

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:

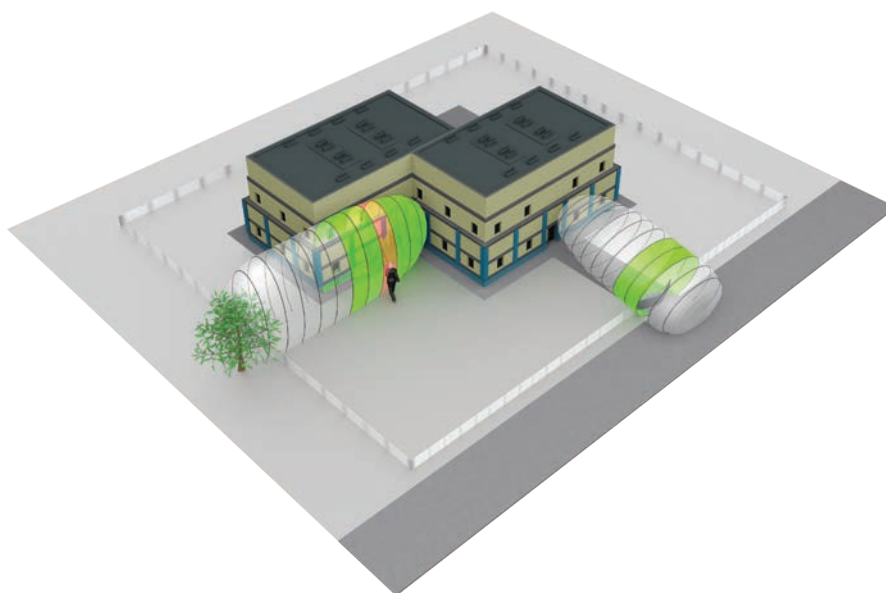
- manually using the control units on the sensor housing;
- using the laptop (Windows) via USB interface in field;
- using the tablet or smartphone (Android) via Bluetooth wireless interface;
- remotely from the guard room via RS-485 interface.

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 clearly identify its limits and increase the interference immunity to people and transport moving outside the detection zone.

There are two models differing in operational frequency: 9,5 GHz and 24 GHz.



**FM-30, FM-60 (volume, curtain, fan)
FM-30(24) (curtain, fan), FM-60(24), FM-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 linear frequency modulation. The sensors FM have more clear limits of the detection zone if compared with usual doppler sensors.

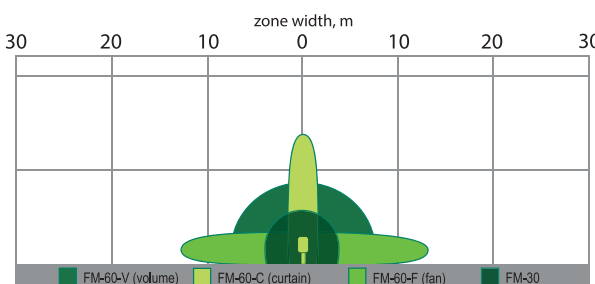
The sensors FM have 5 frequency letters. Like this we avoid mutual interference from adjacent sensors. Like this we can use sensors near each other, for example, in hangars, warehouses, etc.



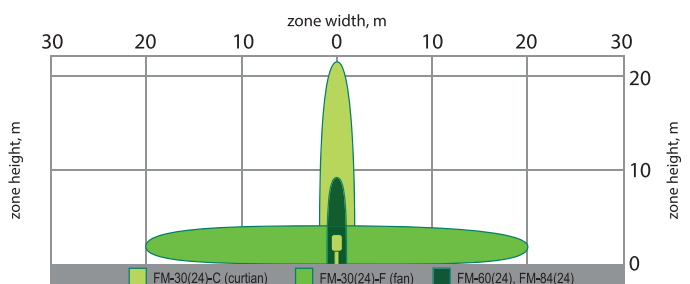
The model with configuration via Bluetooth wireless interface for Android is available at the order.

Specifications	FM-60-V (volume)	FM-60-C (curtain)	FM-60-F (fan)	FM-30
Operational frequency	9,375 GHz			
Range	60 m	60 m	60 m	30 m
Width of the detection zone	15 m	2 m	25 m	8 m
Height of the detection zone (in free space)	15 m	25 m	2 m	8 m
Number of letters	5			
Supply voltage	10...30 V			
Current consumption	0,04 A at 24 V			
Detection probability	not less than 0,98			
Operational temperature	minus 50...+80 °C			
Housing protection level	IP-55			
Alarm output	relay contacts			
Interfaces	RS-485, USB and Bluetooth (upon request)			
Dimensions	210x135x75 mm			141x123x67 mm
Weight	0,5 kg			0,4 kg

Specifications	FM-84(24)	FM-60(24)	FM-30(24)-C (curtain)	FM-30(24)-F (fan)
Operational frequency	24,15 GHz			
Range	84 m	60 m	30 m	30 m
Width of the detection zone	1 m	1 m	2 m	40 m
Height of the detection zone (in free space)	8 m	8 m	40 m	2 m
Number of letters	5			
Supply voltage	10...30 V			
Current consumption	0,06 A at 24 V			
Detection probability	not less than 0,98			
Operational temperature	minus 40...+80 °C			
Housing protection level	IP-55			
Alarm output	relay contacts			
Interfaces	RS-485, USB and Bluetooth (upon request)			
Dimensions	210x135x75 mm		141x123x67 mm	
Weight	0,5 kg		0,4 kg	



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



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