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ET-7050
PET-7050

ET-7250A
PET-7250A

Ethernet I/O Module with 12-channel DI, 6-channel DO

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 to +75°C
- I/O Pair Connection
- Built-in I/O
  - DI/Counter: 12 Channels
  - DO: 6 Channels

Introduction

The ET-7000/ET-7200 series provides full networking capabilities, and a variety of I/O functions, together with web based Ethernet I/O monitoring and control modules, meaning that the modules can be remotely controlled using the Modbus TCP/UDP protocol via an Ethernet network. This ensures that the ET-7000/ET-7200 series provides integration with HMI, SCADA, PLC and other industrial control software systems.

The PET-7050/PET-7250A supports IEEE 802.3af Power-Over-Ethernet (Class 1) specifications. By connecting to network devices that support the IEEE 802.3af PoE standard, power can be supplied via a copper Ethernet cable. The ET-7250A/PET-7250A includes two built-in Ethernet switch ports, which help to reduce implementation costs as there is no need to install an additional switch in order to daisy chain the ports or to extend the network via the Ethernet line.

ET-7050/PET-7050/ET-7250A/PET-7250A provides 6 sink-type digital output channels and 12 wet contact digital input channels, each of which is able to be used as a 32-bit counter. In addition, each digital input of ET-7250A/PET-7250A accepts either dry contact or wet contact.
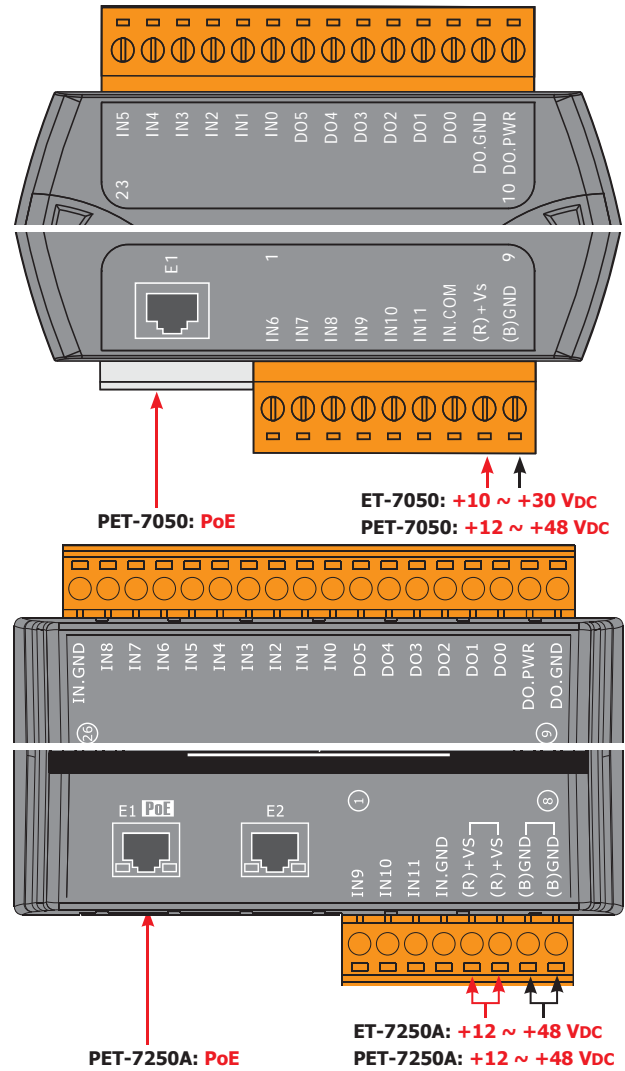
System Specifications

