



## Features

- Built-in Web Server
- Web HMI
- Support for both Modbus TCP and Modbus UDP Protocols
- Communication Security
- 2-port Ethernet Switch for Daisy-Chain Topology
- Dual Watchdog
- Wide Operating Temperature Range: -25 ~ +75°C
- I/O Pair Connection
- Built-in I/O
  - AI: 4 Channels with 240 Vrms Overvoltage Protection
  - AO: 4 Channels
  - DI/Counter: 4 Channels



## Introduction

The ET-7204/PET-7204 is a multi-function module with 4-channel analog inputs, 4-channel analog outputs, 4-channel digital inputs. It provides various programmable analog inputs (+/-500 mV, +/-1 V, +/-5 V, +/-10 V, +/-20 mA, 0 ~ 20 mA and 4 ~ 20 mA), and analog outputs (+/-5 V, +/-10 V, 0 ~ 20 mA and 4 ~ 20 mA). Each analog input is allowed to configure a proper range with 240 Vrms high voltage protection. Each analog input/output can be programmed to accept current or voltage as input/output depending upon the position of corresponding jumper.

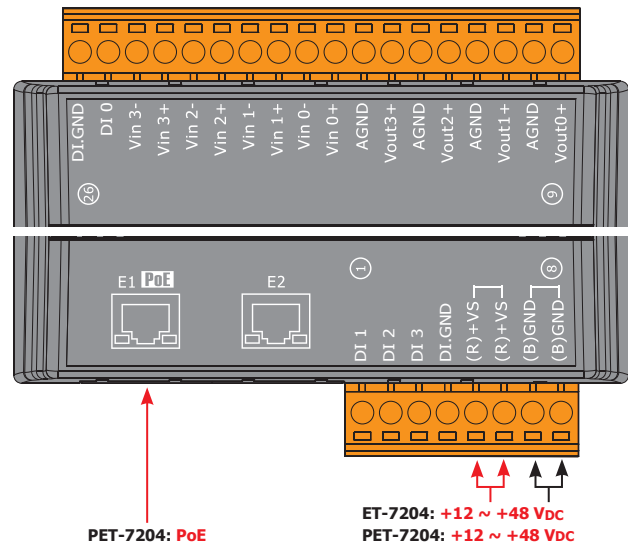
## System Specifications

Models	ET-7204	PET-7204
<b>Software</b>		
Built-in Web Server		Yes
Web HMI		Yes
I/O Pair Connection		Yes
<b>Communication</b>		
Ethernet Port	2 x RJ-45, 10/100 Base-TX, Switch Ports	
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>		
for System Running		Yes
for Ethernet Link/Act		Yes
for DI/DO status		Yes
for PoE Power	-	Yes
<b>2-Way Isolation</b>		
Ethernet	1500 Vdc	-
I/O	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)	±2 kV for Power Line	
Surge (IEC 61000-4-5)	±2 kV for Power Line	
<b>Power</b>		
Reverse Polarity Protection		Yes
Powered from Terminal Block	12 ~ 48 Vdc	
Powered from PoE	-	Yes, IEEE 802.3af, Class1
Consumption	4.9 W (Max.)	5.5 W (Max.)
<b>Mechanical</b>		
Dimensions (L x W x H)	120 mm x 76 mm x 38 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	

