



VPD-130N-H(2)
3.5" Touch HMI Device
with 1 x RS-232/RS-485



VPD-132N-H
3.5" Touch HMI Device
with 2 x RS-232/RS-485



VPD-133N-H(2)
3.5" Touch HMI Device
with 2 x RS-232/RS-485,
Ethernet (PoE)



VPD-130-H(2)
3.5" Touch HMI Device
with 1 x RS-232/RS-485
and Rubber Keypad



VPD-132-H
3.5" Touch HMI Device
with 2 x RS-232/RS-485
and Rubber Keypad



VPD-133-H(2)
3.5" Touch HMI Device
with 2 x RS-232/RS-485,
Ethernet (PoE) and
Rubber Keypad

Features

- High-color high-resolution touch screen
- RTC (Real Time Clock)
- Buzzer
- Communication Port: Serial, Ethernet
- Rubber keypad (VPD-130-H/132-H/133-H)
- Free HMIWorks development tool
- Support C language and Ladder Designer
- Support user-defined third party protocol (C language)
- Modbus TCP/RTU & DCON protocols
- I/O Expansion Board: XV-board
- Front Panel: IP65 Waterproof
- Operating Temperature: -20 ~ 50 °C

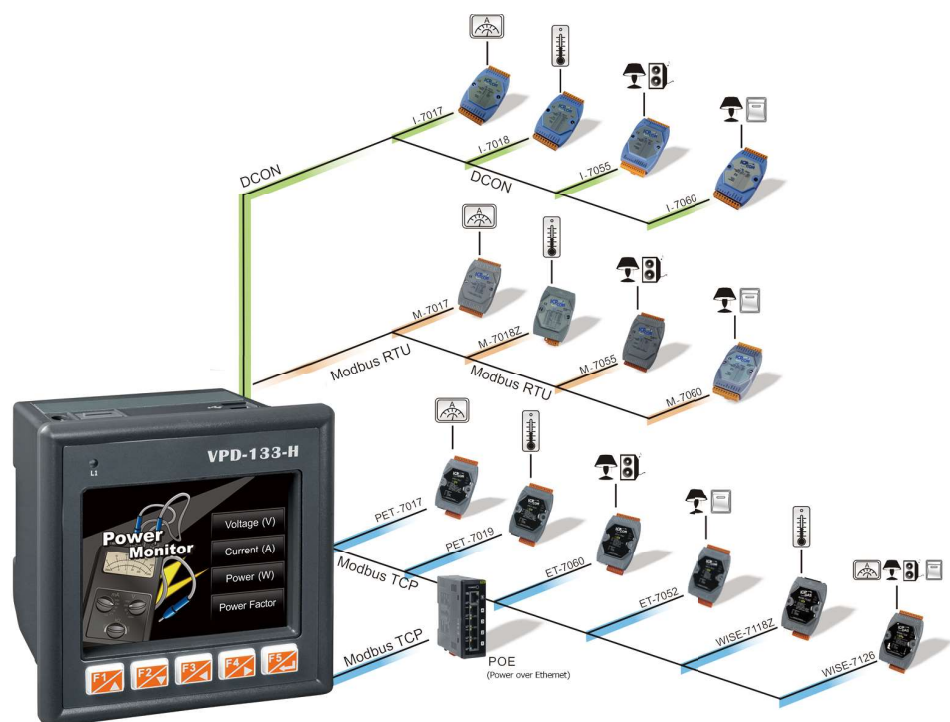
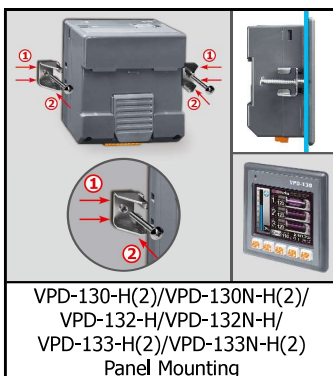
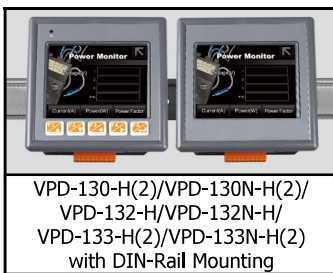


Introduction

The **TouchPAD VPD 3.5" Series** is a series of industrial touch HMI devices that features 3.5" high-color high-resolution touch screen LCD. With touch screen capability, it is easy to deploy into all kinds of automation systems, and make them more intuitive and efficient. Either setup new system installations or complete system retrofits, VPD series stands out for its wide variety of communication methods. Its built-in communication ports include RS-232/RS-485 and Ethernet(for VPD-133 series) interface, enable integration into the system allowing users to control, monitor I/O at the remote sides. Besides, front-panel IP65 waterproof as well as the rubber keypad make VPD series more reliable for rugged environments.

