the detection zone allows to identify its limits clearly and increase the interference immunity to people and transport moving outside the detection zone.

There are two models differing in operational frequency: 9,375 GHz and 24,15 GHz.



ZEBRA-30, ZEBRA-60 (volume, curtain, fan) ZEBRA-30(24) (volume, curtain), ZEBRA-42(24), ZEBRA-60(24), ZEBRA-84(24)

It is the latest development of the factory. Thanks to the patented algorithm of signal processing the sensors are leaders in interference immunity and functionality among monostatic sensors.

The principle of operation of the sensor is based on the method of the linear frequency modulation. The sensors ZEBRA have more clear limits of the detection zone if compared with usual doppler sensors.

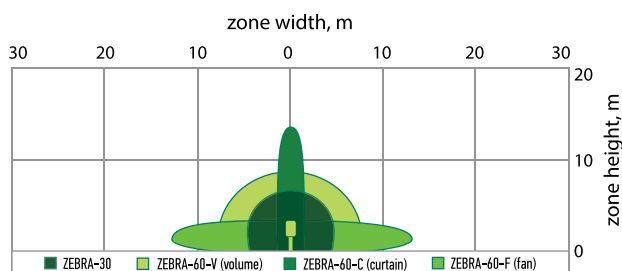
The sensors ZEBRA have 5 frequency letters. Like this we avoid mutual interference from adjacent sensors. Like this we can use sensors near each other, for example, in hangars, warehouses, etc.

The model with configuration via Bluetooth wireless interface for Android is available at the order.

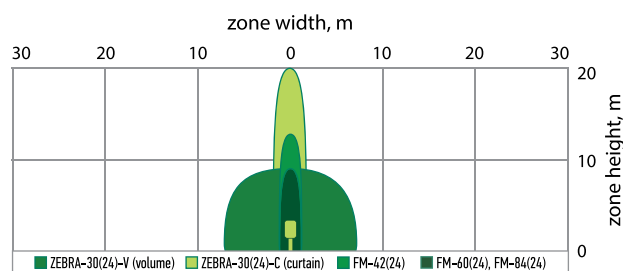


Specifications	ZEBRA-30	ZEBRA-60-V (volume)	ZEBRA-60-C (curtain)	ZEBRA-60-F (fan)
Operational frequency	9,375 GHz			
Range	30 m	60 m	60 m	60 m
Width of the detection zone	8 m	15 m	4 m	25 m
Height of the detection zone (in free space)	8 m	15 m	25 m	4 m
Number of letters	5			
Supply voltage	10...30 V			
Current consumption	0,04 A at 24 V			
Detection probability	minimum 0,98			
Operational temperature	-50...+80 °C			
Housing protection level	IP-55			
Alarm output	relay contacts			
Interfaces	RS-485, USB, upon request Bluetooth or Ethernet			
Dimensions	141x123x71 mm	211x134x78 mm		
Weight	1,0 kg	1,5 kg		

Specifications	ZEBRA-30(24)-V (volume)	ZEBRA-30(24)-C (curtain)	ZEBRA-42(24)	ZEBRA-60(24)	ZEBRA-84(24)
Operational frequency	24,15 GHz				
Range	30 m	30 m	42 m	60 m	84 m
Width of the detection zone	12 m	2 m	1 m	1 m	1 m
Height of the detection zone (in free space)	8 m	40 m	25 m	1 m	8 m
Number of letters	5				
Supply voltage	10...30 V				
Current consumption	0,06 A at 24 V				
Detection probability	minimum 0,98				
Operational temperature	-40...+80 °C				
Housing protection level	IP-55				
Alarm output	relay contacts				
Interfaces	RS-485, USB, upon request Bluetooth or Ethernet				
Dimensions	141x123x71 mm	211x134x78 mm			
Weight	1,0 kg	1,5 kg			



Detection zone of the sensors operating on 9,375 GHz, installation at 1 m



Detection zone of the sensors operating on 24,15 GHz, installation at 1 m

DUAL TECHNOLOGY SENSORS (IR+MW)

The sensors are used for the protection of long perimeter sectors with high requirements for the mean time for false alarm, i.e. high immunity for industry, natural and common interference. There are two modifications of Dual Technology sensors, Bistatic – FORMAT and Monostatic – CYCLOPS.

