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Category	■FAQ □SOP	**Related OS**	N/A
Abstract	ADAM-60XX-CE_How to use wet contact sensor with open-circuit logic		
Keyword	ADAM-60XX, Wet contact, DI, Open-circuit, CE-version		
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 (CE version).

■ Brief Solution - Step by Step:

The specification for the DI wet contact in ADAM-6K series (CE 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 cannot work properly.

If the device that connected to DI of ADAM-6K series (CE version) is open-circuit at logic 0, an extra resistor **1k Ω** resistor is needed. (Except for ADAM-6052)

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)

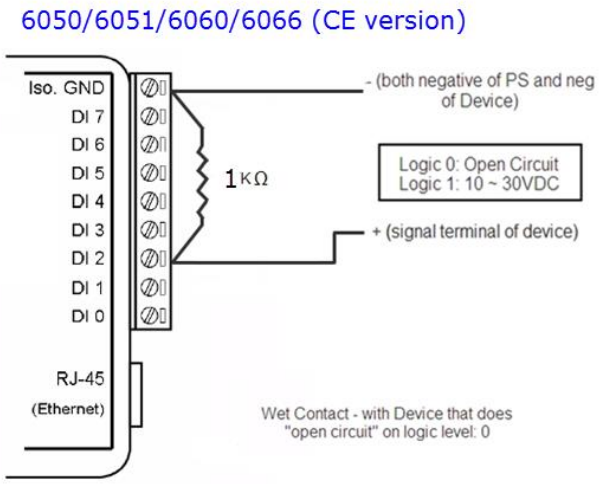
Digital Input

- 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

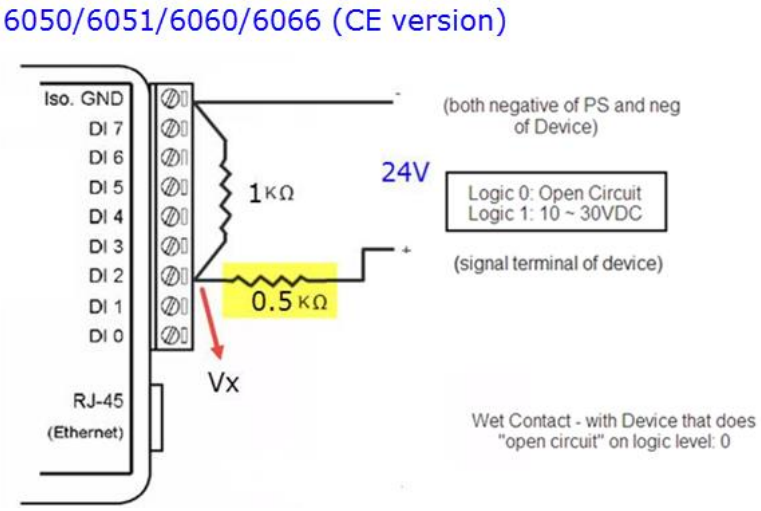
[Solution]

User may add a 1k Ω resistor between DI X and Iso. GND to pull down the internal voltage of ADAM module for making DI work.

Take a 24V DI input signal as an example, user need to choose the 1K resistor, which rated power is at least for **1W.** If the rated power of the 1K resistor is smaller than 1W, it will make the resistor damage.



In order to avoid the 1k pull down resistor 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.



However, we have to emphaze that the wiring method is not the standard wiring 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 is not the correct DI spec supported in ADAM-6000.