ICP DAS Remote I/O Modules 2010 Product Catalog

Vol. RIO 1.0.00 (2010.September.20)

- RS-485
- Ethernet
- FRnet
- CANopen
- DeviceNet
- PROFIBUS
- USB

Remote I/O Modules Product Catalog

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Ethernet I/O Modules

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Ethernet I/O Modules

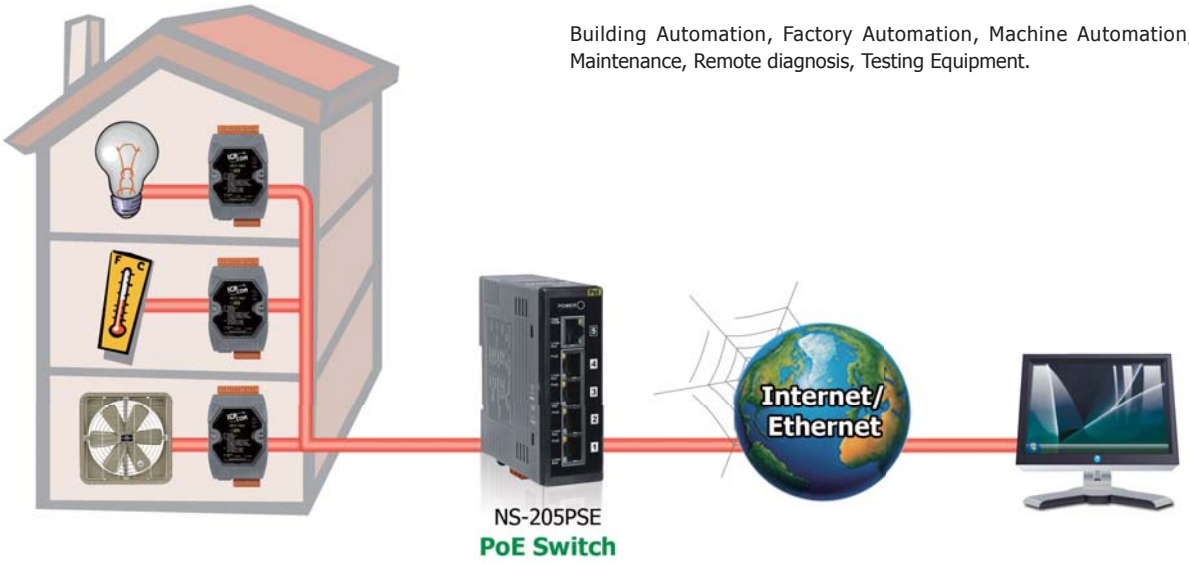
• Introduction

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.

• Application

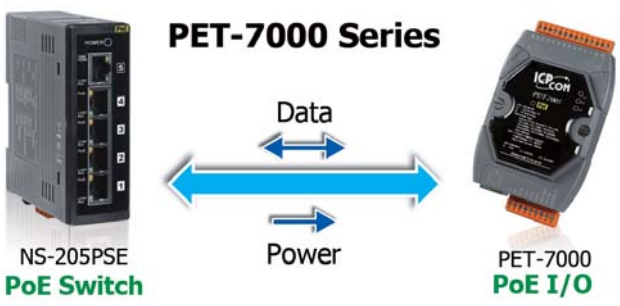


Building Automation, Factory Automation, Machine Automation, Remote Maintenance, Remote diagnosis, Testing Equipment.

• Fautures

1. Power over Ethernet (PoE)

The PET-7000 series module can be powered by an IEEE802.3af compliant PoE switch. Both data and power can be carried by an Ethernet cable eliminating the need for additional wiring and power supply.

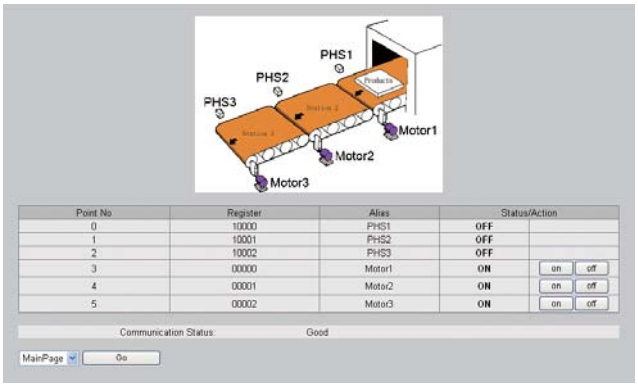


2. Built-In Web Server

Each ET-7000/PET-7000 module has a built-in web server that allows the users to easily configure, monitor and control the module from a remote location using a regular web browser.

3. Web HMI

The Web HMI function allows the users to create dynamic and attractive web pages to monitor and control the I/O points. Users can upload specific I/O layout pictures (bmp, jpg, gif format) and define a description for each I/O point. No HTML or Java skills are needed to create the web pages.



4. Communication Security

Account and password are needed when logging into the ET-7000 web server. An IP address filter is also included, which can be used to allow or deny connections with specific IP addresses.

5. Modbus/TCP, Modbus/UDP Protocol

The Modbus/TCP, Modbus/UDP slave function on the Ethernet port can be used to provide data to remote SCADA software.

6. Built-In I/O

Various I/O components are mixed with multiple channels in a single module, which provides the most cost effective I/O usage and enhances performance of the I/O operations

7. Dual Watchdog

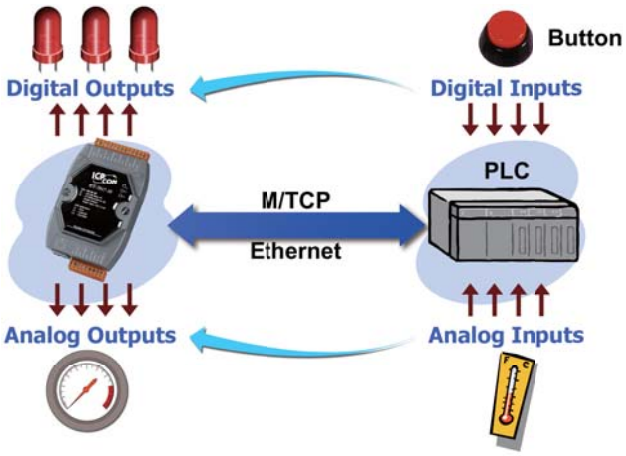
The Dual Watchdog is consists of a Module Watchdog and a Communication Watchdog. The action of AO,DO are also associated to the Dual Watchdog.

Module Watchdog is a built-in hardware circuit to monitor the operation of the module and will reset the CPU if a failure occurs in the hardware or the software. Then the Power On Value of AO,DO will be loaded.

Communication Watchdog is a software function to monitor the communication between the host and the ET-7000/PET-7000 module. The timeout of the communication Watchdog is proprgrammable, when the ET-7000/PET-7000 doesn't receive commands from the host for a while, the watchdog forces the AO,DO to pre-programmed Safe Value to prevent unpredicatable damage of the connected devices.

8. Power On Value & Safe Value

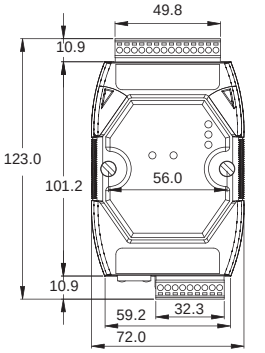
Besides setting by the set AO,DO commands, the AO,DO can be set under two other conditions.
Power On Value: The Power On Value is loaded into the AO,DO under 3 conditions: power on, reset by Module Watchdog, reset by reset command.
Safe Value: When the Communication Watchdog is enabled and a Communication Watchdog timeout occurs, the "safe value" is loaded into the AO,DO.



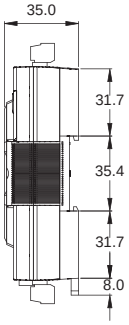
9. I/O Pair Connection

This function is used to create a AI/DI to AO/DO pair through the Ethernet. Once the configuration is completed, the ET-7000/PET-7000 module can poll the status of remote AI/DI devices and then use the Modbus/TCP protocol to continuously write to a local AO/DO channels in the background.

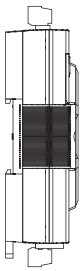
10. Mechanical



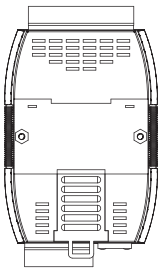
Front View



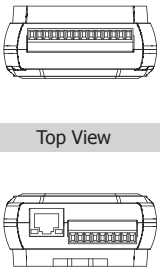
Left Side View



Right Side View



Back View

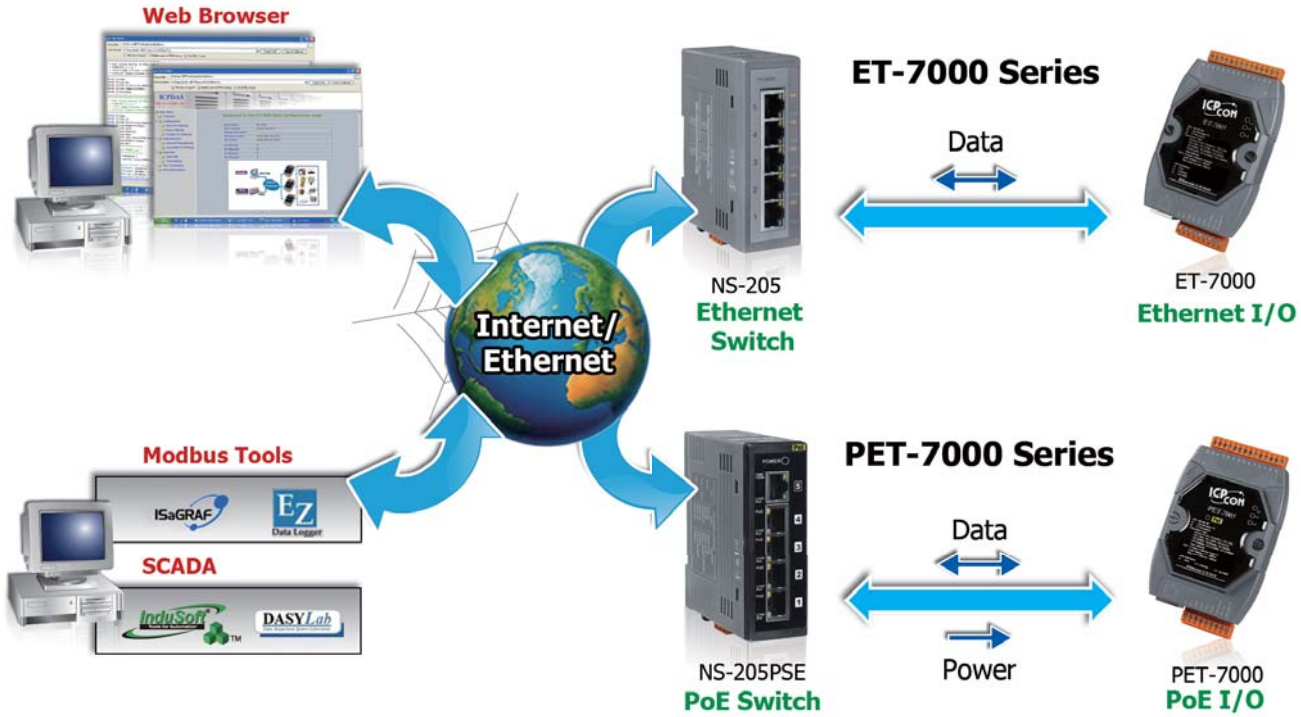


Top View

Bottom View

Ethernet Communication Modules

Selection Guide



Analog Input Model

Model Name	AI			DO		
	Channel	Voltage & Current Input	Sensor Input	Channel	Type	Sink/Source
ET-7005 PET-7005	8	-	Thermistor	4	Open Collector	Sink
ET-7015 PET-7015	7	-	RTD: Pt100, Pt1000, Ni120, Cu100, Cu1000	-	-	-
ET-7017 PET-7017	8	+/-150 mV, +/-500 mV, +/-1 V, +/-5 V, +/-10 V, +/-20 mA, 0 ~ 20 mA, 4 ~ 2 0mA	-	4	Open Collector	Sink
ET-7017-10 PET-7017-10	10/20	+/-150 mV, +/-500 mV, +/-1 V, +/-5 V, +/-10 V, +/-20 mA, 0 ~ 20 mA, 4 ~ 20 mA	-	-	-	-
ET-7018Z PET-7018Z	10	+/-15 mV, +/-50 mV, +/-100 mV, +/-500 mV, +/-1 V, +/-2.5 V +/-20 mA, 0 ~ 20 mA, 4 ~ 20 mA	Thermocouple: J, K, T, E, R, S, B, N, C, L, M, LDIN43710	6	Open Collector	Sink
ET-7019 PET-7019	8	+/-15 mV, +/-50 mV, +/-100 mV, +/-150 mV, +/-500 mV, +/-1 V, +/-5 V, +/-10 V	Thermocouple: J, K, T, E, R, S, B, N, C, L, M, LDIN43710	4	Open Collector	Sink

