

# ECAT-2050 DIO Quick Start

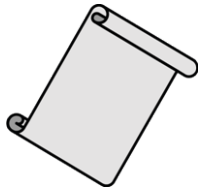
## 1 Shipping Package

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The package includes the following items:



ECAT-2050



Quick Start



CD

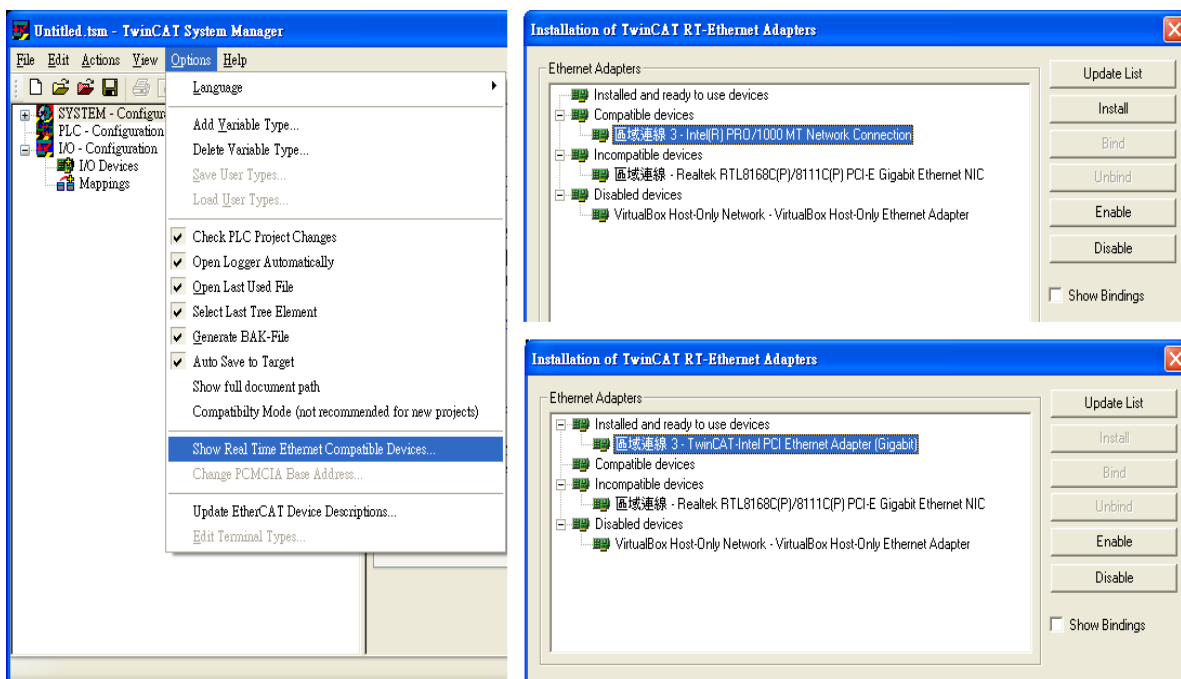
If any of these items are missing or damaged, please contact the local distributor for more information. Keep the shipping materials and package in case you want to ship the module in the future.

