



**ET-7050**  
**PET-7050**



**ET-7250A**  
**PET-7250A**

Ethernet I/O Module with 12-channel DI, 6-channel DO

## Features

- Built-in Web Server
- Web HMI
- Support for both Modbus TCP and Modbus UDP Protocols
- Communication Security
- 2-port Ethernet Switch for Daisy-Chain Topology
- Dual Watchdog
- Wide Operating Temperature Range: -25 to +75°C
- I/O Pair Connection
- Built-in I/O
  - DI/Counter: 12 Channels
  - DO: 6 Channels



## Introduction

The ET-7000/ET-7200 series provides full networking capabilities, and a variety of I/O functions, together with web based Ethernet I/O monitoring and control modules, meaning that the modules can be remotely controlled using the Modbus TCP/UDP protocol via an Ethernet network. This ensures that the ET-7000/ET-7200 series provides integration with HMI, SCADA, PLC and other industrial control software systems.

The PET-7050/PET-7250A supports IEEE 802.3af Power-Over-Ethernet (Class 1) specifications. By connecting to network devices that support the IEEE 802.3af PoE standard, power can be supplied via a copper Ethernet cable. The ET-7250A/PET-7250A includes two built-in Ethernet switch ports, which help to reduce implementation costs as there is no need to install an additional switch in order to daisy chain the ports or to extend the network via the Ethernet line.

ET-7050/PET-7050/ET-7250A/PET-7250A provides 6 sink-type digital output channels and 12 wet contact digital input channels, each of which is able to be used as a 32-bit counter. In addition, each digital input of ET-7250A/PET-7250A accepts either dry contact or wet contact.

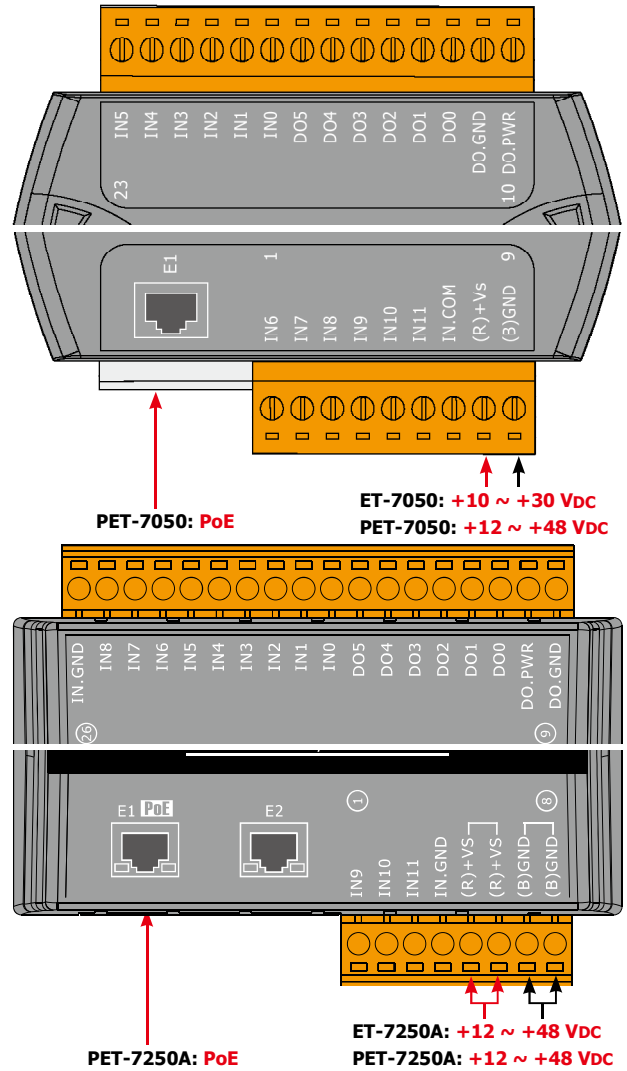
## System Specifications

| Model                       | ET-7050  | PET-7050                  | ET-7250A                                | PET-7250A                 |
|-----------------------------|--|---------------------------|---|---------------------------|
| <b>Software</b>             |  |                           |   |                           |
| Built-in Web Server         |  |                           | Yes                                     |                           |
| Web HMI                     |  |                           | Yes                                     |                           |
| I/O Pair Connection         |  |                           | Yes                                     |                           |
| <b>Communication</b>        |  |                           |   |                           |
| Ethernet Port               | 1 x RJ-45, 10/100 Base-TX                                      |                           | 2 x RJ-45, 10/100 Base-TX, Switch Ports |                           |
| PoE                         | -  | Yes                       | -                                       | Yes                       |
| Protocol                    | Modbus TCP, Modbus UDP   |                           |   |                           |
| Security                    | ID, Password and IP Filter                                     |                           |   |                           |
| Dual Watchdog               | Yes, Module (0.8 seconds), Communication (Programmable)        |                           |   |                           |
| <b>LED Indicators</b>       |  |                           |   |                           |
| for System Running          |  |                           | Yes                                     |                           |
| for Ethernet Link/Act       |  |                           | Yes                                     |                           |
| for DI/DO status            |  | -                         |   | Yes                       |
| for PoE Power               | -  | Yes                       | -                                       | Yes                       |
| <b>2-Way Isolation</b>      |  |                           |   |                           |
| Ethernet                    | 1500 Vdc   | -                         | 1500 Vdc                                | -                         |
| I/O                         | 2500 Vdc   |                           | 2500 Vdc                                |                           |
| <b>EMS Protection</b>       |  |                           |   |                           |
| ESD (IEC 61000-4-2)         | ±4 kV Contact for Each Terminal and ±8 kV Air for Random Point |                           |   |                           |
| EFT (IEC 61000-4-4)         | ±4 kV for Power Line   |                           |   |                           |
| <b>Power</b>                |  |                           |   |                           |
| Reverse Polarity Protection | Yes  |                           |   |                           |
| Powered from Terminal Block | 10 ~ 30 Vdc  | 12 ~ 48 Vdc               | 12 ~ 48 Vdc                             | 12 ~ 48 Vdc               |
| Powered from PoE            | -  | Yes, IEEE 802.3af, Class1 | -                                       | Yes, IEEE 802.3af, Class1 |
| Consumption                 | 2.3 W (Max.)   | 2.4 W (Max.)              | 2.7 W (Max.)                            | 2.9 W (Max.)              |
| <b>Mechanical</b>           |  |                           |   |                           |
| Dimensions (L x W x H)      | 123 mm x 72 mm x 35 mm   |                           | 120 mm x 76 mm x 38 mm                  |                           |
| Installation                | DIN-Rail or Wall Mounting                                      |                           |   |                           |
| <b>Environment</b>          |  |                           |   |                           |
| Operating Temperature       | -25 to +75°C   |                           |   |                           |
| Storage Temperature         | -30 to +80°C   |                           |   |                           |
| Humidity                    | 10 to 90% RH, Non-condensing                                   |                           |   |                           |

