



**ET-7083**  
**PET-7083**

**ET-7283**  
**PET-7283**

Ethernet I/O Module with 3-ch Encoder/Counter Inputs

## 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
- Built-in I/O
  - 3-Axis 32-bit encoder/counter inputs
  - 1 MHz max. for Quadrant mode
  - 4 MHz max. for CW/CCW, Pulse/Direction mode
  - Count Value Retention for 10 years



## Introduction

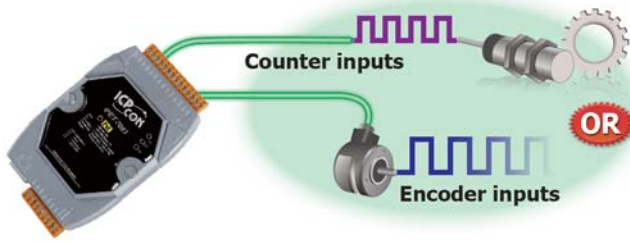
The ET-7083/PET-7083/ET-7283/PET-7283 is a 3-axis high speed encoder/counter module. Its each axis can be individually configured for Quadrant, Pulse/Direction or CW/CCW counting modes. The maximum input rate for Quadrant counting mode is 1 MHz, and for Pulse/Direction, CW/CCW counting modes is 4 MHz.

The encoder/counter module is equipped a FRAM to retain the counter value after it is powered off. FRAM is a nonvolatile memory that can hold written data even after it is powered off. The data retention can be 10 years. And the feature can be configured as enabled or disabled.

## System Specifications

Models	ET-7083	PET-7083	ET-7283	PET-7283
<b>Software</b>				
Built-in Web Server			Yes	
Web HMI			Yes	
I/O Pair Connection			Yes	
<b>Communication</b>				
Ethernet Port	1 x RJ-45, 10/100 Base-TX		2 x RJ-45, 10/100 Base-TX, Switch Ports	
PoE	-	Yes	-	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	-	Yes
<b>2-Way Isolation</b>				
Ethernet	1500 Vdc	-	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			
<b>Power</b>				
Reverse Polarity Protection	Yes			
Powered from Terminal Block	10 ~ 30 Vdc	12 ~ 48 Vdc	12 ~ 48 Vdc	12 ~ 48 Vdc
Powered from PoE	-	Yes, IEEE 802.3af, Class1	-	Yes, IEEE 802.3af, Class1
Consumption	2.7 W	2.7 W	? W	? W
<b>Mechanical</b>				
Dimensions (W x L x H)	72 mm x 123 mm x 35 mm		76 mm x 120 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			

## Applications



## I/O Specifications

Encoder/Counter	
Axis	3
Counting Mode	Quadrant
	CW/CCW
Maximum Count	Pulse/Direction
	32-bit
Maximum Counting Rate	Quadrant mode: 1 MHz
	CW/CCW mode: 4 MHz
	Pulse/Direction mode: 4 MHz
Count Value Retention	Yes, for 10 years
Counter Preset Value	Programmable
Input Signal Level	5 Vdc
	12 Vdc with 1k ohm external resistor (1/2 W) 24 Vdc with 2k ohm external resistor (1/2 W)
Intra-module Isolation, Field to Logic	2500 Vrms

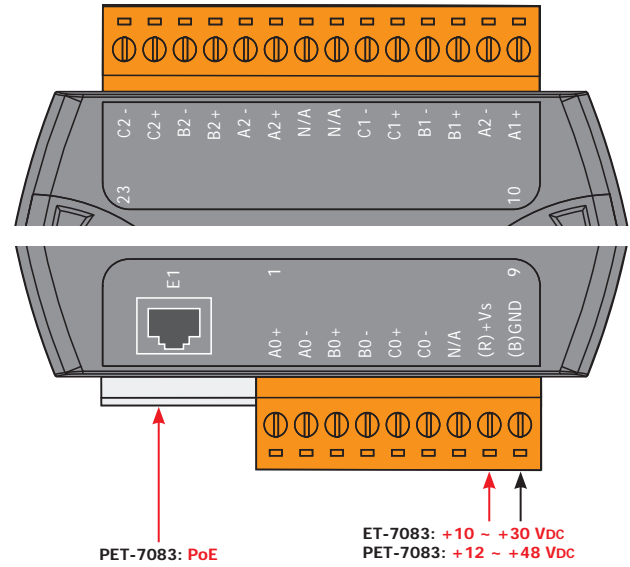
## Wire Connections

Input Type	ON State LED ON Readback as 1	OFF State LED OFF Readback as 0
Relay Contact	Relay ON 	Relay OFF 
	Voltage > 5 V	Voltage < 0.8 V
TTL/CMOS Logic	Logic Level High 	Logic Level High 
	Logic GND 	Logic GND 
NPN Output	Open Collector ON 	Open Collector OFF 
	Open Collector ON	Open Collector OFF
PNP Output	Open Collector ON 	Open Collector OFF 
	Open Collector ON	Open Collector OFF

## Ordering Information

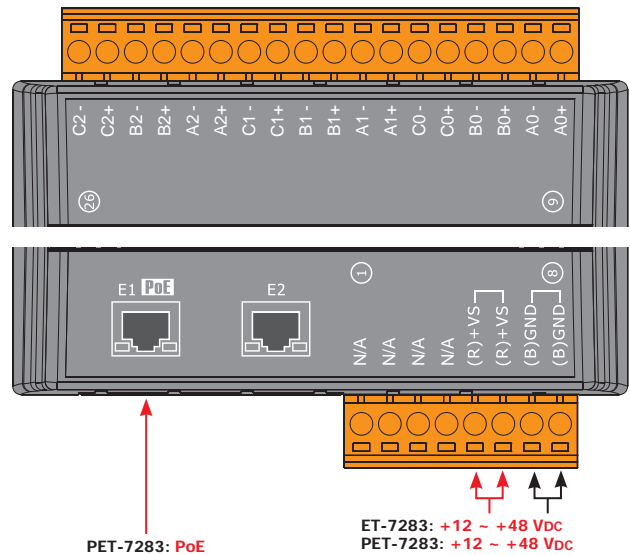
Art. No. 131556	ET-7083 CR	Ethernet I/O Module with 3-ch Encoder/Counter Inputs (RoHS)
Art. No. 131557	PET-7083 CR	PoE Ethernet I/O Module with 3-ch Encoder/Counter Inputs (RoHS)
Auf Anfrage	ET-7283 CR	Ethernet I/O Module with 2-port Ethernet Switch, with 3-ch Encoder/Counter Inputs (RoHS)
Auf Anfrage	PET-7283 CR	PoE Ethernet I/O Module with 2-port Ethernet Switch, with 3-ch Encoder/Counter Inputs (RoHS)

## Pin Assignments



PET-7083: PoE

ET-7083: +10 ~ +30 Vdc  
PET-7083: +12 ~ +48 Vdc



PET-7283: PoE

ET-7283: +12 ~ +48 Vdc  
PET-7283: +12 ~ +48 Vdc