



ET-2255
PET-2255
ET-2255-32
PET-2255-32

Ethernet I/O Module with 8/16-ch DI, 8/16-ch DO

Features

- Web Server for Configuration
- Support Modbus TCP/UDP, MQTT, and SNMP V2c Protocols
- 2-port Ethernet Switch (LAN bypass) for Daisy-chain Wiring
- Supports Dual-watchdog
- I/O Pair Connection (Push and Pull)
- Built-in I/O
  - ☐ (P)ET-2255: 8-ch DI (Wet/Dry), 8-ch DO (Sink)
  - ☐ (P)ET-2255-32: 16-ch DI (Wet/Dry), 16-ch DO (Sink)
- LED Display to Indicate the I/O Status

Introduction

(P)ET-2255/(P)ET-2255-32 is a 8 or 16-channel DI (Wet/Dry Contact) and 8 or 16-channel DO (Sink-type) module. Each input channel can function as a 32-bit counter, while each output channel can be configured with a Power-on value and safe value, ensuring the module's safe operation in applications with hazardous voltages. The module includes a built-in 2-port Ethernet switch, facilitating a daisy-chain topology. This feature offers flexibility in device configuration, simplifies installation, and reduces infrastructure costs. The module Features optical-isolated 3000 V_{rms} transient overvoltage protection and does not support channel-to-channel Isolation. Additionally, it provides EMS (EFT/ESD/Surge) protection and 3000 V_{DC} I/O Isolation to enhance noise protection capabilities in industrial environments.

System Specifications

Model	ET-2255	ET-2255-32	PET-2255	PET-2255-32
Software				
Built-in Web Server	Yes			
CPU Module				
CPU	32-bit ARM			
Watchdog Timer	Module, Communication (Programmable)			
Isolation				
2-way Isolation	Ethernet: 1500 V_{DC}, I/O: 3000 V_{DC}		I/O: 3000 V_{DC}	
EMS Protection				
EFT (IEC 61000-4-4)	±4 kV for Power Line			
ESD (IEC 61000-4-2)	(P)ET-2255: ±8 kV Contact for Each Terminal, ±16 kV Air for Random Point (P)ET-2255-32: ±4 kV Contact for Each Terminal, ±8 kV Air for Random Point			
Surge (IEC 61000-4-5)	±2 kV for Power Line			
LED Indicators				
Status	Run, Ethernet, I/O		Run, Ethernet, I/O, PoE	
Ethernet				
Ports	2 x RJ-45, 10/100 Base-Tx, Switch Ports			
PoE	-		Yes	
LAN bypass	Yes			
Access Control	Password and IP Filter			
Protocol	Modbus TCP, Modbus UDP, MQTT, SNMP V2c			
Power				
Reverse Polarity Protection	Yes			
Consumption	3.5 W (max.)	4.7 W (max.)	4.3 W (max.)	4.8 W (max.)
Powered from PoE	-		IEEE 802.3af, Class2	
Powered from Terminal Block	+10 ~ +30 V_{DC}	+10 ~ +48 V_{DC}		

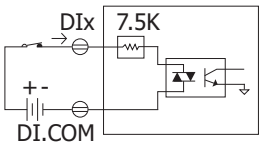
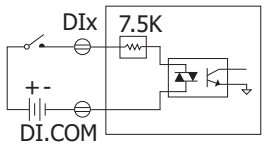
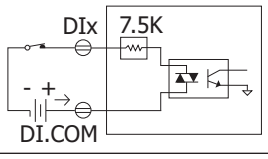
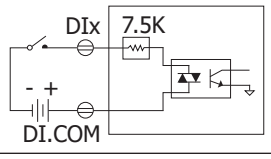
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Model	ET-2255	ET-2255-32	PET-2255	PET-2255-32
Mechanical				
Casing	Plastic			
Dimensions (mm)	(P)ET-2255: 33 x 126 x 108 (W x L x H), (P)ET-2255-32: 31 x 157 x 129 (W x L x H)			
Installation	DIN-Rail Mounting			
Environment				
Operating Temperature	-25 ~ +75 ℃			
Storage Temperature	-40 ~ +80 ℃			
Humidity	10 ~ 90% RH, Non-condensing			

