



ET-7017-10 PET-7017-10 ET-7217-10 PET-7217-10

Ethernet I/O Module with 10/20-ch AI

Features

- Built-in Web Server
- Web HMI
- Support for both Modbus TCP and Modbus UDP Protocols
- Communication Access Control
- 2-port Ethernet Switch (LAN bypass) for Daisy-chain Wiring
- Dual Watchdog
- Built-in I/O
  - AI: 10/20 Channels with 240 Vrms Overvoltage Protection

Introduction

The ET-7017-10/PET-7017-10/ET-7217-10/PET-7217-10 is a module with 10-channel differential or 20-channel single-ended analog inputs. It 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_{rms} high overvoltage protection.

Each analog input can be programmed to accept voltage or current as input depending upon the position of the corresponding jumper. The sampling rate of ET-7017-10/PET-7017-10/ET-7217-10/PET-7217-10 has two modes; fast mode and normal mode for your consideration. ET-7017-10/PET-7017-10/ET-7217-10/PET-7217-10 also has qualification for 4 kV ESD protection as well as 3000 V_{DC} intra-module isolation.

System Specifications

Model	ET-7017-10	PET-7017-10	ET-7217-10	PET-7217-10
Software				
Built-in Web Server	Yes			
CPU Module				
Watchdog Timer	Module, Communication (Programmable)			
2-Way Isolation				
Ethernet	1500 V_{DC}	-	1500 V_{DC}	-
I/O	2500 V_{DC}			
EMS Protection				
EFT (IEC 61000-4-4)	±4 kV for Power Line		±2 kV for Power Line	
ESD (IEC 61000-4-2)	±4 kV Contact for Each Terminal ±8 kV Air for Random Point			
Surge (IEC 61000-4-5)	±0.5 kV for Power Line		±2 kV for Power Line	
LED Indicators				
Status	Run, Ethernet	Run, Ethernet, PoE	Run, Ethernet, I/O	Run, Ethernet, I/O, PoE
Ethernet				
Ports	1 x RJ-45, 10/100 Base-TX		2 x RJ-45, 10/100 Base-TX, Swtich Ports	
PoE	-	Yes	-	Yes
LAN bypass	-		Yes	
Access Control	ID, Password and IP Filter			
Protocol	Modbus TCP, Modbus UDP			
Power				
Reverse Polarity Protection	Yes			
Consumption	2.8 W (max.)	3.3 W (max.)	3.6 W (max.)	3.8 W (max.)
Powered from PoE	-	IEEE 802.3af, Class1	-	IEEE 802.3af, Class1
Powered from Terminal Block	+10 ~ +30 V_{DC}	+12 ~ +48 V_{DC}		

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Model	ET-7017-10	PET-7017-10	ET-7217-10	PET-7217-10
Mechanical				
Dimensions (mm)	72 x 123 x 35 (W x L x H)		76 x 120 x 42 (W x L x H)	
Installation	DIN-Rail Mounting			
Environment				
Operating Temperature	-25 ~ +75 ℃			
Storage Temperature	-30 ~ +80 ℃			
Humidity	10 ~ 90% RH, Non-condensing			

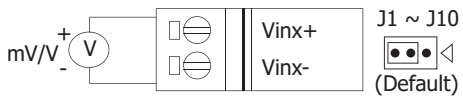
I/O Specifications

Analog Input		
Channels		10 differential or 20 single-ended (**Note1**), (Software Selectable)
Type		Voltage, Current
Range		±150 mV, ±500 mV, ±1 V, ±5 V, ±10 V, ±20 mA ,0 ~ 20 mA, 4 ~ 20 mA (Jumper Selectable)
Resolution		16-bit
Accuracy	Normal Mode	±0.1%
	Fast Mode	±0.5% or better
Sampling Rate	Normal Mode	10 Hz (total channels)
	Fast Mode	50 Hz (total channels)
Input Impedance	Voltage	2 MΩ (Differential), 1 MΩ (Single-ended)
	Current	125 Ω
Common Voltage Protection		±200 V_{DC}
Overvoltage Protection	Differential	240 V_{rms}
	Single-ended	150 V_{rms}
Overcurrent Protection		50 mA at 110 V_{DC} (max.)
Individual Channel Configuration		Yes
Open Wire Detection		For 4 ~ 20 mA only
Virtual Channel to Channel Isolation		±400 V_{DC}

