



ET-2251
PET-2251

ET-2251-32
PET-2251-32

(PoE) Ethernet I/O Module with 16/32-ch DI

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-2251: 16-channel Wet contact & Dry contact DI
 - (P)ET-2251-32: 32-channel Wet contact & Dry contact DI
- LED Display to Indicate the I/O Status



Introduction

The (P)ET-2251/(P)ET-2251-32 provides 16/32 wet contact and dry contact Digital Input channels. With 2 Ethernet ports, the (P)ET-2251/(P)ET-2251-32 allows daisy chain connection which permits the flexibility in locating devices, eases installation and lowers infrastructure costs. It features 8 kV ESD protection, 4 kV EFT protection, 3 kV surge, and 3000 VDC I/O isolation to enhance noise protection capabilities in industrial environments. Each input channel can be used as a 32-bit counter.

System Specifications

Model	ET-2251	ET-2251-32	PET-2251	PET-2251-32
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-2251: ±8 kV Contact for Each Terminal, ±16 kV Air for Random Point (P)ET-2251-32: ±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			
Security	Password and IP Filter			
Protocol	Modbus TCP, Modbus UDP, MQTT, and SNMP V2c			
Power				
Reverse Polarity Protection	Yes			
Consumption	3.0 W (max.)	3.8 W (max.)	3.6 W (max.)	3.9 W (max.)
Powered from PoE	-		IEEE 802.3af, Class1	IEEE 802.3af, Class2
Powered from Terminal Block	+10 to +30 VDC		+10 to +48 VDC	
Mechanical				
Casing	Plastic			
Dimensions (mm)	(P)ET-2251: 33 x 126 x 108 (W x L x H), (P)ET-2251-32: 31 x 157 x 126 (W x L x H)			
Installation	DIN-Rail Mounting			
Environment				
Operating Temperature	-25 to +75°C			
Storage Temperature	-40 to +80°C			
Humidity	10 to 90% RH, Non-condensing			

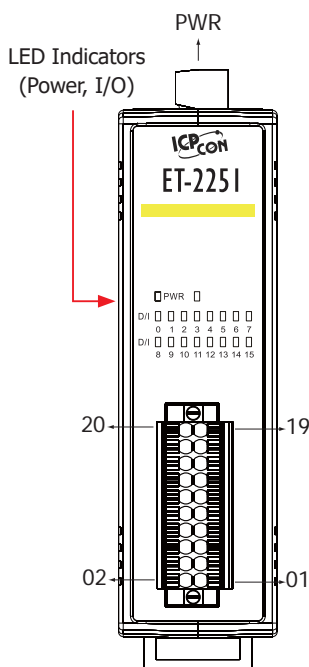
I/O Specifications

Model	(P)ET-2251	(P)ET-2251-32
Digital Input/Counter		
Channels	16	32
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
Input Impedance	7.5 kΩ	
Overvoltage Protection	+ 70 VDC	
Low Pass Filter	1 to 6500 ms (0.08 Hz to 500 Hz)	

