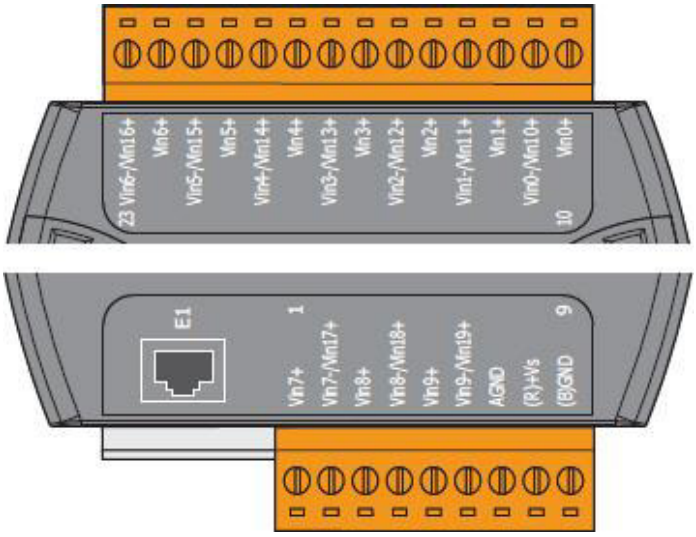
ET-7017-10/PET-7017-10/ET-7217-10/PET-7217-10

I/O Specifications

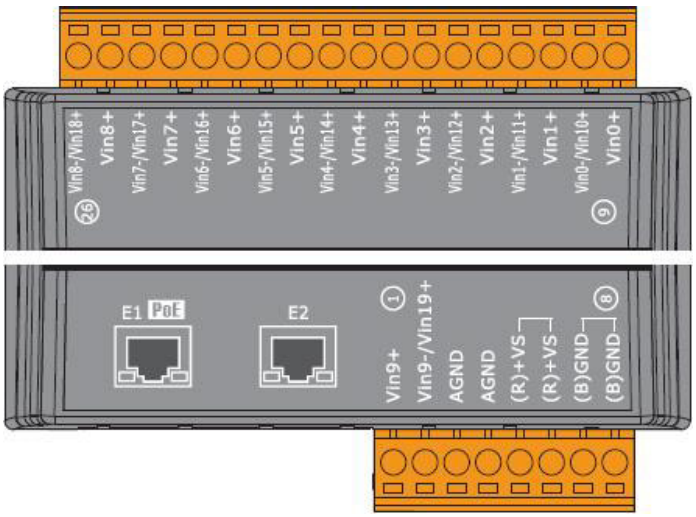
Analog Input		
Channels		10 differential or 20 single-ended (Note) (software selectable)
Type		+/-150 mV, +/-500 mV, +/-1 V, +/-5 V, +/-10 V, 0~20 mA, +/-20 mA, 4~20 mA (Jumper selectable)
Individual Channel Configuration		Yes
Resolution		16-bit
Sampling Rate	Normal Mode	10 Samples/Sec. (Total)
	Fast Mode	50 Samples/Sec. (Total)
Accuracy	Normal Mode	+/-0.1%
	Fast Mode	+/-0.5% or better
Zero Drift		+/-20 μV/°C
Span Drift		+/-25 ppm/°C
Overvoltage Protection	Differential	240 Vrms
	Single-ended	150 Vrms
Common Voltage Protection		+/-200 V_{DC}
Overcurrent Protection		Yes, 50 mA at 110 V_{DC}
Virtual Channel to Channel Isolation		Yes, 400 V_{DC}
Open Wire Detection for 4~20 mA		Yes
Input Impedance	Voltage	2 MΩ (Differential), 1 MΩ (Single-ended)
	Current	125 Ω
Common Mode Rejection		86 dB Min.
Normal Mode Rejection		100 dB
Note: Differential mode can be used for voltage input and current input. Single-ended mode can be used for voltage input only.		