Multifunction I/O

Model Name	AI			AO		DI/Counter		DO	
	Channel	Voltage & Current Input	Sensor Input	Channel	Voltage & Current Output	Channel	Type	Channel	Type
ET-7016 PET-7016	2	+/- 15 mV, +/- 50 mV, +/- 100 mV, +/- 500 mV, +/- 1 V, +/- 2.5 V, 0 ~ 20 mA, +/- 20 mA, 4 ~ 20mA	Strain Gague, Load Cell, Full-Bridge, Half-Bridge, Quarter-Bridge	1	0 ~ 10V	2	Wet (Sink,Source)	2	Open Collector (Sink)
ET-7026 PET-7026	6	+/- 150 mV, +/- 500 mV, +/- 1 V, +/- 5 V, +/-10 V, 0 ~ 20 mA, +/- 20 mA, 4 ~ 20mA	-	2	0 ~ 5 V, +/- 5 V, 0 ~ 10 V, +/- 10 V, 0 ~ 20 mA, 4 ~ 20 mA	2	Dry (Source), Wet (Sink,Source)	2	Open Collector (Sink)

Digital I/O

Model Name	DI/Counter			DO			
	Channel	Type	Sink/Source	Channel	Type	Sink/Source	Max. Load Current @ 25°C
ET-7042 PET-7042	-	-	-	16	Open Collector	Sink	100 mA/channel
ET-7044 PET-7044	8	Wet	Sink, Source	8	Open Collector	Sink	300 mA/channel
ET-7050 PET--7050	12	Wet	Sink, Source	6	Open Collector	Sink	100 mA/channel
ET-7051 PET-7051	16	Wet	Sink, Source	-	-	-	-
ET-7052 PET-7052	8	Wet	Sink, Source	8	Open Collector	Source	650 mA/channel
ET-7053 PET-7053	16	Dry	Source	-	-	-	-

Relay Output & Digital Input

Model Name	Relay Output				DI/Counter		
	Channel	Relay	Type	Max. Load Current @ 25°C	Channel	Type	Sink/Source
ET-7060 PET-7060	6	Power Relay	Form A (SPST N.O.)	5.0 A/channel	6	Wet	Sink, Source
ET-7065 PET-7065	6	PhotoMOS Relay	Form A (SPST N.O.)	1.0 A/channel	6	Wet	Sink, Source
ET-7066 PET-7066	8	PhotoMOS Relay	Form A (SPST N.O.)	1.0 A/channel	-	-	-
ET-7067 PET-7067	8	Power Relay	Form A (SPST N.O.)	5.0 A/channel	-	-	-

ET-7005 — Regular Ethernet Version

PET-7005 — PoE Version

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_{DC} intra-module isolation and 110 V_{DC}/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.

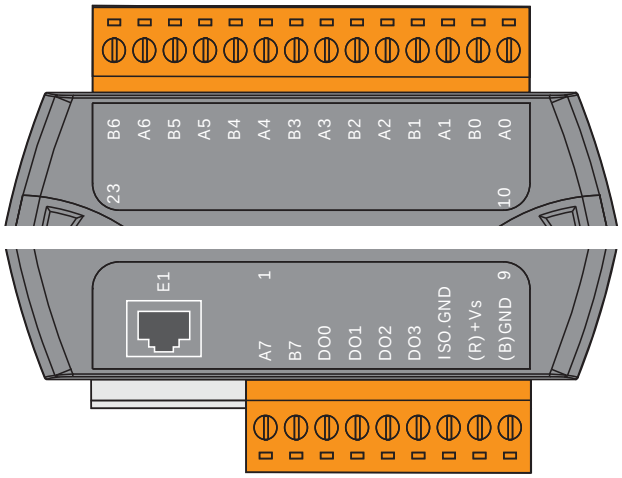
System Specifications

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 Isolaiton		
Ethernet	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	
Power Requirements		
Reverse Polarity Protectionn	Yes	
Powered from terminal block	Yes, 10 ~ 30 V_{DC}	Yes, 12 ~ 48 V_{DC}
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

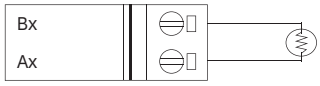
Thermistor Input	
Input Channels	8 (Differential)
Sensor Type	Precon ST-A3, Fenwell U, YSI L100, YSI L300, YSI L1000, YSI B2252, YSI B3000, YSI B5000, YSI B6000, YSI B10000, YSI H10000, YSI H30000, User-defined
Individual Channel Configuration	Yes
Resolution	16-bit
Sampling Rate	10 Sample/Sec. (Total)
Accuracy	+/-0.1% or better
Zero Drift	+/-20 μV/°C
Span Drift	+/-25 ppm/°C
Overvoltage Protection	110 VDC/VAC
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 VDC ~ 50 VDC
Overvoltage Protection	60 VDC
Overload Protection	1.4 A
Short-circuit Protection	Yes
Power On Value	Yes, Programmable
Safe Value	Yes, Programmable

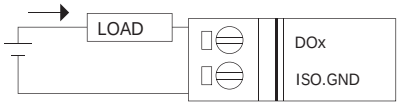
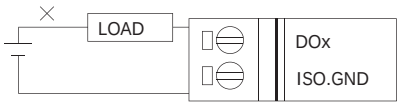
Pin Assignment



Wire Connection

Thermistor Input



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

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 VDC Input (RoHS)
NS-205PSE CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; requires 48 VDC Input (RoHS)
NS-205PSE-24V CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; requires 24 VDC 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)

ET-7015
Regular Ethernet Version

PET-7015
PoE Version

RTD Input 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
  - RTD Input: 7 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-7015/PET-7015 is specifically designed for long-distance RTD measurement. It features automatic compensation for three-wire RTD so that it can measure right regardless of the length of wires and provide open wire detection for RTD measurement. ET-7015/PET-7015 offers 7 channels, each of which could be connected with different kinds of RTD (Pt100, Pt1000, Ni120, Cu100, Cu1000). Also, ET-7015/PET-7015 is fully RoHS-compliant and has qualification for 4 kV ESD protection as well as 2500 VDC intra-module isolation.

Applications

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

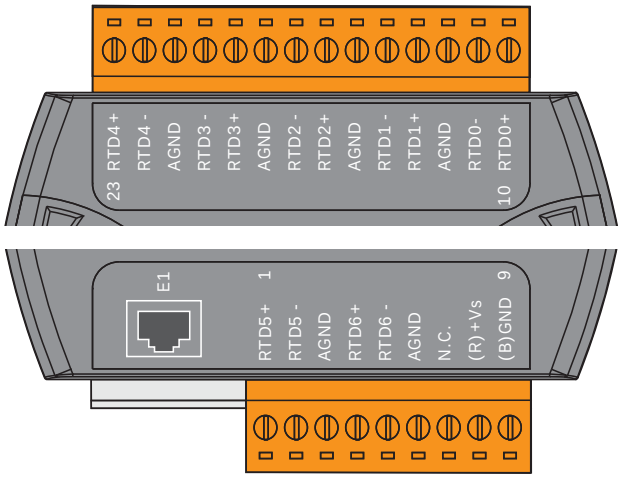
System Specifications

Models	ET-7015	PET-7015
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 Isolaiton		
Ethernet	1500 VDC	-
I/O	2500 VDC	2500 VDC
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 Protectionn	Yes	
Powered from terminal block	Yes, 10 ~ 30 VDC	Yes, 12 ~ 48 VDC
Powered from PoE	-	Yes, IEEE 802.3af, Class1
Consumption	2.0 W	2.6 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	

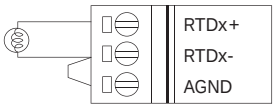
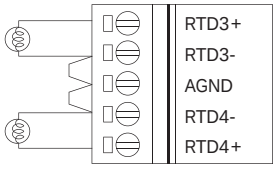
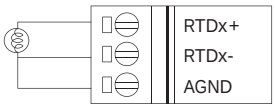
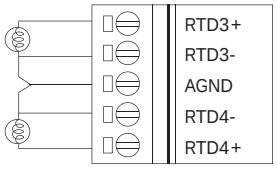
I/O Specifications

RTD Input	
Input Channels	7 (Differential)
Sensor Type	Pt100, Pt1000, Ni120, Cu100, Cu1000
Wire Connection	2/3 wire
Individual Channel Configuration	Yes
Resolution	16-bit
Sampling Rate	12 Samples/Sec. (Total)
Accuracy	+/-0.05%
Zero Drift	+/-0.5 μV/°C
Span Drift	+/-20 μV/°C
Common Mode Rejection	150 dB
Normal Mode Rejection	100 dB
Input Impedance	>1M Ω
Open Wire Detection	Yes
3-wire RTD Lead Resistance Elimination	Yes

Pin Assignment



Wire Connection

Open Collector (Sink)	CH0, 1, 2, 5 and 6	CH3 and CH4
2-wire of RTD		
3-wire of RTD		

Ordering Information

ET-7015 CR	7-channel RTD Input Module with 3-wire RTD Lead Resistance Elimination (RoHS)
PET-7015 CR	7-channel RTD Input Module with 3-wire RTD Lead resistance elimination PoE Module (RoHS)

Accessories

NS-205 CR	Unmanaged 5-port Industrial Ethernet Switch; reguires 24 V_{DC} Input (RoHS)
NS-205PSE CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; reguires 48 V_{DC} Input (RoHS)
NS-205PSE-24V CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; reguires 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)

ET-7016 — Regular Ethernet Version

PET-7016 — PoE Version

Strain Gauge Multifunction 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
  - Strain Gauge Input: 2 Channels
  - AO: 1 Channels
  - DI/Counter: 2 Channels
  - DO: 2 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.

The ET-7016/PET-7016 is a strain gauge module, there are 2-channel analog inputs, 1-channel excitation voltage output, 2-channel digital inputs and 2-channel digital outputs module. It provides programmable input range on all analog inputs (+/-1 mV, +/-50 mV, +/-100 mV, +/-500 mV, +/-1 V, and +/-2.5 V) and supports full-bridge, half-bridge, and quarter-bridge. Each analog input is allowed to configure an individual range. Excitation voltage outputs are 0 ~ 10 V range with 60 mA driving efficient. Digital outputs can be set alarm outputs.

Applications

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

System Specifications

Models	ET-7016	PET-7016
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 Isolaiton		
Ethernet	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	
Power Requirements		
Reverse Polarity Protectionn	Yes	
Powered from terminal block	Yes, 10 ~ 30 V_{DC}	Yes, 12 ~ 48 V_{DC}
Powered from PoE	-	Yes, IEEE 802.3af, Class1
Consumption	3.5 W	5.1 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

Strain Gauge Input		
Input Channels		2 (Differential)
Input Type		+/-15 mV, +/-50 mV, +/-100 mV, +/-500 mV, +/-1 V, +/-2.5 V, +/-20mA, 10 ~ 20 mA, 4 ~ 20 mA
Strain Gauge Type		Full-Bridge, Half-Bridge, and Quarter-Bridge
Individual Channel Configuration		Yes
Resolution		16-bit
Sampling Rate		10 Samples/Sec. (Total)
Accuracy		+/-0.05%
Zero Drift		+/-0.5 uV/°C
Span Drift		+/-25 ppm/°C
Overvoltage Protection		30 VDC
Input Impedance		Voltage Input: >400 kΩ, Current Input: 125 Ω
Common Mode Rejection		150 dB min.
Normal Mode Rejection		100 dB
Excitation Voltage Output		
Output Channels		1
Output Range		0 ~ 10 V
Max. Output Load Current		60 mA
Accuracy		+/-0.05% of FSR
Drift		+/- 50 ppm/°C
Power On Value		Yes
Digital Input/Counter		
Input Channels		2
Type		Wet (Sink or Source)
Off Voltage Level		+1 VDC max.
On Voltage Level		+3.5 VDC ~ +50 VDC
Counters	Channels	2
	Max. Counts	4,294,967,285 (32-bit)
	Max. Input Frequency	100 Hz
	Min. Pulse Width	5 ms
Overvoltage Protection		70 VDC
Digital Output		
Output Channels		2
Type		Isolated Open Collector (Sink)
Max. Load Current		700 mA/Channel
Load Voltage		+ 5 VDC ~ + 50 VDC
Overvoltage Protection		60 VDC
Overload Protection		1.4 A
Short-circuit Protection		Yes
Power On Value		Yes, Programmable
Safe Value		Yes, Programmable

Excitation Voltage

Strain Gauge	Quarter-Bridge	Half-Bridge	Full-Bridge
120R	7.0V	7.0V	3.5V
350R	10V	10V	10V

