



## Ethernet I/O Modules



### AI 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
- AI: 10/20 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-7017-10 is a 16-bit, 10-channel differential or 20-channel single-ended analog inputs module that provides programmable input range on all analog channels (+/-150 mV, +/-500 mV, +/-1 V, +/-5 V, +/-10 V, +/-20 mA, 0~20 mA and 4~20 mA). Each analog channel is allowed to configure an individual range and has 240 V<sub>rms</sub> high overvoltage protection. Jumper selectable for voltage or current input. The sampling rate of ET-7017/PET-7017 is changeable; there are fast mode and normal mode for your consideration. ET-7017/PET-7017 also has qualification for 4 kV ESD protection as well as 3000 V<sub>dc</sub> intra-module isolation.

#### Applications

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

#### System Specifications

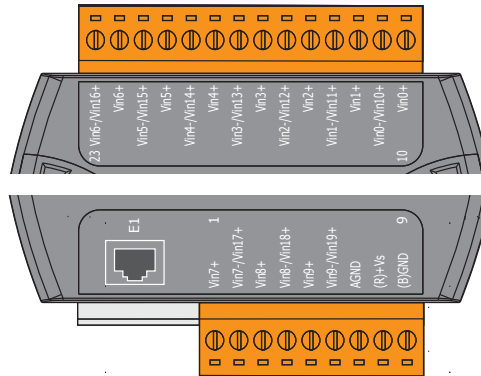
Models	ET-7017-10	PET-7017-10
<b>Software</b>		
Built-In Web Server	Yes	
Web HMI	Yes	
I/O Pair Connection	Yes	
<b>Communication</b>		
Ethernet Port	10/100 Base-TX with Auto MDI/MDI-X	
Protocol	Modbus/TCP, Modbus/UDP	
Security	ID, Password and IP Filter	
Dual Watchdog	Yes, Module (0.8 second), Communication (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	
<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	2.6 W	3.8 W
<b>Mechanical</b>		
Dimensions (W x L x D)	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

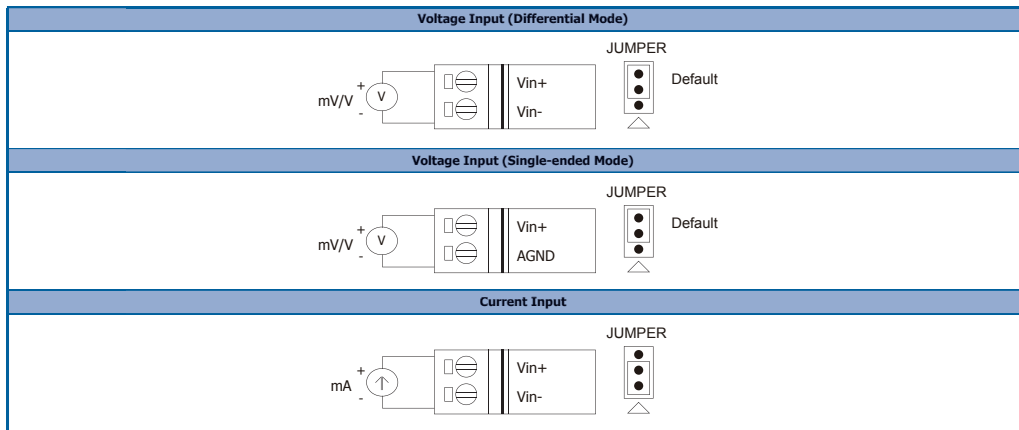
Analog Input		
Input Channels	10 differential or 20 single-ended (Note1), software selectable	
Input Type	+/-150 mV, +/-500 mV, +/-1V, +/-5V, +/-10V +/-20 mA, 0 ~ 20 mA, 4 ~ 20 mA (Jumper selectable)	
Individual Channel Configuration	Yes	
Resolution	Normal Mode	16-bit
	Fast Mode	12-bit
Sampling Rate	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 $\mu$ V/ $^{\circ}$ C	
Span Drift	+/-25 ppm/ $^{\circ}$ C	
Overvoltage Protection	Differential	240 V <sub>rms</sub>
	Single-ended	150 V <sub>rms</sub>
Input Impedance	Voltage	2 M $\Omega$ (Differential), 1 M $\Omega$ (Single-ended)
	Current	125 $\Omega$
Common Mode Rejection	86 dB Min.	
Normal Mode Rejection	100 dB	

Note1: Differential mode can be used for voltage input and current input.  
Single-Ended mode can be used for voltage input only.

## Pin Assignment



## Wire Connection



## Ordering Information

ET-7017-10	10/20-channel Analog Input Module with High Voltage Protection Module (RoHS)
PET-7017-10	10/20-channel Analog Input Module with High Voltage Protection PoE Module (RoHS)

## Accessories

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