Pin Assignments

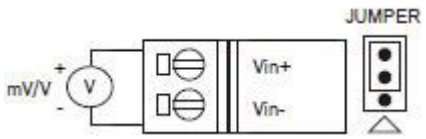
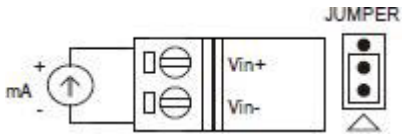
ET-7017-10/PET-7017-10



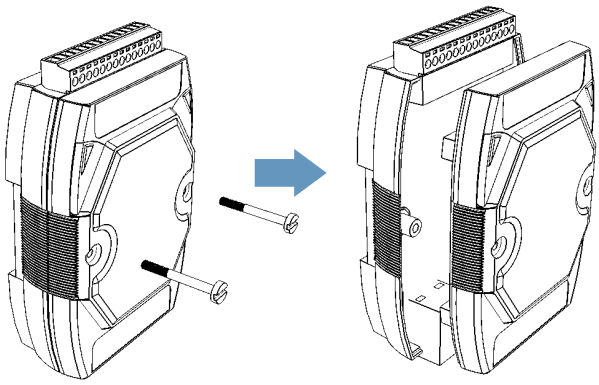
ET-7217-10/PET-7217-10



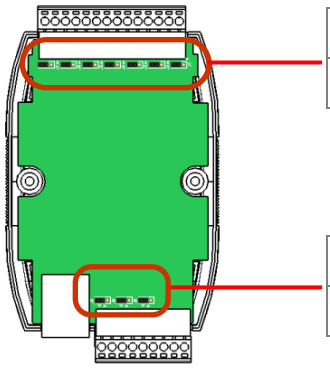
Voltage/Current Input Selection Jumper

Voltage Input (Differential Mode)	Voltage Input (Single-ended Mode)
	
Current Input	
	

Remove the top case of the module



The selection jumpers are next to the connector

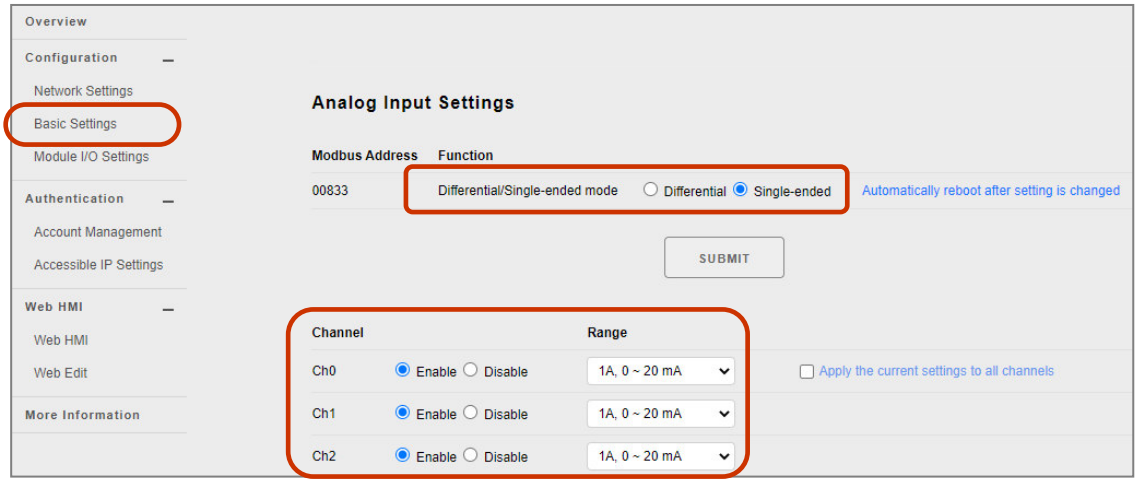


Channel	Vin6±	Vin5±	Vin4±	Vin3±	Vin2±	Vin1±	Vin0±
Jumper	J7	J6	J5	J4	J3	J2	J1

Channel	Vin7±	Vin8±	Vin9±
Jumper	J8	J9	J10

Tips & Warnings

The jumper settings of the input type for each AI channel must correspond to the input range for each AI channel.



