



**ET-2255**  
**PET-2255**

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

(PoE) Ethernet I/O Module with 8/16-ch DI and 8/16-ch DO

## Features

- Built-in Web Server
- Support Modbus TCP/UDP, MQTT, and SNMP V2c Protocols
- 2-port Ethernet Switch (LAN Bypass) for Daisy-Chain Wiring
- Dual Watchdog
- I/O Pair Connection (Push and Pull)
- Built-in I/O
  - (P)ET-2255: 8-channel DI and 8-channel Sink-type DO
  - (P)ET-2255-32: 16-channel DI and 16-channel Sink-type DO
- LED Display to Indicate the I/O Status



## Introduction

The (P)ET-2255/(P)ET-2255-32 provides 8/16 wet/dry contact Digital Input channels and 8/16 sink-type Digital Output channels. With 2 Ethernet ports, the (P)ET-2255/(P)ET-2255-32 allows daisy chain connection which permits the flexibility in locating devices, eases installation and lowers infrastructure costs. It features optical isolation for 3000 Vrms of transient overvoltage protection but doesn't provide channel-to-channel isolation. Each input channel can be used as a 32-bit counter and each output channel can drive 650/600 mA load. The power-on value and safe value of digital output channel are programmable. It can safely be used in applications where hazardous voltages are present. It features 8 kV ESD protection, 4 kV EFT protection, 3 kV surge and 3000 VDC I/O isolation to enrich the noise protection ability for industrial environment.

## System Specifications

Model	ET-2255	ET-2255-32	PET-2255	PET-2255-32
<b>Software</b>				
Built-in Web Server	Yes			
<b>CPU Module</b>				
CPU	32-bit ARM			
Watchdog Timer	Module, Communication (Programmable)			
<b>Isolation</b>				
2-way Isolation	Ethernet: 1500 VDC, I/O: 3000 VDC		I/O: 3000 VDC	
<b>EMS Protection</b>				
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			
<b>LED Indicators</b>				
Status	Run, Ethernet, I/O		Run, Ethernet, I/O, PoE	
<b>Ethernet</b>				
Ports	2 x RJ-45, 10/100 Base-Tx, Switch Ports			
PoE	-		Yes	
LAN bypass	Yes			
Security	Password and IP Filter			
Protocol	Modbus TCP, Modbus UDP, MQTT, and SNMP V2c			
<b>Power</b>				
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 to +30 VDC	+10 to +48 VDC		
<b>Mechanical</b>				
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 126 (W x L x H)			
Installation	DIN-Rail Mounting			
<b>Environment</b>				
Operating Temperature	-25 to +75°C			
Storage Temperature	-40 to +80°C			
Humidity	10 to 90% RH, Non-condensing			

## I/O Specifications

Model	(P)ET-2255	(P)ET-2255-32
<b>Digital Input/Counter</b>		
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 to +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 to 6500 ms (0.08 Hz to 500 Hz)	
Input Impedance	7.5 kΩ	
Overvoltage Protection	+70 VDC	
<b>Digital Output</b>		
Channels	8	16
Type	Open Collector	
Sink/Source (NPN/PNP)	Sink	
Load Voltage	+3.5 to +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	

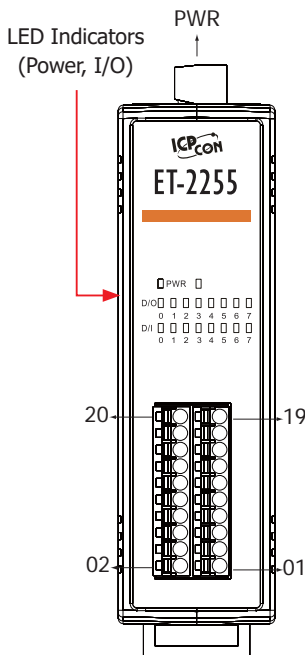
## Wire Connections

Digital Input / Counter	Readback as 1	Readback as 0
Dry Contact	Close to GND 	Open 
	+5 to +50 VDC 	OPEN or <1 VDC 
Wet Contact (Source)	+5 to +50 VDC 	OPEN or <1 VDC 

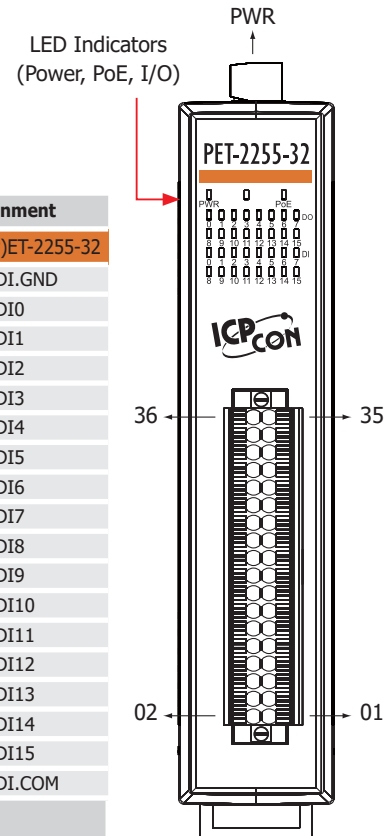
  

Output Type	ON State Readback as 1	OFF State Readback as 0
Inductive Load		
Resistance Load		