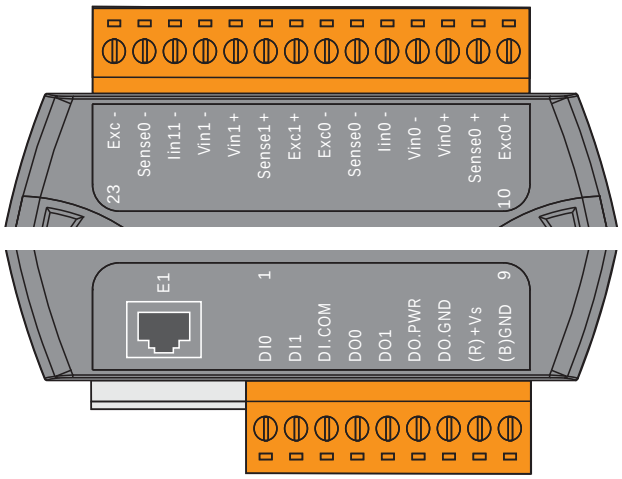
Ordering Information

ET-7016 CR	2-channel strain gauge, 2-channel digital input and 2-channel digital Output module (RoHS)
PET-7016 CR	2-channel strain gauge, 2-channel digital input and 2-channel digital Output PoE module (RoHS)

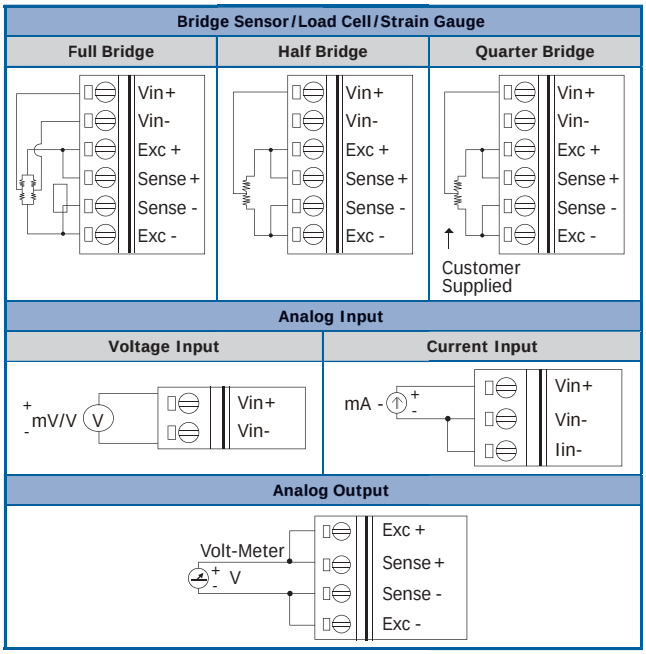
Accessories

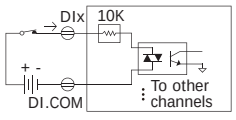
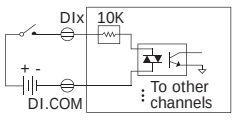
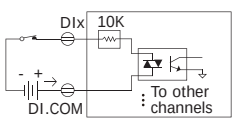
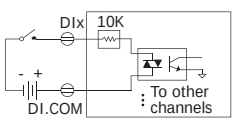
NS-205 CR	Unmanaged 5-port Industrial Ethernet Switch; requires 24 VDC Input (RoHS)
NS-205PSE CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; requires 48 VDC Input (RoHS)
NS-205PSE-24V CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; requires 24 VDC Input (RoHS)
MDR-20-24 CR	24V/1A, 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)

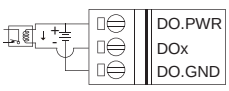
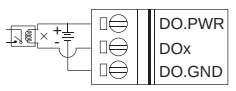
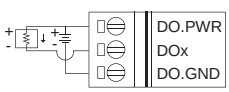
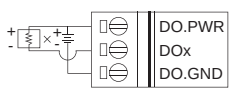
Pin Assignment



Wire Connection



Digital Input/ Counter	Readback as 1	Readback as 0
	+10 ~ +50 VDC	OPEN or <4 VDC
Sink		
Source	+10 ~ +50 VDC	OPEN or <4 VDC
		

Output Type	ON State Readback as 1	OFF State Readback as 0
Drive Relay		
Resistance Load		

ET-7017 — Regular Ethernet Version

PET-7017 — PoE Version

AI 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
  - AI: 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.

The ET-7017/PET-7017 is a 16-bit, 8-channel differential analog inputs and 4-channel digital ouputs module that provides programmable input range on all analog channels (+/-150 mV, +/-500 mV, +/-1 V, +/-5 V, +/-10 V, +/-20 mA, 0~20 mA and 4~20 mA) and digital output can be set alarm output with short-circuit protection and overload protection. Each analog channel is allowed to configure an individual range and has 240 V_{rms} high overvoltage protection. Jumper selectable for voltage or current input. The sampling rate of ET-7017/PET-7017 is changeable; there are fast mode and normal mode for your consideration. ET-7017/PET-7017 also has qualification for 4 kV ESD protection as well as 3000 V_{DC} intra-module isolation.

Applications

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

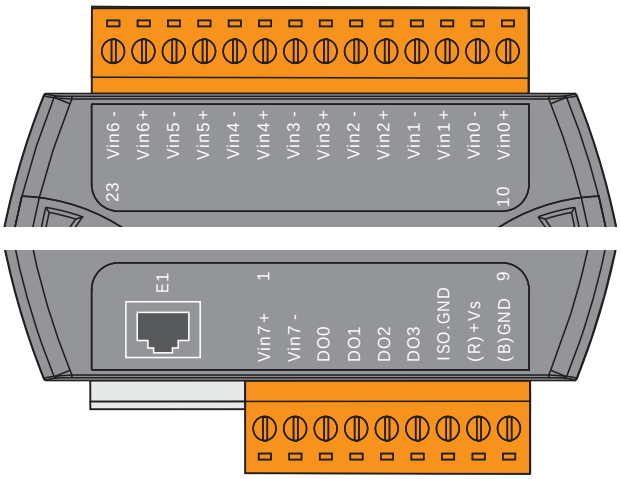
System Specifications

Models	ET-7017	PET-7017
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 Isolaiton		
Ethernet	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	
Power Requirements		
Reverse Polarity Protectionn	Yes	
Powered from terminal block	Yes, 10 ~ 30 V_{DC}	Yes, 12 ~ 48 V_{DC}
Powered from PoE	-	Yes, IEEE 802.3af, Class1
Consumption	2.6 W	3.1 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	

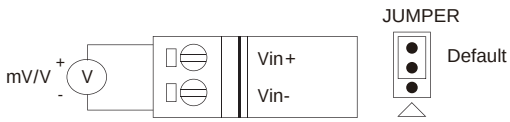
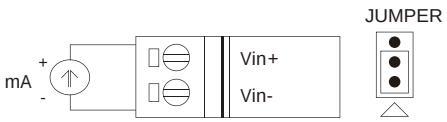
I/O Specifications

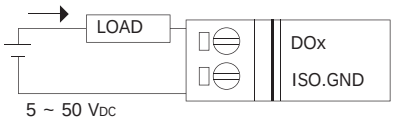
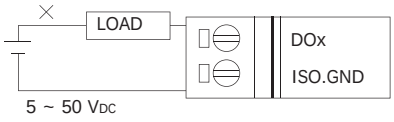
Analog Input		
Input Channels		8 (Differential)
Input Type		+/-150 mV, +/-500 mV, +/-1V, +/-5V, +/-10V +/-20 mA, 0 ~ 20 mA, 4 ~ 20 mA (jumper selectable)
Individual Channel Configuration		Yes
Resolution	Normal Mode	16-bit
	Fast Mode	12-bit
Sampling Rate	Normal Mode	10 Samples/Sec. (Total)
	Fast Mode	60 Samples/Sec. (Total)
Accuracy	Normal Mode	+/-0.1%
	Fast Mode	+/-0.5% or better
Zero Drift		+/-20 uV/°C
Span Drift		+/-25 ppm/°C
Overvoltage Protection		240 V_{rms}
Input Impedance	Voltage	2 MΩ
	Current	125 Ω
Common Mode Rejection		86 dB Min.
Normal Mode Rejection		100 dB
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

Voltage Input	Current Input
	

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

Ordering Information

ET-7017 CR	8-channel Analog Input with High Voltage Protection and 4-channel Isolated Digital Output Module (RoHS)
PET-7017 CR	8-channel Analog Input with High Voltage Protection 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)	MDR-20-24 CR	24V/1A, 24 W Power Supply with DIN-Rail Mounting (RoHS)
NS-205PSE CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; requires 48 V_{DC} Input (RoHS)	DIN-KA52F-48 CR	48V/0.52A, 25 W Power Supply with DIN-Rail Mounting (RoHS)
NS-205PSE-24V CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; requires 24 V_{DC} Input (RoHS)		

ET-7017-10
Regular Ethernet Version

PET-7017-10
PoE Version

AI 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
  - AI: 10/20 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.

The ET-7017-10 is a 16-bit, 10-channel differential or 20-channel single-ended analog inputs module that provides programmable input range on all analog channels (+/-150 mV, +/-500 mV, +/-1 V, +/-5 V, +/-10 V, +/-20 mA, 0~20 mA and 4~20 mA). Each analog channel is allowed to configure an individual range and has 240 V_{rms} high overvoltage protection. Jumper selectable for voltage or current input. The sampling rate of ET-7017/PET-7017 is changeable; there are fast mode and normal mode for your consideration. ET-7017/PET-7017 also has qualification for 4 kV ESD protection as well as 3000 V_{DC} intra-module isolation.

Applications

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

System Specifications

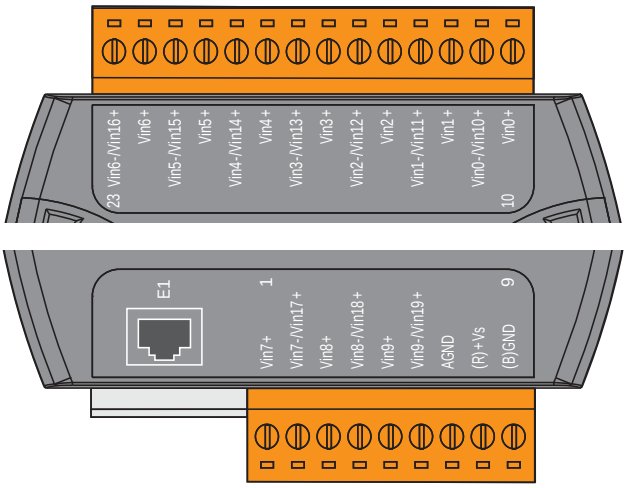
Models	ET-7017-10	PET-7017-10
Software		
Built-In Web Server	Yes	
Web HMI	Yes	
I/O Pair Connection	Yes	
Communication		
Ethernet Port	10/100 Base-TX with Auto MDI/MDI-X	
Protocol	Modbus/TCP, Modbus/UDP	
Security	ID, Password and IP Filter	
Dual Watchdog	Yes, Module (0.8 second), Communication (Programmable)	
LED Indicators		
L1 (System Running)	Yes	
L2 (Ethernet Link/Act)	Yes	
L3 (Ethernet 10/100 M Speed)	Yes	
PoE Power	-	Yes
2 Way Isolaiton		
Ethernet	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	
Power Requirements		
Reverse Polarity Protectionn	Yes	
Powered from terminal block	Yes, 10 ~ 30 V_{DC}	Yes, 12 ~ 48 V_{DC}
Powered from PoE	-	Yes, IEEE 802.3af, Class1
Consumption	2.6 W	3.8 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

Analog Input		
Input Channels		10 differential or 20 single-ended (Note1), software selectable
Input Type		+/-150 mV, +/-500 mV, +/-1V, +/-5V, +/-10V +/-20 mA ,0 ~ 20 mA, 4 ~ 20 mA (jumper selectable)
Individual Channel Configuration		Yes
Resolution	Normal Mode	16-bit
	Fast Mode	12-bit
Sampling Rate	Normal Mode	10 Samples/Sec. (Total)
	Fast Mode	60 Samples/Sec. (Total)
Accuracy	Normal Mode	+/-0.1%
	Fast Mode	+/-0.5% or better
Zero Drift		+/-20 uV/°C
Span Drift		+/-25 ppm/°C
Overvoltage Protection	Differential	240 V_{rms}
	Single-ended	150 V_{rms}
Input Impedance	Voltage	2 MΩ (Differential), 1 MΩ (Single-ended)
	Current	125 Ω
Common Mode Rejection		86 dB Min.
Normal Mode Rejection		100 dB

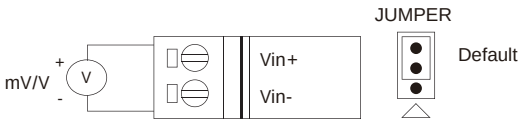
Note1: Differential mode can be used for voltage input and current input.
Single-Ended mode can be used for voltage input only.

Pin Assignment

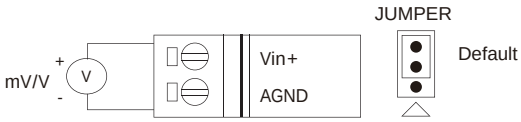


Wire Connection

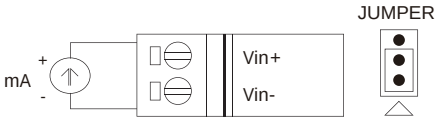
Voltage Input (Differential Mode)



Voltage Input (Single-ended Mode)



Current Input



Ordering Information

ET-7017-10	10/20-channel Analog Input Module with High Voltage Protection Module (RoHS)
PET-7017-10	10/20-channel Analog Input Module with High Voltage Protection 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)

ET-7018Z — Regular Ethernet Version

PET-7018Z — PoE Version

Thermocouple 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
  - Thermocouple Input: 10 Channels
  - DO: 6 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.