Modbus Register Table

Coils (0xxxx)

Register		Points	Description	Data Format	Attribute	Factory Value
DEC	HEX					
00162 : 00181	00A2 : 00B5	20	Clear 1-ch historical AI max. value	1: Clear	W	-
00194 : 00213	00C2 : 00D5	20	Clear 1-ch historical AI min. value	1: Clear	W	-
00226	00E2	1	Reset the I/O settings to the factory default state	1: Reset	W	-
00233	00E9	1	Reboot the module	1: Reboot	W	-
00595 : 00614	0253 : 0266	20	Enable/Disable the AI function	0: Disable 1: Enable	R/W/E	1
00628	0274	1	Set the AI sampling rate	0: Normal mode (10 Hz) 1: Fast mode (50 Hz)	R/W/E	0
00629	0275	1	Set the AI noise filter	0: Frequency 60 Hz 1: Frequency 50 Hz	R/W/E	0
00631	0277	1	Set the AI data format	0: Hexadecimal format 1: Engineering unit	R/W/E	0
00632	0278	1	Reset the AI calibration to the factory settings	1: Reset	W	-
00634	027A	1	Clear all historical AI max. values	1: Clear	W	-
00635	027B	1	Clear all historical AI min. values	1: Clear	W	-
00636 : 00655	027C : 028F	20	Enable/Disable the AI high alarm function	0: Disable 1: Enable	R/W/E	0
00668 : 00687	029C : 02AF	20	Enable/Disable the AI low alarm function	0: Disable 1: Enable	R/W/E	0
00700 : 00719	02BC : 02CF	20	Set the AI high alarm mode	0: Momentary mode 1: Latching mode	R/W/E	0
00732 : 00751	02DC : 02EF	20	Set the AI low alarm mode	0: Momentary mode 1: Latching mode	R/W/E	0
00764 : 00783	02FC : 030F	20	Clear the AI high alarm status	1: Clear	W	-
00796 : 00815	031C : 032F	20	Clear the AI low alarm status	1: Clear	W	-
00830	033E	1	Enable/Disable the AI calibration	0: Disable 1: Enable	R/W	-
00831	033F	1	Zero calibration for the channel 0	1: Set	W	-
00832	0340	1	Span calibration for the channel 0	1: Set	W	-
00833	0341	1	Set the AI mode	0: Differential 1: Single-ended	R/W/E	0

Discrete Inputs (1xxxx)

Register		Points	Description	Data Format	Attribute
DEC	HEX				
10224 : 10243	00E0 : 00F3	20	Read AI high alarm status. When the AI value is higher than the high alarm value, the status becomes 1.	0: Normal 1: Alarmed	R
10256 : 10275	0100 : 0113	20	Read AI low alarm status. When the AI value is lower than the high alarm value, the status becomes 1.	0: Normal 1: Alarmed	R

Input Register (3xxxx)

Register		Points	No. Per Point	Description	Data Format	Attribute
DEC	HEX					
30000 : 30019	0000 : 0013	20	1	AI value	-32768 to 32767 (0x0000 to 0xFFFF)	R
30236 : 30255	00EC : 00FF	20	1	AI historical max. value	-32768 to 32767 (0x0000 to 0xFFFF)	R
30268 : 30287	010C : 011F	20	1	AI historical min. value	-32768 to 32767 (0x0000 to 0xFFFF)	R
30320	0140	1	1	Number of the AI channel	10/20	R
30350	015E	1	1	OS image version	0x123 means version 1.2.3	R
30351	015F	1	1	Firmware version	0x123 means version 1.2.3	R
30353	0161	1	1	I/O version	0x123 means version 1.2.3	R

Holding Register (4xxxx)

Register		Points	No. Per Point	Description	Data Format	Attribute	Factory Value
DEC	HEX						
40271	010F	1	1	Set the module identification (Modbus NetID)	0 to 255	R/W/E	1
40296 : 40315	0128 : 013B	20	1	Set the AI high alarm value	-32768 to 32767 (0x0000 to 0xFFFF)	R/W/E	32767 (0x7FFF)
40328 : 40347	0148 : 015B	20	1	Set the AI low alarm value	-32768 to 32767 (0x0000 to 0xFFFF)	R/W/E	-32768 (0x8000)
40427 : 40446	01AB : 01BF	20	1	Set the AI range	0x07: 4 ~ 20 mA 0x08: +/-10 V 0x09: +/-5 V 0x0A: +/-1 V 0x0B: +/-500 mV 0x0C: +/-150 mV 0x0D: +/-20 mA 0x1A: 0~20 mA	R/W/E	0x08
40555	022B	1	1	Read the module reset status	1: Power-on 2: Module Watchdog 3: Software Reset Command	R	-
40556	022C	1	1	Read the boot count of the module The factory default value is 0 when the settings are set to the factory default values.	1 to 32767	R	-
40559	022F	1	1	Read the module name	0x7017	R	-