



ET-7284 **PET-7284**

Ethernet I/O Module with 2-port Ethernet Switch, 4/8-ch Counter/Frequency/Encoder Input, 4-ch DO

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
- I/O Pair Connection
- Built-in I/O
  - Counter/Frequency/Encoder: 4/8 Channels
  - Digital Output: 4 Channels

Introduction

The ET-7284/PET-7284 is a 32-bit high-speed Counter/Frequency/Encoder input and 4-channel Digital Output module that offers a variety of input mode options, including "Up Counter", "Frequency Input", "Up/Down Counter", "Direct/Pulse Counter" and "A/B Phase Counter".

The mode can be individually configured for all 8 channels, where, for example, some channels can be set to "Up Counter" mode, and other channels can be individually set to "Frequency", "Up/ Down Counter" or "Encoder input" mode. The built-in programmable low pass filter can be used to eliminate noise where the width of the high/low pulse is narrower than the minimum high/low width of the low pass filter.

The ET-7284/PET-7284 module is equipped with FRAM memory to retain the counter values. FRAM is a type of non-volatile memory that can be used to store written data, even after the module has been powered off. This storage feature can be either enabled or disabled, and the data can be retained for up to 10 years.

System Specifications

Model	ET-7284	PET-7284
Software		
Built-in Web Server	Yes	
CPU Module		
Watchdog Timer	Module, Communication (Programmable)	
2-Way Isolation		
Ethernet	1500 VDC	-
I/O	2500 VDC	
EMS Protection		
EFT (IEC 61000-4-4)	±4 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)	±2 kV for Power Line	
LED Indicators		
Status	Run, Ethernet, I/O	Run, Ethernet, I/O, PoE
Ethernet		
Ports	2 x RJ-45, 10/100 Base-TX, Swtich Ports	
PoE	-	Yes
LAN bypass	Yes	
Access Control	ID, Password and IP Filter	
Protocol	Modbus TCP, Modbus UDP	

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Model	ET-7284	PET-7284
Power		
Reverse Polarity Protection	Yes	
Consumption	4.2 W (max.)	4.4 W (max.)
Powered from PoE	-	IEEE 802.3af, Class1
Powered from Terminal Block	+12 ~ +48 VDC	
Mechanical		
Dimensions (mm)	76 x 120 x 42 (W x L x H)	
Installation	DIN-Rail Mounting	
Environment		
Operating Temperature	-25 ~ +75°C	
Storage Temperature	-30 ~ +80°C	
Humidity	10 ~ 90% RH, Non-condensing	

I/O Specifications

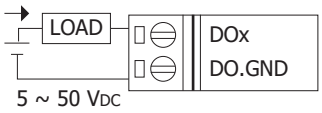
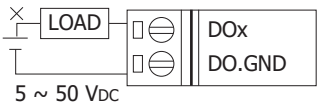
Digital Output		
Channels		4
Type		Isolated Open Collector
Sink/Source (NPN/PNP)		Sink
Load Voltage		+5 ~ +50 VDC
Load Current		650 mA/channel
Load Voltage		+5 ~ +50 VDC
Overvoltage Protection		+60 VDC
Overload Protection		1.4 A
Short-circuit Protection		Yes
Power on Value		Programmable
Safe Value		Programmable
Counter/Frequency/Encoder Input		
Channels	4-channel	Up/Down Counter (CW/CCW) Dir/Pulse Counter (Bi-directional) A/B Phase (Quadrant Counting)
	8-channel	Up Counter, Frequency
Type		Counter, Frequency or Encoder
Counter/Encoder bits		32-bit
ON Voltage Level		+3.5 ~ +30 VDC
OFF Voltage Level		+1 VDC (max.)
Frequency Accuracy		1 Hz ~ 200 kHz: ±0.025% of Input Frequency **(Note1)**
Individual Channel Configuration		Yes
Low Pass Filter		1 ~ 32767 μs
Max. Speed		+3.5 ~ +10 VDC: 200 kHz +10 ~ +30 VDC: 150 kHz
Counter Value Retention		Yes

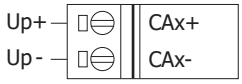
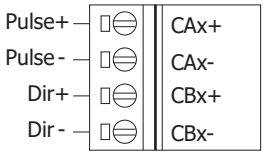
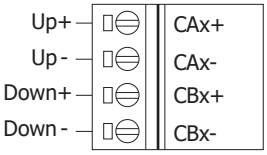
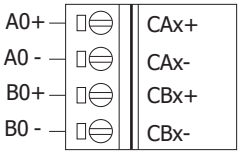
Note1:

Frequency Range	Frequency Error (Typical)
1 Hz ~ 10 Hz	0.01 Hz
10 Hz ~ 10 kHz	0.5 Hz
10 kHz ~ 100 kHz	15 Hz
100 kHz ~ 200 kHz	30 Hz

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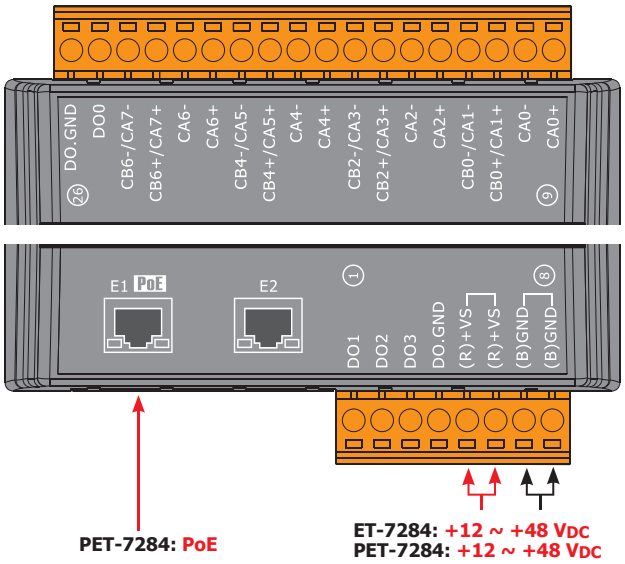
Wire Connections

Digital Output	ON State, Readback as 1	OFF State, Readback as 0
Open Collector (Sink)		

Counter Type			
Up		Dir/Pulse	
Up/Down		A/B Phase	

Frequency Type	
Frequency	

Pin Assignments



Ordering Information

ET-7284 CR	Ethernet I/O Module with 2-port Ethernet Switch, 4/8-ch Counter/Frequency/Encoder Input, 4-ch DO (RoHS)
PET-7284 CR	PoE I/O Module with 2-port Ethernet Switch, 4/8-ch Counter/Frequency/Encoder Input, 4-ch DO (RoHS)

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