



## 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.

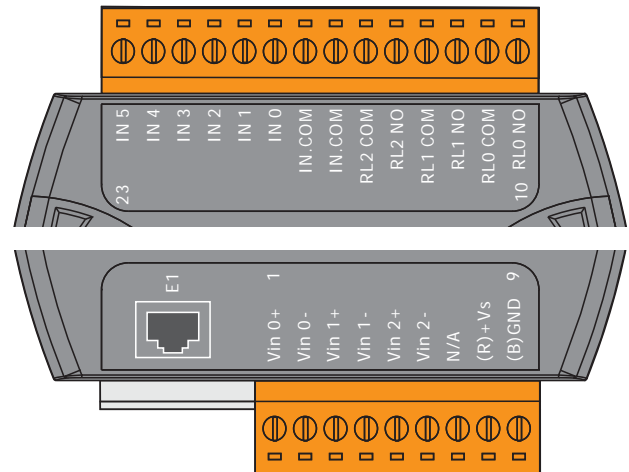
### System Specifications

Models	ET-7002	PET-7002
<b>Software</b>		
Built-In Web Server	Yes	
Web HMI	Yes	
I/O Pair Connection	Yes	
<b>Communication</b>		
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)	
<b>LED Indicators</b>		
L1 (System Running)	Yes	
L2 (Ethernet Link/Act)	Yes	
L3 (Ethernet 10/100 M Speed)	Yes	
PoE Power	-	Yes
<b>2 Way Isolation</b>		
Ethernet	1500 V <sub>DC</sub>	-
I/O	2500 V <sub>DC</sub>	2500 V <sub>DC</sub>
<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	
Surge (IEC 61000-4-5)	+/-4 kV for Power	
<b>Power Requirements</b>		
Reverse Polarity Protection	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	1.7 W	
<b>Mechanical</b>		
Dimensions (W x L x H)	72 mm x 123 mm x 35 mm	
Installation	DIN-Rail or Wall Mounting	
<b>Environment</b>		
Operating Temperature	-25 °C ~ +75 °C	
Storage Temperature	-30 °C ~ +80 °C	
Humidity	10 ~ 90% RH, Non-condensing	

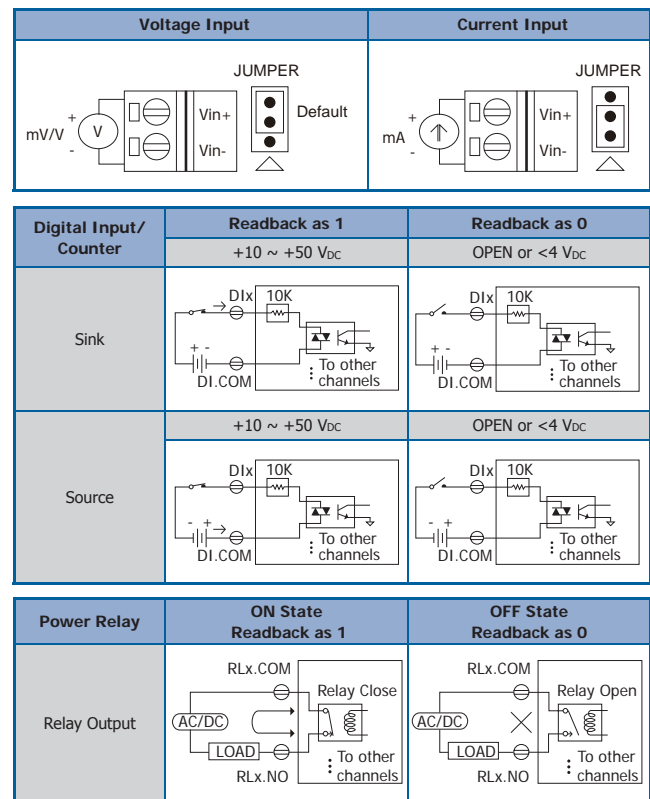
### I/O Specifications

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 uV/°C	
Span Drift	+/-25 ppm/°C	
Overvoltage Protection	240 V <sub>rms</sub>	
Overcurrent Protection	50 mA max. at 110 V <sub>oc</sub> /V <sub>ac</sub> max.	
Input Impedance	Voltage	2 MΩ
	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 <sub>dc</sub> ~ +50 V <sub>dc</sub>	
Off Voltage Level	+4 V <sub>dc</sub> max.	
Input Impedance	10 KΩ, 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 <sub>dc</sub>	
Power Relay		
Output Channels	3	
Type	Power Relay, Form A (SPST N.O.)	
Operating Voltage Range	250 V <sub>ac</sub> /30 V <sub>dc</sub>	
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 <sub>ac</sub> 30,000 ops (10 ops/minute) at 75°C.
		5 A @ 30 V <sub>dc</sub> 70,000 ops (10 ops/minute) at 75°C.
	UL:	5 A @ 250 V <sub>ac</sub> /30 V <sub>dc</sub> 6,000 ops. 3 A @ 250 V <sub>ac</sub> /30 V <sub>dc</sub> 100,000 ops.
Mechanical Life	20,000,000 ops. at no load (300 ops./minute).	
Intra-module Isolation, Field-to-Logic	3750 V <sub>dc</sub>	
Power-on Value	Yes, Programmable	
Safe Value	Yes, Programmable	

### Pin Assignments



### Wire Connections



### 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 <sub>dc</sub> Input (RoHS)
NS-205PSE CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; requires 48 V <sub>dc</sub> Input (RoHS)
NS-205PSE-24V CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; requires 24 V <sub>dc</sub> 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)