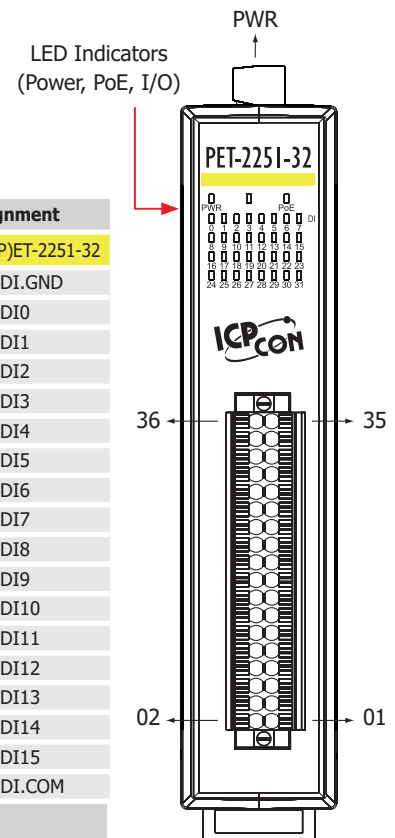
Wire Connections

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

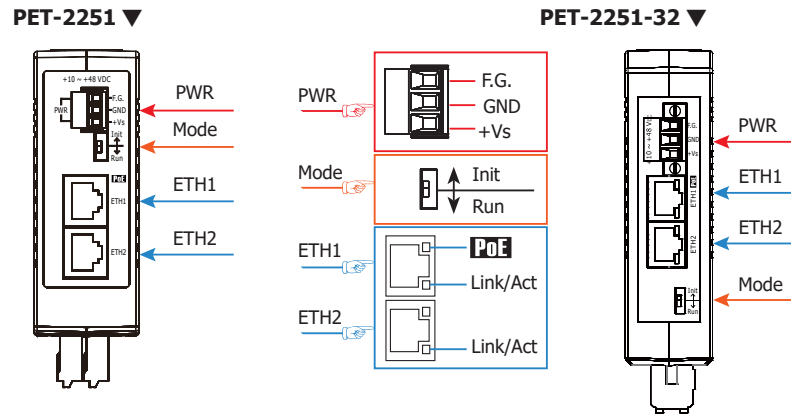
Pin Assignments



Pin Assignment		Terminal No.	Pin Assignment	
(P)ET-2251	(P)ET-2251-32		(P)ET-2251	(P)ET-2251-32
DI.GND	DI16	36	DI.GND	DI7
DI16	DI17	34	DI0	DI8
DI17	DI18	32	DI1	DI9
DI18	DI19	30	DI2	DI10
DI19	DI20	28	DI3	DI11
DI20	DI21	26	DI4	DI12
DI21	DI22	24	DI5	DI13
DI22	DI23	22	DI6	DI14
DI.GND	DI24	20	DI.GND	DI15
DI8	DI25	18	DI0	DI16
DI9	DI26	16	DI1	DI17
DI10	DI27	14	DI2	DI18
DI11	DI28	12	DI3	DI19
DI12	DI29	10	DI4	DI20
DI13	DI30	08	DI5	DI21
DI14	DI31	06	DI6	DI22
DI15	DI.COM	04	DI7	DI23
DI.COM	DI.COM	02	DI.COM	DI24

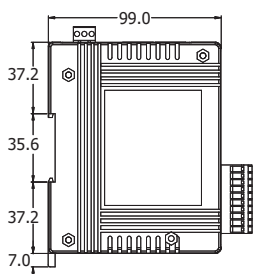


Appearance

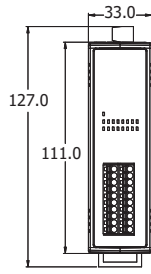


Dimensions (Units: mm)

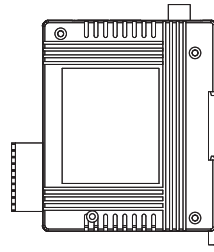
(P)ET-2251



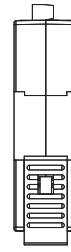
Left Side View



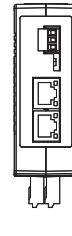
Front View



Right Side View



Rear View

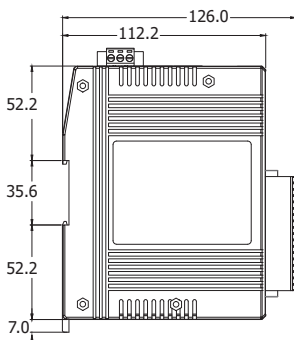


Top View

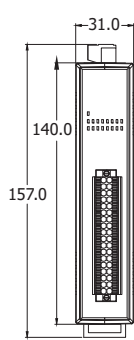


Bottom View

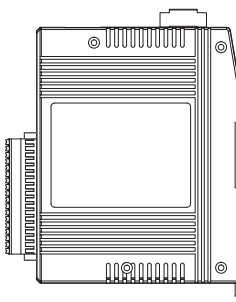
(P)ET-2251-32



Left Side View



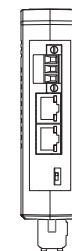
Front View



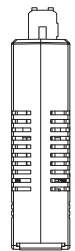
Right Side View



Rear View



Top View



Bottom View

Ordering Information

ET-2251 CR	Ethernet I/O Module with 2-port Ethernet Switch and 16-ch DI (RoHS)
PET-2251 CR	PoE Ethernet I/O Module with 2-port Ethernet Switch and 16-ch DI (RoHS)
ET-2251-32 CR	Ethernet I/O Module with 2-port Ethernet Switch and 32-ch DI (RoHS)
PET-2251-32 CR	PoE Ethernet I/O Module with 2-port Ethernet Switch and 32-ch DI (RoHS)