



**ET-7002**  
**PET-7002**

**ET-7202**  
**PET-7202**

Ethernet I/O Module with 3-ch AI, 6-ch DI, 3-ch Power Relay

### Features

- Built-in Web Server
- Web HMI
- Support for both Modbus TCP and Modbus UDP Protocols
- Communication Access Control
- 2-port Ethernet Switch (LAN Bypass) for Daisy-Chain Wiring
- Dual Watchdog
- I/O Pair Connection
- Built-in I/O
  - AI: 3 Channels with 240 Vrms Overvoltage Protection
  - DI/Counter: 6 Channels
  - Power Relay: 3 Channels



### Introduction

The ET-7002/PET-7002/ET-7202/PET-7202 is a multi-function module with 3-channel analog inputs, 6-channel digital inputs and 3-channel relay outputs. It provides various programmable analog inputs (+/-150 mV, +/-500 mV, +/-1 V, +/-5 V, +/-10 V, +/-20 mA, 0 ~ 20 mA and 4 ~ 20 mA). Each analog input is allowed to configure a proper range with 240 Vrms high voltage protection. Each analog input can be programmed to accept current or voltage as input/output depending upon the position of the corresponding jumper. The ET-7002/PET-7002/ET-7202/PET-7202 is fully RoHS-compliant and has qualification for 4 kV ESD protection as well as 2500 VDC intra-module isolation.

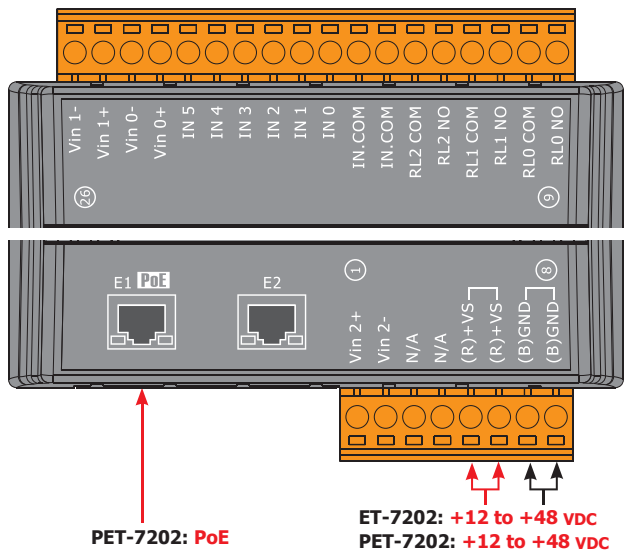
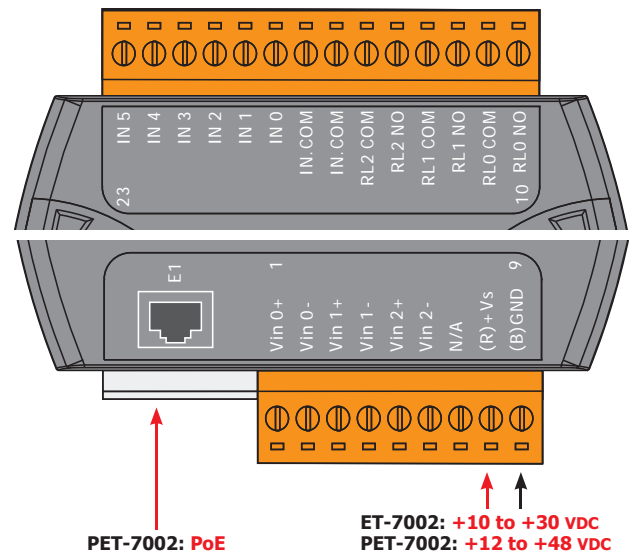
### System Specifications