The principle of operation: we achieved the high interference immunity of the sensor thanks to the combination of two different physical principles of operation – bistatic (monostatic) microwave (MW) and active (passive) infrared (IR), i.e. two ways of intrusion detection.

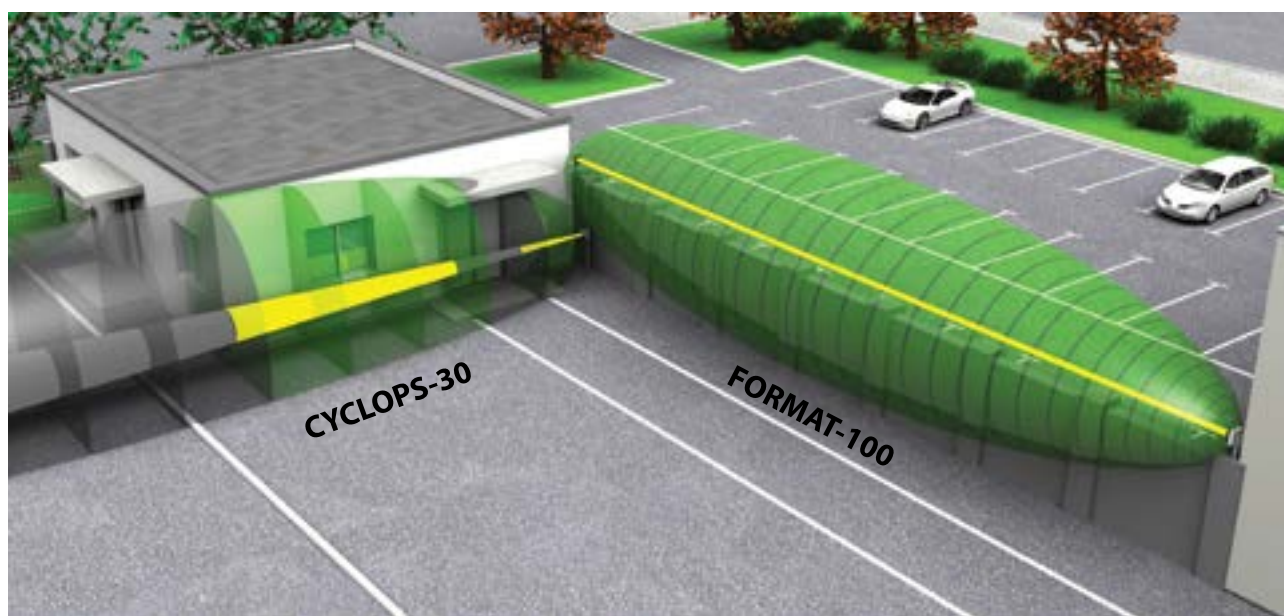
Different interferences influence differently on the processing channels. For example, the litter raised by the wind can activate the IR channel and the MW channel will stay inactive. That is why combination of these two physical principles and alarm initialization at the activation of both channels allowed to increase significantly the interference immunity.

There is no complete analogues of our sensors in architecture, design and integrated functionality.

The sensors are used to protect big and small industrial factories, military bases, transport structure, etc.

As the alarm is generated only at the activation of both channels, the resultant detection zone in case of bistatic dual technology sensors has small dimensions – the dimensions of the IR beam. Like this we can use the sensors for the protection of perimeter sectors requiring extra narrow detection zone.

The high survivability of the sensor is assured thanks to the performance of the sensor in case of failure or false alarming of one of the detection channels.



