



#### DI and DO Module Features PoE and Regular Ethernet Options Built-In Web Server Web HMI Modbus/TCP, Modbus/UDP Protocol Communication Security Dual Watchdog Operating Temperature: -25 ~ +75 °C I/O Pair Connection Built-In I/O DI/Counter: 12 Channels DO: 6 Channels ET-7050 **PET-7050** CE F© RoHS Ŕ Regular Ethernet Version PoE Version

#### Introduction

The ET-7000/PET-7000, a web-based Ethernet I/O module, features a built-in web server which allows configuration, I/O monitoring and I/O control by simply using a regular web browser. Remote control is as easy as surfing the Internet.

Besides, with the web HMI function, no more programming or HTML skills are required; creating dynamic and attractive web pages for I/O monitoring and I/O control would be fun to engineers ever after. The ET-7000/PET-7000 also supports Modbus/TCP protocol that makes perfect integration to SCADA software.

Furthermore, PET-7000 features "PoE" that not only data but also power is carried through an Ethernet cable. This feature makes installation of PET-7000 a piece of cake. Imagine that no more unnecessary wires, only an Ethernet cable takes care of everything in the field.

## Applications \_

Building Automation, Factory Automation, Machine Automation, Remote Maintenance, Remote diagnosis, Testing Equipment.

#### System Specifications \_

| Models                       | ET-7050   | PET-7050   |  |
|------------------------------|---|--|--|
| Software                     |   |  |  |
| Built-In Web Server          | Yes   |  |  |
| Web HMI                      | Yes   |  |  |
| I/O Pair Connection          | Yes   |  |  |
| Communication                |   |  |  |
| Ethernet Port                | 10/100 Base-TX with Auto MDI/MDI-X                    |  |  |
| Protocol                     | Modbus/TCP, Modbus/UDP                                |  |  |
| Security                     | ID, Password and IP Filter                            |  |  |
| Dual Watchdog                | Yes, Module (0.8 second), Communication (Programmable | Yes, Module (0.8 second), Communication (Programmable) |  |
| LED Indicators               |   |  |  |
| L1 (System Running)          | Yes   |  |  |
| L2 (Ethernet Link/Act)       | Yes   |  |  |
| L3 (Ethernet 10/100 M Speed) | Yes   |  |  |
| PoE Power                    | -   | Yes  |  |
| 2 Way Isolaiton              |   |  |  |
| Ethernet                     | 1500 Vpc  | -  |  |
| I/O                          | 3750 Vrms   | 3750 Vms   |  |
| EMS Protection               |   |  |  |
| ESD (IEC 61000-4-2)          | 4 kV Contact for each terminal                        |  |  |
| EFT (IEC 61000-4-4)          | +/-2 kV for Power                                     | +/-2 kV for Power                                      |  |
| Power Requirements           |   |  |  |
| Reverse Polarity Protectionn | Yes   |  |  |
| Powered from terminal block  | Yes, 10 ~ 30 V <sub>DC</sub>                          | Yes, 12 ~ 48 V <sub>DC</sub>                           |  |
| Powered from PoE             | -   | Yes, IEEE 802.3af, Class1                              |  |
| Consumption                  | 2.4 W   | 4.3 W  |  |
| Mechanical                   |   |  |  |
| Dimensions (W x L x D)       | 72 mm x 123 mm x 35 mm                                |  |  |
| Installation                 | DIN-Rail or Wall mounting                             |  |  |
| Environment                  |   |  |  |
| Operating Temperature        | -25 °C ~ +75 °C                                       |  |  |
| Storage Temperature          | -30 °C ~ +80 °C                                       |  |  |
| Humidity                     | 10 ~ 90% RH, non-condensing                           |  |  |

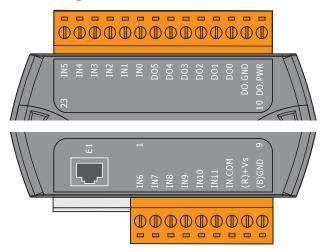
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3

