Ethernet I/O Series

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ICP
Electronics Australia

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_{rms} 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_{rms}. 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.
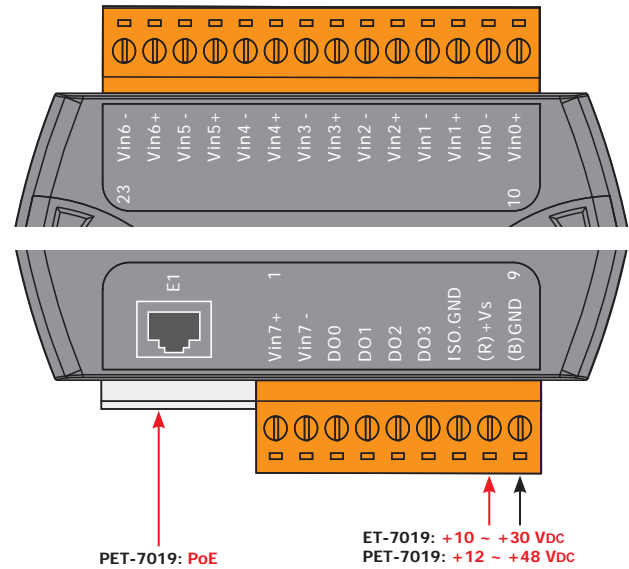
System Specifications

Models	ET-7019	PET-7019
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	
PoE	-	Yes
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 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 Line	
Power		
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
Power Output	-	-
Consumption	2.6 W (Max.)	2.9 W (Max.)
Mechanical		
Dimensions (L x W x H)	123 mm x 72 mm x 35 mm	
Installation	DIN-Rail or Wall Mounting	
Environment		
Operating Temperature	-25 ~ +75°C	
Storage Temperature	-30 ~ +80°C	
Humidity	10 ~ 90% RH, Non-condensing	

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Ethernet I/O Products
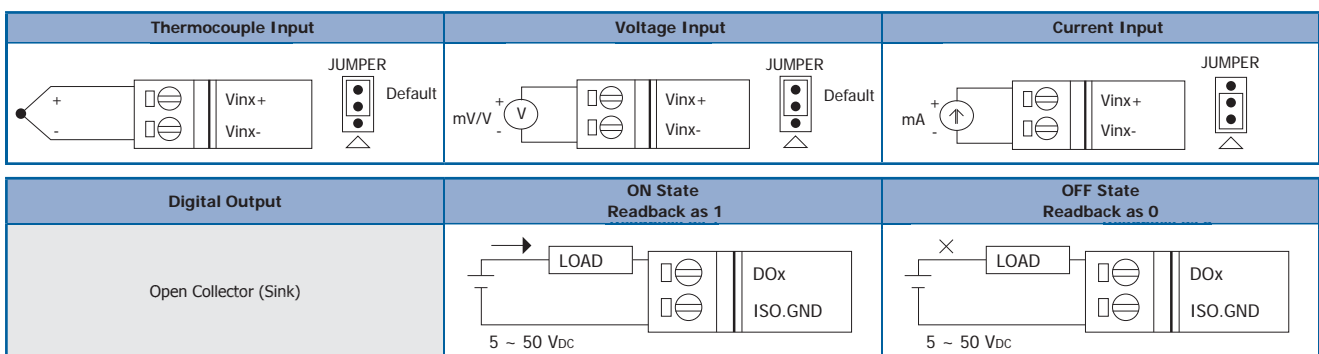
■ I/O Specifications

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 µV/°C
Span Drift	+/-25 ppm/°C
Overvoltage Protection	240 Vrms
Input Impedance — Voltage	>1 MΩ
Input Impedance — Current	125 Ω
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

PET-7019: PoE

ET-7019: +10 ~ +30 VDC
PET-7019: +12 ~ +48 VDC

■ Wire Connections

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	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)