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

Wire Connections

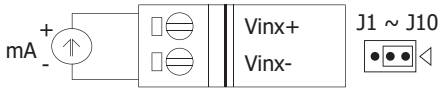
Voltage Input (Differential Mode)



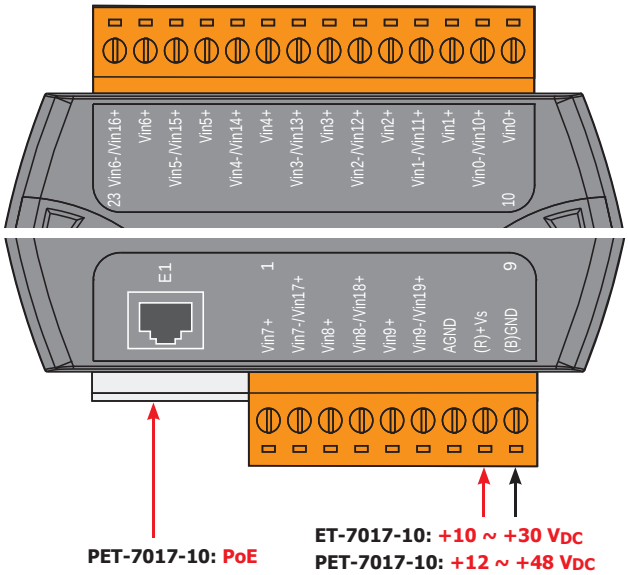
Voltage Input (Single-ended Mode)

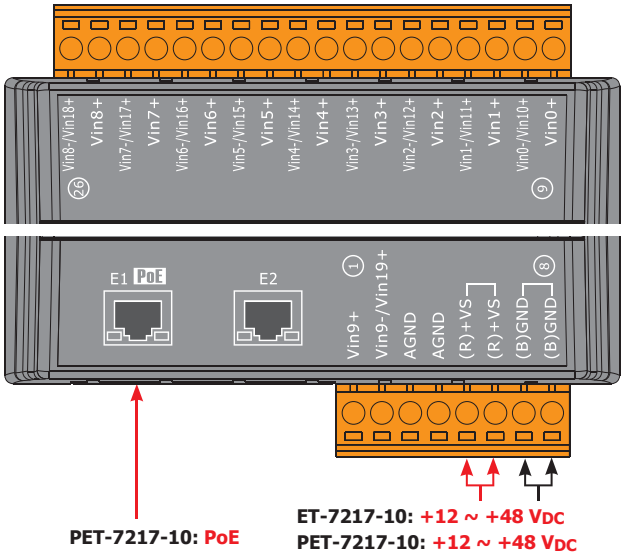


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Current Input


Pin Assignments





Ordering Information

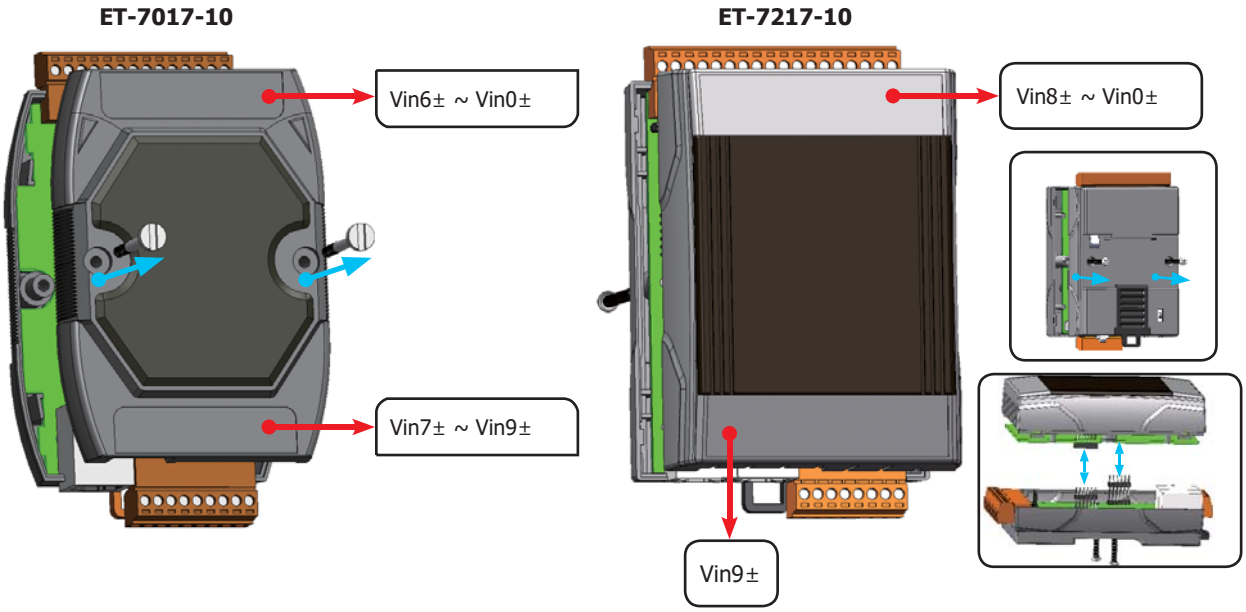
ET-7017-10 CR	Ethernet I/O Module with 10/20-ch AI (RoHS)
PET-7017-10 CR	PoE I/O Module with 10/20-ch AI (RoHS)
ET-7217-10 CR	Ethernet I/O Module with 2-port Ethernet Switch, 10/20-ch AI (RoHS)
PET-7217-10 CR	PoE I/O Module with 2-port Ethernet Switch, 10/20-ch AI (RoHS)