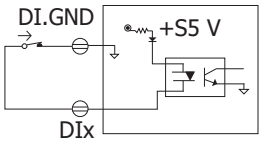
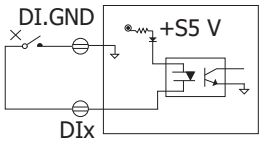
I/O Specifications

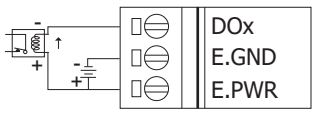
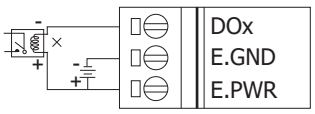
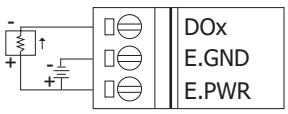
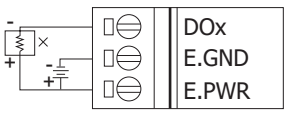
Model	(P)ET-2255	(P)ET-2255-32
Digital Input/Counter		
Channels	8	16
Type	Dry Contact Wet Contact	
Sink/Source (NPN/PNP)	Dry: Source Wet: Sink/Source	
ON Voltage Level	Dry: Close to GND Wet: +5 ~ +50 VDC	
OFF Voltage Level	Dry: Open Wet: +1 VDC (max.)	
Max. Counts	4,294,967,295 (32-bit)	
Frequency	3 kHz	2.5 kHz
Low Pass Filter	1 ~ 6500 ms (0.08 Hz ~ 500 Hz)	
Input Impedance	7.5 kΩ	
Overvoltage Protection	+70 VDC	
Digital Output		
Channels	8	16
Type	Open Collector	
Sink/Source (NPN/PNP)	Sink	
Load Voltage	+3.5 ~ +50 V	
Load Current	650 mA/channel	500 mA/channel
Overvoltage Protection	+60 VDC	
Overload Protection	1.4 A (with short-circuit protection)	
Short Circuit Protection	Yes	
Power-on Value	Programmable	
Safe Value	Programmable	

Wire Connections

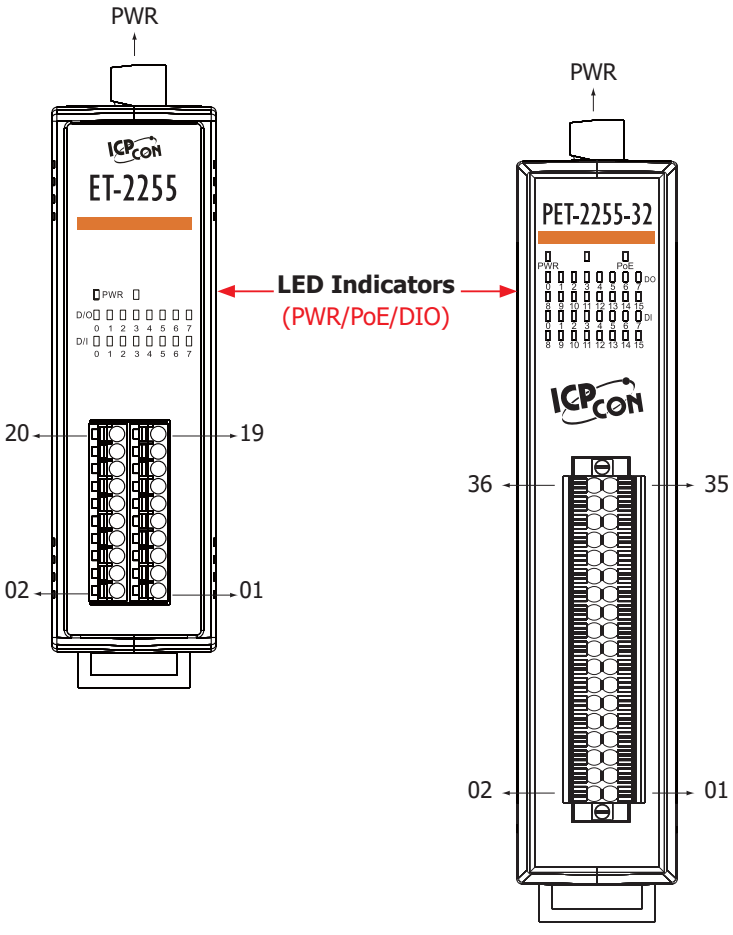
Digital Input/Counter	Readback as 1	Readback as 0
	+5 ~ +50 VDC	OPEN or <1 VDC
Wet Contact (Sink)		
Wet Contact (Source)		