# I/O Specifications \_\_\_\_\_\_

| Models                   |                         | ET-7050  | PET-7050 |
|--------------------------|-------------------------|--|----------|
| Digital Input/Counter    |                         | 21-7030  | PE1-7030 |
| Input Channels           |                         | 12   |          |
| Туре                     |                         | Wet Contact (Sink, Source)                                 |          |
| On Voltage Level         |                         | +10 VDC ~ +50 VDC  |          |
| Off Voltage Level        |                         | +4 VDC Max.  |          |
| Input Impedance          |                         | 10 κΩ  |          |
|                          | Max. Count              | 4,294,967,285 (32 bits)                                    |          |
| Counters                 | Max. Input<br>Frequency | 500 Hz   |          |
|                          | Min. Pulse Width        | 1 ms   |          |
| Overvoltage Protection   |                         | +70 VDC  |          |
| Digital Output           |                         |  |          |
| Output Channels          |                         | 6  |          |
| Туре                     |                         | Isolated Open Collector (Sink)                             |          |
| Max. Load Current        |                         | 100 mA/channel at 25 °C<br>Direct drive power relay module |          |
| Load Voltage             |                         | +5 Vdc ~ +30 Vdc   |          |
| Overvoltage Protection   |                         | -  | 60 Vdc   |
| Overload Protection      |                         | -  | 1.3 A    |
| Short-circuit Protection |                         | -  | Yes      |
| Power On Value           |                         | Yes, Programmable  |          |
| Safe Value               |                         | Yes, Programmable  |          |

## Pin Assignment \_\_\_\_\_



### Vire Connection

| Digital Input/Counter | Readback as 1                                   | Readback as 0   |
|-----------------------|---|---|
|                       | +10 ~ +50 V <sub>DC</sub>                       | OPEN or <4 Vbc  |
| Sink                  | Thx 10K<br>→→→→→→→→→→→→→→→→→→→→→→→→→→→→→→→→→→→→ | INx 10K<br>+-<br>IN.COM To other<br>i channels                          |
|                       | +10 ~ +50 V <sub>DC</sub>                       | OPEN or <4 V <sub>DC</sub>  |
| Source                | INx 10K<br>- +<br>IN.COM : To other<br>in.com   | INx 10K<br>- +<br>IN.COM<br>IN.COM<br>IN.COM                            |
| Output Type           | ON State<br>Readback as 1                       | OFF State<br>Readback as 0  |
| Drive Relay           |   |   |
| Resistance<br>Load    | + ↓ + ↓ + ↓ □ ← DO.PWR<br>□ ← DOx<br>□ ← DO.GND | +<br>-<br>+<br>+<br>+<br>+<br>+<br>+<br>+<br>+<br>+<br>+<br>+<br>+<br>+ |

# Ordering Information —

| ET-7050 CR  | 12-channel DI and 6-channel DO with 32-bit Counters (RoHS)            |
|-------------|---|
| PET-7050 CR | 12-channel DI and 6-channel DO with 32-bit Counters PoE Module (RoHS) |

#### Accessories \_\_\_\_\_

| NS-205 CR        | Unmanaged 5-port Industrial Ethernet Switch;<br>reguires 24 Voc Input (RoHS)                     |
|------------------|--|
| NS-205PSE CR     | Unmanaged Ethernet switch with 4-PoE and<br>1 RJ45 uplink; reguires 48 Voc Input (RoHS)          |
| NS-205PSE-24V CR | Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; reguires 24 $V_{\text{DC}}$ Input (RoHS) |

| MDR-20-24 CR    | 24V/1A, 24 W Power Supply with DIN-Rail Mounting<br>(RoHS) |
|-----------------|--|
| DIN-KA52F-48 CR | 48V/0.52A, 25 W Power Supply with DIN-Rail Mounting (RoHS) |