The "Z" version is another milestone in the development of thermocouple series and a testament to excellence by ICP DAS. ET-7018Z/PET-7018Z is specifically designed for extremely accurate thermocouple measurement. It features automatic cold-junction compensation for each channel to get temperature outputs consistency and stable temperature output in the field . Current input and voltage input are supported. Another feature is that ten of its input channels can individually be configured with different kinds of analog input. ET-7018Z/PET-7018Z also got open thermocouple detection and many protection mechanisms. The 6 digital output can be set alarm output with short-circuit protection and overload protection.

Applications

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

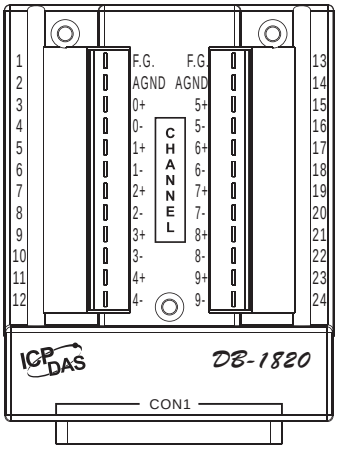
System Specifications

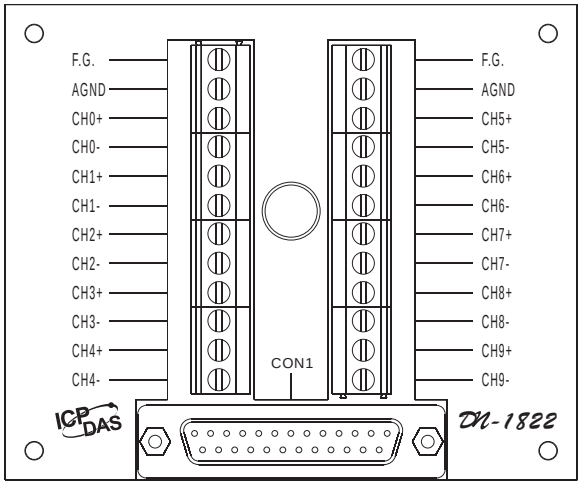
Models	ET-7018Z	PET-7018Z
Software		
Built-In Web Server	Yes	
Web HMI	Yes	
I/O Pair Connection	Yes	
Communication		
Ethernet Port	10/100 Base-TX with Auto MDI/MDI-X	
Protocol	Modbus/TCP, Modbus/UDP	
Security	ID, Password and IP Filter	
Dual Watchdog	Yes, Module (0.8 second), Communication (Programmable)	
LED Indicators		
L1 (System Running)	Yes	
L2 (Ethernet Link/Act)	Yes	
L3 (Ethernet 10/100 M Speed)	Yes	
PoE Power	-	Yes
2 Way Isolaiton		
Ethernet	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	
Power Requirements		
Reverse Polarity Protectionn	Yes	
Powered from terminal block	Yes, 10 ~ 30 V_{DC}	Yes, 12 ~ 48 V_{DC}
Powered from PoE	-	Yes, IEEE 802.3af, Class1
Consumption	2.0 W	3.0 W
Mechanical		
Dimensions (W x L x D)	72 mm x 116 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	

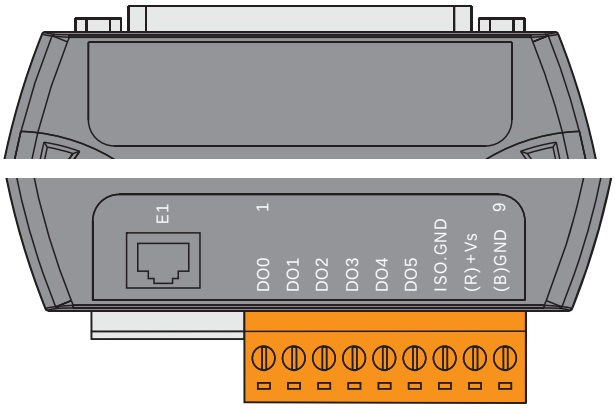
I/O Specifications

Thermocouple Input	
Input Channels	10 (Differential)
Sensor Type	+/-15 mV, +/-50 mV, +/-100 mV, +/-500 mV, +/-1 V, +/-2.5 V
	+/-20 mA, 0 ~ 20 mA, 4 ~ 20 mA (Requires Optional External 125 Ω Resistor)
	Thermocouple (J, K, T, E, R, S, B, N, C, L, M, LDIN43710)
Individual Channel Configuration	Yes
Resolution	16-bit
Sampling Rate	10 Samples/Sec. (Total)
Accuracy	+/-0.1% or better
Zero Drift	+/-0.5 uV/°C
Span Drift	+/-25 ppm/°C
Over Voltage Protection	240 V_{rms}
Input Impedance	>300 kΩ
Common Mode Rejection	150 dB Min.
Normal Mode Rejection	100 dBV
Temperature outputs consistency	Yes
Stable temperature output in the field	Yes
Open Wire Detection	Yes
Digital Output	
Output Channels	6
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

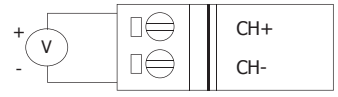
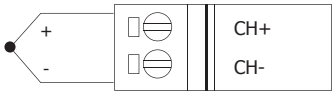
Pin Assignment



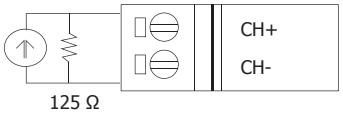




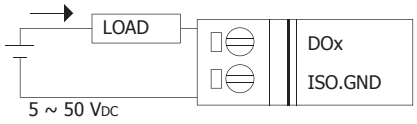
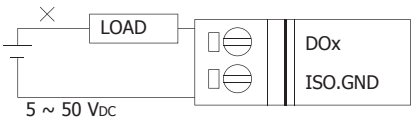
Wire Connection

Voltage Input (Default)	Thermocouple Input (Default)
	

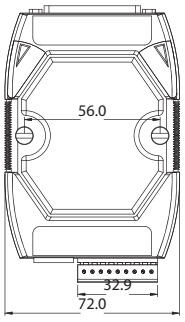
Current Input



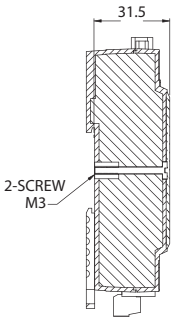
Note: When connecting to a current source, an optional external 125 Ω resistor is required.

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

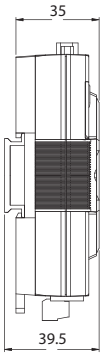
Dimensions (Unit: mm)



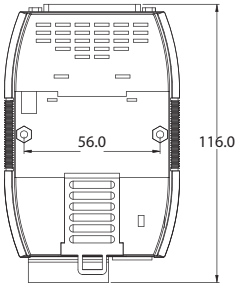
Front View



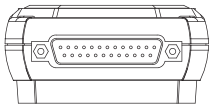
Right Side View



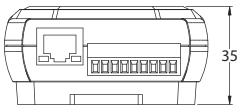
Din Rail MountingBracket



Back View

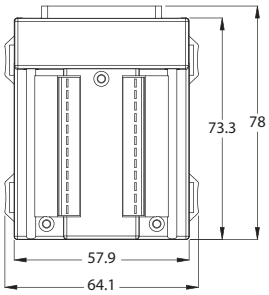


Top View

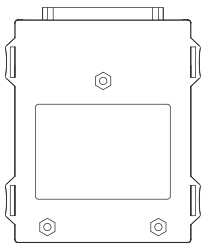


Bottom View

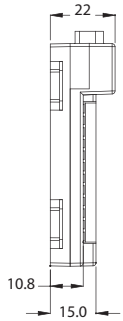
DN-1820



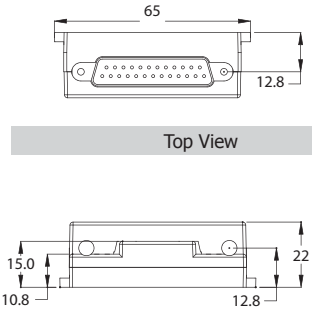
Front View



Back View



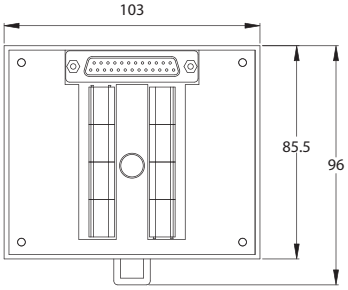
Left Side View



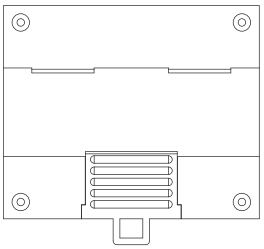
Top View

Bottom View

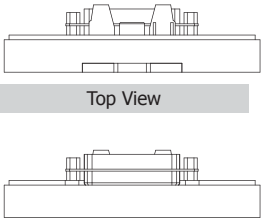
DN-1822



Front View

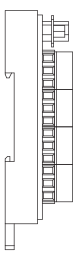


Back View

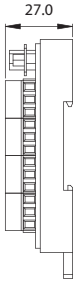


Top View

Bottom View



Right Side View



Left Side View

Ordering Information

ET-7018Z-G/S CR	10-channel Thermocouple Input with High Voltage Protection and 6-channel Isolated Digital Output Module (RoHS) Include ET-7018Z Module and DB-1820 Daughter Board
ET-7018Z-G/S2 CR	10-channel Thermocouple Input with High Voltage Protection and 6-channel Isolated Digital Output PoE Module (RoHS) Include ET-7018Z Module, DN-1822 Daughter Board and 1.8 m Cable
PET-7018Z-G/S CR	10-channel Thermocouple Input with High Voltage Protection and 6-channel Isolated Digital Output Module (RoHS) Include PET-7018Z Module and DB-1820 Daughter Board
PET-7018Z-G/S2 CR	10-channel Thermocouple Input with High Voltage Protection and 6-channel Isolated Digital Output PoE Module (RoHS) Include PET-7018Z Module, DN-1822 Daughter Board and 1.8 m Cable

Front Back

ET-7018Z-G/S = ET-7018Z Connects DB-1820 Directly
PET-7018Z-G/S = PET-7018Z Connects DB-1820 Directly

ET-7018Z-G/S2 = ET-7018Z Connect DN-1822 Directly
PET-7018Z-G/S2 = PET-7018Z Connect DN-1822 Directly

Accessories

NS-205 CR	Unmanaged 5-port Industrial Ethernet Switch; reguires 24 V_{DC} Input (RoHS)
NS-205PSE CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; reguires 48 V_{DC} Input (RoHS)
NS-205PSE-24V CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; reguires 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)
CD-2518D CR	25F-25M 1.8 m Cable with DIN-Rail Mount of DB-1820 (RoHS)
CD-25015 CR	25F-25M 15 cm Cable with DIN-Rail Mount of DB-1820 (RoHS)
4PAPP-006-G CR	Plastic Rack (RoHS)

CD-25015
15 cm Cable + DB-1820

4PAPP-006-G

PET-7018Z-G/S + CD-25015 + 4PAPP-006-G

CD-2518D
1.8 m Cable + DB-1820

PET-7018Z-G/S + CD-2518D

ET-7019 — Regular Ethernet Version

PET-7019 — PoE Version

Universal AI 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
  - AI: 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-7019/PET-7019 features an extremely excellent protection mechanism where overvoltage protection is up to 240 V_{rms}. It has wider input range for voltage compared to ET-7017. ET-7019/PET-7019 measures voltage from +/- 15 mV ~ +/- 10 V. Its input type also includes current and thermocouple. An intuitive design is kept in this model; choosing to measure current or voltage is simply by a jumper. An external resistor is no longer needed. Eight of its inputs channels can individually be configured with different kinds of analog input. What's more, ET-7019/PET-7019 also got open thermocouple detection and many protection mechanisms. The 4 digital output can be set alarm output with short-circuit protection and overload protection.