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Digital Input/Counter	Readback as 1	Readback as 0
	Close to GND	Open
Dry Contact (Source)		

Output Type	ON State Readback as 1	OFF State Readback as 0
Inductive Load		
Resistance Load		

Pin Assignments

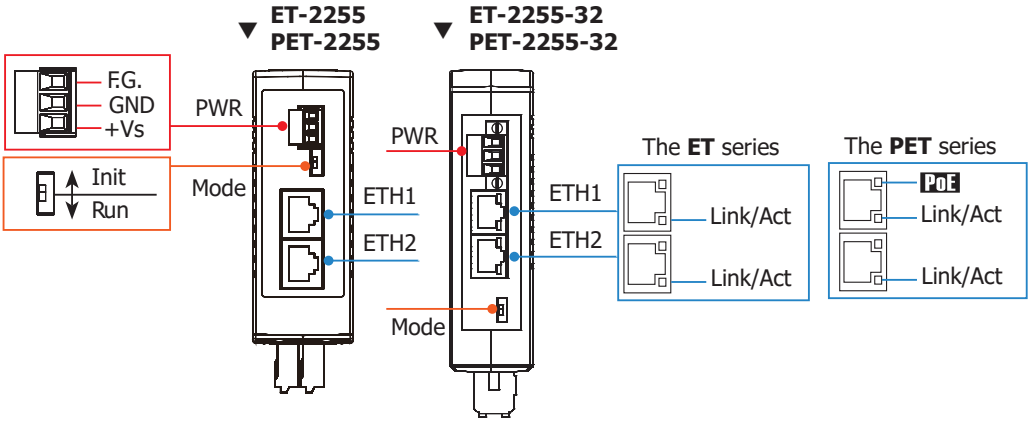


Pin Assignment	Terminal No.		Pin Assignment
E.GND	20	19	DI.GND
DO0	18	17	DI0
DO1	16	15	DI1
DO2	14	13	DI2
DO3	12	11	DI3
DO4	10	09	DI4
DO5	08	07	DI5
DO6	06	05	DI6
DO7	04	03	DI7
E.PWR	02	01	DI.COM

Pin Assignment	Terminal No.		Pin Assignment
E.GND	36	35	DI.GND
DO0	34	33	DI0
DO1	32	31	DI1
DO2	30	29	DI2
DO3	28	27	DI3
DO4	26	25	DI4
DO5	24	23	DI5
DO6	22	21	DI6
DO7	20	19	DI7
DO8	18	17	DI8
DO9	16	15	DI9
DO10	14	13	DI10
DO11	12	11	DI11
DO12	10	09	DI12
DO13	08	07	DI13
DO14	06	05	DI14
DO15	04	03	DI15
E.PWR	02	01	DI.COM