Model	ET-7050	PET-7050	ET-7250A	PET-7250A
Software				
Built-in Web Server	Yes			
Web HMI	Yes			
I/O Pair Connection	Yes			
Communication				
Ethernet Port	1 x RJ-45, 10/100 Base-TX		2 x RJ-45, 10/100 Base-TX, Swtich Ports	
PoE	-	Yes	-	Yes
Protocol	Modbus TCP, Modbus UDP			
Security	ID, Password and IP Filter			
Dual Watchdog	Yes, Module (0.8 seconds), Communication (Programmable)			
LED Indicators				
for System Running	Yes			
for Ethernet Link/Act	Yes			
for DI/DO status	-		Yes	
for PoE Power	-	Yes	-	Yes
2-Way Isolation				
Ethernet	1500 V_{DC}	-	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	10 ~ 30 V_{DC}	12 ~ 48 V_{DC}	12 ~ 48 V_{DC}	12 ~ 48 V_{DC}
Powered from PoE	-	Yes, IEEE 802.3af, Class1	-	Yes, IEEE 802.3af, Class1
Consumption	2.3 W (Max.)	2.4 W (Max.)	2.7 W (Max.)	2.9 W (Max.)
Mechanical				
Dimensions (L x W x H)	123 mm x 72 mm x 35 mm		120 mm x 76 mm x 38 mm	
Installation	DIN-Rail or Wall Mounting			
Environment				
Operating Temperature	-25 to +75°C			
Storage Temperature	-30 to +80°C			
Humidity	10 to 90% RH, Non-condensing			

■ I/O Specifications

Model	ET-7050	PET-7050	ET-7250A	PET-7250A
Digital Input/Counter				
Channels	12			
Contact	Wet Contact		Dry +Wet Contact	
Sink/Source (NPN/PNP)	Sink/Source		Dry: Source Wet: Sink	
Wet Contact — On Voltage Level	+10 V$_{DC}$ ~ +50 V$_{DC}$		1 V$_{DC}$ Max.	
Wet Contact — Off Voltage Level	+4 V$_{DC}$ Max.		+3.5 V$_{DC}$ ~ +50 V$_{DC}$ Max.	
Dry Contact — On Voltage Level	-		Close to GND	
Dry Contact — Off Voltage Level	-		Open	
Input Impedance	10 kΩ			
Counters — Max. Count	4,294,967,295 (32 bits)			
Counters — Max. Input Frequency	500 Hz		100 Hz	
Counters — Min. Pulse Width	1 ms		5 ms	
Overvoltage Protection	+70 V$_{DC}$		+60 V$_{DC}$	
Digital Output				
Channels	6			
Type	Isolated Open Collector			
Sink/Source (NPN/PNP)	Sink			
Max. Load Current	100 mA/channel at 25°C Direct Drive Power Relay Module		500 mA/channel	
Load Voltage	+5 V$_{DC}$ ~ +30 V$_{DC}$		+5 V$_{DC}$ ~ +50 V$_{DC}$	
Overvoltage Protection	-		60 V$_{DC}$	
Overload Protection	-		1.3 A	
Short-circuit Protection	-		Yes	
Power-on Value	Yes, Programmable			
Safe Value	Yes, Programmable			

■ Pin Assignments

PET-7050: PoE

ET-7050: +10 ~ +30 V$_{DC}$
PET-7050: +12 ~ +48 V$_{DC}$

PET-7250A: PoE

ET-7250A: +12 ~ +48 V$_{DC}$
PET-7250A: +12 ~ +48 V$_{DC}$

■ Wire Connections

ET-7050/PET-7050

Digital Input/ Counter	ON State Readback as 1	OFF State Readback as 0
Wet Contact (Sink)	+10 ~ +50 V$_{DC}$	OPEN or <4 V$_{DC}$
Wet Contact (Source)	+10 ~ +50 V$_{DC}$	OPEN or <4 V$_{DC}$

Digital Output	ON State Readback as 1	OFF State Readback as 0
Open Collector (Sink)	+5 ~ +30 VDC	+5 ~ +30 VDC

ET-7250A/PET-7250A

Digital Input/ Counter	ON State Readback as 1	OFF State Readback as 0
Wet Contact (Sink)	1 V$_{DC}$ Max.	+3.5 V$_{DC}$ ~ +50 V$_{DC}$ Max.
Dry Contact (Source)	Close to GND	Open

Digital Output	ON State Readback as 1	OFF State Readback as 0
Open Collector (Sink)	+5 ~ +50 VDC	+5 ~ +50 VDC

■ Ordering Information

ET-7050 CR	Ethernet I/O Module with 12-channel Digital Input, 6-channel Digital Output (RoHS)
PET-7050 CR	PoE Ethernet I/O Module with 12-channel Digital Input, 6-channel Digital Output (RoHS)
ET-7250A CR	Ethernet I/O Module with 2-port Ethernet Switch, with 12-channel Digital Input, 6-channel Digital Output (RoHS)
PET-7250A CR	PoE Ethernet I/O Module with 2-port Ethernet Switch, with 12-channel Digital Input, 6-channel Digital Output (RoHS)