

STS-107

Security sensor



STVF.426479.006

PURPOSE

STS-107 dual-position radio wave security sensor is designed to detect intrusion into a secured facility and trigger an alarm message.

FIELDS OF APPLICATION

- integrated facility security systems
- perimeter and extended lines security systems
- stand-alone security alarm solution

VERSION

- the sensor consists of a receiver and a transmitter in sealed plastic casing
- receiver and transmitter are equipped with universal mounting brackets enabling their installation on $\varnothing 40$ mm poles (via metal clamps) as well as on flat surfaces (via screws or bolts)
- bracket design enables rotation of receiver and transmitter casings at $\pm 10^\circ$ angle

FEATURES

- detecting an object crossing a secured line and triggering an alarm
- generating an ellipsoidal volumetric detection zone of 5 to 300 m in length

PECULIARITIES

- small width of the exclusion zone - an area free of vegetation, foreign objects and people which might interfere with the sensor's operability

- detection zone width depends on the distance between the receiver and the transmitter and peaks at the maximum range
- the horizontal distance from the axis of the detection zone to the boundaries of the exclusion zone is:
 - at least 1.5 m for the 50-100 m section,
 - at least 2.5 m for a 100-200 m section,
 - at least 3 m for 200-300 m section

SCOPE OF SUPPLY

Name	Quantity
✓ STS-107 security sensor, including:	
– receiver	1 pc.
– transmitter	1 pc.
✓ Passport	1 copy
✓ Spare parts-O set, including:	1 set
– self-tapping screw 2,9x6,5 DIN 7971 A2	4 pcs.
– sealing fixture PG-7	1 pc.
– Ziplock bag	1 pc.
✓ Mounting set, including: Assembly parts kit:	1 set
– self-tapping screw 6,3x16 DIN 7504-K, stainless steel	4 pcs.
– Ziplock bag	1 pc.
✓ Pack type 5 STVF.305646.007	1 pc.
✓ Operating guidelines*	–
* 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.	

RELIABILITY AND WARRANTY

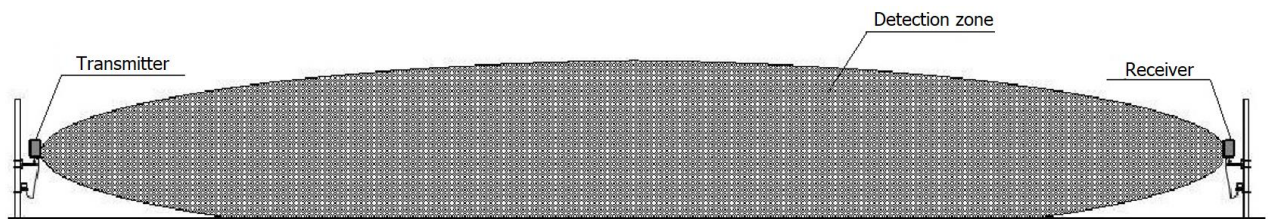
- Warranty operation period - 2 years.
- Assigned operation period - 10 years.

TECHNICAL PARAMETERS

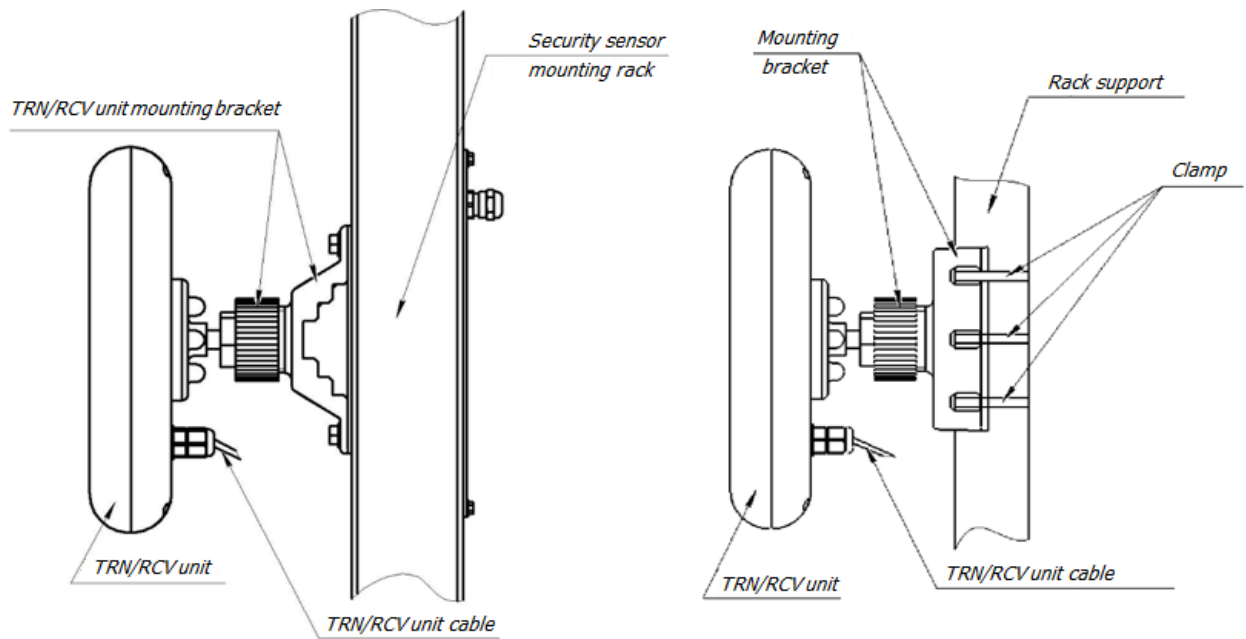
Parameter name	Value
Length of detection zone, m	5 to 300
Detectable intruder movement speed in a standing or crouching position, m/s	0,1 to 10,0
Operating frequency, MHz	24000-24250
Remote control signal parameters:	
– pulse voltage, V	from 5 to 30
– pulse duration, s (minimum)	0,5
Detection zone width at equidistant interval from the units, at maximum range, m (maximum)	3
Detection zone height at equidistant interval from the units at maximum range, m (maximum)	3
Length of the uncertain detection zone at a distance from the transmitter and receiver, m (maximum)	2
Receiving signal strength reserve at maximum detection range, dB (minimum)	6
DC power supply voltage, V	from 10 to 36
Allowable amplitude of supply voltage ripple, V (maximum)	0,03*