Applications

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

System Specifications

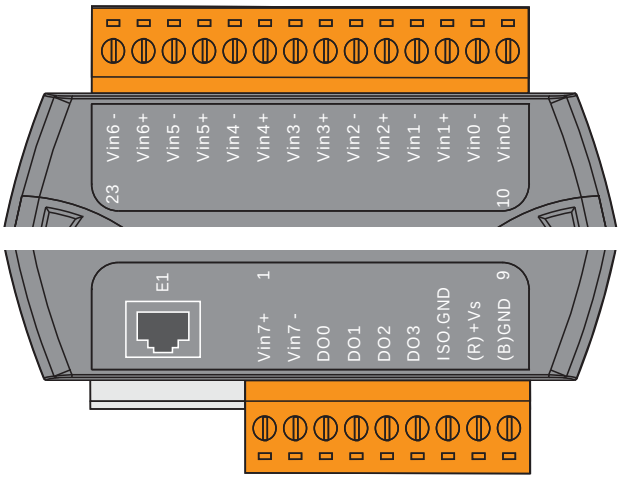
Models	ET-7019	PET-7019
Software		
Built-In Web Server	Yes	
Web HMI	Yes	
I/O Pair Connection	Yes	
Communication		
Ethernet Port	10/100 Base-TX with Auto MDI/MDI-X	
Protocol	Modbus/TCP, Modbus/UDP	
Security	ID, Password and IP Filter	
Dual Watchdog	Yes, Module (0.8 second), Communication (Programmable)	
LED Indicators		
L1 (System Running)	Yes	
L2 (Ethernet Link/Act)	Yes	
L3 (Ethernet 10/100 M Speed)	Yes	
PoE Power	-	Yes
2 Way Isolaiton		
Ethernet	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	
Power Requirements		
Reverse Polarity Protectionn	Yes	
Powered from terminal block	Yes, 10 ~ 30 V_{DC}	Yes, 12 ~ 48 V_{DC}
Powered from PoE	-	Yes, IEEE 802.3af, Class1
Consumption	2.4 W	3.4 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

Analog Input		
Input Channels		8 (Differential)
Sensor Type		+/-15 mV, +/-50 mV, +/-100 mV, +/-150 mV, +/-500 mV, +/-1 V, +/-5 V, +/-10 V
		Thermocouple (J, K, T, E, R, S, B, N, C, L, M, LDIN43710)
Individual Channel Configuration		Yes
Resolution		16-bit
Sampling Rate		10 samples/Sec. total
Accuracy		+/-0.1 % or better
Zero Drift		+/-10 μV/°C
Span Drift		+/-25 ppm/°C
Overvoltage Protection		240 V_{rms}
Input Impedance	Voltage	>1 MΩ
	Current	125 Ω
Common Mode Rejection		86 dB Min.
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

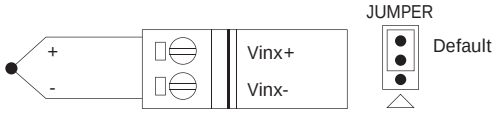
Note: We recommend to choose ET-7018Z for accurate thermocouple measurement.

Pin Assignment

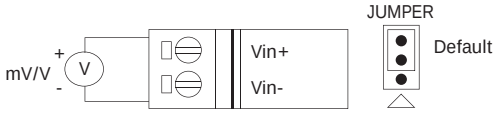


Wire Connection

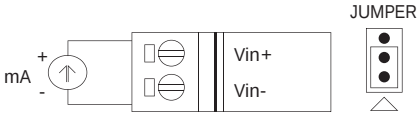
Thermocouple Input

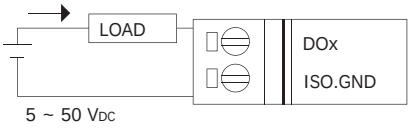
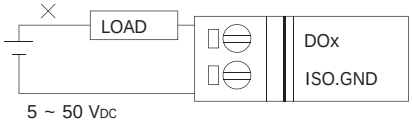


Voltage Input



Current Input



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

Ordering Information

ET-7019 CR	8-channel Analog Input with High Voltage Protection and 4-channel Isolated Digital Output Module (RoHS)
PET-7019 CR	8-channel Analog Input with High Voltage Protection 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)

ET-7026
Regular Ethernet Version

PET-7026
PoE Version

Multifunction 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
  - AI: 6 Channels
  - AO: 2 Channels
  - DI/Counter: 2 Channels
  - DO: 2 Channels

Introduction

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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.

The ET-7026/PET-7026 is a multi-function module, there are 6-channel analog inputs, 2-channel analog output, 2-channel digital inputs and 2-channel digital outputs module. It provides programmable input range on all analog inputs (+/-500 mV, +/-1 V, +/-5 V, +/-10 V, +/-20 mA, 0~20 mA and 4~20 mA), analaog outputs are 12 bit with +/-5 V, +/-10 V, 0~20 mA and 4~20 mA and digital output can be set alarm output. Each analog input is allowed to configure an individual range and has 240 V_{rms} high overvoltage protection. Jumper selectable for voltage or current of inputs/outputs

Applications

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

System Specifications

Models	ET-7026	PET-7026
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 Isolaiton		
Ethernet	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	
Power Requirements		
Reverse Polarity Protectionn	Yes	
Powered from terminal block	Yes, 10 ~ 30 V_{DC}	Yes, 12 ~ 48 V_{DC}
Powered from PoE	-	Yes, IEEE 802.3af, Class1
Consumption	3.1 W	4.2 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	

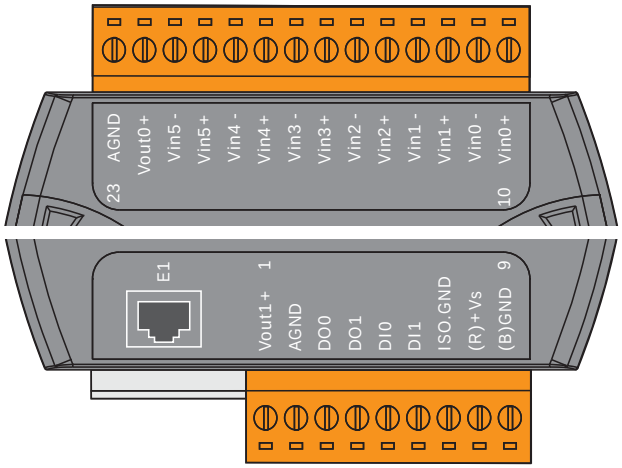
I/O Specifications

Analog Input		
Input Channels		6 (Differential)
Input Type		+/- 500 mV, +/- 1V, +/- 5 V, +/-10 V + 0 mA ~ + 20 mA, +/- 20 mA, 4 ~ 20 mA (jumper selectable)
Individual Channel Configuration		Yes
Resolution	Normal Mode	16-bit
	Fast Mode	12-bit
Sampling Rate	Normal Mode	10 Samples/Sec. (Total)
	Fast Mode	60 Samples/Sec. (Total)
Accuracy	Normal Mode	+/-0.1%
	Fast Mode	+/-0.5% or better
Zero Drift		+/-20 uV/°C
Span Drift		+/-25 ppm/°C
Overvoltage Protection		240 V_{rms}
Input Impedance		2 MΩ
Common Mode Rejection		86 dB Min.
Normal Mode Rejection		100 dB
Analog Output		
Output Channels		2
Output Type		+ 0 V_{DC} ~ + 5 V_{DC}, +/- 5 V_{DC}, + 0 V_{DC} ~ + 10 V_{DC}, +/- 10 V_{DC},+ 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		500 Ω
Open Wire Detection		Yes, for 4 ~ 20 mA only
Power On Value		Yes, Programmable
Safe Value		Yes, Programmable
Digital Input/Counter		
Input Channels		2
Dry Contact (Source)	On Voltage Level	Close to GND
	Off Voltage Level	Open
	Effective Distance for Dry Contact	500M max.
Wet contact (Sink/Source)	On Voltage Level	+ 1 V_{DC} max.
	Off Voltage Level	+ 3.5 V_{DC} ~ + 30 V_{DC}
Counters	Channels	2
	Max. Counts	4,294,967,285 (32-bit)
	Max. Input Frequency	100 Hz
	Min. Pulse Width	5 ms
Overvoltage Protection		30 V_{DC}
Digital Output		
Output Channels		2
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

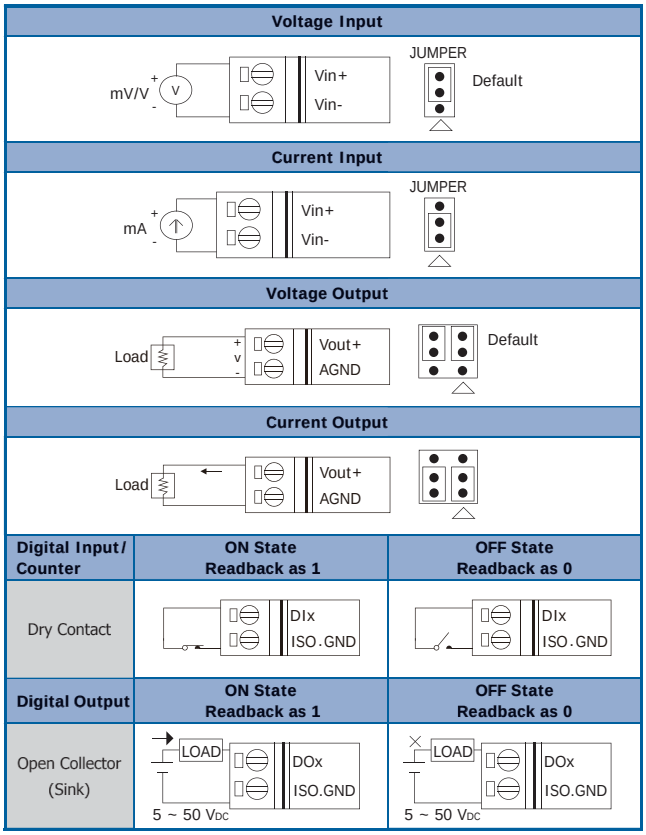
Ordering Information

ET-7026 CR	Multifunction Module (RoHS)
PET-7026 CR	Multifunction PoE Module (RoHS)

Pin Assignment



Wire Connection



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)

ET-7042
Regular Ethernet Version

PET-7042
PoE Version

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
  - DO: 16 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.

Applications

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

System Specifications

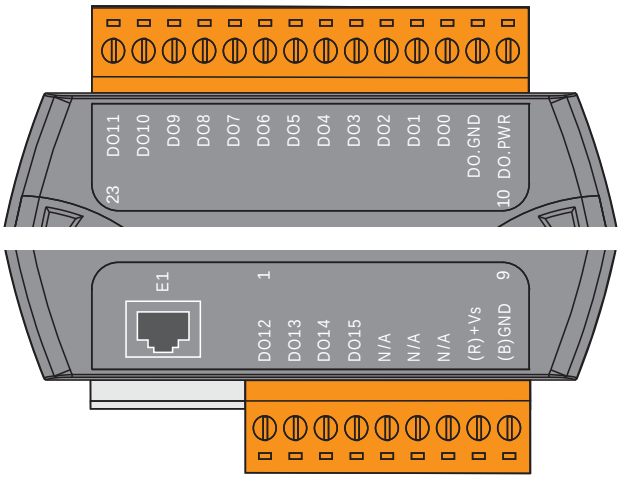
Models	ET-7042	PET-7042
Software		
Built-In Web Server	Yes	
Web HMI	Yes	
I/O Pair Connection	Yes	
Communication		
Ethernet Port	10/100 Base-TX with Auto MDI/MDI-X	
Protocol	Modbus/TCP, Modbus/UDP	
Security	ID, Password and IP Filter	
Dual Watchdog	Yes, Module (0.8 second), Communication (Programmable)	
LED Indicators		
L1 (System Running)	Yes	
L2 (Ethernet Link/Act)	Yes	
L3 (Ethernet 10/100 M Speed)	Yes	
PoE Power	-	Yes
2 Way Isolaiton		
Ethernet	1500 V_{DC}	-
I/O	3750 V_{rms}	3750 V_{rms}
EMS Protection		
ESD (IEC 61000-4-2)	4 kV Contact for each terminal	
EFT (IEC 61000-4-4)	+/-2 kV for Power	
Power Requirements		
Reverse Polarity Protectionn	Yes	
Powered from terminal block	Yes, 10 ~ 30 V_{DC}	Yes, 12 ~ 48 V_{DC}
Powered from PoE	-	Yes, IEEE 802.3af, Class1
Consumption	2.7 W	4.3 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

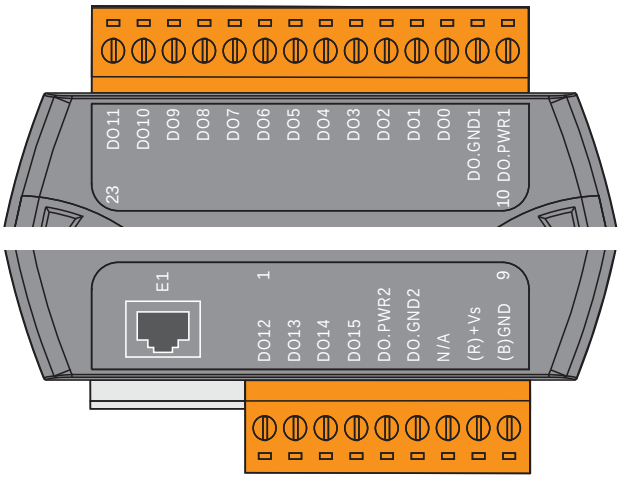
Models	ET-7042	PET-7042
Digital Output		
Output Channels	16	
Type	Isolated Open Collector (Sink)	
Max. Load Current	100 mA/channel at 25 °C Direct drive power relay module	
Load Voltage	+5 VDC ~ +30 VDC	
Overvoltage Protection	-	60 VDC
Overload Protection	-	1.3 A
Short-circuit Protection	-	Yes
Power On Value	Yes, Programmable	
Safe Value	Yes, Programmable	

Pin Assignment

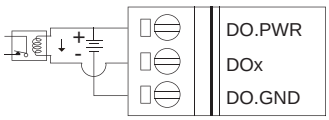
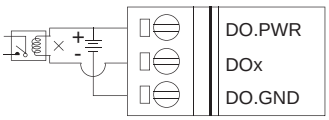
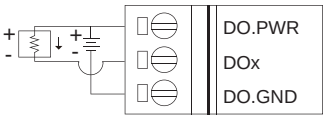
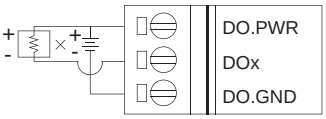
ET-7042



PET-7042



Wire Connection

Output Type	ON State Readback as 1	OFF State Readback as 0
Drive Relay		
Resistance Load		

Ordering Information

ET-7042 CR	16-channel Isolated Sink Type Open Collector Digital Output Module (RoHS)
PET-7042 CR	16-channel Isolated Sink Type Open Collector Digital Output PoE Module (RoHS)

Accessories

NS-205 CR	Unmanaged 5-port Industrial Ethernet Switch; requires 24 VDC Input (RoHS)
NS-205PSE CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; requires 48 VDC Input (RoHS)
NS-205PSE-24V CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; requires 24 VDC 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)

ET-7044
Regular Ethernet Version

PET-7044
PoE Version

DI 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
  - DI/Counter: 8 Channels
  - DO: 8 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.

