



ET-7000/PET-7000 Series (Web based)



Multifunction Module

Features

- PoE and Regular Ethernet Options
- Built-In Web Server
- Web HMI
- Modbus/TCP, Modbus/UDP Protocol
- Communication Security
- Dual Watchdog
- Wide Operating Temperature Range: -25 °C ~ +75 °C
- I/O Pair Connection
- Built-In I/O
 - AI: 3 Channels
 - DI/Counter: 6 Channels
 - Power Relay: 3 Channels



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 offers easy and safe access for users from anytime and anywhere! In addition, 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.

The ET-7002/PET-7002 is a multi-function module, there are 3-channel analog inputs, 6-channel digital inputs and 3-channel Relay outputs module.. It provides programmable input range on all 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 an individual range and has 240Vrms high overvoltage protection. Jumper selectable for voltage or current of inputs, ET-7002/PET-7002 is fully RoHS-compliant and has qualification for 4 kV ESD protection as well as 2500 Vdc intra-module isolation.

Applications

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

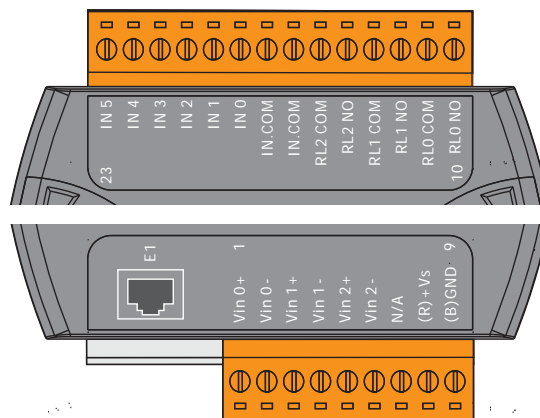
System Specifications

| Models | ET-7002 | PET-7002 |
|------------------------------|--|---------------------------|
| 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 seconds), 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 Isolation | | |
| Ethernet | 1500 Vdc | - |
| I/O | 2500 Vdc | 2500 Vdc |
| EMS Protection | | |
| 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 | |
| Surge (IEC 61000-4-5) | +/-4 kV for Power | |
| Power Requirements | | |
| Reverse Polarity Protection | Yes | |
| Powered from Terminal Block | Yes, 10 ~ 30 Vdc | Yes, 12 ~ 48 Vdc |
| Powered from PoE | - | Yes, IEEE 802.3af, Class1 |
| Consumption | 1.7 W | |
| Mechanical | | |
| Dimensions (W x L x H) | 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 | |

I/O Specifications

| Analog Input | | | |
|--|----------------------|--|--|
| Input Channels | | 3 (Differential) | |
| Input Type | | +/- 150 mV,+/- 500 mV, +/- 1V, +/- 5 V, +/-10 V + 0 mA ~ + 20 mA, +/- 20 mA, 4 ~ 20 mA (jumper selectable) | |
| Individual Channel Configuration | | Yes | |
| Resolution | Normal Mode | 16-bit | |
| | Fast Mode | 12-bit | |
| Sampling Rate | Normal Mode | 10 Samples/Sec. (Total) | |
| | Fast Mode | 60 Samples/Sec. (Total) | |
| Accuracy | Normal Mode | +/-0.1% | |
| | Fast Mode | +/-0.5% or better | |
| Zero Drift | | +/-20 μ V/°C | |
| Span Drift | | +/-25 ppm/°C | |
| Overvoltage Protection | | 240 V _{rms} | |
| Overcurrent Protection | | 50 mA max. at 110 V _{oc} /V _{ac} max. | |
| Input Impedance | Voltage | 2 M Ω | |
| | Current | 124 Ω | |
| Common Mode Rejection | | 86 dB Min. | |
| Normal Mode Rejection | | 100 dB | |
| Digital Input/Counter | | | |
| Input Channels | | 6 | |
| Type | | Wet Contact (Sink or Source) | |
| On Voltage Level | | +10 V _{DC} ~ +50 V _{DC} | |
| Off Voltage Level | | +4 V _{DC} max. | |
| Input Impedance | | 10 K Ω , 0.5W | |
| Counters | Channels | 6 | |
| | Max. Count | 4,294,967,285 (32-bit) | |
| | Max. Input Frequency | 100 Hz | |
| | Min. Pulse Width | 5 ms | |
| Overvoltage Protection | | +50 V _{DC} | |
| Power Relay | | | |
| Output Channels | | 3 | |
| Type | | Power Relay, Form A (SPST N.O.) | |
| Operating Voltage Range | | 250 V _{AC} /30 V _{DC} | |
| Max. Load Current | | 5.0A/channel at 25 °C | |
| Operate Time | | 6 ms (Typical) | |
| Release Time | | 3 ms (Typical) | |
| Electrical Life (Resistive load) | | VDE: | 5 A @ 250 V _{AC} 30,000 ops (10 ops/minute) at 75°C. |
| | | | 5 A @ 30 V _{DC} 70,000 ops (10 ops/minute) at 75°C. |
| | | UL: | 5 A @ 250 V _{AC} /30 V _{DC} 6,000 ops. 3 A @ 250 V _{AC} /30 V _{DC} 100,000 ops. |
| Mechanical Life | | 20,000,000 ops. at no load (300 ops./minute). | |
| Intra-module Isolation, Field-to-Logic | | 3750 V _{DC} | |
| Power-on Value | | Yes, Programmable | |
| Safe Value | | Yes, Programmable | |

Pin Assignments



Wire Connections

| Voltage Input | | Current Input | |
|-----------------------|---------------------------|----------------------------|--|
| | | | |
| Digital Input/Counter | Readback as 1 | Readback as 0 | |
| | +10 ~ +50 V _{dc} | OPEN or <4 V _{dc} | |
| Sink | | | |
| Source | | | |
| Power Relay | ON State Readback as 1 | OFF State Readback as 0 | |
| Relay Output | | | |

Ordering Information

| | |
|-------------|--|
| ET-7002 CR | 3-channel analog inputs, 6-channel digital inputs and 3-channel Relay outputs module (RoHS) |
| PET-7002 CR | 3-channel analog inputs, 6-channel digital inputs and 3-channel Relay outputs module PoE Module (RoHS) |

Accessories

| | |
|------------------|--|
| NS-205 CR | Unmanaged 5-port Industrial Ethernet Switch; requires 24 V _{oc} Input (RoHS) |
| NS-205PSE CR | Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; requires 48 V _{oc} Input (RoHS) |
| NS-205PSE-24V CR | Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; requires 24 V _{oc} Input (RoHS) |
| MDR-20-24 CR | 24V/1A, 24 W Power Supply with DIN-Rail Mounting (RoHS) |
| DIN-KA52F-48 CR | 48V/0.52A, 25 W Power Supply with DIN-Rail Mounting (RoHS) |