

# STS-111

## Security sensor with sensitive elements set



STAE.426479.019-03

### PURPOSE

STS-111 security sensor with sensing element set is designed for detecting intruder trying to damage or traverse a mesh metal or concrete fence and causing mechanical impact on it.

### FIELDS OF APPLICATION

- as a stand-alone intrusion protection system
- as part of integrated facility security systems in combination with detection equipment of other operating principles

### VERSION

- sensor is a processing unit with connected cable sensing elements
- sensor processing unit is enclosed in a metal casing for protection against atmospheric impact and mechanical damage
- each of cable sensing elements is a special cable with a resistor contained end coupling

### FEATURES

- detection of ultra-small mechanical fence vibrations caused by the intruder's physical impact
- generating and sending an alarm notification upon fence crossing or breaking attempts
- automatic regular operability check of the processing unit and sensitive elements
- generating a fault notification upon breakage or short-circuit detection
- adjusting the sensor with STS-4920 configuration cable STAE.426471.464 (purchased separately) or via RS-485 interface via RS-485-USB adaptor

## PECULIARITIES

- sensor is equipped with high-frequency and low-frequency sensing elements for vibration detection and for indication of partial fence damage
- adaptive algorithm of signal processing, significantly reducing the number of false alarms, including those resulting from changes in environmental conditions
- method of sensing elements installation is selected depending on the fence type and the line crossing approach that should be prevented

## SCOPE OF SUPPLY

Name	Quantity
✓ STS-111 Security sensor with SE set, including:	
– security sensor processing unit	1 pc.
– cable sensing element set for STS-111, STS-112 sensors	1 set
✓ Mounting set STAE.425911.002	1 set
✓ Mounting set KMC-SK STAE.424921.015*	1 set
✓ Plug set STVF.424921.013	1 set
✓ Spare parts-O set STVF.425973.157	1 set
✓ Passport	1 copy
✓ Operating guidelines**	–
* Used to mount the cable sensing element to the mesh fence. To be supplied under separate agreement.	
** The operating guidelines are supplied in a single copy when shipped with a batch of products or as part of a system. For single deliveries, the operating guidelines are supplied for each unit	
Operating guidelines are available at: <a href="http://stilsoft.ru">http://stilsoft.ru</a>	

## RELIABILITY AND WARRANTY

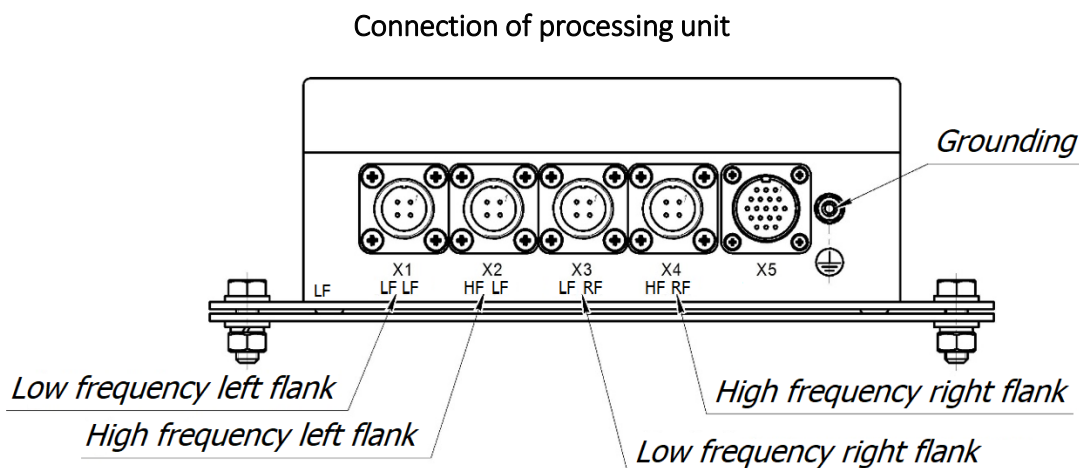
- Warranty operation period - 2 years.
- Operation period - 10 years.

## TECHNICAL PARAMETERS

Parameter name	Quantity
Length of secured section, m	2 flanks 250 m each
Intruder detection probability during traversing the fence by climbing over or tunneling under the deepened fence, destroying the meshwire by cutting or sawing as well as by dismantling the sensing element at 0,8 confidence level (minimum)	0,95
Average mean time between failures, h	60000
Average MTBF during exposure to random natural combination of environmental interference factors, h (minimum)	800
Average MTBF during exposure to random natural combination of interference factors of artificial (industrial) origin, h (minimum)	720
RS-485 bus information value	8
Loop information value	5
Standby time after power-up, s	30
Alarm recovery time, s	10
Notification duration, s	from 1 to 60
DC power supply voltage, V	12±10%

Parameter name	Quantity
Current consumption, mA (maximum)	3,2
Operating mode	continuous
Operating temperature range, °C	-40...+50
Overall dimensions, mm	210x118x76
Processing unit weight, kg (maximum)	1,8
Number of rays in CSE set, pcs.	4 pcs 250 m each

## CONNECTION



X1–X4 – sockets for connecting sensing elements

X5 – socket for connecting STS-4920 configuration cable and wired connection

### Contact designation for X5 connector

# cont.	Designation
1	Output LF-A malfunc.
2	Output LF-B malfunc.
3	Output RF-A malfunc.
4	Output LF-A alarm
5	Output LF-B alarm
6	Output RF-A alarm
7	Output RF-B alarm
8	+12V
10	General
11	Output RF-B malfunc.
14	Control A
15	Control B
16	RS-485 «A»
17	RS-485 «B»
18, 19	Control

Contacts 9, 12, 13 are not active

### Detector information capacity:

- alarm, left flank - notification generated by the product in case of detecting an intruder on the left flank;
- alarm, right flank - notification generated by the product in case of detecting an intruder on the right flank;
- malfunction, left flank, HF SE - notification generated by the product in case of left HF SE malfunction;
- malfunction, left flank, LF SE - notification generated by the product in case of left LF SE malfunction;
- malfunction, right flank, HF SE - notification generated by the product in case of right HF SE malfunction;
- malfunction, right flank, LF SE - notification generated by the product in case of right LF SE malfunction;
- malfunction, right flank, LF SE - notification generated by the product in case of right LF SE malfunction;
- RC passed - a notification generated by the product in case of passed remote control;
- RC not passed - notification issued in case of failed remote control.



Developed and manufactured in Russia

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