



Ethernet I/O Modules



Universal AI 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
 - AI: 8 Channels
 - DO: 4 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.

ET-7019/PET-7019 features an extremely excellent protection mechanism where overvoltage protection is up to 240 V_{ms}. It has wider input range for voltage compared to ET-7017. ET-7019/PET-7019 measures voltage from +/- 15 mV ~ +/- 10 V. Its input type also includes current and thermocouple. An intuitive design is kept in this model; choosing to measure current or voltage is simply by a jumper. An external resistor is no longer needed. Eight of its inputs channels can individually be configured with different kinds of analog input. What's more, ET-7019/PET-7019 also got open thermocouple detection and many protection mechanisms. The 4 digital output can be set alarm output with short-circuit protection and overload protection.

Applications

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

System Specifications

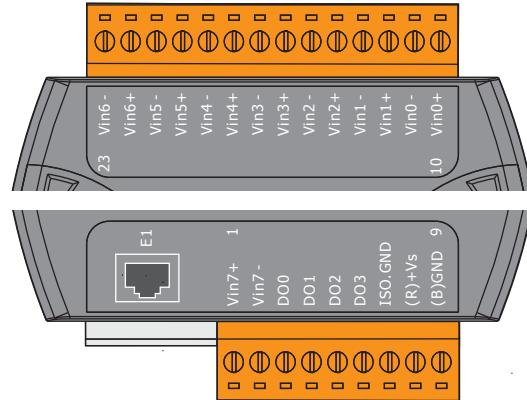
Models	ET-7019	PET-7019
Software		
Built-In Web Server	Yes	
Web HMI	Yes	
I/O Pair Connection	Yes	
Communication		
Ethernet Port	10/100 Base-TX with Auto MDI/MDI-X	
Protocol	Modbus/TCP, Modbus/UDP	
Security	ID, Password and IP Filter	
Dual Watchdog	Yes, Module (0.8 second), Communication (Programmable)	
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 V _{dc}	-
I/O	2500 V _{dc}	2500 V _{dc}
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	
Power Requirements		
Reverse Polarity Protection	Yes	
Powered from terminal block	Yes, 10 ~ 30 V _{dc}	Yes, 12 ~ 48 V _{dc}
Powered from PoE	-	Yes, IEEE 802.3af, Class1
Consumption	2.4 W	3.4 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	

I/O Specifications

Analog Input	
Input Channels	8 (Differential)
Sensor Type	+/-15 mV, +/-50 mV, +/-100 mV, +/-150 mV, +/-500 mV, +/-1 V, +/-5 V, +/-10 V, +/-20 mA, 0~20 mA, 4~20 mA Thermocouple (J, K, T, E, R, S, B, N, C, L, M, LDIN43710)
Individual Channel Configuration	Yes
Resolution	16-bit
Sampling Rate	10 samples/Sec. total
Accuracy	+/-0.1 % or better
Zero Drift	+/-10 μ V/°C
Span Drift	+/-25 ppm/°C
Overvoltage Protection	240 V _{rms}
Input Impedance	Voltage >1 M Ω Current 125 Ω
Common Mode Rejection	86 dB Min.
Normal Mode Rejection	100 dB
Open Wire Detection	Yes
Digital Output	
Output Channels	4
Type	Isolated Open Collector (Sink)
Max. Load Current	700 mA/Channel
Load Voltage	5 V _{DC} ~ 50 V _{DC}
Overvoltage Protection	60 V _{DC}
Overload Protection	1.4 A
Short-circuit Protection	Yes
Power On Value	Yes, Programmable
Safe Value	Yes, Programmable

Note: We recommend to choose ET-7018Z for accurate thermocouple measurement.

Pin Assignment



Wire Connection

Thermocouple Input	Voltage Input	
Current Input		
Digital Output	ON State Readback as 1	OFF State Readback as 0
Open Collector (Sink)		

Ordering Information

ET-7019 CR	8-channel Analog Input with High Voltage Protection and 4-channel Isolated Digital Output Module (RoHS)
PET-7019 CR	8-channel Analog Input with High Voltage Protection and 4-channel Isolated Digital Output PoE Module (RoHS)

Accessories

	NS-205 CR	Unmanaged 5-port Industrial Ethernet Switch; requires 24 V _{DC} Input (RoHS)
	NS-205PSE CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; requires 48 V _{DC} Input (RoHS)
	NS-205PSE-24V CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; requires 24 V _{DC} 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)