

NVR Alarm Input/ Output Function

A. Brief Introduction

1. Alarm Input function is the device triggered to execute relevant program by external events. Alarm Output function is the device has an event and trigger an external execution.
2. There are two types of Alarm Output: Level value output type (outputs electric current), switching value output type (similar to an on-off switch).
3. NVR device only has the switching value output type. IPC has two Alarm Output types.

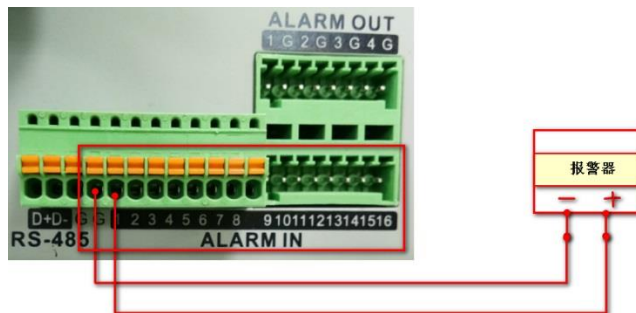
B. Theory Introduction and Application

1. Alarm Input

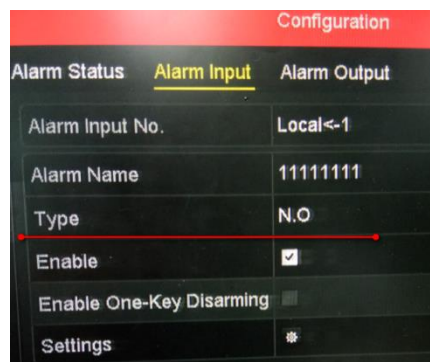
1) Application

When an external Alarm event happens, such as fire, area intrusion, the device is supposed to trigger a related execution (such as warning sound, pushing email, alarm notification, etc).

Usually, the device will work with alarm detectors, such as smoke detector which has two leading wires to connect to NVR/DVR alarm input channels. The alarm input is controlled by the sensor circuit. The practical applied model is shown as below, and the red rectangular box indicates the NVR/DVR alarm input module.



2) Alarm types Module:



Normally Open (N.O): Alarm Input circuit being Open is the normal status, being connected to the Ground will trigger the alarm.

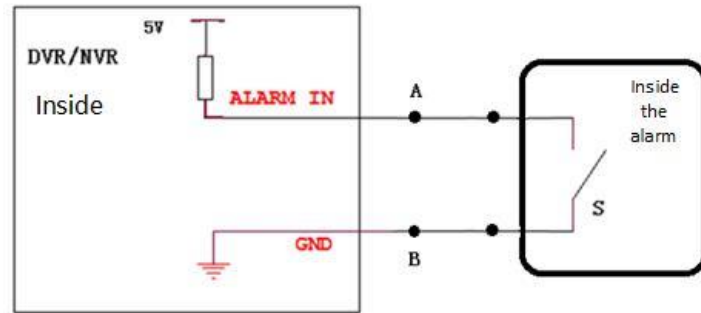
Normally Close (N.C): Alarm Input circuit being Closed is the normal status, being Open will trigger the alarm.

Choosing N.O or N.C to control the alarm apparatus depends on actual situation. The default setting of the device is N.O.

For example:

The smoke detector Output type: Output circuit is open when it's arming and circuit close when alarm is triggered. Which means, in normal cases, the smoke detector circuit will be open, you can choose N.O. for alarm in type in this case.

3) Theory and Application:



Alarm type	ALARM IN open	ALARM IN close
N.O	Not trigger	Trigger alarm
N.C	Trigger alarm	Not trigger

Note:

1. If it is DC power supply, the maximum voltage of Alarm-in Pin A is DC 12V;
2. The line sequence must be right, and the Alarm-in Pin voltage shouldn't be over