## I/O Specifications

| Model                        | ET-7050   | PET-7050                | ET-7250A                 | PET-7250A |
|------------------------------|---|-------------------------|--------------------------|-----------|
| <b>Digital Input/Counter</b> |   |                         |                          |           |
| Channels                     | 12  |                         |                          |           |
| Contact                      | Wet Contact   |                         | Dry +Wet Contact         |           |
| Sink/Source (NPN/PNP)        | Sink/Source   |                         | Dry: Source<br>Wet: Sink |           |
| Wet Contact                  | On Voltage Level  | +10 Vdc ~ +50 Vdc       | 1 Vdc Max.               |           |
|                              | Off Voltage Level   | +4 Vdc Max.             | +3.5 Vdc ~ +50 Vdc Max.  |           |
| Dry Contact                  | On Voltage Level  | -                       | Close to GND             |           |
|                              | Off Voltage Level   | -                       | Open                     |           |
| Input Impedance              | 10 kΩ   |                         |                          |           |
| Counters                     | Max. Count  | 4,294,967,295 (32 bits) |                          |           |
|                              | Max. Input Frequency                                      | 500 Hz                  | 100 Hz                   |           |
|                              | Min. Pulse Width  | 1 ms                    | 5 ms                     |           |
| Overvoltage Protection       | +70 Vdc   |                         | +60 Vdc                  |           |
| <b>Digital Output</b>        |   |                         |                          |           |
| Channels                     | 6   |                         |                          |           |
| Type                         | Isolated Open Collector                                   |                         |                          |           |
| Sink/Source (NPN/PNP)        | Sink  |                         |                          |           |
| Max. Load Current            | 100 mA/channel at 25°C<br>Direct Drive Power Relay Module |                         | 500 mA/channel           |           |
| Load Voltage                 | +5 Vdc ~ +30 Vdc  |                         | +5 Vdc ~ +50 Vdc         |           |
| Overvoltage Protection       | -   | 60 Vdc                  |                          |           |
| Overload Protection          | -   | 1.3 A                   |                          |           |
| Short-circuit Protection     | -   | Yes                     |                          |           |
| Power-on Value               | Yes, Programmable   |                         |                          |           |
| Safe Value                   | Yes, Programmable   |                         |                          |           |

## Pin Assignments



## Wire Connections

| ET-7050/PET-7050      |                        |                         |
|-----------------------|------------------------|-------------------------|
| Digital Input/Counter | ON State Readback as 1 | OFF State Readback as 0 |
| Wet Contact (Sink)    | +10 ~ +50 Vdc<br>      | OPEN or <4 Vdc<br>      |
|                       | +10 ~ +50 Vdc<br>      | OPEN or <4 Vdc<br>      |
| Digital Output        | ON State Readback as 1 | OFF State Readback as 0 |
| Open Collector (Sink) | +5 ~ +30 VDC<br>       | +5 ~ +30 VDC<br>        |

| ET-7250A/PET-7250A    |                        |                             |
|-----------------------|------------------------|-----------------------------|
| Digital Input/Counter | ON State Readback as 1 | OFF State Readback as 0     |
| Wet Contact (Sink)    | 1 Vdc Max.<br>         | +3.5 Vdc ~ +50 Vdc Max.<br> |
|                       | 1 Vdc Max.<br>         | +3.5 ~ +50 VDC Max.<br>     |
| Dry Contact (Source)  | Close to GND<br>       | Open<br>                    |
|                       | Close to GND<br>       | Open<br>                    |
| Digital Output        | ON State Readback as 1 | OFF State Readback as 0     |
| Open Collector (Sink) | +5 ~ +50 VDC<br>       | +5 ~ +50 VDC<br>            |

## Ordering Information

|                     |   |
|---------------------|---|
| <b>ET-7050 CR</b>   | Ethernet I/O Module with 12-channel Digital Input, 6-channel Digital Output (RoHS)                                  |
| <b>PET-7050 CR</b>  | PoE Ethernet I/O Module with 12-channel Digital Input, 6-channel Digital Output (RoHS)                              |
| <b>ET-7250A CR</b>  | Ethernet I/O Module with 2-port Ethernet Switch, with 12-channel Digital Input, 6-channel Digital Output (RoHS)     |
| <b>PET-7250A CR</b> | PoE Ethernet I/O Module with 2-port Ethernet Switch, with 12-channel Digital Input, 6-channel Digital Output (RoHS) |