
Beijing Vitrttech Technology Co

Intelligent leakage cable intrusion alarm
system

I. Introduction and purpose

VITR-LCC-100 leakage cable warning system is an outdoor perimeter intrusion detection system, mainly applicable for communication bureau (stations), banks, coffer, senior residential areas, villas, prisons, warehouses, museums, power stations (including nuclear power plants), military organs and facilities, bases, oilfield, oil depots, cultural relics protection and other alarm places requiring outdoor perimeter protection, and can also be used as various indoor protection alarms. The key device involved in the system is a cable surface shallow buried intrusion detector, which can also be used in more complex field terrain (such as uneven mountainous areas and perimeter boundary corner, etc.), through the detection of active metal objects or people and animals weighing more than 10 kg, to achieve the purpose of effective safety prevention.

Two, system composition

An invisible cylindrical electromagnetic field protection area is formed between the two leakage cables laid. When the human body moves in this area over a certain volume and weight, it causes an electromagnetic field disturbance and is detected by the detector, generating an alarm signal. For non-conductors, such as branches, scraps of paper, etc., because the interference to the electromagnetic field is very weak, although moving in the protective area, it cannot cause the disturbance of the electromagnetic field, so the alarm will not be called. Through the exploration

The adjustment of the sensitivity of the detector can filter out small animals, such as puppies, kittens and other interference of moving in the protective area, to achieve the purpose of effective protection. The whole system consists of three parts: alarm host, detector host and leakage cable:

Three, working principle

The transmitting unit generates high frequency energy fed into the leakage cable for transmission and transmitted in the cable. When the energy is transmitted along the cable, an electromagnetic field is established within the range of the warning space, and a part of the energy is received by a receiving leakage cable installed nearby, forming a direct coupling of the transceiver energy. When the intruder enters the electromagnetic zone formed by the two cables, this part of the electromagnetic energy is disturbed, causing a change in the receiving signal. The changing signal is amplified and pushes the alarm indicator to light on, while turning the relay contact on.

IV. Equipment performance index parameters

Detector host

1. Lightning protection level: level.
2. Power supply: AC220V or DV18V (DC15V~DC26V).
3. Power Consumption: <4W.
4. Cable emission rate: <1W.
5. Operating frequency: Type A / B / C.
6. Environmental temperature: -40~85°C.
7. Environmental humidity: <90%.

leaky cable

- (1) Spacing distance for leakage cable placement: At 0.8-1.5 metres

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- (2) Depth of leakage cable placement: 3-10 cm (depending to medium)
 - (3) Alarm mode: the relay is often open and often closed for the contact output
 - (4) Maximum warning range length: 100 m
 - (5) Operating temperature: -40 C- + 60 C
 - (6) Weight: 20kg (10kg / root) / 100 m
 - (7) Specification: 10mm

V. Installation instructions

Installation of the probe host

The detection host is firmly installed on the wall or fixture, such as installed outdoor in the host plus cover waterproof protection chassis.

The leakage cable is buried

The leakage cable is installed at the perimeter of the warning area, the boundary of the single warning area is 100 meters long, two leakage cables in parallel, buried depth of about 10 cm. In order to ensure the normal work of the system, place the cable on the ground at appropriate spacing before embedding, and then connect the main machine to power for the walking test. After normal operation, finally bury in the position of the cable test (it is recommended to prevent future surface operation, such as weeding and greening damage cable, please bury the leakage cable in the PVC pipe).

VI. Matters needing attention

1. Two cables shall not cross and cross each other close to installation. Excess cables shall be cut. (Including non-leakage cables);
2. The depth of cable placement is determined according to the medium. Generally, the soil burial depth is 10 cm, and the cement burial depth is 3-7 cm
3. The main machine should be equipped with a waterproof protection box to the main machine when the main machine is installed outdoors;
4. Leak cables should not be laid overhead, otherwise the alarm effect will be affected.
5. The distance between the two leakage cables shall be equal at any point along the laying line. The distance is too wide, too narrow, or inconsistent width during laying, which will lead to the alarm blind area.

