

**ET-7019**

**PET-7019**

Ethernet I/O Module with 8-channels universal AI,  
4-channels DO

**Features**

- Built-in Web Server
- Web HMI
- Support for both Modbus TCP and Modbus UDP Protocols
- Communication Security
- Dual Watchdog
- Wide Operating Temperature Range: -25 ~ +75°C
- I/O Pair Connection
- Built-in I/O
  - AI: 8 Channels with 240 V<sub>rms</sub> Overvoltage Protection
  - DO: 4 Channels



**Introduction**

The ET-7019/PET-7019 features an extremely excellent protection mechanism where overvoltage protection is up to 240 V<sub>rms</sub>. 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 built in this model, measuring current or voltage 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. Moreover, the ET-7019/PET-7019 also got open thermocouple detection and many protection mechanisms. The 4 digital output can be set as alarm output with Short-circuit protection and overload protection.

**System Specifications**

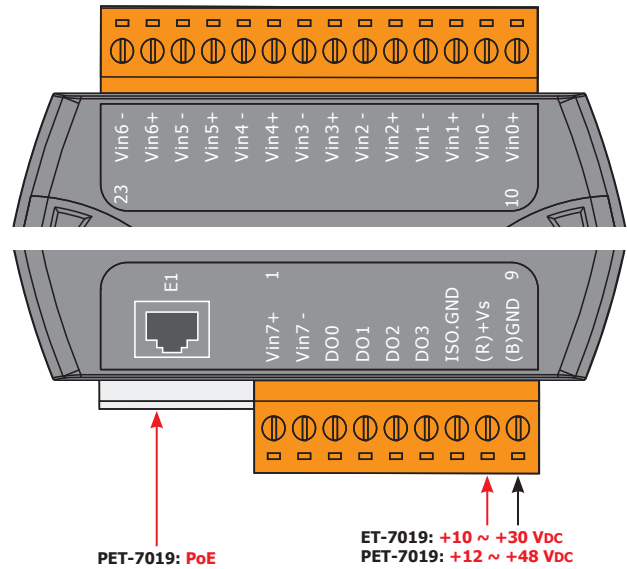
Models	ET-7019	PET-7019
<b>Software</b>		
Built-in Web Server		Yes
Web HMI		Yes
I/O Pair Connection		Yes
<b>Communication</b>		
Ethernet Port	10/100 Base-TX with Auto MDI/MDI-X	
PoE	-	Yes
Protocol	Modbus TCP, Modbus UDP	
Security	ID, Password and IP Filter	
Dual Watchdog	Yes, Module (0.8 seconds), Communication (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 Vdc	-
I/O	2500 Vdc	2500 Vdc
<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 Line	
<b>Power</b>		
Reverse Polarity Protection		Yes
Powered from Terminal Block	Yes, 10 ~ 30 Vdc	Yes, 12 ~ 48 Vdc
Powered from PoE	-	Yes, IEEE 802.3af, Class1
Power Output	-	-
Consumption	2.6 W (Max.)	2.9 W (Max.)
<b>Mechanical</b>		
Dimensions (L x W x H)	123 mm x 72 mm x 35 mm	
Installation	DIN-Rail or Wall Mounting	
<b>Environment</b>		
Operating Temperature	-25 ~ +75°C	
Storage Temperature	-30 ~ +80°C	
Humidity	10 ~ 90% RH, Non-condensing	

### I/O Specifications

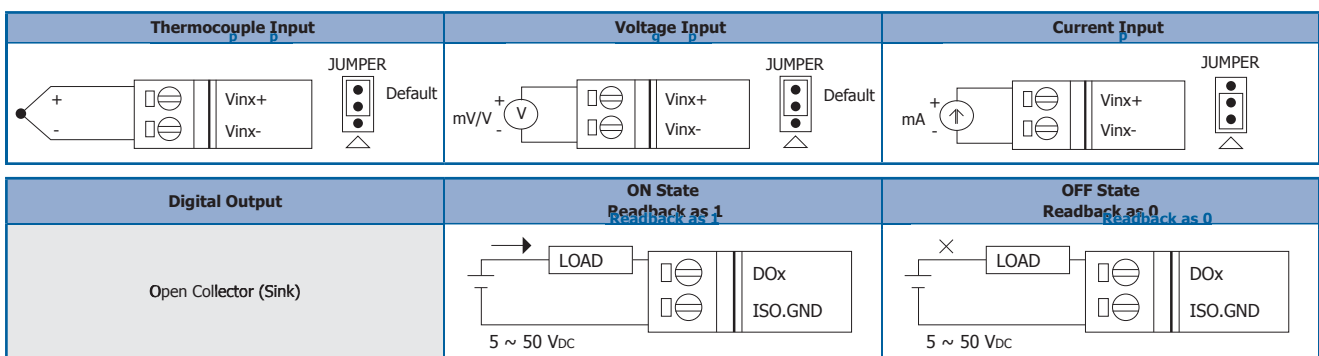
Analog Input		
Channels	8 (Differential)	
Sensor Type	+/-15 mV, +/-50 mV, +/-100 mV, +/-150 mV, +/-500 mV, +/-1 V, +/-5 V, +/-10 V, +/-20 mA, 0~20 mA, 4~20 mA Thermocouple (J, K, T, E, R, S, B, N, C, L, M, , and L-DIN43710)	
Individual Channel Configuration	Yes	
Resolution	16-bit	
Sampling Rate	10 samples/Second total	
Accuracy	+/-0.1 % or better	
Zero Drift	+/-10 $\mu$ V/ $^{\circ}$ C	
Span Drift	+/-25 ppm/ $^{\circ}$ C	
Overvoltage Protection	240 Vrms	
Input Impedance	Voltage	>1 M $\Omega$
	Current	125 $\Omega$
Common Mode Rejection	86 dB Min.	
Normal Mode Rejection	100 dB	
Open Wire Detection	Yes	
Virtual Channel to Channel Isolation	+/-400 Vdc	
Digital Output		
Channels	4	
Type	Isolated Open Collector	
Sink/Source (NPN/PNP)	Sink	
Max. Load Current	700 mA/Channel	
Load Voltage	5 Vdc ~ 50 Vdc	
Overvoltage Protection	60 Vdc	
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 Assignments



### Wire Connections



### Ordering Information

ET-7019 CR	Ethernet I/O Module with 8-channels universal AI, 4-channels DO (RoHS)
PET-7019 CR	PoE Ethernet I/O Module with 8-channels universal AI, 4-channels DO (RoHS)