Applications

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

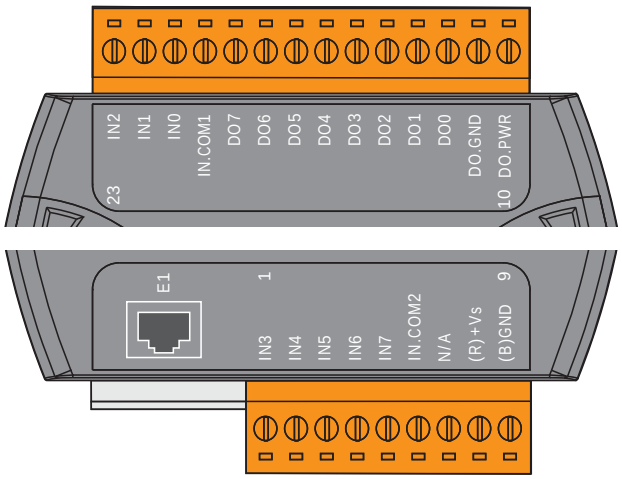
System Specifications

Models	ET-7044	PET-7044
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 Isolaiton		
Ethernet	1500 V_{DC}	-
I/O	3750 V_{rms}	3750 V_{rms}
EMS Protection		
ESD (IEC 61000-4-2)	4 kV Contact for each terminal	
EFT (IEC 61000-4-4)	+/-2 kV for Power	
Power Requirements		
Reverse Polarity Protectionn	Yes	
Powered from terminal block	Yes, 10 ~ 30 V_{DC}	Yes, 12 ~ 48 V_{DC}
Powered from PoE	-	Yes, IEEE 802.3af, Class1
Consumption	2.4 W	4.3 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	

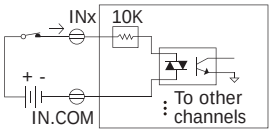
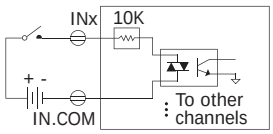
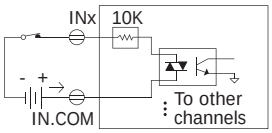
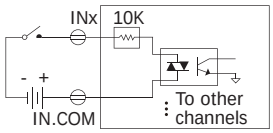
I/O Specifications

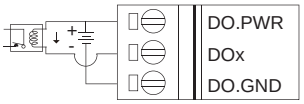
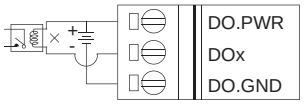
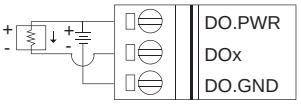
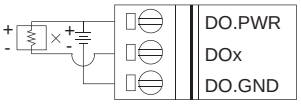
Digital Input/Counter		
Input Channels		8
Type		Wet Contact (Sink, Source)
On Voltage Level		+10 V_{DC} ~ +50 V_{DC}
Off Voltage Level		+4 V_{DC} max.
Input Impedance		10 kΩ
Counters	Max. Count	4,294,967,285 (32 bits)
	Max. Input Frequency	500 Hz
	Min. Pulse Width	1 ms
Overvoltage Protection		+70 V_{DC}
Digital Output		
Output Channels		8
Type		Isolated Open Collector (Sink)
Max. Load Current		300 mA/channel at 25 °C Direct drive power relay module
Load Voltage		+10 V_{DC} ~ +40 V_{DC}
Overvoltage Protection		60 V_{DC}
Overload Protection		1.1 A
Short-circuit Protection		Yes
Power On Value		Yes, Programmable
Safe Value		Yes, Programmable

Pin Assignment



Wire Connection

Digital Input/Counter	Readback as 1	Readback as 0
Sink	+10 ~ +50 V_{DC}	OPEN or <4 V_{DC}
		
Source	+10 ~ +50 V_{DC}	OPEN or <4 V_{DC}
		

Output Type	ON State Readback as 1	OFF State Readback as 0
Drive Relay		
Resistance Load		

Ordering Information

ET-7044 CR	8-channel DI and 8-channel DO with 32-bit Counters Module (RoHS)
PET-7044 CR	8-channel DI and 8-channel DO with 32-bit Counters 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)

ET-7050
Regular Ethernet Version

PET-7050
PoE Version

DI 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
  - DI/Counter: 12 Channels
  - DO: 6 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.

Applications

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

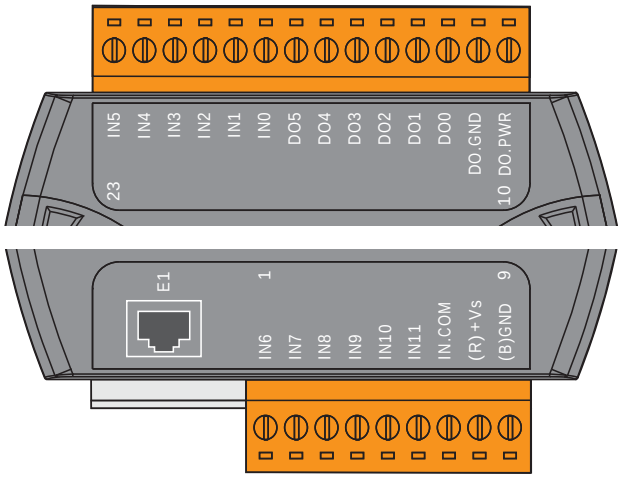
System Specifications

Models	ET-7050	PET-7050
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 Isolaiton		
Ethernet	1500 V_{DC}	-
I/O	3750 V_{rms}	3750 V_{rms}
EMS Protection		
ESD (IEC 61000-4-2)	4 kV Contact for each terminal	
EFT (IEC 61000-4-4)	+/-2 kV for Power	
Power Requirements		
Reverse Polarity Protectionn	Yes	
Powered from terminal block	Yes, 10 ~ 30 V_{DC}	Yes, 12 ~ 48 V_{DC}
Powered from PoE	-	Yes, IEEE 802.3af, Class1
Consumption	2.4 W	4.3 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	

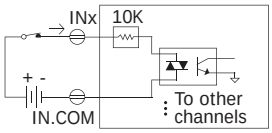
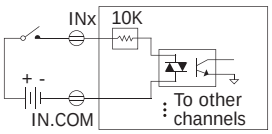
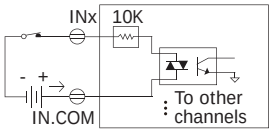
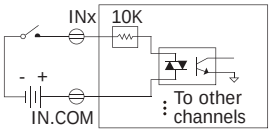
I/O Specifications

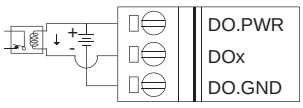
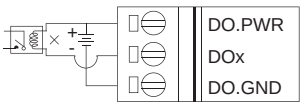
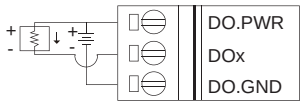
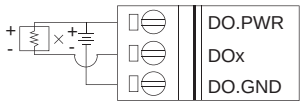
Models		ET-7050	PET-7050
Digital Input/Counter			
Input Channels		12	
Type		Wet Contact (Sink, Source)	
On Voltage Level		+10 VDC ~ +50 VDC	
Off Voltage Level		+4 VDC Max.	
Input Impedance		10 kΩ	
Counters	Max. Count	4,294,967,285 (32 bits)	
	Max. Input Frequency	500 Hz	
	Min. Pulse Width	1 ms	
Overvoltage Protection		+70 VDC	
Digital Output			
Output Channels		6	
Type		Isolated Open Collector (Sink)	
Max. Load Current		100 mA/channel at 25 °C Direct drive power relay module	
Load Voltage		+5 VDC ~ +30 VDC	
Overvoltage Protection		-	60 VDC
Overload Protection		-	1.3 A
Short-circuit Protection		-	Yes
Power On Value		Yes, Programmable	
Safe Value		Yes, Programmable	

Pin Assignment



Wire Connection

Digital Input/Counter	Readback as 1	Readback as 0
Sink	+10 ~ +50 VDC	OPEN or <4 VDC
		
Source	+10 ~ +50 VDC	OPEN or <4 VDC
		

Output Type	ON State Readback as 1	OFF State Readback as 0
Drive Relay		
Resistance Load		

Ordering Information

ET-7050 CR	12-channel DI and 6-channel DO with 32-bit Counters (RoHS)
PET-7050 CR	12-channel DI and 6-channel DO with 32-bit Counters PoE Module (RoHS)

Accessories

NS-205 CR	Unmanaged 5-port Industrial Ethernet Switch; requires 24 VDC Input (RoHS)
NS-205PSE CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; requires 48 VDC Input (RoHS)
NS-205PSE-24V CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; requires 24 VDC 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)

ET-7051
Regular Ethernet Version

PET-7051
PoE Version

DI 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
  - DI/Counter: 16 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.

Applications

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

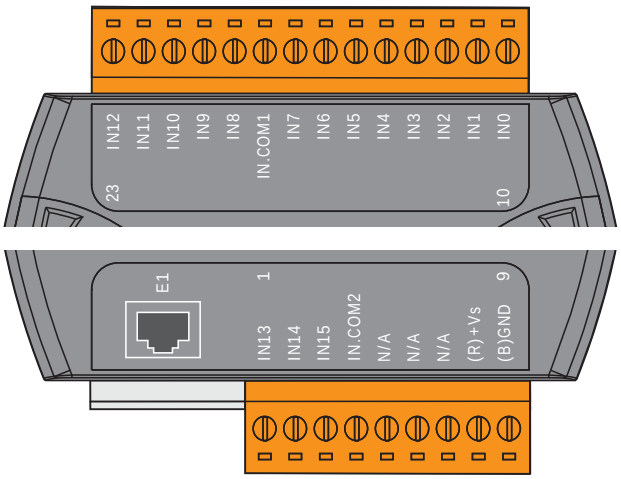
System Specifications

Models	ET-7051	PET-7051
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 Isolaiton		
Ethernet	1500 V_{DC}	-
I/O	3750 V_{rms}	3750 V_{rms}
EMS Protection		
ESD (IEC 61000-4-2)	4 kV Contact for each terminal	
EFT (IEC 61000-4-4)	+/-2 kV for Power	
Power Requirements		
Reverse Polarity Protectionn	Yes	
Powered from terminal block	Yes, 10 ~ 30 V_{DC}	Yes, 12 ~ 48 V_{DC}
Powered from PoE	-	Yes, IEEE 802.3af, Class1
Consumption	2.2 W	3.9 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	

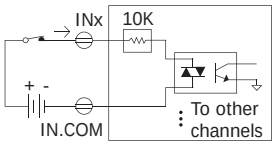
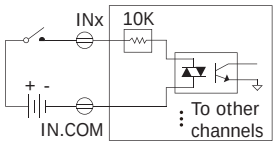
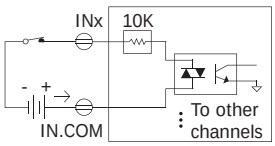
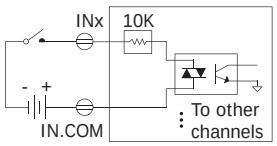
I/O Specifications

Digital Input/Counter		
Input Channels		16
Type		Wet Contact (Sink, Source)
On Voltage Level		+10 V_{DC} ~ +50 V_{DC}
Off Voltage Level		+4 V_{DC} max.
Input Impedance		10 kΩ
Counters	Max. Count	4,294,967,285 (32 bits)
	Max. Input Frequency	500 Hz
	Min. Pulse Width	1 ms
Overvoltage Protection		+70 V_{DC}

Pin Assignment



Wire Connection

Digital Input/Counter	Readback as 1	Readback as 0
Sink	+10 ~ +50 V_{DC}	OPEN or <4 V_{DC}
		
Source	+10 ~ +50 V_{DC}	OPEN or <4 V_{DC}
		

Ordering Information

ET-7051 CR	16-channel Isolated Digital Input Module with 32-bit Counters Module (RoHS)
PET-7051 CR	16-channel Isolated Digital Input Module with 32-bit Counters PoE Module (RoHS)

Accessories

NS-205 CR	Unmanaged 5-port Industrial Ethernet Switch; reguires 24 V_{DC} Input (RoHS)
NS-205PSE CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; reguires 48 V_{DC} Input (RoHS)
NS-205PSE-24V CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; reguires 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)

ET-7052
Regular Ethernet Version

PET-7052
PoE Version

DI 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
  - DI/Counter: 8 Channels
  - DO: 8 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.

