

"RADIOBARRIER" WIRELESS INTRUSION DETECTION SYSTEM

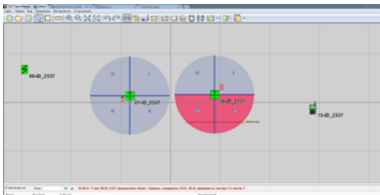
RS-N DIRECTIONAL MULTI-SENSOR

The **RS-N** is a multifunctional seismic sensor. It detects and classifies intruders by registering and processing the seismic signals they produce. It then determines and tracks their movement, and sends an alarm message to a receiver or an operator's console.



The RS-N can operate in the following modes:

- A directional sensor mode. The **RS-N** determines and tracks the movement of the intruder within a circular detection zone. The **RS-N** divides the detection zone into 4 equal sectors (90° each) according to the device marking. The sectors are numbered clockwise. The **RS-N** detects and classifies the intruder, indicates the sector of its location, and then shows its movement direction. This is the default mode.
- A seismic sensor mode. The **RS-N** classifies the type of intrusion as personnel or vehicle and sends an alarm message.
- An autonomous repeater mode that is always on. In this mode, the RS-N transmits alarm and service data of system devices in the radio network to increase the network communication range and ensure the reliability of data exchange in it.



Additional functions

- In the network controller configuration, the **RS-N** organizes and controls the communication and data traffic between the system devices in a radio network.
- The **RS-N** performs self-tests and exchanges of service messages automatically and on operator's demand.
- The **RS-N** settings and modes can be changed onsite through a handheld receiver and remotely, through an operator's console.

Compatible batteries¹

- 10.8 V non-rechargeable external batteries ([VIP-1013](#) with the [PP-2 Cable Adapter](#), [VIP-1113](#) with the [PP-2 Cable Adapter](#), [VIP-1026](#), or [VIP-1126](#)).
- 12 V battery container ([VKP-121](#)) with the [PP-2 Cable Adapter](#).
- 15 V rechargeable external battery ([VIP-1513](#)).

OPERATION WITH VIP BATTERIES*				
	VIP-1013/ VIP-1113	VIP-1026/ VIP-1126	VIP-1513	VKP-121 (Energizer Ultimate Lithium batteries, 3 V, 1.5 Ah)
RS-N (in directional sensor mode)	1 year	2 years	16 months	1 month
RS-N (in seismic sensor mode)	2 years	4 years	2.5 years	2 months

**Environmental conditions: T: 20°C, RH: 80%, P: 763 mm Hg, no moisture in the soil.*
Recommended radio network parameters: Eco mode, 2-second radio network configuration, and two neighboring sensors.

¹Additional equipment. Shall be ordered by the customer separately.

Compatible antennas²

- ASH-433 433 MHz Whip Antenna
- ASHV-433 433 MHz Long Whip Antenna
- KBV-433 433 MHz Cable Antenna
- PA-433/an1 433 MHz Underground Antenna

ANTENNAS' COMMUNICATION RANGE (433 MHz)**

Max, m	AV-6	ASh	AShS	AShV	AK	KBV	AGP	Y5	AMSh	PA/an1	ABK
ASh	8000	2000	1700	4000	500	6000	200	7000	5000	50	5500
AShV	9000	4000	3000	5000	700	6800	200	8000	6000	50	6500
KBV	11500	6000	4500	6800	800	9000	300	9000	7500	-	8000
PA/an1	-	50	-	50	-	-	-	-	-	-	-

****Environmental conditions:** T: 20°C, RH: 80%, cloudless atmosphere, LoS: 8 km, elevation changes within the detection line: less than 2 m.

Installation requirements: No power lines within 5000 m, no sources of radiation at the antennas' frequencies within 5000 m, no solar flares, no industrial contamination of the air, no ionized particles in the air, installation at the recommended antenna installation height.

Note: The types of antenna and battery for the **RS-N** may vary and are subject to operating conditions and technical requirements of the customer.

PERFORMANCE***

Detection range in seismic mode: <ul style="list-style-type: none"> • personnel • vehicle 	90 m 220 m
Detection probability <ul style="list-style-type: none"> • personnel • vehicle 	0.9 0.95
Radio channel frequency	433.2–434.6 MHz
Radio channel type	two-way digital radio channel
Operating temperature range	-40°C to +50°C
IP rating	IP68
Weight	0.9 kg
Dimensions	140 × 150 × 90 mm

*****Environmental conditions:** Soil characteristics as in Lat, Long: 53.394505, 77.729883, May to September, 12% to 14% soil moisture.

Recommended radio network parameters: Eco mode, 2-second radio network configuration, and two neighboring sensors.

²Additional equipment. Shall be ordered by the customer separately.

ENVIRONMENTAL REQUIREMENT	MIL-STD REFERENCE
Storage High Temperature	MIL-STD 810H, 501.7 I (+60°C)
Storage Low Temperature	MIL-STD 810H, 502.7 I (-50°C)
Storage Low Pressure	MIL-STD 810H, 500.6 I
Natural Humidity (Cycle B3)	MIL-STD 810H, 507.6 Ia
Induced Humidity (Cycle B3)	MIL-STD 810H, 507.6 Ib
Operation High Temperature	MIL-STD 810H, 501.7 II (+50°C)
Operation Low Temperature	MIL-STD 810H, 502.7 II (-40°C)
Operation Low Pressure	MIL-STD 810H, 500.6 II
Immersion	MIL-STD 810H, 512.7 I
Functional Shock	MIL-STD 810H, 516.8 I
Transportation Shock	MIL-STD 810H, 516.8 II