



ET-2215H
PET-2215H



ET-2215H-16
PET-2215H-16

Ethernet I/O Module with 8/16-ch
High Speed RTD Input

Features

- Web Server for Configuration
- Support Modbus TCP and MQTT Protocols
- 2-port Ethernet Switch (LAN Bypass) for Daisy-chain Wiring
- 3-wire RTD Lead Resistance Compensation
- I/O Pair Connection (Push and Pull)
- Supports Firmware Update via Ethernet
- 90Hz High-speed Sampling Rate for each Channel
- Open Wire Detection
- Built-in I/O
 - (P)ET-2215H: 8-ch RTD Input
 - (P)ET-2215H-16: 16-ch RTD Input
- Individual Channel Configuration



Introduction

The (P)ET-2215H / (P)ET-2215H-16 is an 8/16-channel RTD input module that provides a 90Hz high-speed measurement for each channel. Each channel can be connected to different kinds of RTD sensors and features automatic compensation for three-wire RTD so that it can measure accurately regardless of the length of the wires. With 2 Ethernet ports, it allows daisy chain connection which permits flexibility in locating devices, eases installation, and lowers infrastructure costs.

System Specifications

Model	ET-2215H	ET-2215H-16	PET-2215H	PET-2215H-16
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)	±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		Run, Ethernet, 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, MQTT			
Power				
Reverse Polarity Protection	Yes			
Consumption	1.5 W (max.)	1.6 W (max.)	1.9 W (max.)	2.0 W (max.)
Powered from PoE	-		IEEE 802.3af, Class1	
Powered from Terminal Block	+10 to +48 VDC			
Mechanical				
Casing	Metal			
Dimensions (mm)	31 x 159 x 137 (W x L x H)			
Installation	DIN-Rail mounting / Wall mounting			
Environment				
Operating Temperature	-25 ~ +75 °C			
Storage Temperature	-40 ~ +80 °C			
Humidity	10 ~ 90% RH, Non-condensing			

I/O Specifications

Model	ET-2215H PET-2215H	ET-2215H-16 PET-2215H-16
Analog Input		
Channels	8	16
Sensor Type	Pt100, Ni120, Cu50, Cu100	
Resolution	16-bit	
Accuracy	Fast Mode	±0.1 % of FSR (25°C)
	Normal Mode	±0.05 % of FSR (25°C)
Sampling Rate	Fast Mode	90 Hz (per channel)
	Normal Mode	1.5 Hz (per channel)
Input Impedance	>1M Ω	
Individual Channel Configuration	Yes	
3-wire RTD Lead Resistance Elimination	Yes	
Open Wire Detection	Yes	

Applications

- Building Automation
- Remote Diagnosis
- Remote Maintenance
- Machine Automation
- Factory Automation
- Testing Equipment

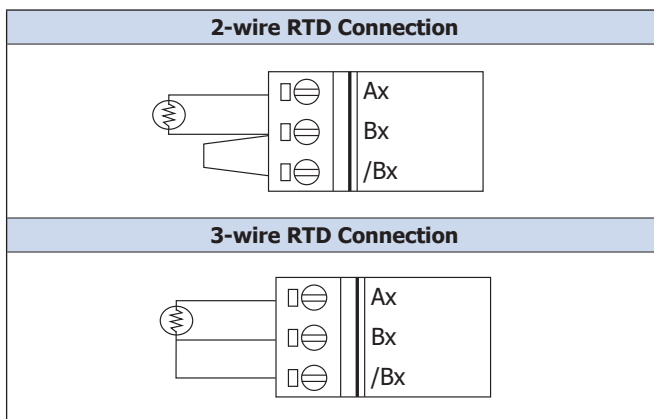
Pin Assignments

ET-2215H/PET-2215H				
Pin Assignment	Terminal No.	Pin Assignment		
A1	13	01	A0	
B1	14	02	B0	
/B1	15	03	/B0	
A3	16	04	A2	
B3	17	05	B2	
/B3	18	06	/B2	
A5	19	07	A4	
B5	20	08	B4	
/B5	21	09	/B4	
A7	22	10	A6	
B7	23	11	B6	
/B7	24	12	/B6	

RTD Type Code Table

Type Code	RTD Type	Temperature
0x20	Pt 100, a = 0.00385	-100 ~ + 100 °C
0x21	Pt 100, a = 0.00385	0 ~ + 100 °C
0x22	Pt 100, a = 0.00385	0 ~ + 200 °C
0x23	Pt 100, a = 0.00385	0 ~ + 600 °C
0x24	Pt 100, a = 0.003916	-100 ~ + 100 °C
0x25	Pt 100, a = 0.003916	0 ~ + 100 °C
0x26	Pt 100, a = 0.003916	0 ~ + 200 °C
0x27	Pt 100, a = 0.003916	0 ~ + 600 °C
0x28	Ni 120	-80 ~ + 100 °C
0x29	Ni 120	0 ~ + 100 °C
0x2B	Cu 100, a = 0.00421	-20 ~ + 150 °C
0x2C	Cu 100, a = 0.00427	0 ~ + 200 °C
0x2E	Pt 100, a = 0.00385	-200 ~ + 200 °C
0x2F	Pt 100, a = 0.003916	-200 ~ + 200 °C
0x80	Pt 100, a = 0.00385	-200 ~ + 600 °C
0x81	Pt 100, a = 0.003916	-200 ~ + 600 °C
0x82	Cu 50	-50 ~ + 150 °C
0x83	Ni 100	-60 ~ 180 °C
0x84	Ni 120	-80 ~ 150 °C
0x85	Cu 100, a = 0.00428	0 ~ 150 °C
0x86	Pt 100, a = 0.00385	-100 ~ 300 °C
0x87	Pt 100, a = 0.003916	-100 ~ 300 °C

