Advantech AE Technical Share Document

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Category	■FAQ □SOP	Related OS	N/A
Abstract	WISE-4000, Can WISE DI work with NPN and PNP type DO module		
Keyword	NPN, PNP, source-type, sink-type, wiring, digital input, digital output		
Related Product	WISE-4000		

■ **Problem Description:**

What's the internal circuit design for WISE DI (digital input) module?

It belongs to pnp-type or npn-type transistor?

Can do I wiring it to the npn-type or pnp-type DO module?

■ **Answer:**

Following picture (*Figure 1*) is the partial circuit design for digital input of WISE, as you could see in the diagram, it belongs to npn-type circuit design.
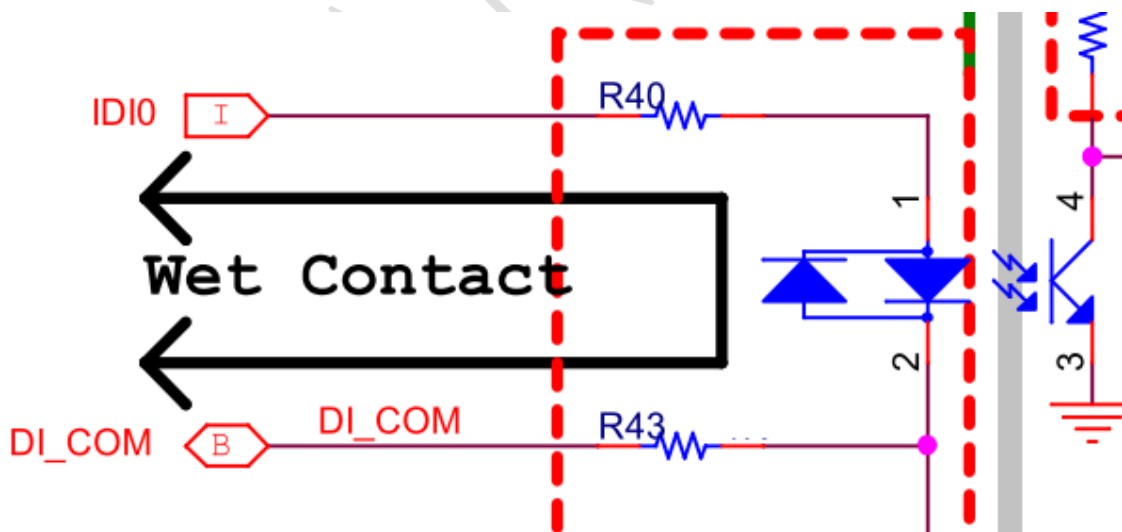

Figure 1

For the connection of between pnp-type or npn-type digital output module with WISE, please refer to the following FAQ.

What's different Sink & Source Digital Output of Adcantech DAQ device

When connecting a single channel of DO with WISE DI, the wiring methods do work. However, in the most application scenario, usually there will be more than one channel of DI and DO connected together with ONLY one power supply.

In this situation, we would suggest the customer use PNP DO module to work with WISE DI as the following diagram. (*Figure 2*)
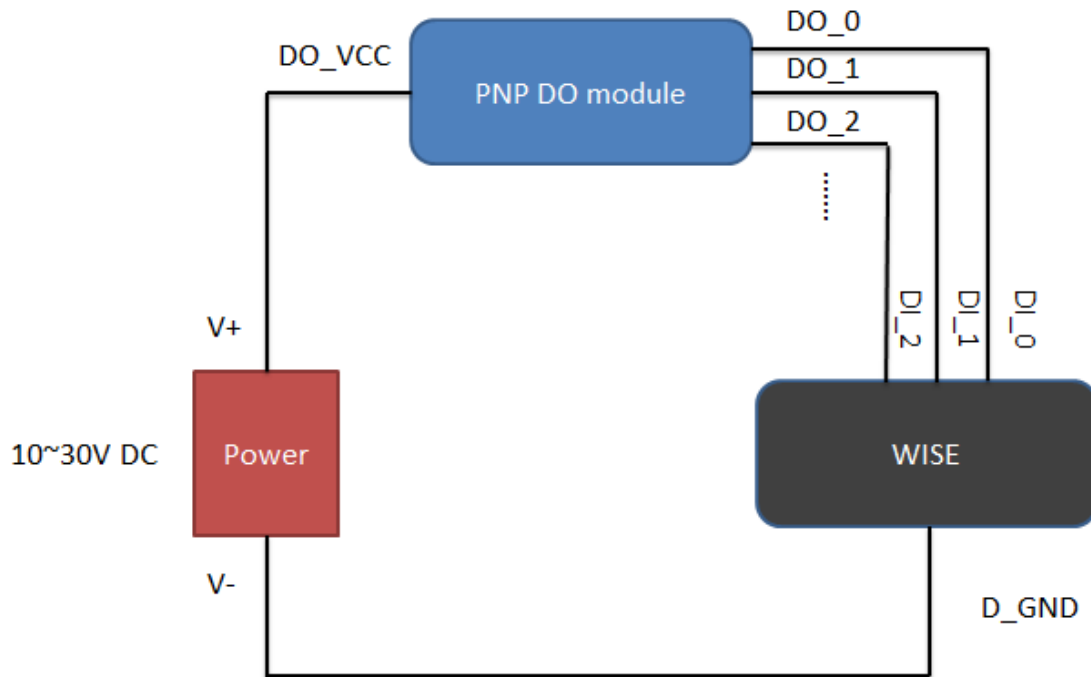

Figure 2

For the NPN DO module with multiple channels connection, we would not suggest the customer connect it to WISE since the D_GND will be connected to different DO channel, which will result in the interference on other channel.