Applications

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

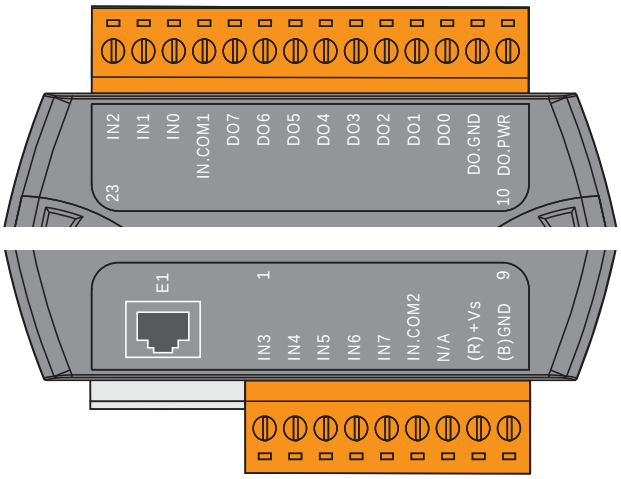
System Specifications

Models	ET-7052	PET-7052
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 Isolaiton		
Ethernet	1500 V_{DC}	-
I/O	3750 V_{rms}	3750 V_{rms}
EMS Protection		
ESD (IEC 61000-4-2)	4 kV Contact for each terminal	
EFT (IEC 61000-4-4)	+/-2 kV for Power	
Power Requirements		
Reverse Polarity Protectionn	Yes	
Powered from terminal block	Yes, 10 ~ 30 V_{DC}	Yes, 12 ~ 48 V_{DC}
Powered from PoE	-	Yes, IEEE 802.3af, Class1
Consumption	2.4 W	4.3 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	

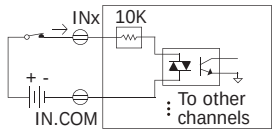
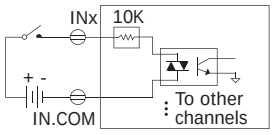
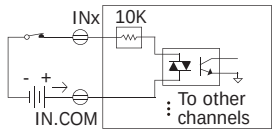
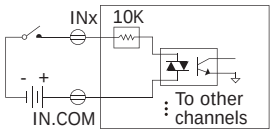
I/O Specifications

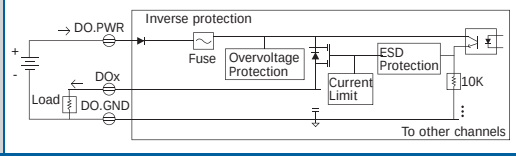
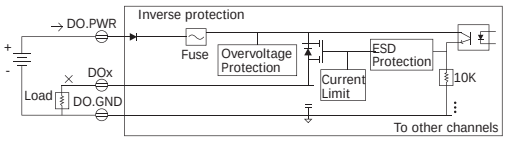
Digital Input/Counter		
Input Channels		8
Type		Wet Contact (Sink, Source)
On Voltage Level		+10 VDC ~ +50 VDC
Off Voltage Level		+4 VDC max.
Input Impedance		10 kΩ
Counters	Max. Count	4,294,967,285 (32 bits)
	Max. Input Frequency	500 Hz
	Min. Pulse Width	1 ms
Overvoltage Protection		+70 VDC
Digital Output		
Output Channels		8
Type		Open Collector (Source)
Max. Load Current		650 mA/channel at 25 °C
Load Voltage		+10 VDC ~ +40 VDC
Overvoltage Protection		47 VDC
Overload Protection		-
Short-circuit Protection		Yes
Power On Value		Yes, Programmable
Safe Value		Yes, Programmable

Pin Assignment



Wire Connection

Digital Input/Counter	Readback as 1	Readback as 0
Sink	+10 ~ +50 VDC	OPEN or <4 VDC
		
Source	+10 ~ +50 VDC	OPEN or <4 VDC
		

Digital Output	ON State Readback as 1	OFF State Readback as 0
Source		

Ordering Information

ET-7052 CR	8-channel DI and 8-channel DO with 32-bit Counters Module (RoHS)
PET-7052 CR	8-channel DI and 8-channel DO with 32-bit Counters Module PoE Module (RoHS)

Accessories

NS-205 CR	Unmanaged 5-port Industrial Ethernet Switch; requires 24 VDC Input (RoHS)
NS-205PSE CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; requires 48 VDC Input (RoHS)
NS-205PSE-24V CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; requires 24 VDC 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)

ET-7053 — Regular Ethernet Version

PET-7053 — PoE Version

DI 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
  - DI/Counter: 16 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.

Applications

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

System Specifications

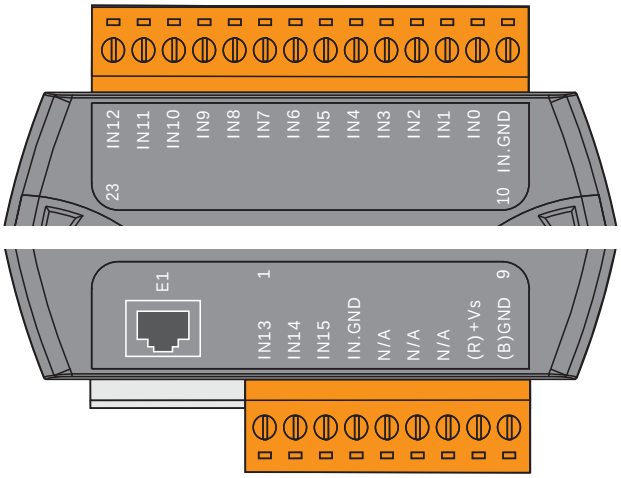
Models	ET-7053	PET-7053
Software		
Built-In Web Server	Yes	
Web HMI	Yes	
I/O Pair Connection	Yes	
Communication		
Ethernet Port	10/100 Base-TX with Auto MDI/MDI-X	
Protocol	Modbus/TCP, Modbus/UDP	
Security	ID, Password and IP Filter	
Dual Watchdog	Yes, Module (0.8 second), Communication (Programmable)	
LED Indicators		
L1 (System Running)	Yes	
L2 (Ethernet Link/Act)	Yes	
L3 (Ethernet 10/100 M Speed)	Yes	
PoE Power	-	Yes
2 Way Isolaiton		
Ethernet	1500 V_{DC}	-
I/O	3750 V_{rms}	3750 V_{rms}
EMS Protection		
ESD (IEC 61000-4-2)	4 kV Contact for each terminal	
EFT (IEC 61000-4-4)	+/-2 kV for Power	
Power Requirements		
Reverse Polarity Protectionn	Yes	
Powered from terminal block	Yes, 10 ~ 30 V_{DC}	Yes, 12 ~ 48 V_{DC}
Powered from PoE	-	Yes, IEEE 802.3af, Class1
Consumption	2.4 W	4.3 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

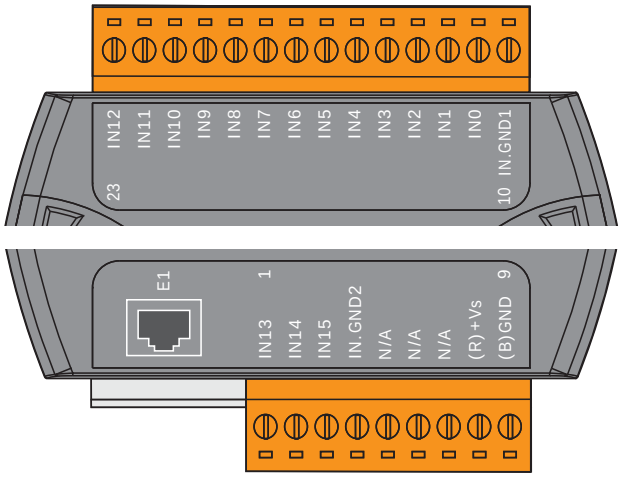
Digital Input/Counter		
Input Channels		16
Type		Dry Contact (Source)
On Voltage Level		Open
Off Voltage Level		Close to GND
Counters	Max. Count	4,294,967,285 (32 bits)
	Max. Input Frequency	500 Hz
	Min. Pulse Width	1 ms
Overvoltage Protection		-
Effective Distance		500 M max.

Pin Assignment

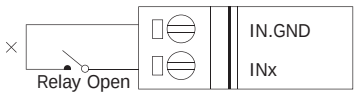
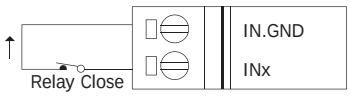
ET-7053



PET-7053



Wire Connection

Digital Input/Counter	ON State Readback as 1	OFF State Readback as 0
Dry Contact		

Ordering Information

ET-7053 CR	16-channel Isolated Digital Input Module with 32-bit Counters (RoHS)
PET-7053 CR	16-channel Isolated Digital Input Module with 32-bit Counters 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)

ET-7060
Regular Ethernet Version

PET-7060
PoE Version

Power Relay Output and DI 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
  - DI/Counter: 6 Channels
  - Power Relay: 6 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.

Applications

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

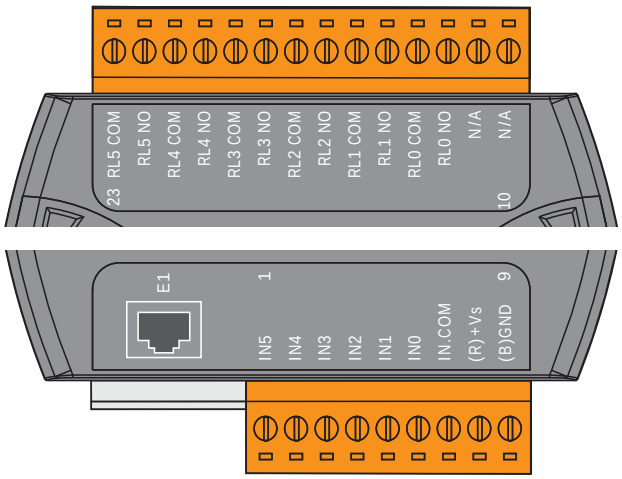
System Specifications

Models	ET-7060	PET-7060
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 Isolaiton		
Ethernet	1500 V_{DC}	-
I/O	3000 V_{rms}	3000 V_{rms}
EMS Protection		
ESD (IEC 61000-4-2)	4 kV Contact for each terminal	
EFT (IEC 61000-4-4)	+/-2 kV for Power	
Power Requirements		
Reverse Polarity Protectionn	Yes	
Powered from terminal block	Yes, 10 ~ 30 V_{DC}	Yes, 12 ~ 48 V_{DC}
Powered from PoE	-	Yes, IEEE 802.3af, Class1
Consumption	2.9 W	4.8 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	

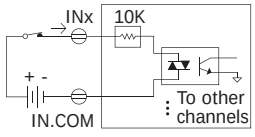
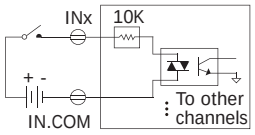
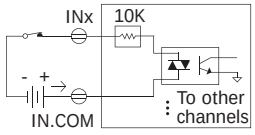
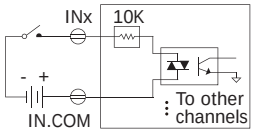
I/O Specifications

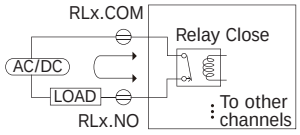
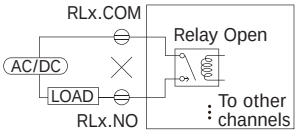
Digital Input/Counter		
Input Channels		6
Type		Wet Contact (Sink, Source)
On Voltage Level		+10 VDC ~ +50 VDC
Off Voltage Level		+4 VDC max.
Input Impedance		10 kΩ
Counters	Max. Count	4,294,967,285 (32 bits)
	Max. Input Frequency	500 Hz
	Min. Pulse Width	1 ms
Overvoltage Protection		+70 VDC
Power Relay		
Output Channels		6
Type		Power Relay, Form A (SPST N.O.)
Operating Voltage Range		250 VAC/30 VDC
Max. Load Current		5.0A/channel at 25 °C
Operate Time		6 ms (Typical)
Release Time		3 ms (Typical)
Electrical Life (Resistive Load)	VDE	5A 250 VAC 30,000 ops (10 ops/minute) at 75 °C
		5A 30 VDC 70,000 ops (10 ops/minute) at 75 °C
	UL	5A 250 VAC/30 VDC 6,000 ops.
		3A 250 VAC/30 VDC 100,000 ops.
Mechanical Life		20,000,000 ops. at no load (300 ops./minute)
Power On Value		Yes, Programmable
Safe Value		Yes, Programmable

Pin Assignment



Wire Connection

Digital Input/Counter	Readback as 1	Readback as 0
Sink	+10 ~ +50 VDC	OPEN or <4 VDC
		
Source	+10 ~ +50 VDC	OPEN or <4 VDC
		

Power Relay	ON State Readback as 1	OFF State Readback as 0
Relay Output		

Ordering Information

ET-7060 CR	6-channel Power Relay Output and 6-channel Isolation Digital Input Module with 32-bit Counters (RoHS)
PET-7060 CR	6-channel Power Relay Output and 6-channel Isolation Digital Input Module with 32-bit Counters PoE Module (RoHS)

Accessories

NS-205 CR	Unmanaged 5-port Industrial Ethernet Switch; requires 24 VDC Input (RoHS)
NS-205PSE CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; requires 48 VDC Input (RoHS)
NS-205PSE-24V CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; requires 24 VDC 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)

ET-7065
Regular Ethernet Version

PET-7065
PoE Version

PhotoMOS Relay Output and DI 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
  - DI/Counter: 6 Channels
  - PhotoMOS Relay: 6 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.