Protection of the perimeter using the Dual Technology Bistatic sensor FORMAT-100 and Dual Technology Monostatic sensor CYCLOPS-30

- - microwave channel
- - infrared channel
- - sub zones disconnected

FORMAT-50, FORMAT-100, FORMAT-200

The principle of operation is based on the operation of two channels working on two different physical principles of detection: bistatic microwave and bistatic infrared.

The sensors performance is the most effective on direct perimeter sectors requiring extra narrow detection zone, for example, if the sensors are installed by the top of the fence, in corridors, in areas near side-walks and roads, etc.

FORMAT sensors operate on 24,15 GHz.

The essential advantage of the sensors is the high interference immunity.

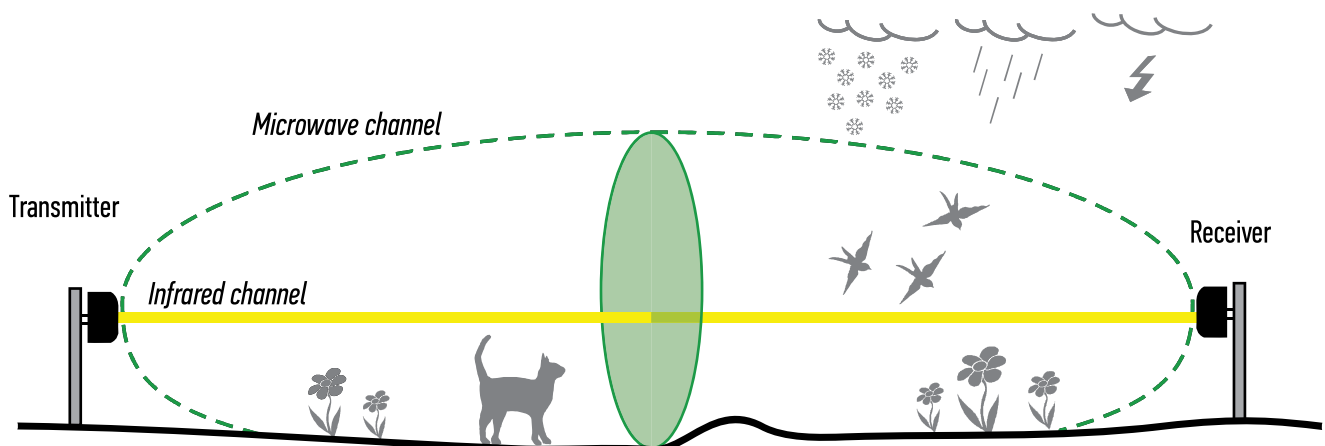
The sensors have USB and RS-485 interfaces for work with special software. The software makes it easy to start up the sensors and assures correct configuration of parameters.

In spite of apparent difficulty of the sensors, they are easy to operate. They do not require special knowledge of staff and are not expensive.



Specifications	FORMAT-50	FORMAT-100	FORMAT-200
Operational frequency		24,15 GHz	
Range	10 ÷ 50 m	10 ÷ 100 m	20 ÷ 200 m
Diameter of IR channel detection zone*	0,1 m	0,2 m	0,3 m
Diameter of MW channel detection zone	1,0 m	1,5 m	2,0 m
Number of letters		4	
Supply voltage		9...30 V	
Current consumption	0,06 A		0,07 A
Detection probability		minimum 0,98	
Operational temperature		-50...+75°C	
Housing protection level		IP-55	
Alarm output		relay contacts	
Interfaces		RS-485, USB, Ethernet (upon request)	
Dimensions	211x138x70 mm		211x138x105 mm
Weight	1,0 kg	1,2 kg	1,3 kg

*Diameter of the sensor detection zone coincides with the IR channel detection zone