Model	ET-7002	PET-7002	ET-7202	PET-7202
<b>Software</b>				
Built-in Web Server	Yes			
<b>CPU Module</b>				
Watchdog Timer	Module, Communication (Programmable)			
<b>2-Way Isolation</b>				
Ethernet	1500 VDC	-	1500 VDC	-
I/O	2500 VDC		2500 VDC	
<b>EMS Protection</b>				
EFT (IEC 61000-4-4)	±4 kV for Power Line		±2 kV for Power Line	
ESD (IEC 61000-4-2)	±4 kV Contact for Each Terminal ±8 kV Air for Random Point			
Surge (IEC 61000-4-5)	±0.5 kV for Power Line		±2 kV for Power Line	
<b>LED Indicators</b>				
Status	Run, Ethernet	Run, Ethernet, PoE	Run, Ethernet, I/O	Run, Ethernet, I/O, PoE
<b>Ethernet</b>				
Ports	1 x RJ-45, 10/100 Base-TX		2 x RJ-45, 10/100 Base-TX, Switch Ports	
PoE	-	Yes	-	Yes
LAN bypass	-		Yes	
Access Control	ID, Password and IP Filter			
Protocol	Modbus TCP, Modbus UDP			
<b>Power</b>				
Reverse Polarity Protection	Yes			
Consumption	2.9 W (max.)	3.4 W (max.)	3.8 W (max.)	4.1 W (max.)
Powered from PoE	-	IEEE 802.3af, Class1	-	IEEE 802.3af, Class1
Powered from Terminal Block	+10 to +30 VDC	+12 to +48 VDC		
<b>Mechanical</b>				
Dimensions (mm)	72 x 123 x 35 (W x L x H)		76 x 120 x 38 (W x L x H)	
Installation	DIN-Rail mounting			
<b>Environment</b>				
Operating Temperature	-25 ~ +75 °C			
Storage Temperature	-30 ~ +80 °C			
Humidity	10 ~ 90% RH, Non-condensing			

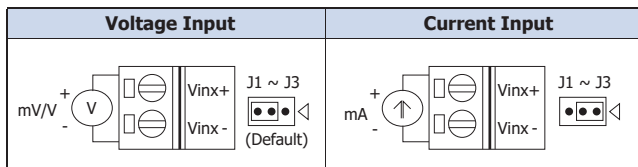
## I/O Specifications

Analog Input		
Channels	3 (Differential)	
Type	Voltage, Current	
Range	±150 mV, ±500 mV, ±1 V, ±5 V, ±10 V 0 to 20 mA, ±20 mA, 4 to 20 mA (Jumper Selectable)	
Resolution	16-bit	
Accuracy	Normal Mode	±0.1%
	Fast Mode	±0.5% or better
Sampling Rate	Normal Mode	10 Hz (total channels)
	Fast Mode	50 Hz (total channels)
Input Impedance	Voltage	2 MΩ
	Current	125 Ω
Overvoltage Protection	240 Vrms	
Overcurrent Protection	50 mA @ 110 VDC (max.)	
Individual Channel Configuration	Yes	
Open Wire Detection	For 4 to 20 mA only	
Virtual Channel to Channel Isolation	±400 VDC	
Digital Input/Counter		
Channels	6	
Type	Wet Contact	
Sink/Source (NPN/PNP)	Sink/Source	
ON Voltage Level	+10 to +50 VDC	
OFF Voltage Level	+4 VDC (max.)	
Max. Counts	4,294,967,295 (32-bit)	
Frequency	100 Hz	
Min. Pulse Width	5 ms	
Input Impedance	10 KΩ, 0.5 W	
Overvoltage Protection	+70 VDC	
Relay Output		
Channels	3	
Type	Power Relay, Form A (SPST N.O.)	
Operate Time	6 ms (Typical)	
Release Time	3 ms (Typical)	
Contact Rating	5 A @ 250 VAC/24 VDC (Resistive Load)	
Electrical Endurance	10 <sup>5</sup> ops.	
Mechanical Endurance	2 × 10 <sup>7</sup> ops.	
Power on Value	Programmable	
Safe Value	Programmable	

