GS620N STAND ALONE INERTIA SHOCK DETECTOR

Aritech is an ISO 9001 certified manufacturer

INTRODUCTION

The GS620N is a LED indicating inertia detector which can be used as a stand-alone unit or in a multiple detection system and includes the following features:

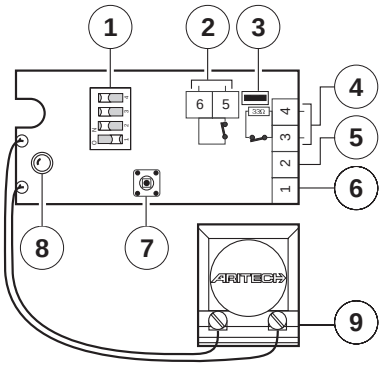
- PULSE COUNT programming
- GROSS ATTACK programming
- Test facility using LED indication
- Automatic sensor fault detection
- Tamper switch

The GS620N's detection element is a electro mechanical inertia sensor, which can be mounted vertically or horizontally on any structure through 360 degrees.

WIRING and SWITCH PROGRAMMING

The GS620N has to be wired with standard six core alarm cable. For wiring description see schematic below.

Figure 1



① PULSE COUNT- and GROSS ATTACK- programming (see table 1)
② TAMPER: (NC, going open on activition)
③ J1: LED enable jumper (Remove to enable LED)
④ ALARM: (NC, going open on activition)
⑤ +12 V ⎓ supply
⑥ - GND
⑦ TAMPER switch
⑧ Red LED

⑨ Inertia sensor

INSTALLATION

1. Choose the mounting position for the GS620N detectors on the structure to be protected, having regard to the structure's ability to transmit vibrations, etc. Note that the universal sensor can be mounted on a horizontal plane e.g. on a flat ceiling or under a door lintel.
2. Remove the detector cover and secure the base-plate to the structure either vertically or horizontally as required.
3. Orientate the sensor module so that the ARITECH logo is upright and in the readable position.
4. Route cabling into the unit and connect up wiring in accordance with the wiring diagram of figure 1.
5. Ensure that the screws of the sensor module are secure.
6. When all sensors in the system are fully wired, apply power to the sensor line. The alarm relay and the LED of each unit are activated for a period of 4 seconds.
7. Program each unit for *GROSS ATTACK* and *PULSE COUNT* using the switch programming of table 1.

Table 1

PULSE COUNT PROGRAMMING

Switch 1	Switch 2	Pulse counts
off	off	4
on	off	6
off	on	8
on	on	pulse count disabled

GROSS ATTACK PROGRAMMING

Switch 3	Switch 4	Gross level sensitivity
off	off	1 (max. sens)
on	off	2
off	on	3
on	on	4 (min. sens)

PROGRAMMING

1. Remove the LED-enable jumper J1 from the PCB, this allows the LED to light during test and programming (figure 1 ③)
2. To program the unit for *GROSS ATTACK*, set both the switches 1 and 2 to "ON". In this position the *PULSE COUNT* circuit is disabled. In this setting the relay can only be activated by a *GROSS ATTACK*.
3. The LED will light up for one second every time a shock is detected by the sensor. An alarm event (relay trip) indication is given when the LED remains lit for approximately 4 seconds.
4. Using the *GROSS ATTACK* switches 3 & 4 for sensitivity adjustment, apply high level shocks to the structure, using the LED as a guide to when the alarm relay trips (LED on for 4 seconds). See table 1 for the position of switch 3 & 4 for each *GROSS ATTACK* level programming.
5. When the gross attack level required to activate the alarm has been set, select the pulse count required for alarm activation with the switches 1 & 2. See table1 for *PULSE COUNT* programming.

Note: PULSE COUNT signals are counted at one-second intervals and stored in a thirty second digital memory. These small signals detect an intruder gently prising open a window or door frame etc.

6. To test the pulse count setting, create small shocks on the structure below the gross attack level. Each time a shock is detected and registered in memory, the LED will light up for one second. When the programmed *PULSE COUNT* is reached, the alarm relay will trip and this is indicated by the LED remaining on for four seconds. If the *PULSE COUNT* isn't reached within 30 seconds or the alarm relay trips, the stored pulses are cancelled. After cancellation a new detected pulse starts a new 30 seconds memory time.

If only *GROSS ATTACK* level activation is required, set both switches 1 & 2 to "ON".

7. Replace jumper *J1*, this ensures that the LED does not light. Therefore window cleaners etc. cannot see the sensitivity level or the area of cover. Now the LED only lights when the electronics detect a faulty sensor.

FAULT DETECTION

When the inertia sensor signal is high for a defined period, this indicates that the detector is not properly installed (ARITECH logo not readable), the wires to the detector are loose or the sensor is faulty. A defined "high" period of the input signal is detected by the electronics and if this situation occurs, the unit will enter the fault-mode. The LED start flashing fast (independent of the position of *J1*) and the alarm relay trips. The unit will stay in this fault-mode until reset (LATCH). In this way the user can't arm the system when a sensor is faulty. The user has to look which device is causing the trouble and reset the device before arming the system. If the fault condition occurred when the system was armed, the user can see which device caused the trouble (flashing LED)
The detector can be reset by a power down of the system or by removing and replacing of jumper *J1*. After a reset the alarm relay closes and the LED stops flashing.

Note: The fault-mode can only be reset if the sensor is NOT faulty during a reset attempt.
If the sensor is still faulty the device stays in fault-mode.

TECHNICAL DATA

Supply voltage	8 to 15 V ⎓ (12 V ⎓ nom.)
Peak to peak ripple	2 V ⎓ max. (at 12 V ⎓)
Current consumption(typical)	
Nominal operation	7 mA
Alarm (LED off)	2 mA
Alarm max.(LED on)	9 mA
Alarm output	100 mA at 28 V ⎓
Alarm time	min. 3 sec.
Tamper output	100 mA at 28 V ⎓
Operating temperature	-20° C to +50° C
Weight	44 g
Dimensions	93 x30 x 24
Housing meets	IP 301

CE