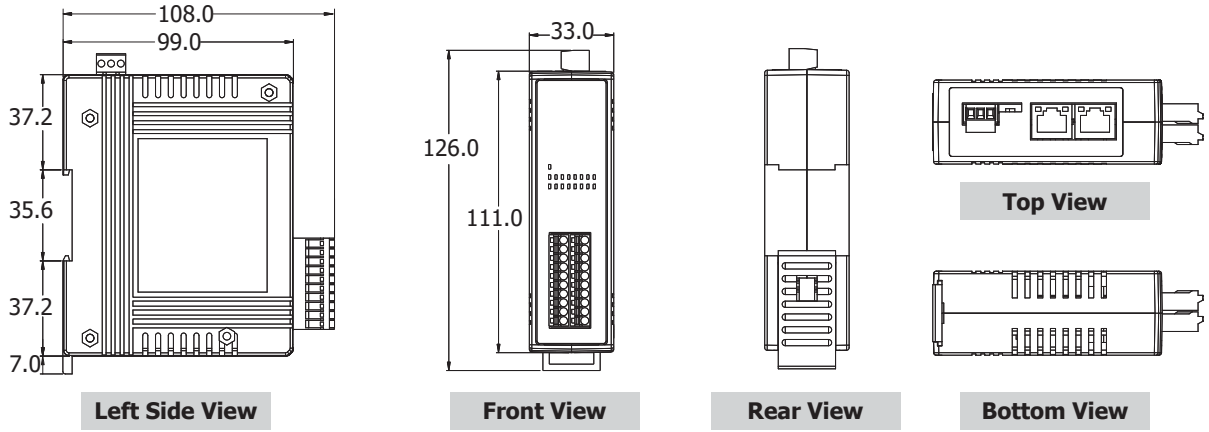
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Appearance

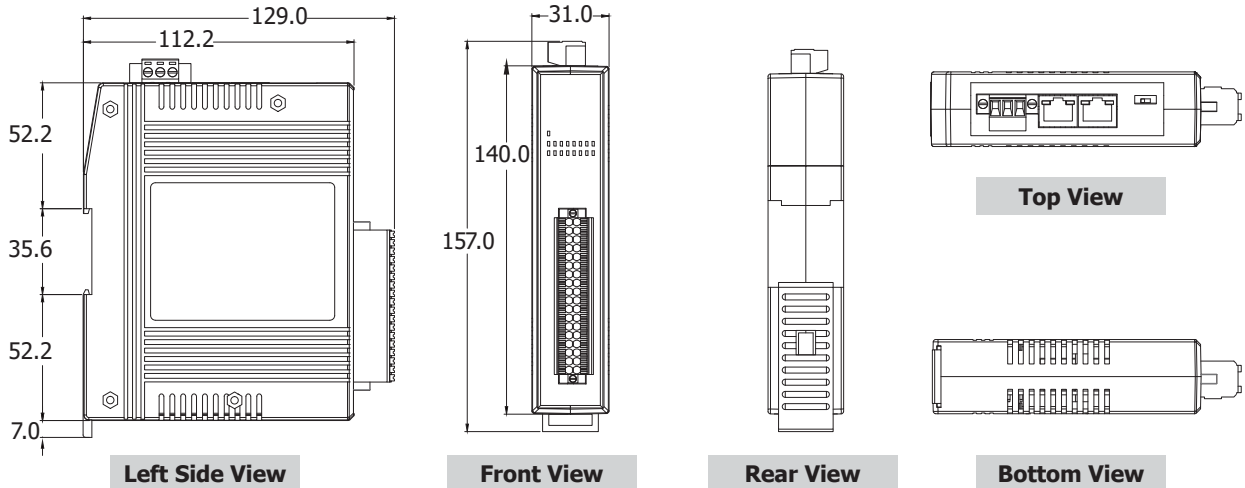


Dimensions (Units: mm)

(P)ET-2255



(P)ET-2255-32



Ordering Information

ET-2255 CR	Ethernet I/O Module with 2-port Ethernet Switch, 8-ch DI, 8-ch DO (Sink) (RoHS)
PET-2255 CR	PoE I/O Module with 2-port Ethernet Switch, 8-ch DI, 8-ch DO (Sink) (RoHS)
ET-2255-32 CR	Ethernet I/O Module with 2-port Ethernet Switch, 16-ch DI, 16-ch DO (Sink) (RoHS)
PET-2255-32 CR	PoE I/O Module with 2-port Ethernet Switch, 16-ch DI, 16-ch DO (Sink) (RoHS)

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