



ET-2255
PET-2255

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

ET-2255-32
PET-2255-32

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 Vrms transient overvoltage protection and does not support channel-to-channel isolation. Additionally, it provides EMS (EFT/ESD/Surge) protection and 3000 VDC 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 VDC, I/O: 3000 VDC		I/O: 3000 VDC	
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 VDC	+10 ~ +48 VDC		
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 °C			
Storage Temperature	-40 ~ +80 °C			
Humidity	10 ~ 90% RH, Non-condensing			

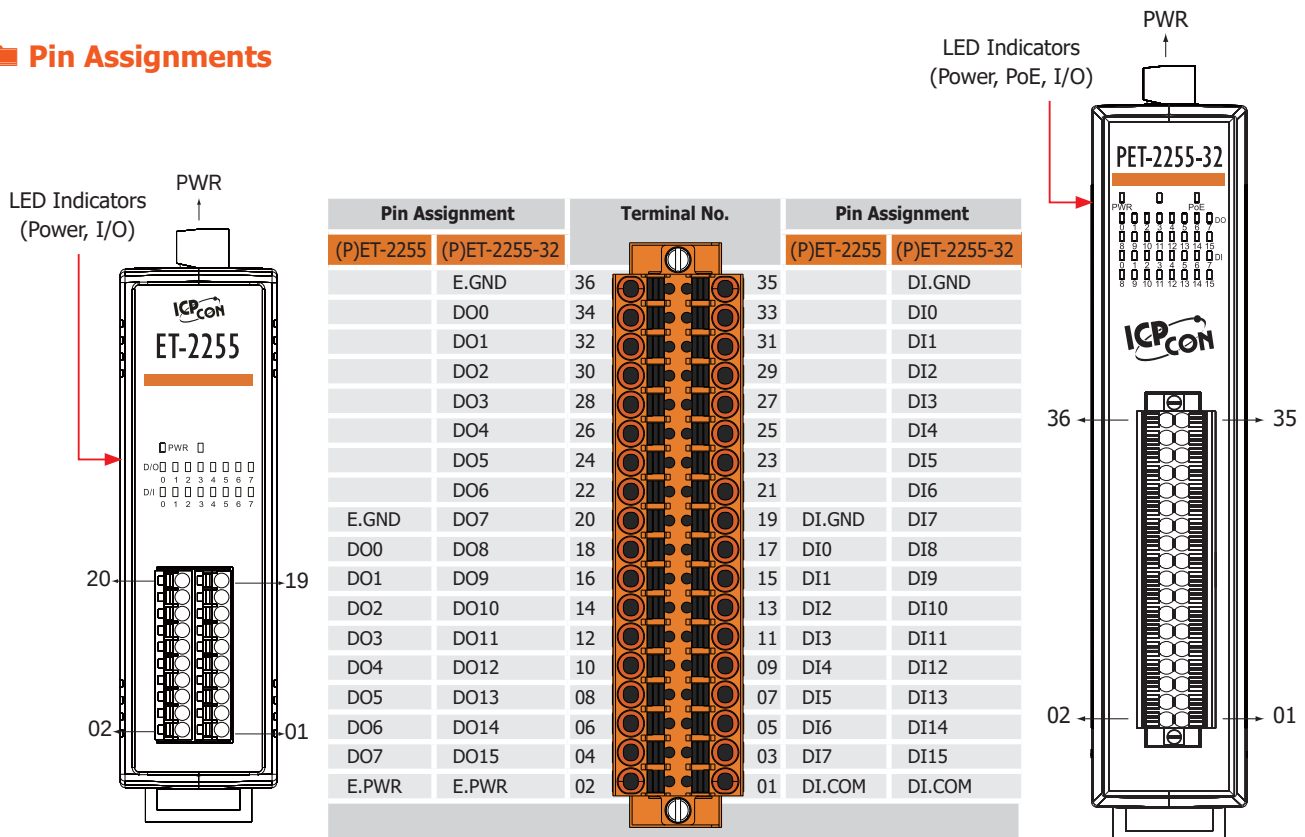
I/O Specifications

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	

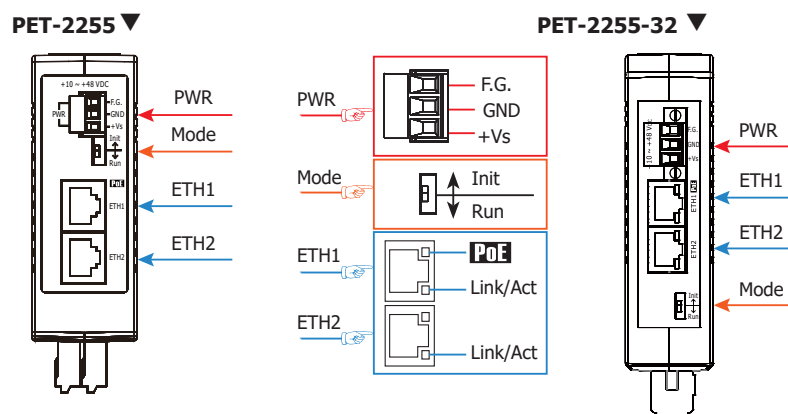
Wire Connections

Digital Input / Counter	Readback as 1	Readback as 0