## 2 Software Communications

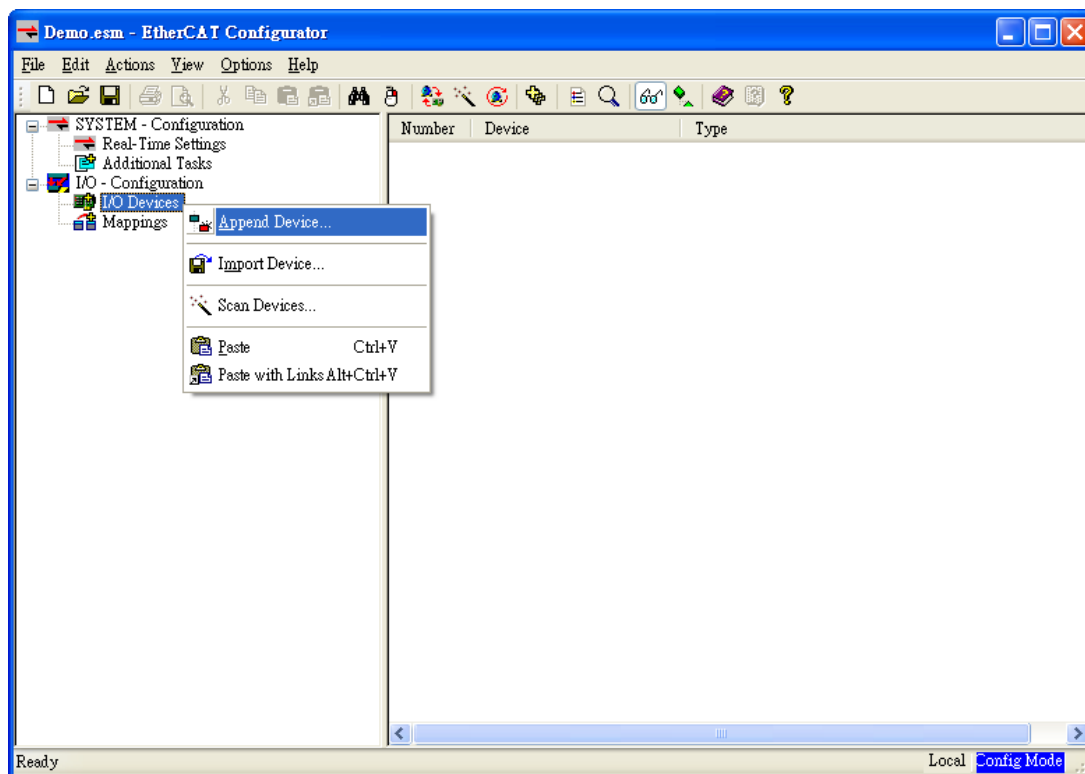
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1. Download the ESI file, [ICPDAS ECAT-2050.xml](http://ftp.icpdas.com/pub/cd/fieldbus_cd/ethercat/slave/ecat-2000/software/ICPDAS_ECAT-2050.xml), from the website  
[http://ftp.icpdas.com/pub/cd/fieldbus\\_cd/ethercat/slave/ecat-2000/software/](http://ftp.icpdas.com/pub/cd/fieldbus_cd/ethercat/slave/ecat-2000/software/)  
or from the CD in the shipping package  
CD: \fieldbus\_cd\ethercat\slave\ecat-2000\software
2. Copy the file "[ICPDAS ECAT-2050.xml](#)" to the destination folder of EtherCAT Master Tools ([Beckhoff EtherCAT Configurator](#) or [TwinCAT](#) etc.)  
C:\EtherCAT Configurator\EtherCAT\ICPDAS ECAT-2050.xml  
C:\TwinCAT\Io\EtherCAT\ICPDAS ECAT-2050.xml
3. Start your [EtherCAT Configurator](#). Choose File, New to create a new I/O Configuration.

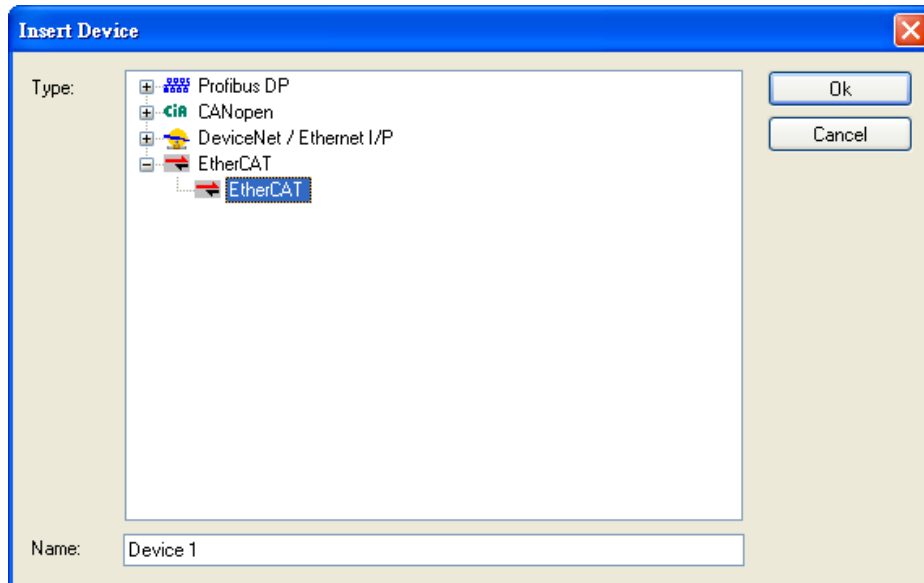
- Select **Options** → **Show Real Time Ethernet Compatible Devices...**, and choose your Ethernet interface or device and **Install**. Please confirm your device is now under the list of **Install and ready to use devices**.