Current consumption at 12V operating voltage, mA (maximum):	
– transmitter	160
– receiver	200
Standby time after power-up, s (maximum)	45
Alarm recovery time, s (maximum)	10
Parameters of the signal generated by the output contacts of the "Alarm Relay" and "Tamper Sensor Alarm Relay" circuits:	
– current, DC or AC, mA (maximum)	120
– amplitude voltage, V, max. (maximum)	30
Alarm duration, s (minimum)	2
Detection probability (minimum)	0,98
Mean time between false alarms, h (minimum)	60000
Sensor communication interface	RS-485
False operation time, h (minimum)	1200
Sensor information capacity via loop	3
Sensor Information capacity via RS-485 bus	19
Operating temperature range, °C	от -50 до +70
Overall dimensions of receiver and transmitter (with bracket), mm	210x210x141
Sensor weight in packaging, kg (maximum)	1,3
* A higher amplitude of supply voltage ripple can cause a performance decline.	

UNIT LOCATION LAYOUT

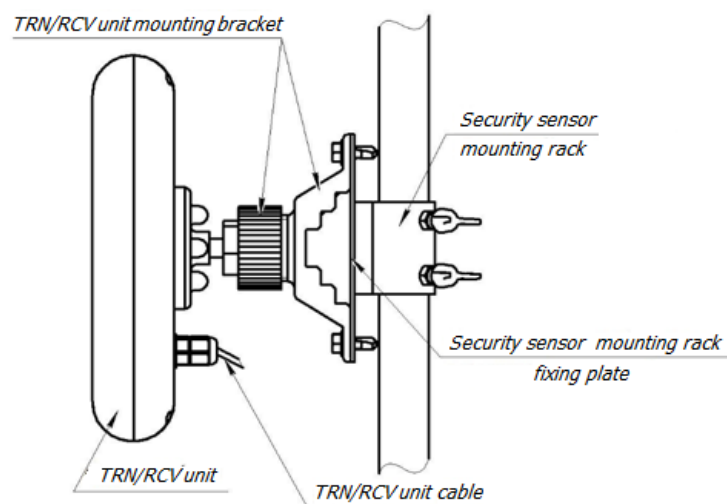


MOUNTING



Mounting with security sensor mounting rack

Mounting on round support with clamps



Mounting with seasonal height adjustment option*

*When mounting the sensor, it is important to facilitate easy rearrangement of sensor units on the mounting frame during seasonal adjustments. For this purpose, it is recommended to install the product on the "Mounting bracket for security sensors STAE.301568.004", and the bracket - on the "Mounting bracket for security sensors STAE.301317.001" or the "Mounting bracket for security sensors STVF.301317.015" (brackets and racks are not included in the supply set).

CONNECTION

Receiver and transmitter wiring designation

Wire color	Designation
White	"CVR-" Tamper sensor alarm relay
Grey	"CVR+" Tamper sensor alarm relay
Black	"ALM-" Alarm relay
Purple	"ALM+" Alarm relay
Brown	"RC+" Remote monitoring
Orange	"RC-" Remote monitoring
Blue	Power supply minus
Red	Power supply plus
Green	A RS-485
Yellow	B RS-485

The step-by-step configuration of STS-107 sensor is described in Operating guidelines.



Developed and manufactured in Russia

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