

## CVD-105 Security Sensor



### Product

CVD-105 security sensor— radio channel standalone microwave double position perimeter security sensor. Intended for intruder detection in secured area. Principle of operation – linear radio wave.

CVD-105 consists of:

- Transmitter – 1 pc.;
- Receiver - 1 pc.;
- CVD-930 unit - 1 pc.;
- CVD-932 unit - 1 pc.;
- Mounting bracket – 2 pcs.

The primary function of CVD-105 sensor – identification of intrusion within secured area, alarm release and alarm transmission via radio channel.

Different modes allow identification of standing, bending, crawling and rolling intruders in the area.

Power supply and radio communication are provided by CVD-930 and CVD-932 units included in the set. CVD-930 unit (for receiver) is equipped with a battery pack, a solar module providing power for the battery and wireless modem and antenna. CVD-932 unit (for transmitter) is equipped with batteries, a solar module providing power for the battery.

CVD-105 has self-supervision functions: alarm on failure and remote test.

### Application

CVD-105 sensor is applied:

- as a part of perimeter and long border security system;
- stand-alone, in open areas;
- along with permanent fences;
- along with metal mesh or wire fences.

CVD-105 security sensor is applied as a part of “RadioFence” system.

## Technical specification

| Parameter  | Value          |
|--|----------------|
| Walking intruder detection distance, m   | From 10 to 200 |
| Crawling or rolling Intruder detection distance, m   | 80             |
| Detection zone height  | 3              |
| Detection zone width<br>(depends on detector installation conditions and operating mode),<br>m | From 1 up to 4 |
| Registered speed, m/sec  | 0.1 ... 5      |
| Detection rate   | 0.98           |
| Operation restore time after long detection area block, sec                                    | 120            |
| Alert time after intrusion, sec  | 0.5            |
| Return to armed mode after alert, sec  | 1              |
| Detection area magnetic field frequency, MHz   | 9375±70        |
| Alarm frequency, MHz   | 433.92±0.9     |
| Transmission distance with antenna, m*   |                |
| - Directed, max  | Up to 8000     |
| - Rod quarter-wave, max  | Up to 2700     |
| - Rod quarter-wave, guaranteed   | Up to 1000     |
| Direct current voltage, V  | 12±10%         |
| Input current, not more, mA:   | 8              |
| - while data transmission  | 40             |
| Battery total capacity, Ah   | 7.2            |
| Ingress protection   | IP65           |
| Operating temperatures, °C   | -40 to +50     |
| Overall dimensions   |                |
| - receive and transmitter, mm  | Ø110x380       |
| - CVD-930 and CVD-932 without bracket and antenna  | 338x249x115    |
| Weight, kg   | 18             |

### Connection:

Connector pin assignment for receiver

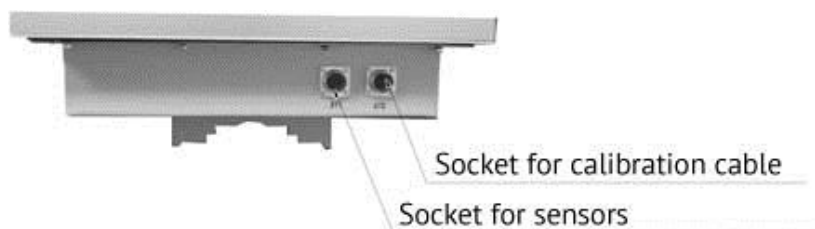
| №  | Purpose       |
|----|---------------|
| 4  | Alarm out     |
| 2  | General       |
| 7  | Rx (RS-232)   |
| 8  | Power in +12V |
| 10 | General       |
| 11 | Tx (RS-232)   |
| 18 | Cable control |
| 19 | Cable control |

Contacts 1, 3, 6, 9, 12...17 – are not used

Connector pin assignment for transmitter

| №  | Purpose        |
|----|----------------|
| 2  | Mode selection |
| 8  | +12V           |
| 10 | General        |

Contacts 1, 3, 4 ...7, 9, 11...19 – are not used



Connection of CVD-930 and CVD-932

XT1- for sensors

XT2-for calibration cable

XT1, XT2 for CVD-930

14-15 jumper on XT2 – power for all sensors

| №  | Purpose    |
|----|------------|
| 4  | Alarm out  |
| 7  | Rx RS-232  |
| 8  | +12 V      |
| 9  | +12 V      |
| 10 | GND        |
| 11 | Tx RS-232  |
| 14 | +12 V      |
| 15 | +12 V      |
| 16 | RS-485 (A) |
| 17 | RS-485 (B) |
| 18 | Control    |
| 19 | Control    |

Contacts 1...3, 5, 6, 12, 13 – are not used

XT1, XT2 for CVD-932

1-2, 2-3 jumpers on XT2 – frequency adjustment for CVD-105, 14-15 jumper – power for all sensors.

| №  | Purpose               |
|----|-----------------------|
| 1  | “Foe mode” jumper     |
| 2  | “General mode” jumper |
| 3  | “Friend mode” jumper  |
| 7  | Rx RS-232             |
| 8  | +12 V                 |
| 9  | +12 V                 |
| 10 | GND                   |
| 11 | Tx RS-232             |
| 14 | +12 V                 |
| 15 | +12 V                 |

Contacts 4...6, 12, 13, 16, 17 – are not used