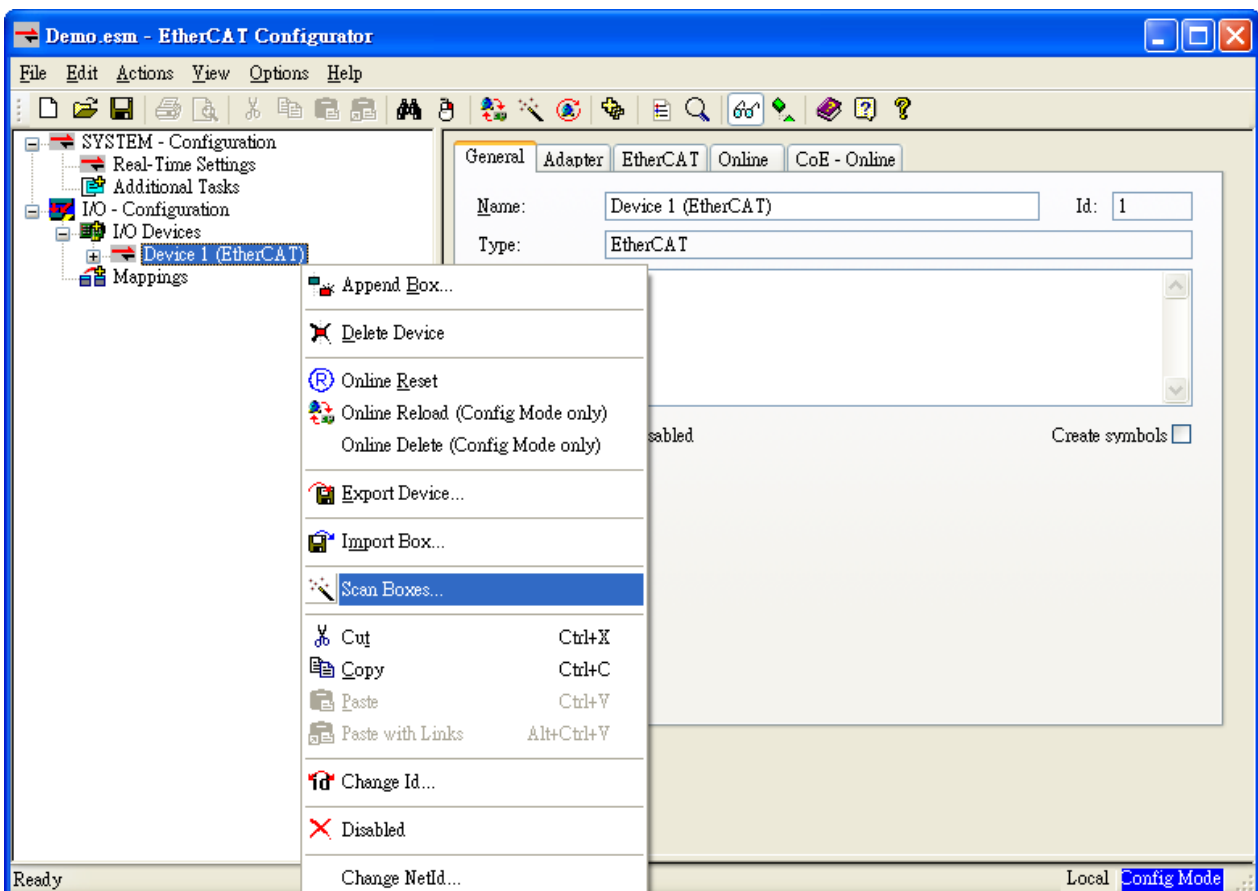
- Click **I/O Device** with the right mouse button and choose **Append Device...** in the menu, and then the dialog window Insert Device is opened.



