ritm

Wired tilt/shock pick up sensor

DST

Data sheet

Device identification number

1. General Information

The DST wired tilt/shock pick up sensor (hereinafter referred to as the sensor) is a security sensor designed for determination a tilt angle of the protected object and for registration of object external exposures (impacts, movements, vibrations). The sensor accelerometer has an output to connect a receiving and control sensor and can be used in any security system.

Sensor trigger thresholds can be configured according to an acceleration amplitude, tilt value and tilt period. When a threshold is reached the sensor output gets an open condition. If there is no impact the output is in the closed condition. The sensor is able to determine a processor temperature.

2. Manufacturer

RITM Company
195248,
Energetikov avenue, building 30, block 8,
St Petersburg, Russia
Tel.: +7 911 795 02 02
www.ritm.ru/en world@ritm.ru

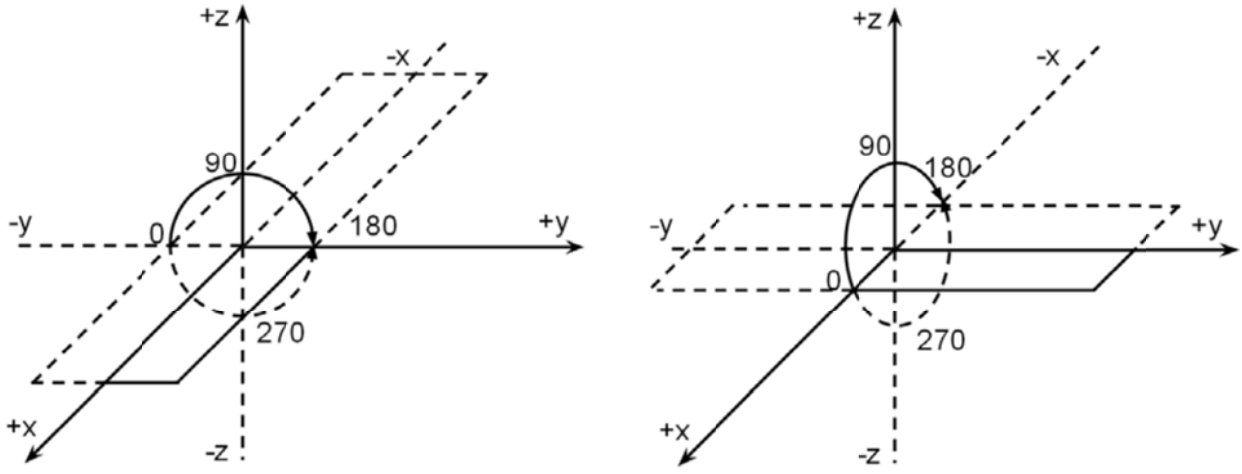
3. Package Contents

DST wired tilt/shock pick up sensor	1 pc
Fastening kit	1 kit
Data sheet	1 pc
Package	1 kit

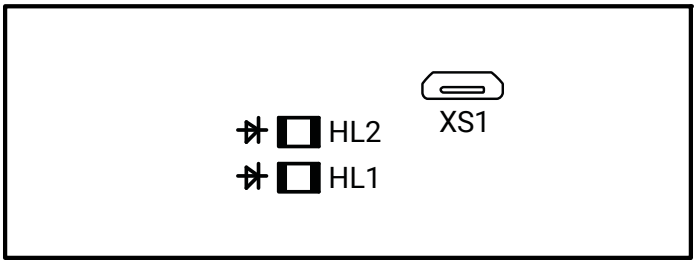
4. Technical Specifications

Specification	Value
Sensor type	3-axis accelerometer
Tilt threshold, grade	0 – 45
Tilt response delay, sec	1 – 20
Tilt sensitivity, grade	3
Impact threshold, G	Up to 2
PC interface	USB
Output for security equipment connection. (Open output with no power. With power supplied to the sensor the output could be configured and has the normally closed or the normally open condition.)	1
Power supply, V	DC 8 - 30; 5 (USB)
Absorbed current, mA	20 (at DC 12V)
Dimensions, mm	70×30×22
Weight, g	25
Operating temperature range, °C	–30…+50

5. Sensor Turning Angles



6. Designation of Elements



Element	Designation
HL1	LED indicator, lights up red when the sensor is triggered
HL2	LED indicator, lights up blue for a moment when the sensor is restarting
XS1	USB connector for PC connection
K1, K2	Connector for receiving and control device connection
12B, GND	Connector for power supply

7. Sensor installation

1. Sensor should be placed on a level surface. Do not place the sensor in a close proximity of EMI sources, power cable runs, heaters and ventilation.
2. Open the sensor enclosure.
3. Through holes at the enclosure base pull supply lines of protective ribbon cable and power.
4. Connect external power source DC 8…30 V to the **12B, GND** connector: positive terminal to the 12V terminal, negative terminal to the GND terminal.
5. Connect security loop input of the receiving and control device to the **K1, K2** connector.
6. Install the enclosure base in the location selected at the step 1.
7. Mount the product enclosure at the base.
8. Finish the mounting and connect to the sensor using the configuration software to define triggering thresholds.

8. Sensor Configuration

1. Download and install the sensor driver.[1]
2. Connect the sensor to your PC using a USB cable and run the configuration software ritm.conf or Ritm Configure.
3. Open “Calibration” section. Click the link “Store an initial position” and perform sensor calibration. The sensor fixes this position as initial.
4. Define triggering thresholds for range and period of sensor incline, set the sensor impact sensitivity.
5. Save the settings.

9. Maintenance and Safety Measures

At least once per year check the integrity of leads and cables, connection locations, and fastening security.

All installation and maintenance activities applied to the sensor should be performed by duly qualified personnel.

10. Transportation and Storage

The sensor should be properly packed and transported in roofed vehicles. Storage premises should be free of current-conducting dust, acid and alkaline fumes, corrosive gases and gases harmful to insulation.

11. Manufacturer’s Warranties

The manufacturer guarantees that the sensor complies to requirements of the technical specifications provided to the client, ensures compliances to conditions of transportation, storage, installation and operation.

Although **the warranty period** is 24 months from the commissioning date, it may not exceed 36 months from the production date.

The **warranty storage period** is 12 months from the production date.

The manufacturer reserves the right for modification of the sensor in any way that does not degrade its functional characteristics without prior notice.

12. Information on Claims

In case of a sensor failure or defect during the warranty period, please fill in a malfunction report specifying the dates of issue and commissioning of the sensor and nature of the defect and submit it to the manufacturer.

[1] http://www.ritm.ru/en/downloads/

For Notes

For Notes

For Notes