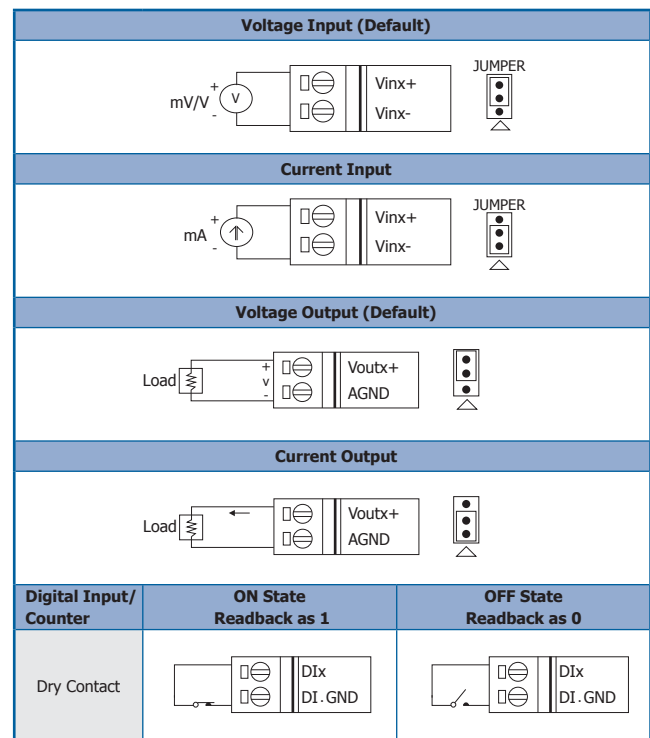
### I/O Specifications

Analog Input		
Channels	4 (Differential)	
Type	+/-500 mV, +/-1 V, +/-5 V, +/-10 V +0 mA ~ +20 mA, +/-20 mA, 4 ~ 20 mA (Jumper Selectable)	
Individual Channel Configuration	Yes	
Resolution	16-bit	
Sampling Rate	Normal Mode	10 Samples/Second (Total)
	Fast Mode	50 Samples/Second (Total)
Accuracy	Normal Mode	+/-0.1%
	Fast Mode	+/-0.5% or better
Zero Drift	+/-20 $\mu$ V/°C	
Span Drift	+/-25 ppm/°C	
Overvoltage Protection	240 Vrms	
Overcurrent Protection	50 mA Max. at 110 Vdc/VAC Max.	
Common Voltage Protection	$\pm$ 200 Vdc	
Overcurrent Protection	Yes, 50 mA at 110 Vdc	
Virtual Channel to Channel Isolation	Yes, 400 Vdc	
Open Wire Detection for 4 ~ 20 mA	Yes	
Input Impedance	Voltage	2 M $\Omega$
	Current	125 $\Omega$
Common Mode Rejection	86 dB Min.	
Normal Mode Rejection	100 dB	
Analog Output		
Channels	4	
Type	+0 Vdc ~ +5 Vdc, +/-5 Vdc, +0 Vdc ~ +10 Vdc, +/-10 Vdc,+0 mA ~ +20 mA, +4 mA ~ +20 mA (Jumper Selectable)	
Individual Channel Configuration	Yes	
Resolution	12-bit	
Accuracy	+/-0.1% of FSR	
Voltage Output Capability	20 mA @ 10 V	
Current Load Resistance	400 $\Omega$	
Open Wire Detection	Yes, for 4 ~ 20 mA only	
Power-on Value	Yes, Programmable	
Safe Value	Yes, Programmable	
Digital Input/Counter		
Channels	4	
Dry Contact (Source)	On Voltage Level	Close to GND
	Off Voltage Level	Open
	Effective Distance for Dry Contact	500 M Max.
Wet contact (Sink)	On Voltage Level	+1 Vdc Max.
	Off Voltage Level	+3.5 Vdc ~ +30 Vdc
Input Impedance	-	
Counters	Max. Count	4,294,967,295 (32-bit)
	Max. Input Frequency	100 Hz
	Min. Pulse Width	5 ms
Overvoltage Protection	30 Vdc	

### Pin Assignments



### Wire Connections



### Ordering Information

<b>ET-7204 CR</b>	Ethernet I/O Module with 2-port Ethernet Switch, with 4-channels AI, 4-channels AO, 4-channels DI (RoHS)
<b>PET-7204 CR</b>	PoE Ethernet I/O Module with 2-port Ethernet Switch, with 4-channels AI, 4-channels AO, 4-channels DI (RoHS)