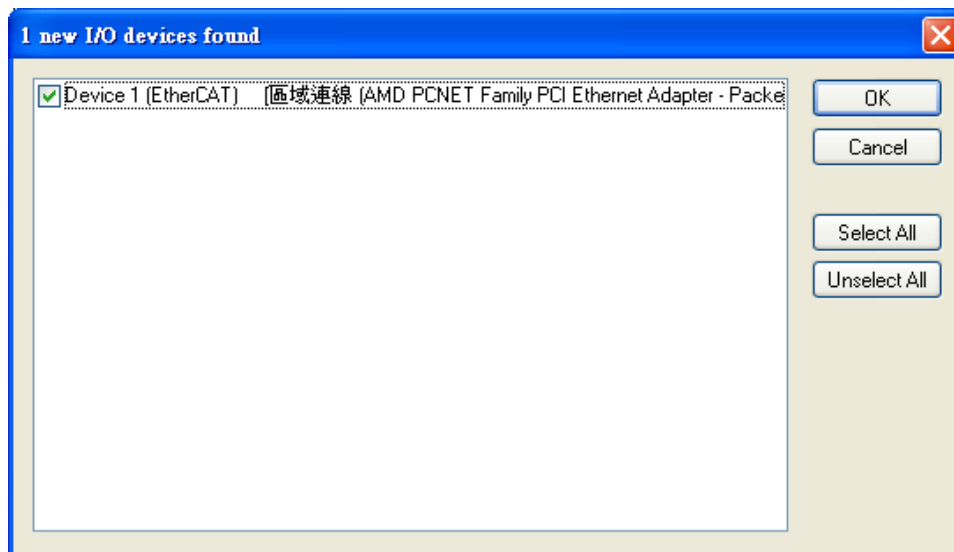
6. Select the *EtherCAT* type in this dialog window and confirm with *OK*.



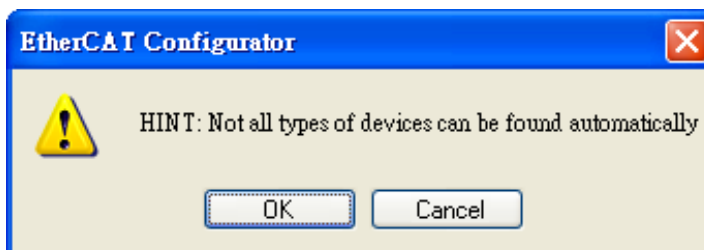
7. *Device 1 (EtherCAT)* is added to to your configuration, i.e. a new EtherCAT line. Click *Device 1(EtherCAT)* with the right mouse button and choose *Scan Boxes...* in the menu.



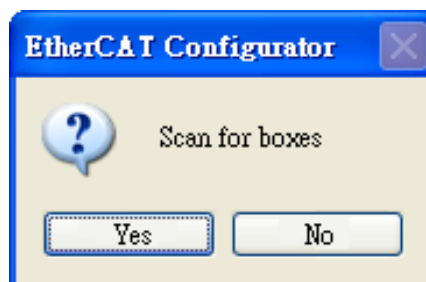
8. Choose the correct network device which is connected to ECAT-2000.



9. If the hint is shown, click **Yes/OK** and continue.



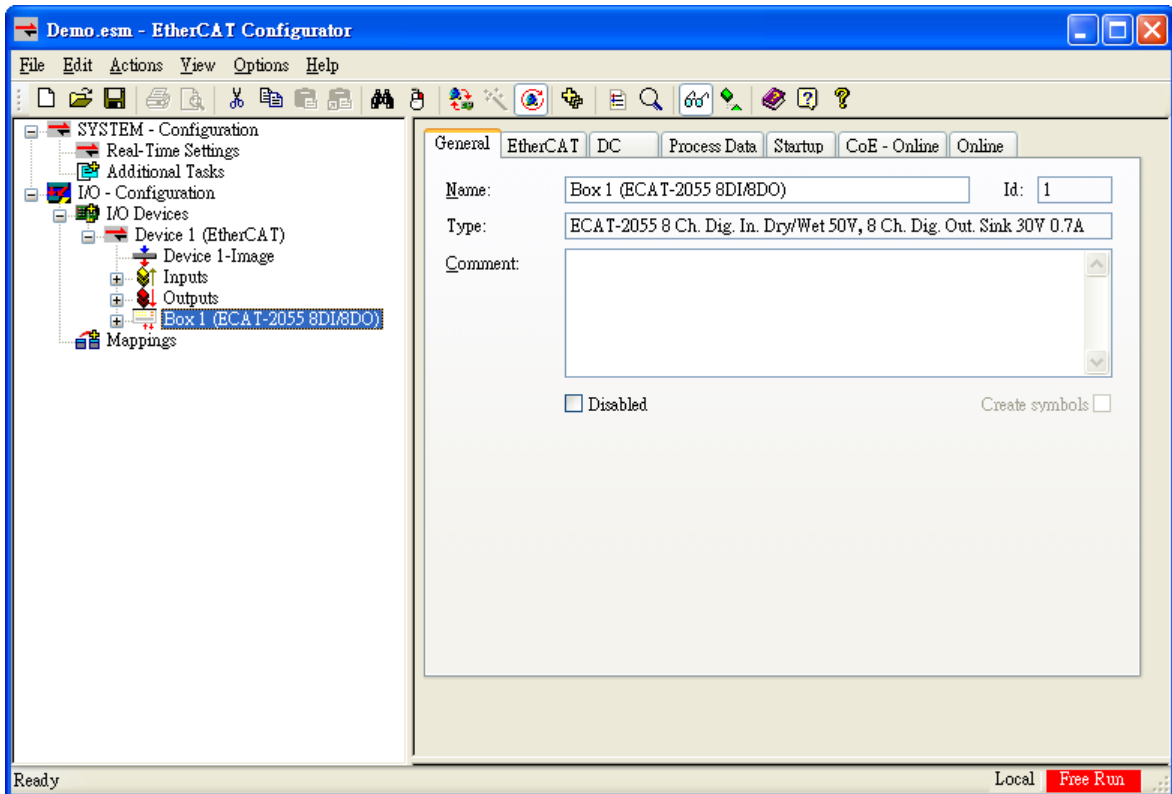
10. Click **Yes** to start scanning for ECAT-2000.



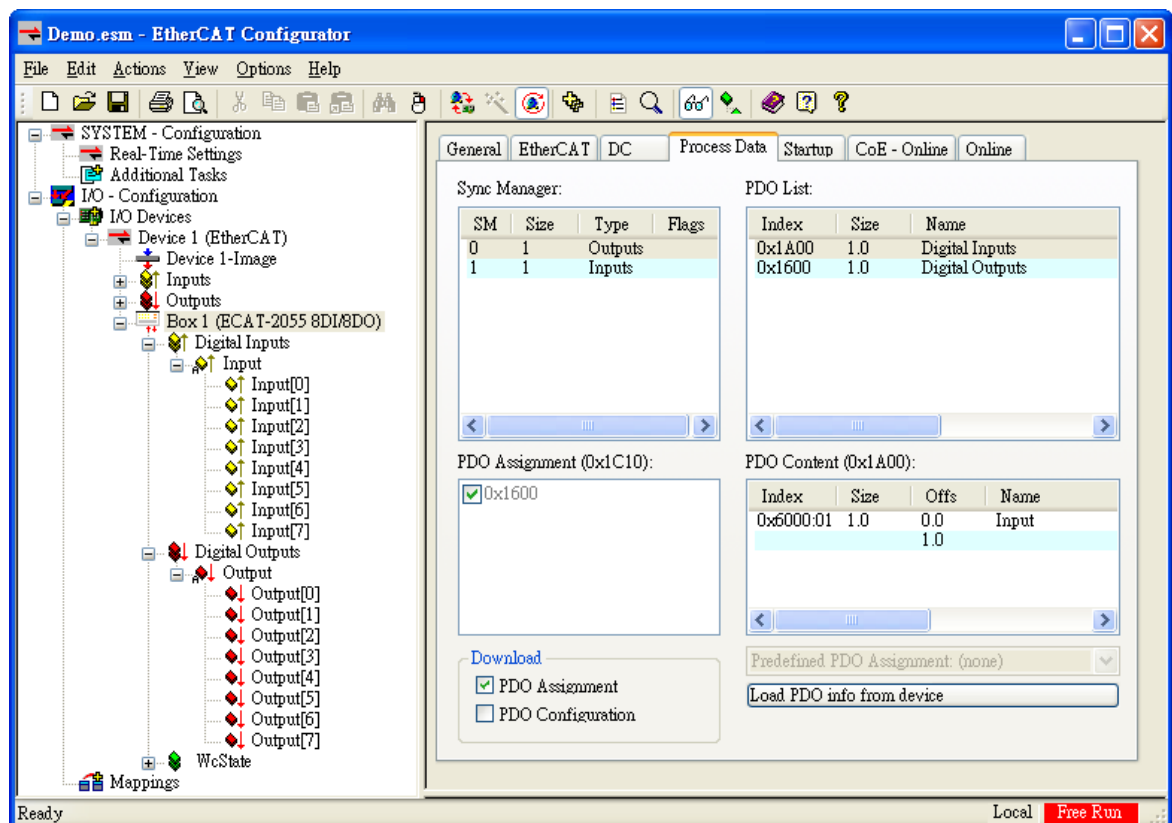
11. Click **Yes** to activate the **free run mode** for EtherCAT Configurator



12. The **ECAT-2000 (Box 1)** is now shown in the EtherCAT Configurator.

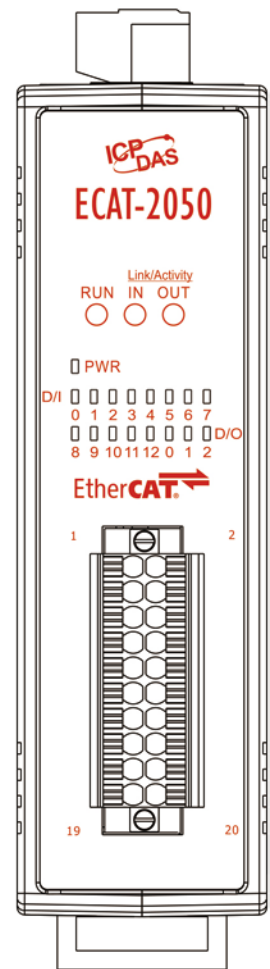


13. The input and output variables contained in the ESI (\*.xml) file of the ECAT-2000 are displayed as CANopen Process List Data Objects(PDO). The PDOs are listed in the **PDO List** of the **Process Data** tab.

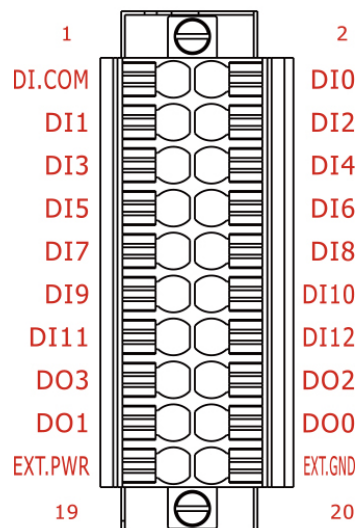


# 3 *Status LED Indicators*

Notation	Color	States	Description
<b>PWR</b>	Red	On	The device is powered up
<b>RUN</b>	Red	Off	The device is in state INIT
		Blinking	The indicator shall turn on and off iso-phase with a frequency of 2.5 Hz: on for 200 ms followed by off for 200 ms.
		Single Flash	The indicator shall show one short flash (200 ms) followed by a long off phase (1000 ms).
		On	The device is in state OPERARIONAL
<b>Link Activity IN/OUT</b>	Green	Off	No link
		Blinking	Link and activity
		On	Link without activity
<b>D/I</b>	Green	Off	Input voltage is lower than +2 V <sub>DC</sub> (Max.)
		On	Input voltage is higher than "Off" state
<b>D/O</b>	Green	Off	Digital output status is "Off"
		On	Digital output status is "On"



# 4 *Pin Assignments*



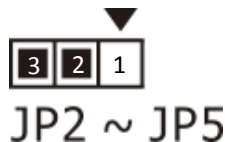
# 5 Wire Connections

## ➤ Input Wiring

Input	ON	OFF
Relay Contact (Wet)		
NPN Output (Wet)		

## ➤ NPN Output Wiring (Default):

Jumpers JP2 to JP5 are used to configure the Output type as either PNP (Source) or NPN (Sink) for Digital Output channel 0 to 3. To configure **NPN (Sink) output**, connect pin2 to pin3.



Output	ON	OFF
Drive Relay		
Resistance Load		

➤ **PNP Output Wiring:**

Jumpers JP2 to JP5 are used to configure the Output type as PNP (Source) or NPN (Sink) for Digital Output channel 0 to 3. To configure *PNP (Source) output*, connect pin1 to pin2.



Output	ON	OFF
Drive Relay		
Resistance Load		

If you have any difficulties using your ECAT-2000 series modules, please contact us or send a description for the problem to [service@icpdas.com](mailto:service@icpdas.com).