

CVD-114 Security Sensor



Purpose

CVD-114 security sensor is a vibration-seismic security detector applied to detect unauthorized attempt to cross the secured area by crossing the perimeter line without any fencing.

CVD-114 scope of supply:

- Processing unit – 1 pc.
- Connecting cable – 1 pc.
- CVD-930– 1 pc.
- Vibration-seismic sensitive cable set for CVD-114, CVD-115 security sensors (SCS) – 1 set.

One SCS consists of two vibration-seismic sensitive cables. SBSM unit is applied as signal receiver to connect wireless sensors.

CVD-114 operating principle – vibration-seismic, sensitive elements of the sensor transform fencing or soil vibrations into electrical signal which is then transmitted to the sensor and the sensor generates alert.

CVD-114 has two inputs to connect sensitive elements. Each input signal is processed separately with separate alarm generation, this way ensuring two securing zones. The sensor can operate with vibration detectors and seismic sensors.

Seismic sensors are inserted directly into the soil and detect intruder steps or vibrations from bypassing vehicles.

Seismic sensor detection area depends on the concrete soil features and location.

CVD-114 has self-adaptive threshold to adjust itself to the ambient noise to ensure efficient operation in windy or rainy weather.

CVD-114 ensures high detection rate with almost no false alarms.

CVD-114 is equipped with a CVD-930 unit with battery set and solar module to provide power for the battery set, wireless modem and antenna.

CVD-114 and CVD-114 have self-test and self-control functions.

Setting is made through CVD-4920 adjustment cable in configuration application (is not included in the scope of supply and purchased separately).

Application.

CVD-114 security sensors are applied for perimeter intrusion detection systems.

CVD-114 is applied to build hidden seismic underground security lines alongside secured perimeters, approaches without any fencing, exclusion zones etc.

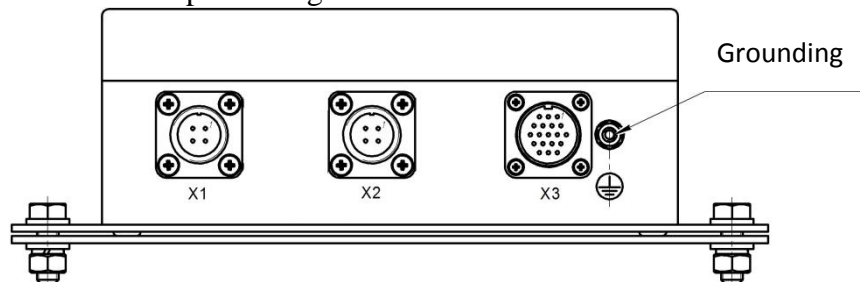
Technical features.

Parameter	Value
Secured area length, m	2 lines x 250m
Detection rate	0,95
Alarm message	
- Transmission frequency, MHz	433
- adiated power, not more, mW	10

Transmission distance within line-of-sight with antenna, up to, m	
- directed	9000
- rod quarter-wave	2700
- rod quarter-wave, guaranteed	1000
Uptime after power-up, sec	60
Uptime after alert, sec	10
Message duration, sec	from 1 to 60
Direct current voltage, V	12
Total battery set capacity, Ah	7,2
Consumed current, no more, mA	45
Operating mode	continuous
Ingress protection	IP65
Operating temperatures, °C	from -40 to +50
Overall dimensions	
- Detection unit, mm	210x110x85
- CVD-930 (without bracket and antenna)	338x249x115
Weight, no more, kg	
- Detection unit	2
- CVD-930 without bracket	6,8
CVD-4920 adjustment cable length, m	6

Connection.

Connection of processing unit



X1–X2 – sockets for vibration-seismic sensitive cable sets;
X3 – socket for CVD-4920 adjusting cable and wired connection.

ATTENTION!!! Satisfactory ground connection ensures reliable product operation.

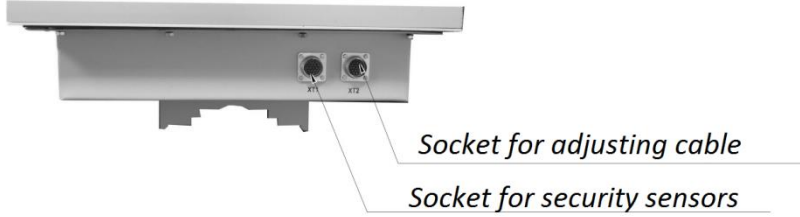
X3 socket pins:

№ pin	Name
1	Failure out Left line-A
2	Failure out. Left line -B
3	Failure out. Right line-A
4	Alarm out Left line -A
5	Alarm out Left line -B
6	Alarm out Right line -A
7	Alarm out Right line -B
8	Power in +12V
10	General
11	Failure out Right line -B
14	Control out-A

15	Control out -B
16	RS-485 (A)
17	RS-485 (B)
18	Cable control
19	Cable control

Contacts 9, 12, 13 – not used.

