



Ethernet I/O Modules



Thermistor Input and DO Module

Features

- PoE and Regular Ethernet Options
- Built-In Web Server
- Web HMI
- Modbus/TCP, Modbus/UDP Protocol
- Communication Security
- Dual Watchdog
- Operating Temperature: -25 ~ +75 °C
- I/O Pair Connection
- Built-In I/O
 - Thermistor Input: 8 Channels
 - DO: 4 Channels



Introduction

The ET-7000/PET-7000, a web-based Ethernet I/O module, features a built-in web server which allows configuration, I/O monitoring and I/O control by simply using a regular web browser. Remote control is as easy as surfing the Internet.

Besides, with the web HMI function, no more programming or HTML skills are required; creating dynamic and attractive web pages for I/O monitoring and I/O control would be fun to engineers ever after. The ET-7000/PET-7000 offers easy and safe access for users from anytime and anywhere! In addition, the ET-7000/PET-7000 also supports Modbus/TCP protocol that makes perfect integration to SCADA software.

Furthermore, PET-7000 features "PoE" that not only data but also power is carried through an Ethernet cable. This feature makes installation of PET-7000 a piece of cake. Imagine that no more unnecessary wires, only an Ethernet cable takes care of everything in the field.

ET-7005/PET-7005 is used for measuring temperature by the thermistor. It supports many kinds of thermistors and features individual channel configuration which means that eight of its input channels can individually be configured with different kind of thermistor and supports user-defined types by specifying the Steinhart coefficients to add other thermistors, if necessary. Besides, ET-7005/PET-7005 also has 4-channel digital outputs for alarm output with short-circuit protection and overload protection. Adding 2500 V_{oc} intra-module isolation and 110 V_{oc}/V_{ac} overvoltage protection for thermistor on ET-7005/PET-7005 makes itself running with higher reliability.

Applications

Building Automation, Factory Automation, Machine Automation, Remote Maintenance, Remote diagnosis, Testing Equipment.

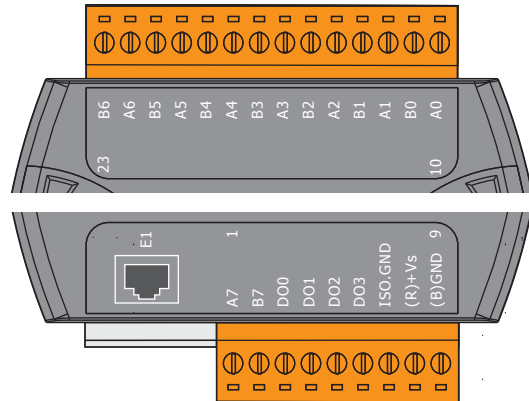
System Specifications

Models	ET-7005	PET-7005
Software		
Built-In Web Server	Yes	
Web HMI	Yes	
I/O Pair Connection	Yes	
Communication		
Ethernet Port	10/100 Base-TX with Auto MDI/MDI-X	
Protocol	Modbus/TCP, Modbus/UDP	
Security	ID, Password and IP Filter	
Dual Watchdog	Yes, Module (0.8 second), Communication (Programmable)	
LED Indicators		
L1 (System Running)	Yes	
L2 (Ethernet Link/Act)	Yes	
L3 (Ethernet 10/100 M Speed)	Yes	
PoE Power	-	Yes
2 Way Isolation		
Ethernet	1500 V _{oc}	-
I/O	2500 V _{oc}	2500 V _{oc}
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	
Power Requirements		
Reverse Polarity Protection	Yes	
Powered from terminal block	Yes, 10 ~ 30 V _{oc}	Yes, 12 ~ 48 V _{oc}
Powered from PoE	-	Yes, IEEE 802.3af, Class1
Consumption	2.1 W	3.0 W
Mechanical		
Dimensions (W x L x D)	72 mm x 123 mm x 35 mm	
Installation	DIN-Rail or Wall mounting	
Environment		
Operating Temperature	-25 °C ~ +75 °C	
Storage Temperature	-30 °C ~ +80 °C	
Humidity	10 ~ 90% RH, non-condensing	

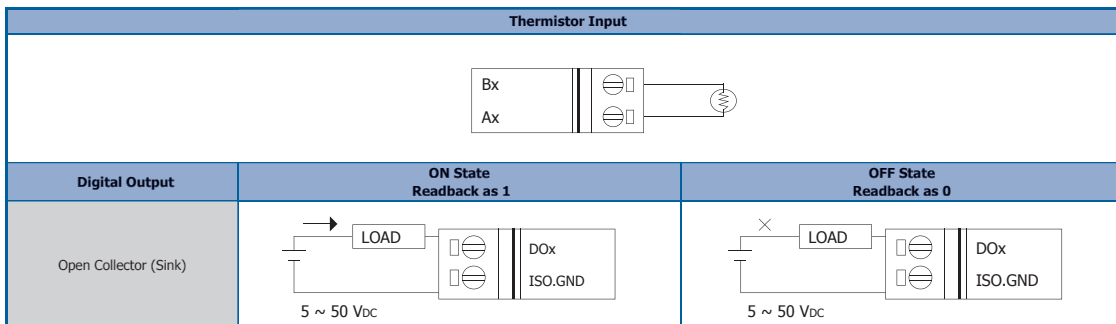
I/O Specifications

Thermistor Input	
Input Channels	8 (Differential)
Sensor Type	Precon ST-A3, Fenwell U, YSI L100, YSI L300, YSI L1000, YSI B2252, YSI B3000, YSI B5000, YSI B6000, YSI B10000, YSI H10000, YSI H30000, User-defined
Individual Channel Configuration	Yes
Resolution	16-bit
Sampling Rate	10 Sample/Sec. (Total)
Accuracy	+/- 0.1% or better
Zero Drift	+/- 20 μ V/ $^{\circ}$ C
Span Drift	+/- 25 ppm/ $^{\circ}$ C
Overvoltage Protection	110 V _{DC} /V _{AC}
Common Mode Rejection	86 dB
Normal Mode Rejection	100 dB
Open Wire Detection	Yes
Digital Output	
Output Channels	4
Type	Isolated Open Collector (Sink)
Max. Load Current	700 mA/Channel
Load Voltage	5 V _{DC} ~ 50 V _{DC}
Overvoltage Protection	60 V _{DC}
Overload Protection	1.4 A
Short-circuit Protection	Yes
Power On Value	Yes, Programmable
Safe Value	Yes, Programmable

Pin Assignment



Wire Connection



Ordering Information

ET-7005 CR	8-channel Thermistor Input and 4-channel Isolated Digital Output Module (RoHS)
PET-7005 CR	8-channel Thermistor Input and 4-channel Isolated Digital Output PoE Module (RoHS)

Accessories

	NS-205 CR	Unmanaged 5-port Industrial Ethernet Switch; requires 24 V _{DC} Input (RoHS)
	NS-205PSE CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; requires 48 V _{DC} Input (RoHS)
	NS-205PSE-24V CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; requires 24 V _{DC} Input (RoHS)
	MDR-20-24 CR	24V/1A, 24 W Power Supply with DIN-Rail Mounting (RoHS)
	DIN-KA52F-48 CR	48V/0.52A, 25 W Power Supply with DIN-Rail Mounting (RoHS)