



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 and MQTT 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

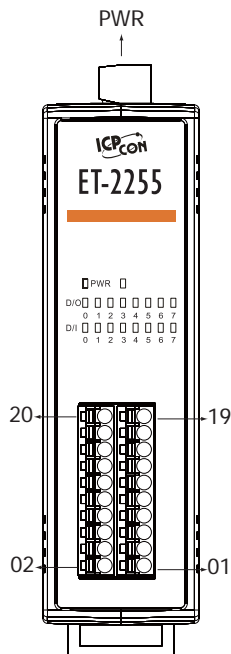
Model	ET-2255	PET-2255	ET-2255-32	PET-2255-32
Software				
Built-in Web Server	Yes			
CPU Module				
CPU	32-bit ARM			
Watchdog Timer	Module, Communication (Programmable)			
Isolation				
2-way Isolation	Ethernet: 1500 VDC, I/O: 3000 VDC			
EMS Protection				
EFT (IEC 61000-4-4)	±4 kV for Power Line			
ESD (IEC 61000-4-2)	±8 kV Contact for Each Terminal ±16 kV Air for Random Point			
Surge (IEC 61000-4-5)	±3 kV for Power Line			
LED Indicators				
Status	Run, Ethernet, I/O	Run, Ethernet, I/O, PoE	Run, Ethernet, I/O	Run, Ethernet, I/O, PoE
Ethernet				
Ports	2 x RJ-45, 10/100 Base-Tx, Switch Ports			
PoE	-	Yes	-	Yes
LAN bypass	Yes			
Security	Password and IP Filter			
Protocol	Modbus TCP, Modbus UDP, and MQTT			
Power				
Reverse Polarity Protection	Yes			
Consumption	2.9 W (max.)	3.4 W (max.)	3.6 W (max.)	4.1 W (max.)
Powered from PoE	-	IEEE 802.3af, Class1	-	IEEE 802.3af, Class1
Powered from Terminal Block	+10 to +30 VDC	+10 to +48 VDC		
Mechanical				
Casing	Plastic			
Dimensions (mm)	33 x 126 x 108 (W x L x H)		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

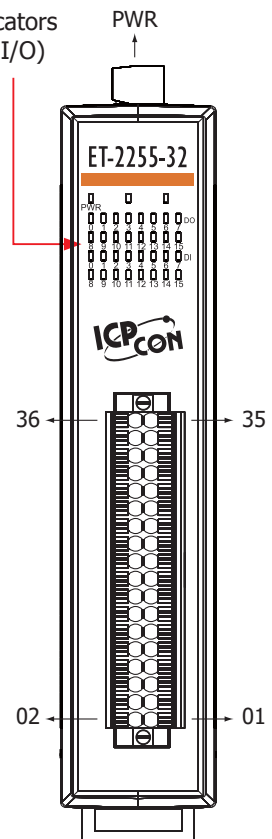
Model	(P)ET-2255	(P)ET-2255-32
Digital Input/Counter		
Channels	8	16
Type	Dry Contact Wet Contact	
Sink/Source (NPN/PNP)	Dry: Source Wet: Sink/Source	
ON Voltage Level	Dry: Close to GND Wet: +5 to +50 VDC	
OFF Voltage Level	Dry: Open Wet: +1 VDC (max.)	
Max. Counts	4,294,967,295 (32-bit)	
Frequency	3 kHz	
Low Pass Filter	1 to 6500 ms (0.08 Hz to 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 to +50 V	
Load Current	650 mA/channel	600 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	

Pin Assignments

Port	Pin Assignment
PWR	F.G.
	GND
	+ Vs
ETH1	
ETH2	



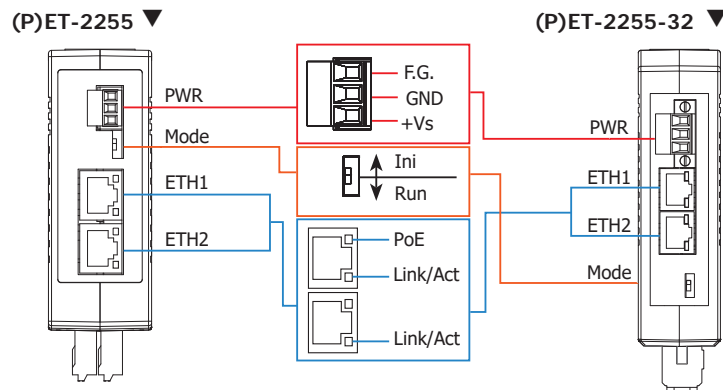
Pin Assignment		Terminal No.	Pin Assignment	
(P)ET-2255	(P)ET-2255-32		(P)ET-2255	(P)ET-2255-32
	E.GND	36		DI.GND
	DO0	34		DI0
	DO1	32		DI1
	DO2	30		DI2
	DO3	28		DI3
	DO4	26		DI4
	DO5	24		DI5
	DO6	22		DI6
	DO7	20		DI7
	E.GND			DI8
DO0	DO8	18		DI9
DO1	DO9	16		DI10
DO2	DO10	14		DI11
DO3	DO11	12		DI12
DO4	DO12	10		DI13
DO5	DO13	08		DI14
DO6	DO14	06		DI15
DO7	DO15	04		DI.COM
E.PWR	E.PWR	02		DI.COM



Wire Connections

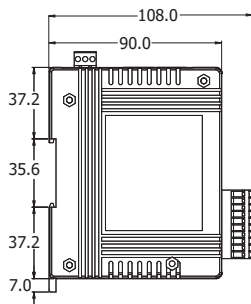
Digital Input/Counter	Readback as 1	Readback as 0
Dry Contact	Close to GND 	Open
	Wet Contact (Sink) 	OPEN or <1 VDC
Wet Contact (Source) 	OPEN or <1 VDC 	
Output Type	ON State Readback as 1	OFF State Readback as 0
Inductive Load		
Resistance Load		

Appearance

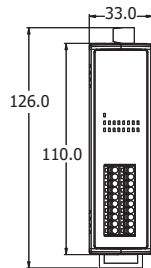


Dimensions (Units: mm)

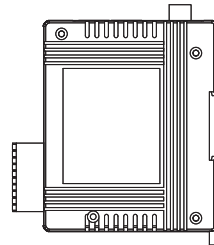
(P)ET-2255



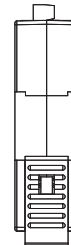
Left Side View



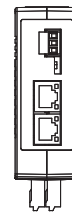
Front View



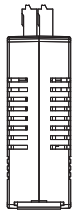
Right Side View



Rear View

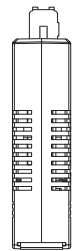
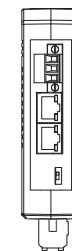
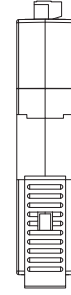
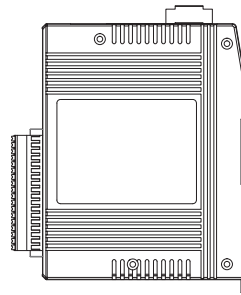
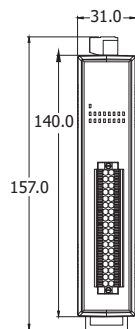
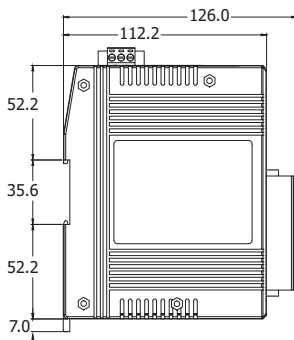


Top View



Bottom View

(P)ET-2255-32



Ordering Information

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