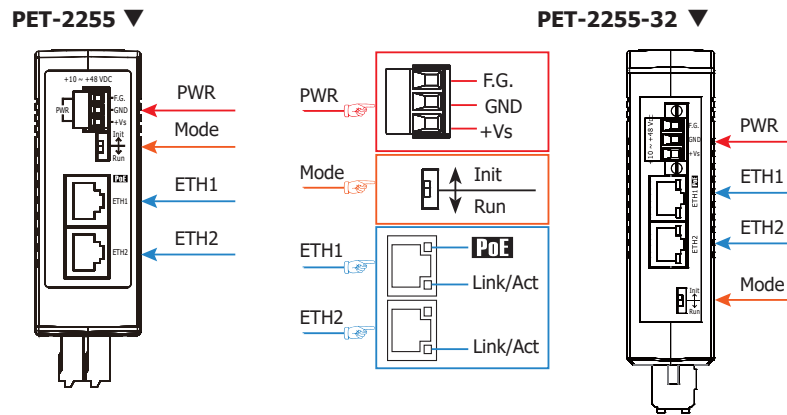
## Pin Assignments



Pin Assignment		Terminal No.	Pin Assignment	
(P)ET-2255	(P)ET-2255-32		(P)ET-2255	(P)ET-2255-32
	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
	E.GND	DO7	20	DI.GND
	DO0	DO8	18	DI0
	DO1	DO9	16	DI1
	DO2	DO10	14	DI2
	DO3	DO11	12	DI3
	DO4	DO12	10	DI4
	DO5	DO13	08	DI5
	DO6	DO14	06	DI6
	DO7	DO15	04	DI7
	E.PWR	E.PWR	02	DI.COM
			01	DI.COM

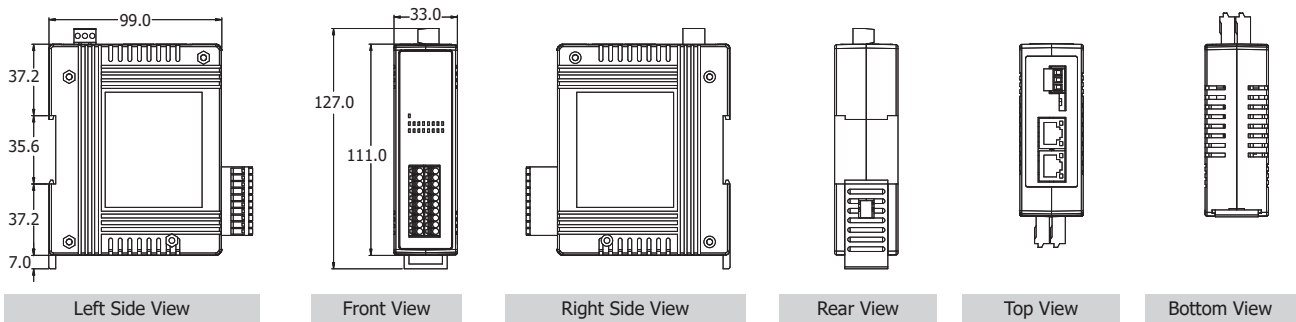


## Appearance

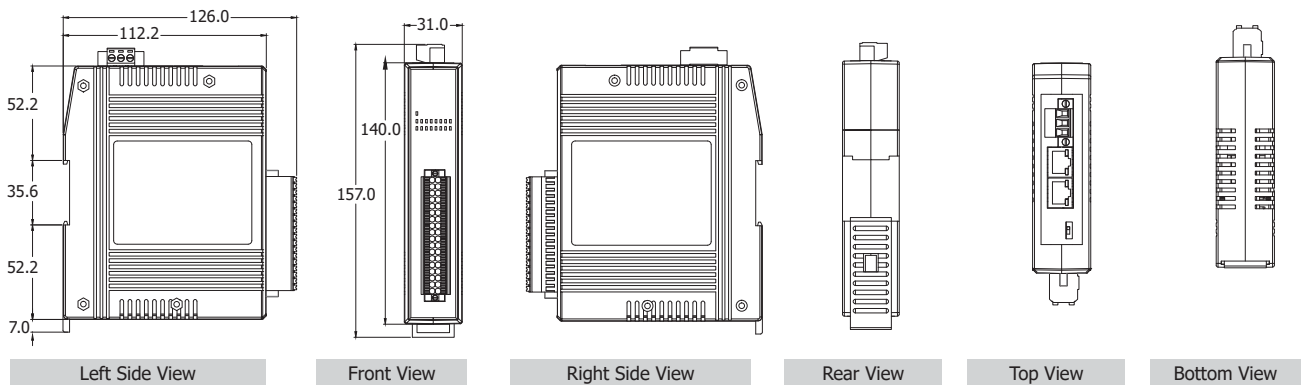


## Dimensions (Units: mm)

### (P)ET-2255



### (P)ET-2255-32



## Ordering Information

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