CVD-930 connection:

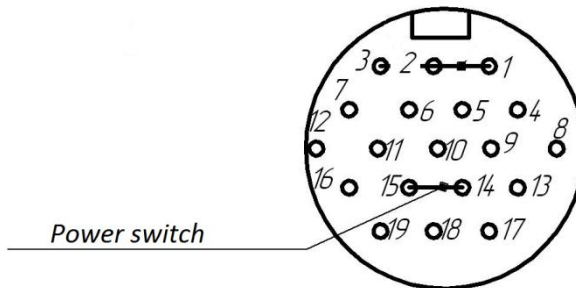


X1 – to connect security sensors,

X2 – to connect adjusting cable.

Legends for X1, X2 sockets.

14-15 bridge of X2 – sensor power

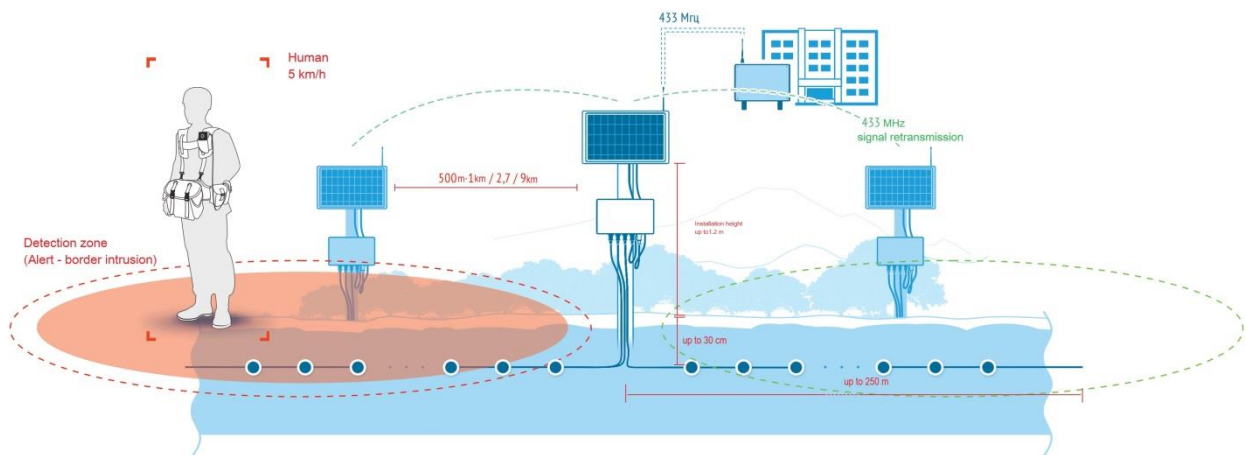
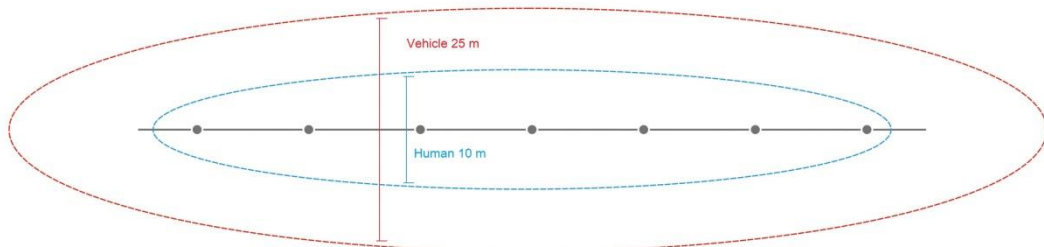


№ pin.	Pin	
	XT1	XT2
4	Alarm out	
6	Charge «+»	Not used
8,9	+12V	
10	General	
12	Charge «-»	Not used
14,15	+12V	
16	RS-485 A	
17	RS-485 B	
18,19	Control	

Other contacts are not used.

Sensor detection zones:

Detection zone (top view)



Adjusting cable and sockets:

