



ECAT-2045/2057 series Quick Start

v1.2, Jun. 2020

Packing List

In addition to this guide, the package includes the following items:

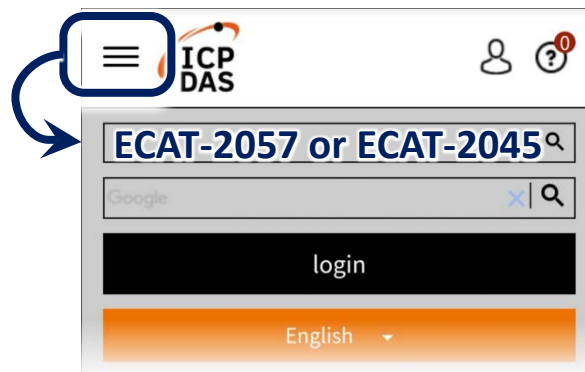


ECAT-2045/2057/2057P/2057-NPN/2057-8P8N

Resources

How to search for ESI, manuals and spec information on ICP DAS website.

- For Mobile Web



Technical Support

service@icpdas.com

www.icpdas.com

- For Desktop Web



ECAT-2057 or ECAT-2045



PRODUCTS SOLUTIONS NEWS & EVENTS SUPPORT CORPORATE

Related Information

For more detailed information related to the manual, hardware manual:

<http://www.icpdas.com/en/download/index.php?model=ECAT-2057>

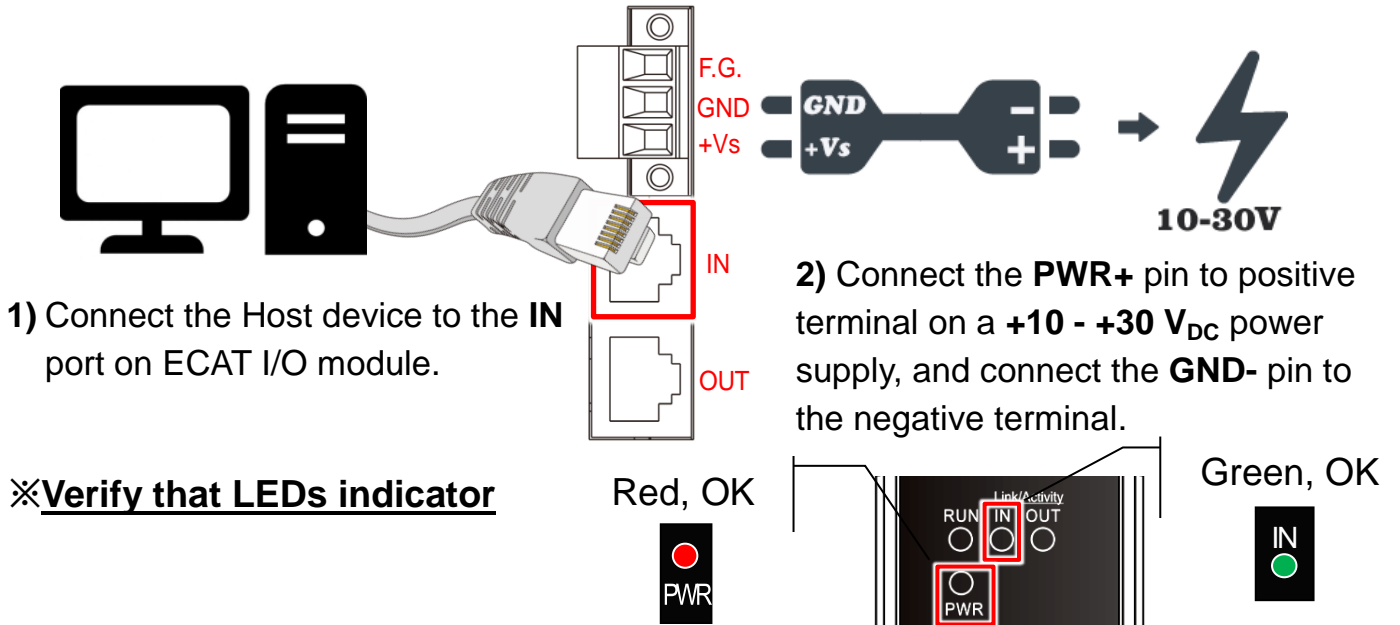
<http://www.icpdas.com/en/download/index.php?model=ECAT-2045>

1 Connecting the Power and Host

※Switch on module and connect it to an EtherCAT network

! NOTE:

Attaching an ESC directly to an office network will result in network flooding, since the ESC will reflect any frame – especially broadcast frames – back into the network (broadcast storm).



2 Search Modules

ESI file

The latest ESI file (ECAT-2000_DIO....xml) can be downloaded from website at

[ECAT-2000 DIO Series EtherCAT Slave Information\(ESI\).xml](#)

Install the ESI file

Copy the “ECAT-2000_DIO....xml” file to the Master Tools installation folder, as indicated in the table below.

Software	Default Path
Beckhoff EtherCAT Configuration	C:\EtherCAT Configurator\EtherCAT
Beckhoff TwinCAT 3.X	C:\TwinCAT\3.x\Config\lo\EtherCAT
Beckhoff TwinCAT 2.X	C:\TwinCAT\lo\EtherCAT

Run the EtherCAT Master software (Beckhoff TwinCAT 2.X)

Switch on power and execute the TwinCAT System Manager (Config mode)

1. I/O Devices → Right click → Scan Devices...

2. Click “OK” button

3. Choose the correct network device which is connected to ECAT Module and click “OK” button

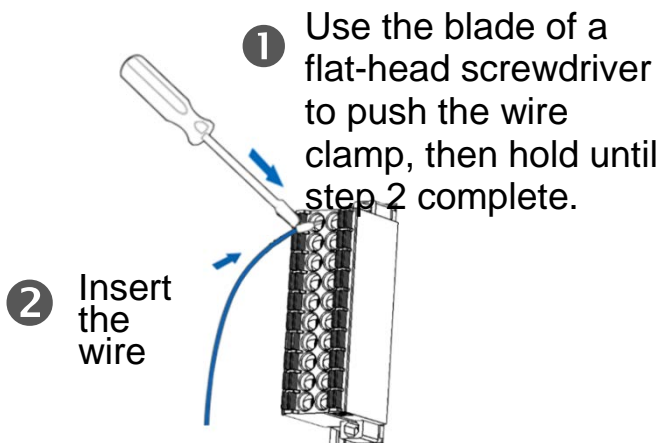
4. Click “OK” to start scanning
Click “OK” to activate the free run mode for TwinCAT system manager

5. In the left-hand window, **ECAT Module** is now shown in the TwinCAT system Manager

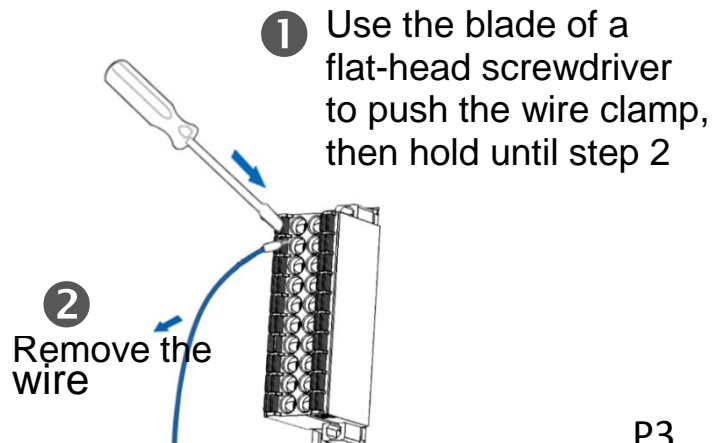
3 Wiring to the Connector

➤ Wiring Tip

Connecting the wire



Removing the wire



➤ Wire Diagrams

Module Name	ECAT-2045/ECAT-2057-NPN/ ECAT-2057-8P8N (DO8-15)		ECAT-2057/ECAT-2057P ECAT-2057-8P8N(DO0-7)	
Output Type	Sink		Source	
	ON State Readback as 1	OFF State Readback as 0	ON State Readback as 1	OFF State Readback as 0
Drive Relay				
Resistance				

➤ Wiring the DO

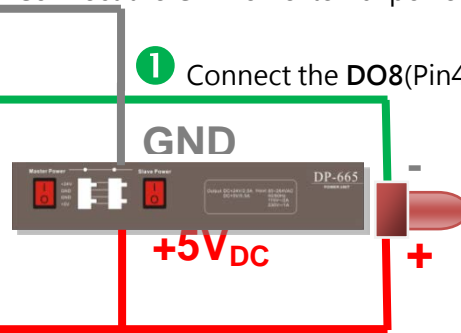
ECAT-2045/2057-NPN/2057-8P8N(DO8-15)

3 Connect the GND on external power supply to the EXT.GND(Pin2)

Terminal No.	Pin Assignment
1	EXT.GND
3	DO0
5	DO1
7	DO2
9	DO3
11	DO4
13	DO5
15	DO6
17	DO7
19	EXT.PWR



Pin Assignment	Terminal No.
EXT.GND	2
DO8	4
DO9	6
DO10	8
DO11	10
DO12	12
DO13	14
DO14	16
DO15	18
EXT.PWR	20



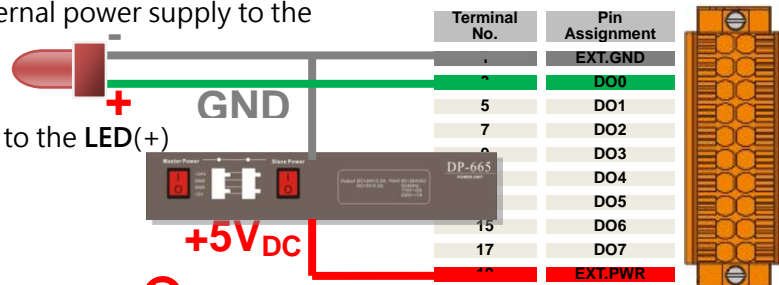
1 Connect the DO8(Pin4) to the LED(-)

2 Connect +5V external power supply to the LED(+) and EXT.PWR(pin18)

ECAT-2057/2057P/2057-8P8N(DO0-7)

3 Connect the GND on external power supply to the EXT.GND(Pin1) and LED(-)

1 Connect the DO0(Pin3) to the LED(+)

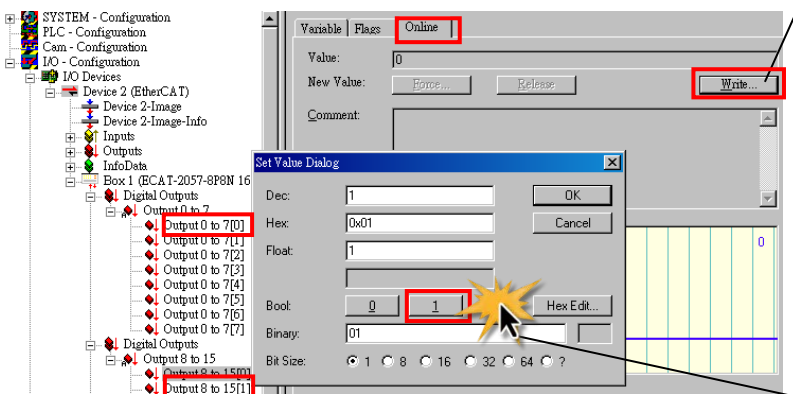


2 Connect +5V external power supply to EXT.PWR(pin19)

Terminal No.	Pin Assignment
1	EXT.GND
3	DO0
5	DO1
7	DO2
9	DO3
11	DO4
13	DO5
15	DO6
17	DO7
19	EXT.PWR

Pin Assignment	Terminal No.
EXT.GND	2
DO8	4
DO9	6
DO10	8
DO11	10
DO12	12
DO13	14
DO14	16
DO15	18
EXT.PWR	20

➤ Verifying the DO functionality



In the left-hand of the window, click on the Output 0 to 7 or Output 8 to 15, then click Output 0 to 7[0] or Output 0 to 15[0].

In the right-hand of the windows, click the online.

Click Write.

Click 1 (Configure DO0 or DO8 to Logic1).

LED is lighting.

