

How to Connect Sensor/Alarm Device to FlexWATCH

◆ DI/DO port of FlexWATCH is not Digital Input/Output.

DI (Digital Input) Port of FlexWATCH was originally designed to receive sensor's trigger signal by DC level. But it is modified as **Opto-Coupled Input port** to connect Sensor device without any additional circuit like as power supply , TTL level output device, or something else., so FlexWATCH receive the sensor's event using not DC level (DC Input) signal, but just On/Off contact (dry-contact), although terminology "DI" is still used to indicate input port.

DO(Digital Output) Port is changed as a **Relay-Output Port**. It works like a normal open or normal close type switch.

◆ Operation of FlexWATCH using DI/DO

FlexWATCH-300/500 has 6 opto-coupled input port to detect sensor's trigger signal and 6 relay output port ("1 form C " type relay , 0.5 A 60 VAC/ 1A 24 VDC.) to control alarm device.

FlexWATCH-CAM has 2 opto-coupled input port for sensor detection and 1 relay output . Each port can be configured and operated independently. But the stand-alone mode is set, each output port is related input port by one-to-one mapping.

Sensor / Alarm Device Control can be operated only after s/w configuration of FlexWATCH is set up . Configuration is modified in the DI/ DO mode setup menu or DO menu of Configuration Setup in the console, telnet or Web Admin. Page.

FlexWATCH detect the sensor's status every 1 sec. Sensor type can be normal close or normal open type . but user should set the type of sensor in the config. Menu beforehand.. FlexWATCH needs not DC level signal but on/off contact to detect sensor's state change. So, general "dry-contact" type sensor like as PIR(PIR's output circuit is normally consist of relay) , or Magnetic sensor can be used for FlexWATCH

Alarm Device Control(DO) can be configured without s/w setting, Output port is consist of 1-form-C type relay, so user can connect the alarm device with "Normal-Open" type or "Normal-Close" type. FlexWATCH doesn't offer any additional DC level, so external DC or AC supply circuit can be required to operate alarm device like as siren.

* Normal-Open type device should be connected the A and C of DO port.

* Normal-Close type device should be connected the A and B of DO port

◆ Meaning of DI/DO Configuration value

1. Input Control : (Enable/Disable)

It decide whether FlexWATCH will use the sensor input or not..

It should be Enabled only if sensor is connected and decided to get the input.

2. Output Control: (Enable/Disable)

It decide whether FlexWATCH will use the alarm device or not..

It should be Enabled only if device is connected and decided to control an output.

3. Stand Alone Control : (Enable/Disable)

It decide whether alarm device will make output automatically ,

regardless of indicating event to user or client program, when the sensor's event is detected..

Stand Alone Control is effective only when Input Control and Output Control is enabled.

When Sensor is triggered, Alarm device will be turned on automatically , but turning off the alarm device is the responsibility of user.

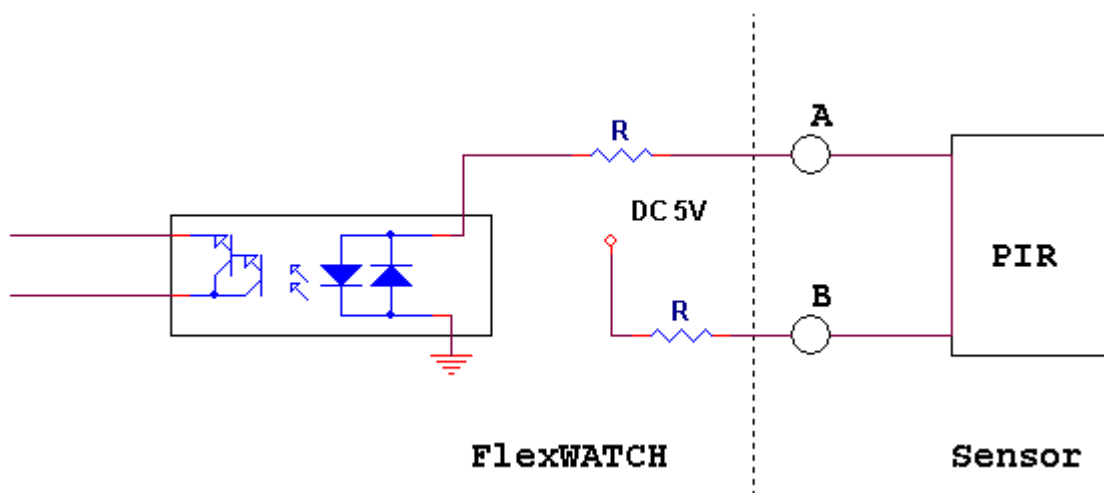
4. Default Status : (Normal Close/Normal Open)

It define the normal steady state of sensor. (i.e. sensor does not generate event signal) .

It depends on the type of sensor.

*** Application Example.**

● **Sensor Connection example.**



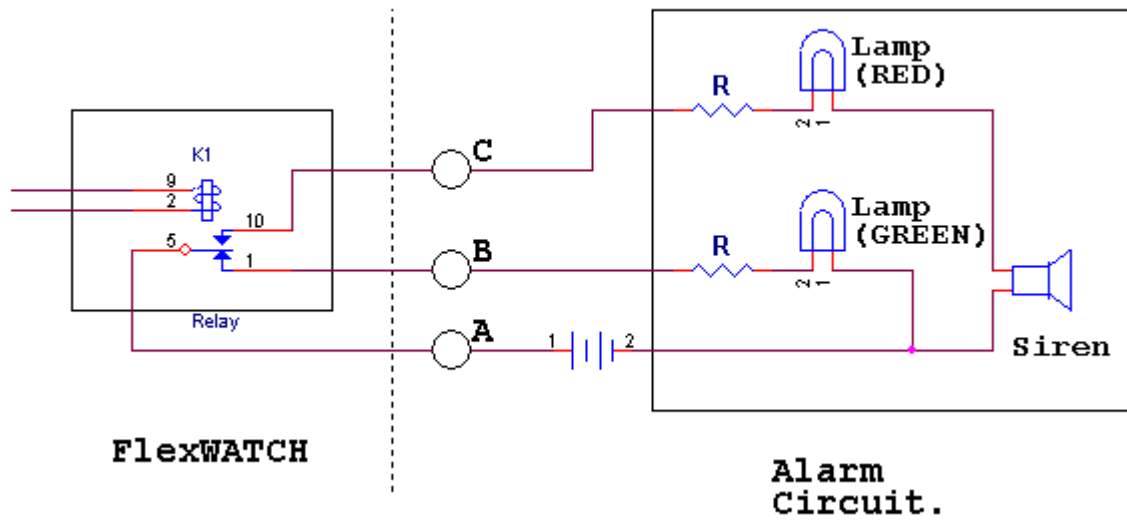
cf) FlexWATCH-CAM :

DI 1 : A → Pin 1 of DI/DO port B → Pin2 of DI/DO Port

DI 2 : A → Pin 3 of DI/DO port B → Pin4 of DI/DO Port

CAUTION ! : DI port to check sensor is not required DC level signal to but just on/off contact (dry-contact).

● **Alarm Device Connection example.**



cf) FlexWATCH-CAM :

DO : A → Pin 6 of DI/DO port B → Pin7 of DI/DO Port C → Pin8 of DI/DO Port

NOTICE ! : Power can be DC or AC, it is very dependent on the alarm device and related additional circuit. But you should consider the Relay Specification and choose the alarm device and power type.

Power spec. of relay : 0.5A 60 VAC
1A 24 VDC

● **Pin Description of DI/DO Port / Connector of FlexWATCH-CAM**