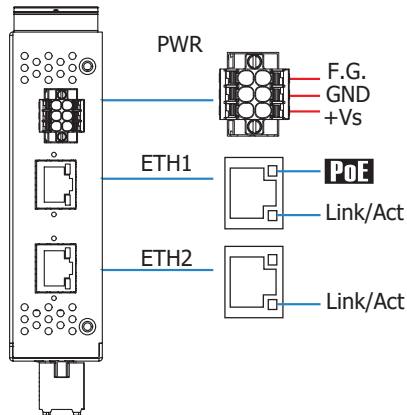
Wire Connections



ET-2215H-16/PET-2215H-16				
Pin Assignment	Terminal No.	Pin Assignment		
A1	13	01	A0	
B1	14	02	B0	
/B1	15	03	/B0	
A3	16	04	A2	
B3	17	05	B2	
/B3	18	06	/B2	
A5	19	07	A4	
B5	20	08	B4	
/B5	21	09	/B4	
A7	22	10	A6	
B7	23	11	B6	
/B7	24	12	/B6	
A9	37	25	A8	
B9	38	26	B8	
/B9	39	27	/B8	
A11	40	28	A10	
B11	41	29	B10	
/B11	42	30	/B10	
A13	43	31	A12	
B13	44	32	B12	
/B13	45	33	/B12	
A15	46	34	A14	
B15	47	35	B14	
/B15	48	36	/B14	

Appearance

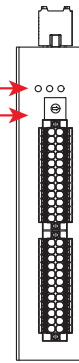
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LED (PWR/ - /PoE)



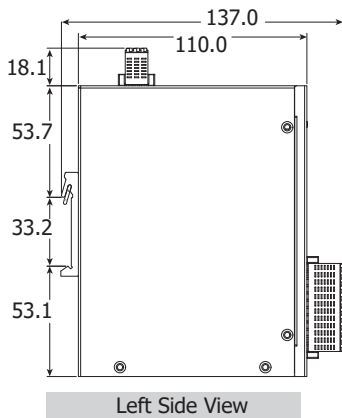
0: Run mode
(User specified IP or DHCP)

1-E: Run mode
(Default IP, 192.168.255.1 - 14)

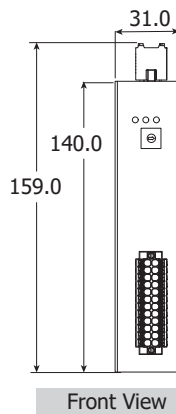
F: Init mode
(Factory default, Firmware Update)

Dimensions (Units: mm)

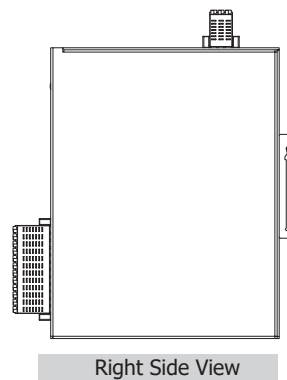
(P)ET-2215H



Left Side View



Front View

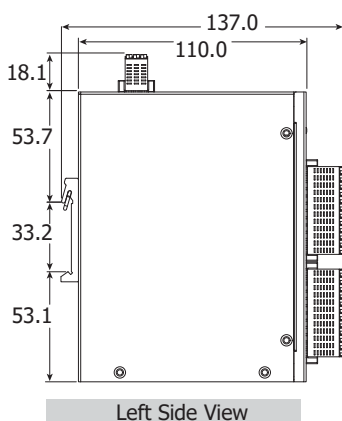


Right Side View

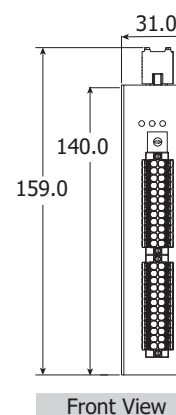


Rear View

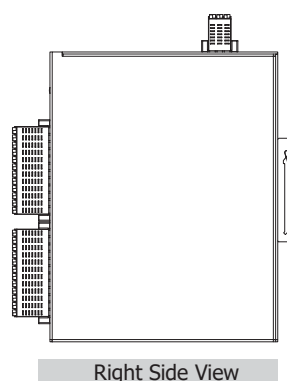
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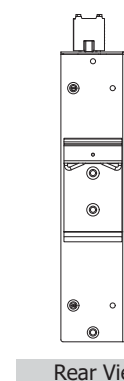
Left Side View



Front View



Right Side View



Rear View

Ordering Information

ET-2215H CR	Ethernet I/O Module with 2-port Ethernet Switch, 8-ch High Speed RTD Input, 90 S/s (RoHS)
ET-2215H-16 CR	Ethernet I/O Module with 2-port Ethernet Switch, 16-ch High Speed RTD Input, 90 S/s (RoHS)
PET-2215H CR	PoE I/O Module with 2-port Ethernet Switch, 8-ch High Speed RTD Input, 90 S/s (RoHS)
PET-2215H-16 CR	PoE I/O Module with 2-port Ethernet Switch, 16-ch High Speed RTD Input, 90 S/s (RoHS)