Applications

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

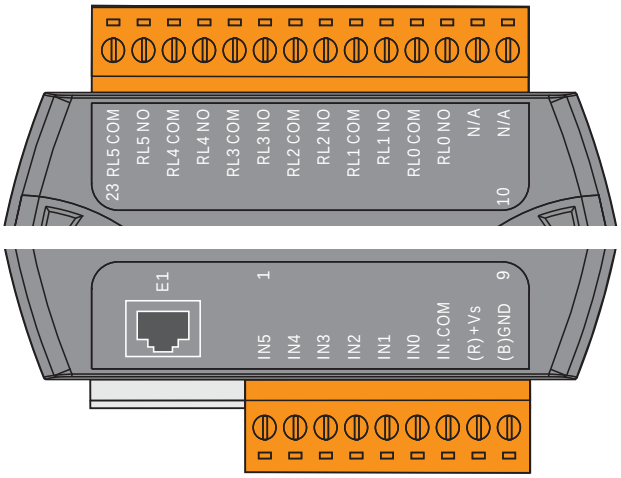
System Specifications

Models	ET-7065	PET-7065
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 Isolaiton		
Ethernet	1500 V_{DC}	-
I/O	3000 V_{rms}	3000 V_{rms}
EMS Protection		
ESD (IEC 61000-4-2)	4 kV Contact for each terminal	
EFT (IEC 61000-4-4)	+/-2 kV for Power	
Power Requirements		
Reverse Polarity Protectionn	Yes	
Powered from terminal block	Yes, 10 ~ 30 V_{DC}	Yes, 12 ~ 48 V_{DC}
Powered from PoE	-	Yes, IEEE 802.3af, Class1
Consumption	2.9 W	4.8 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	

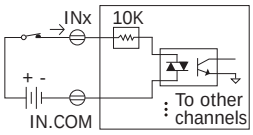
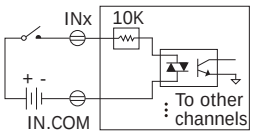
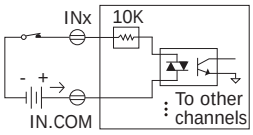
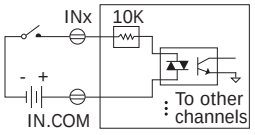
I/O Specifications

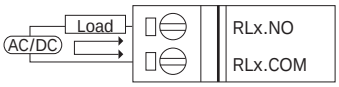
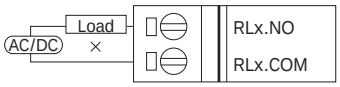
Digital Input/Counter		
Input Channels		6
Type		Wet Contact (Sink, Source)
On Voltage Level		+10 VDC ~ +50 VDC
Off Voltage Level		+4 VDC max.
Input Impedance		10 kΩ
Counters	Max. Count	4,294,967,285 (32 bits)
	Max. Input Frequency	500 Hz
	Min. Pulse Width	1 ms
Overvoltage Protection		+70 VDC
PhotoMOS Relay		
Output Channels		6
Type		PhotoMOS Relay, Form A
Load Voltage		60 VDC/VAC
Max. Load Current		60V/1.0A (Operating Temperature -25 °C ~ +40 °C)
		60V/0.8A (Operating Temperature +40 °C ~ +60 °C)
		60V/0.7A (Operating Temperature +60 °C ~ +75 °C)
Operate Time		1.3 ms (Typical)
Release Time		0.1 ms (Typical)
Power On Value		Yes, Programmable
Safe Value		Yes, Programmable

Pin Assignment



Wire Connection

Digital Input/Counter	Readback as 1	Readback as 0
Sink	+10 ~ +50 VDC	OPEN or <4 VDC
		
Source	+10 ~ +50 VDC	OPEN or <4 VDC
		

PhotoMOS Relay	ON State Readback as 1	OFF State Readback as 0
Form A Relay Contact		

Ordering Information

ET-7065 CR	6-channel PhotoMOS Relay Output and 6-channel Isolated Digital Input Module with 32-bit Counters (RoHS)
PET-7065 CR	6-channel PhotoMOS Relay Output and 6-channel Isolated Digital Input Module with 32-bit Counters PoE Module (RoHS)

Accessories

NS-205 CR	Unmanaged 5-port Industrial Ethernet Switch; requires 24 VDC Input (RoHS)
NS-205PSE CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; requires 48 VDC Input (RoHS)
NS-205PSE-24V CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; requires 24 VDC 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)

ET-7066 — Regular Ethernet Version

PET-7066 — PoE Version

PhotoMOS Relay Output 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
  - PhotoMOS Relay: 8 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.

Applications

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

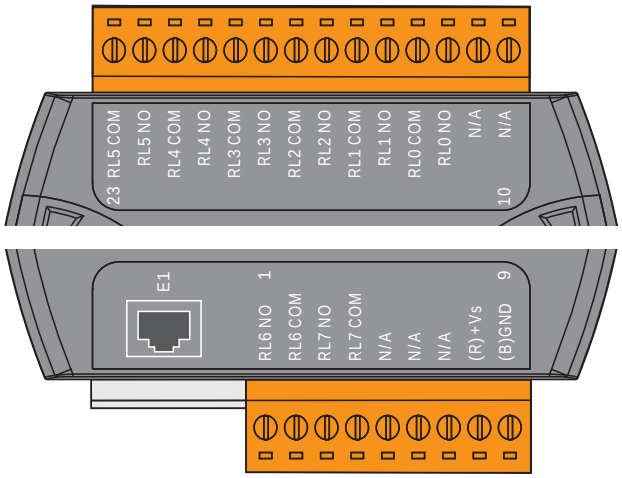
System Specifications

Models	ET-7066	PET-7066
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 Isolaiton		
Ethernet	1500 V_{DC}	-
I/O	3000 V_{rms}	3000 V_{rms}
EMS Protection		
ESD (IEC 61000-4-2)	4 kV Contact for each terminal	
EFT (IEC 61000-4-4)	+/-2 kV for Power	
Power Requirements		
Reverse Polarity Protectionn	Yes	
Powered from terminal block	Yes, 10 ~ 30 V_{DC}	Yes, 12 ~ 48 V_{DC}
Powered from PoE	-	Yes, IEEE 802.3af, Class1
Consumption	2.9 W	5.3 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	

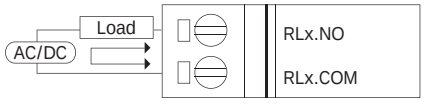
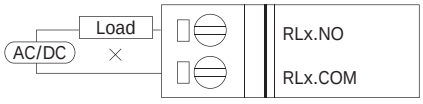
I/O Specifications

PhotoMOS Relay	
Output Channels	8
Type	PhotoMOS Relay, Form A
Load Voltage	60 VDC/VAC
Load Current	60V/1.0A (Operating Temperature -25 °C ~ +40 °C)
	60V/0.8A (Operating Temperature +40 °C ~ +60 °C)
	60V/0.7A (Operating Temperature +60 °C ~ +75 °C)
Operate Time	1.3 ms (Typical)
Release Time	0.1 ms (Typical)
Power On Value	Yes, Programmable
Safe Value	Yes, Programmable

Pin Assignment



Wire Connection

PhotoMOS Relay	ON State Readback as 1	OFF State Readback as 0
Form A Relay Contact		

Ordering Information

ET-7066 CR	8-channel PhotoMOS Relay Output Module (RoHS)
PET-7066 CR	8-channel PhotoMOS Relay Output Module PoE Module (RoHS)

Accessories

NS-205 CR	Unmanaged 5-port Industrial Ethernet Switch; reguires 24 VDC Input (RoHS)
NS-205PSE CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; reguires 48 VDC Input (RoHS)
NS-205PSE-24V CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; reguires 24 VDC 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)

ET-7067 — Regular Ethernet Version

PET-7067 — PoE Version

Power Relay Output 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
  - Power Relay: 8 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.

Applications

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

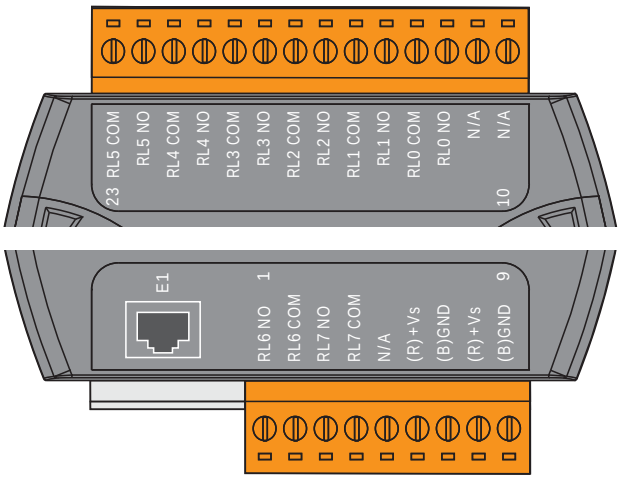
System Specifications

Models	ET-7067	PET-7067
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 Isolaiton		
Ethernet	1500 V_{DC}	-
I/O	3000 V_{rms}	3000 V_{rms}
EMS Protection		
ESD (IEC 61000-4-2)	4 kV Contact for each terminal	
EFT (IEC 61000-4-4)	+/-2 kV for Power	
Power Requirements		
Reverse Polarity Protectionn	Yes	
Powered from terminal block	Yes, 10 ~ 30 V_{DC}	Yes, 12 ~ 48 V_{DC}
Powered from PoE	-	Yes, IEEE 802.3af, Class1
Consumption	3.2 W	5.3 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	

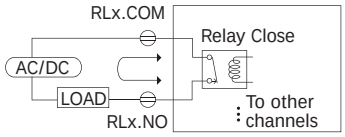
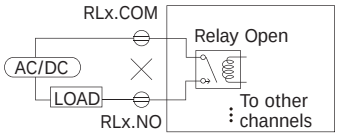
I/O Specifications

Power Relay		
Output Channels		8
Type		Power Relay, Form A (SPST N.O.)
Operating Voltage Range		250 VAC/30 VDC
Max. Load Current		5.0A/channel at 25 °C
Operate Time		6 ms (Typical)
Release Time		3 ms (Typical)
Electrical Life (Resistive Load)	VDE	5A 250 VAC 30,000 ops (10 ops/minute) at 75 °C
		5A 30 VDC 70,000 ops (10 ops/minute) at 75 °C
	UL	5A 250 VAC/30 VDC 6,000 ops.
		3A 250 VAC/30 VDC 100,000 ops.
Mechanical Life		20,000,000 ops. at no load (300 ops./minute)
Power On Value		Yes, Programmable
Safe Value		Yes, Programmable

Pin Assignment



Wire Connection

Power Relay	ON State Readback as 1	OFF State Readback as 0
Relay Output		

Ordering Information

ET-7067 CR	8-channel Power Relay Output Module (RoHS)
PET-7067 CR	8-channel Power Relay Output Module PoE Module (RoHS)

Accessories

NS-205 CR	Unmanaged 5-port Industrial Ethernet Switch; reguires 24 VDC Input (RoHS)
NS-205PSE CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; reguires 48 VDC Input (RoHS)
NS-205PSE-24V CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; reguires 24 VDC 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)

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