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Jumper

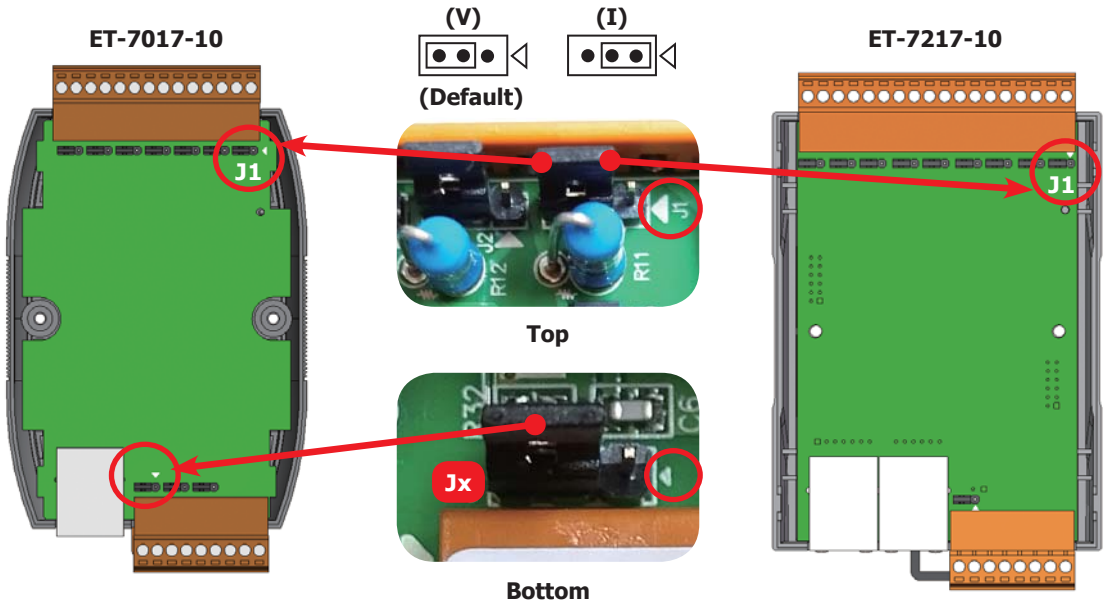
Notice:

1. **Before adjusting the jumpers, remove the module's top cover. For the ET-7200 series, the screws are located on the rear cover, and the CPU board must be removed as well.**



2. **Users can locate the Jx/JPx jumpers on the board by checking the I/O labels on the cover.**

Model	ET-7217-10								
	-		ET-7017-10						
Channel (Top)	Vin8±	Vin7±	Vin6±	Vin5±	Vin4±	Vin3±	Vin2±	Vin1±	Vin0±
Jumper	J9	J8	J7	J6	J5	J4	J3	J2	J1



Channel (Bottom)	Vin7±	Vin8±	Vin9±
Jumper	J8	J9	J10

Channel (Bottom)	Vin9±
Jumper	J10

3. **After adjusting the jumpers, reinstall the top cover (along with the CPU board) and secure the screws.**

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