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Category	■FAQ □SOP	**Related OS**	N/A
Abstract	ADAM-60XX _How to use wet contact sensor with open-circuit logic		
Keyword	ADAM-60XX, Wet contact, DI, Open-circuit		
Related Product	ADAM-6050, ADAM-6051, ADAM-6060, ADAM-6066		

■ Problem Description:

This document shows how to use wet contact sensor with open-circuit logic for ADAM-6K series (BE、CE and D version).

■ Brief Solution - Step by Step:

The specification for the DI wet contact in ADAM-6K series (BE、CE&D version) is **logic 0 at 0~3V** instead of open circuit. However, there are chances that customer using a sensor with Open status as logic 0, which will make DI not be able to work properly.

ADAM-6060 Specifications

- Communication: 10/100 Base-T Ethernet
- Supports Protocols: Modbus/TCP, TCP/IP, UDP, HTTP, ICMP, ARP
- Supports Peer-to-Peer and GCL (Refer to Section 5.3.4 and Chapter 7)

Digital Input

- Channels: 6
- Dry Contact:
  - Logic level 0: Close to Ground
  - Logic level 1: Open
- Wet Contact:
  - Logic level 0: 0 ~ 3 VDC
  - Logic level 1: 10 ~ 30 VDC

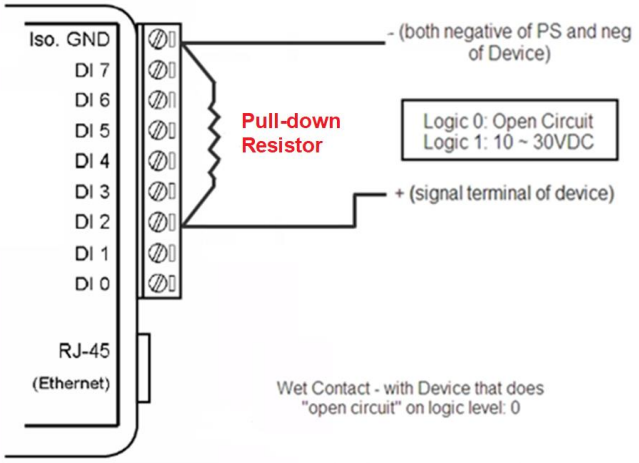
If the device that connected to DI of ADAM-6K series is open-circuit at logic 0, an extra resistor would be needed.(Except for ADAM-6052). For different versions of ADAM-6060, users would need different resistors with respective resistance.

ADAM-6060 version	Resistance of pull down resistor
ADAM-60XX-BE	Lower than 4.7K Ω
ADAM-60XX-CE	Lower than 1K Ω
ADAM-60XX-D	Lower than 1.5K Ω

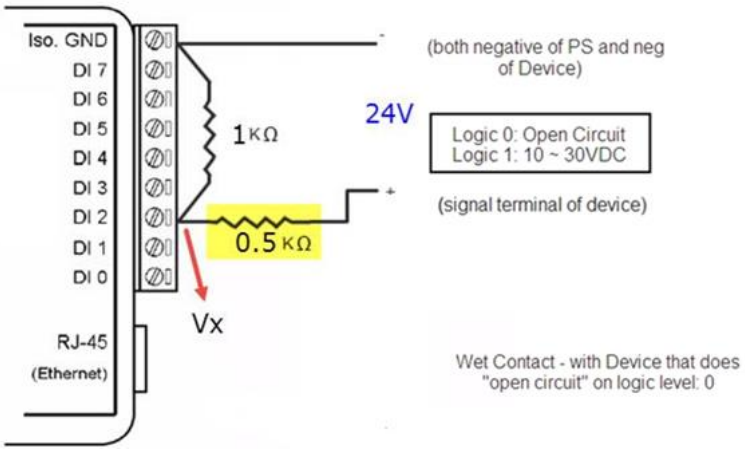
[Solution]

User may add different resistors with respective resistance between DI X and Iso. GND to pull down the internal voltage of ADAM module to turn logic to low status.

For example, if user takes a 24V as DI input signal, then user would need to utilize the corresponding pull-down resistor, which rated power is at least **1W.** If the rated power of the resistor is smaller than 1W, the resistor will be damaged.



In order to avoid the pull down resistor from overheat due to the excessive current, user may also add a current limiting resistor as below picture. The value of current limit resistor and the rated power is based on the current passing through the sensor also the output voltage from the sensor. Take below picture as an example, user can add a 0.5K resistor for a 24V sensor output signal, and the rated power for the extra current limiting resistor should be at least 0.5W.



Please note that this wiring method is not standard wiring way provided in the user manual, this work around method is only to provide customers convenience when using the sensor with Open and 10~30V wet contact signal, which does not conform with the correct DI spec supported in ADAM-6000.