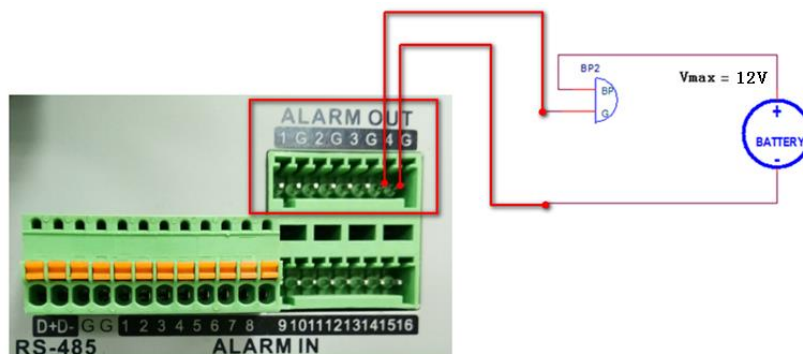
12V;

2. Alarm Output

1) Applications

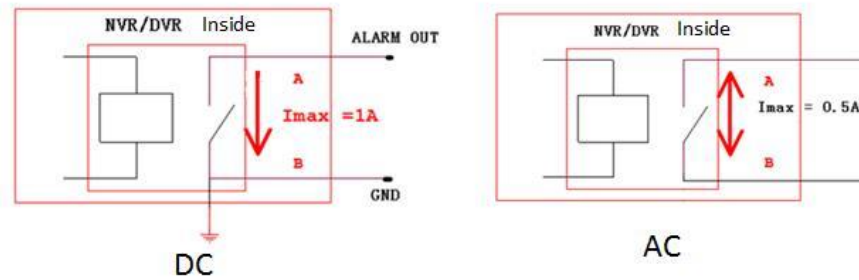
When the NVR/DVR detects an event, such as Motion detection, VCA smart detection, an external execution shall be triggered (such as Warning light, Alarm Bell).

Connect to the suitable external alarm devices according to the actual application. The Alarm Output works as a switch. The application model is as below, the red rectangular box indicates the NVR/DVR alarm output module.

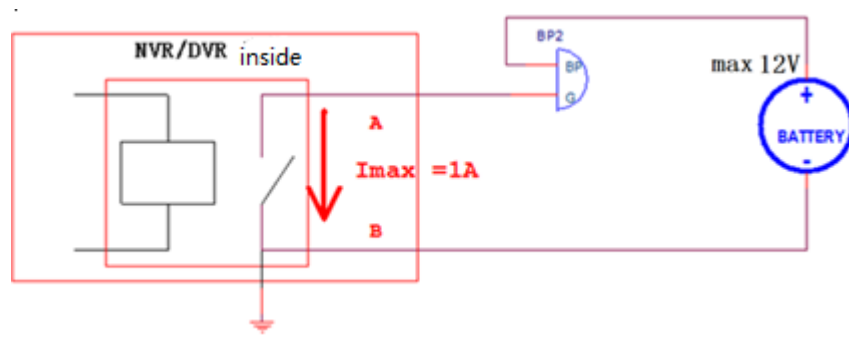


2) **Alarm Output:**

NVR/DVR Alarm output mode is switching value output type, which means the inner mechanism is equivalent to a switch. If the external circuit is AC, the Alarm output module jumper should be unplugged. The inner modules with AC external circuit and DC external circuit are shown as below:



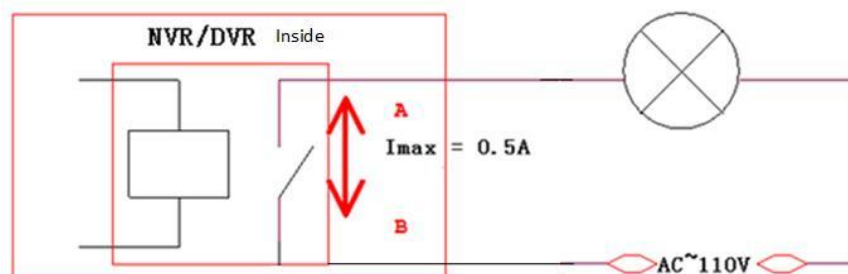
3) **Theory and Application:**
When the input is DC



Notes:

1. DC supply, the B-terminal is connected to the ground. The current flows in a certain direction.
2. The maximum load voltage is DC 12V, the max load current is 1A.

When the input is AC



Notes:

1. AC supply, A and B terminals are not connected to the ground. There is no electric polarity in the circuit.
2. The max load voltage is AC 110V, the max load current is 0.5A.