## Pin Assignments



## Wire Connections



## Ordering Information

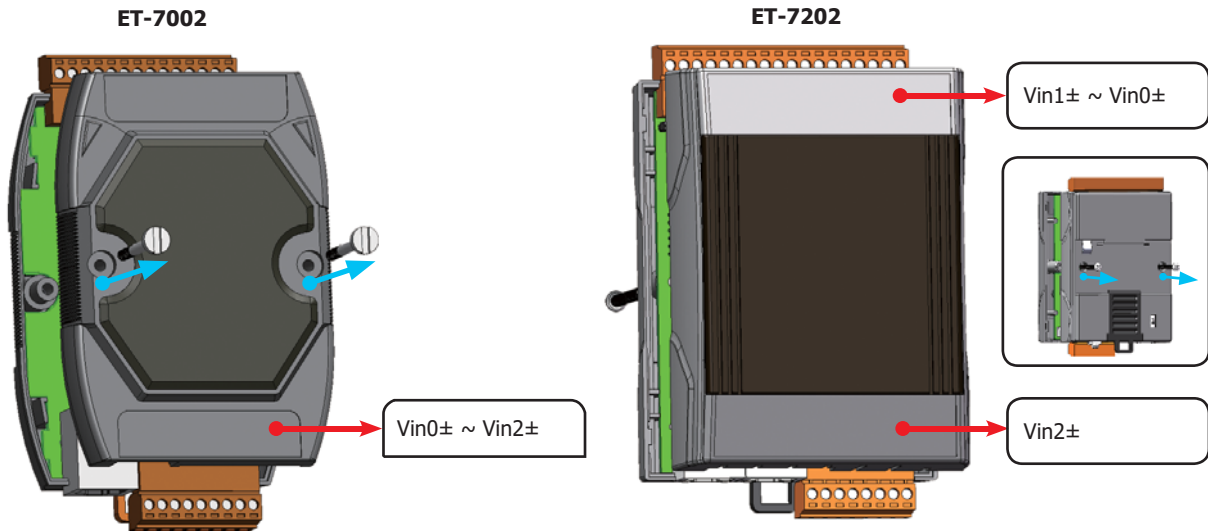
<b>ET-7002 CR</b>	Ethernet I/O Module with 3-ch AI, 6-ch DI, 3-ch Power Relay (RoHS)
<b>PET-7002 CR</b>	PoE I/O Module with 3-ch AI, 6-ch DI, 3-ch Relay (RoHS)
<b>ET-7202 CR</b>	Ethernet I/O Module with 2-port Ethernet Switch, 3-ch AI, 6-ch DI, 3-ch Power Relay (RoHS)
<b>PET-7202 CR</b>	PoE I/O Module with 2-port Ethernet Switch, 3-ch AI, 6-ch DI, 3-ch Power Relay (RoHS)

Digital Input/Counter	Readback as 1	Readback as 0
	+10 ~ +50 VDC	OPEN or <4 VDC
Sink		
Source		
Power Relay	ON State Readback as 1	OFF State Readback as 0
Relay Output		

## Jumper

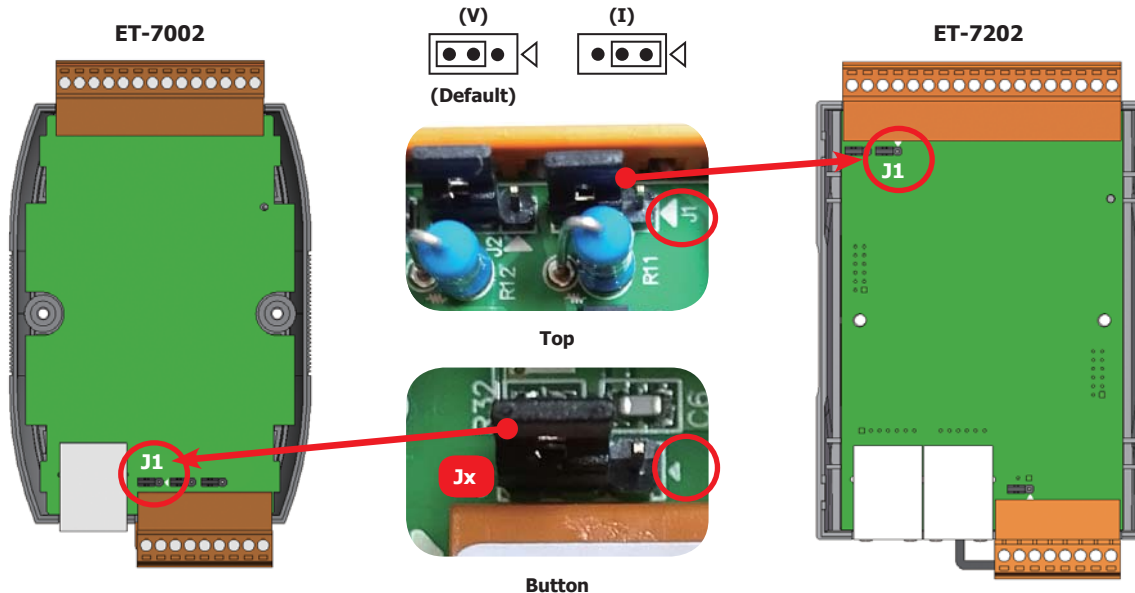
### Notice:

1. Remove the top cover of the module before adjusting the jumper. Additionally, the screws for the ET-7200 are located on the back cover.



2. Users can locate the Jx/JPx jumpers on the board by checking the I/O labels on the cover.

Channel (Top)	Vin1±	Vin0±
Jumper	J2	J1



Channel (Button)	Vin0±	Vin1±	Vin2±
Jumper	J1	J2	J3

Channel (Button)	Vin2±
Jumper	J3