Dry Contact	Close to GND	Open
Wet Contact (Sink)	+5 ~ +50 VDC	OPEN or <1 VDC
Wet Contact (Source)	+5 ~ +50 VDC	OPEN or <1 VDC
Output Type	ON State Readback as 1	OFF State Readback as 0
Inductive Load		
Resistance Load		

Pin Assignments

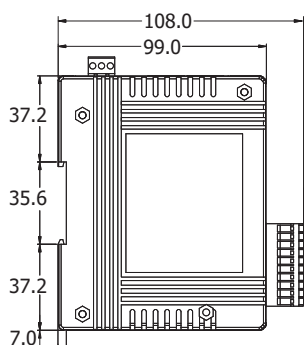


Appearance

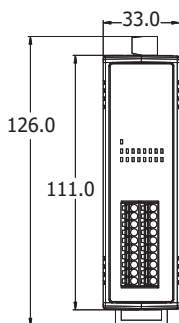


Dimensions (Units: mm)

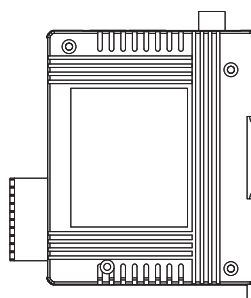
(P)ET-2255



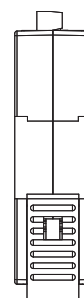
Left Side View



Front View

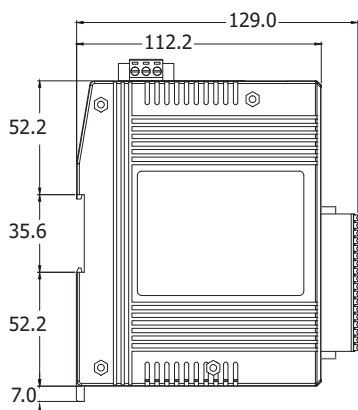


Right Side View

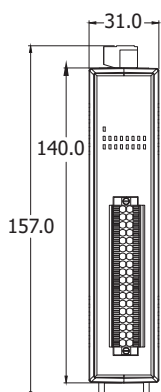


Rear View

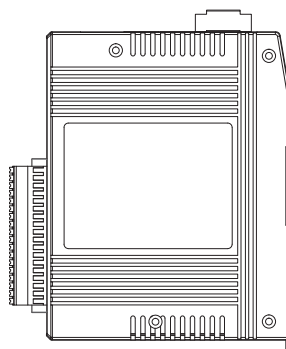
(P)ET-2255-32



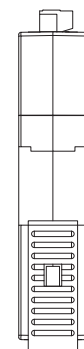
Left Side View



Front View



Right Side View



Rear View

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)