Parameters of the detection zone

- - Microwave channel
- - Infrared channel

CYCLOPS-30



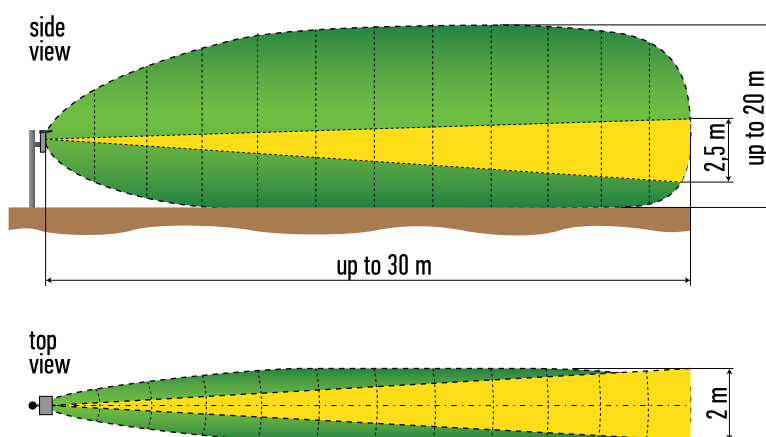
The principle of operation is based on the operation of two channels working on two different physical principles of detection: monostatic microwave and monostatic infrared.

We use the sensor ZEBRA-30 for microwave channel of CYCLOPS sensors. That is why all the advantages and features of ZEBRA are appropriate to CYCLOPS sensors, especially:

- using of special software via USB or RS-485 interfaces allows to configure correctly the sensor in-field as well as remotely from the guard room.
- the sensors detection zone is divided into sub zones, every sub zone can be configured separately, any sub zone can be disconnected to make secured passages for people or transport through gates.
- the sensors have 5 frequency letters allowing to install and operate them near each other.

Specifications	CYCLOPS-30
Operational frequency	24,15 GHz
Range	30 m
Width of the detection zone	2 m
Number of sub zones	12
Number of letters	5
Supply voltage	10...30 V
Current consumption	0,06 A
Detection probability	minimum 0,98
Operational temperature	-40...+65°C
Housing protection level	IP-55
Alarm output	relay contacts
Interfaces (MW channel)	RS-485, USB, Ethernet (upon request)
Dimensions	210x135x95 mm
Weight	1 kg

The sensors CYCLOPS-30 have a beam-shaped detection zone, that is why we recommend to use them for the protection of «frontiers».



■ - Microwave channel ■ - Infrared channel

Detection zone of the sensor CYCLOPS-30

SPIDER-M, SPIDER-MG

Vibration sensors SPIDER are intended for detection of destruction of physical fences.

The sensor is used:

SPIDER-M – for the protection of window, door or gate grids;

SPIDER-MG – for the protection of sewers, storm drains and other fences temporary flooded.

**Features**

If the surface of detection allows, the sensor can be used to protect two grids welded by the metal rod, what helps to reduce costs.

Vandal-proof housing makes it impossible to dismount the sensor without opening the cover. Under the cover there is the tamper.

Easy design and reliable sensors are well protected from climatic effects.

SPIDER-MG keeps its specifications under water jets or during temporary flood.

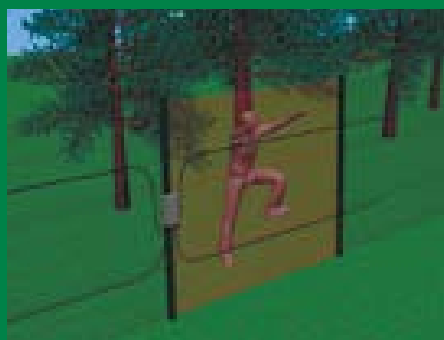
Specifications	SPIDER-M	SPIDER-MG
Protected surface	10 m ²	
Supply voltage	6...30 V	
Current consumption	0,002 A	
Detection probability	minimum 0,98	
Operational temperature	-45...+65 °C	
Housing protection level	IP-65	IP-67
Alarm output	relay contacts	
Dimensions	90x58x65 mm	
Weight	0,25 kg	



SPIDER-M



SPIDER-MG



CONTACT INFORMATION

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Technical specification, delivery kit and the equipment configuration may differ from the data given in the catalog or may be modified by the manufacturer due to the equipment updating. Kindly refer to the User Manual or to the managers to get the exact data.