HMIWorks, the free development software for VPD series, provides an easy-to-use environment, and powerful and intuitive programming with graphic capabilities to let users create appealing graphical interface screens in minutes. For PLC users, HMIWorks provides Ladder Designer and C language environment for IT users. Especially, it only takes no more than 30 minutes to learn how to create an application program when using Ladder Designer. With all the features provided, VPD series touch HMI Devices must be the most cost effective HMI Device ever been in the market.

Applications



Applications

Status Display

Presentations

Factory/Machine Automation

User-defined HMI

Power Monitor

- Voltage (V)
- Current (A)
- Power (W)
- Power Factor

Schedule Management with Built-in RTC

Multi-display

Multi-page Design

	Time	Shutdown	Cumulative Time
1	120 _m	Start	120 _m Reset
2	120 _m	Start	120 _m Reset
3	120 _m	Start	

	Remaining
1	120 _m
2	120 _m
3	120 _m

26c

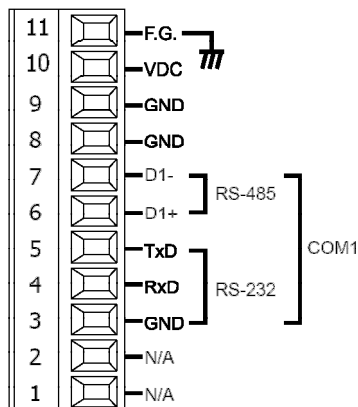
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Specifications

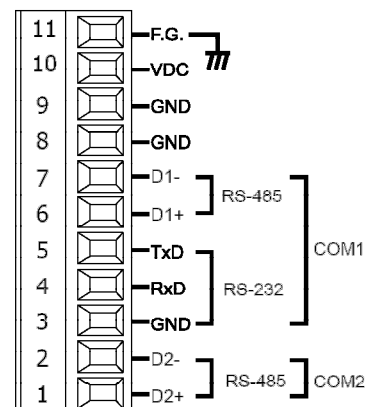
Model	VPD-130-H	VPD-130N-H	VPD-132-H	VPD-132N-H	VPD-133-H	VPD-133N-H
	VPD-130-H2	VPD-130N-H2			VPD-133-H2	VPD-133N-H2
Main Unit						
CPU	32-bit RISC CPU					
Storage	16 MB SDRAM/16 MB Flash					
Real Time Clock	Yes					
Display						
Type	LCD 3.5 TFT (Resolution 240 x 320 x 16), defective pixels <= 3					
Backlight Life	20,000 hours					
Brightness	270 cd/m2					
Touch Panel	Yes					
LED Indicators						
Status	1 LED					
COM Ports						
Ports	1 x RS-232/RS-485 including Self-Tuner		1 x RS-232/RS-485 including Self-Tuner 1 x RS-485 including Self-Tuner			
HMI						
Buzzer	Yes					
Rotary Switch	Yes					
Rubber Keypad	5 keys (Programmable)		-			
Reset Button	Yes					
Ethernet						
Ports	-				RJ-45 x 1, 10/100 Base-TX	
Power						
Consumption	2 W					
Powered from PoE	IEEE 802.3af, Class1 (48 V)					
Powered from Terminal Block	+12 ~ 48 VDC					
Mechanical						
Dimensions (mm)	103 mm x103 mm x 53 mm					
Installation	DIN-Rail Mounting and Panel Mounting					
Ingress Protection Rating	Front Panel: IP65					
Environmental						
Operating Temperature	-20 ~ +50°C					
Storage Temperature	-30 ~ +80 °C					
Humidity	10 ~ 90% RH, Non-condensing					

Pin Assignments

VPD-130(N)-H/VPD-130N-H(2)

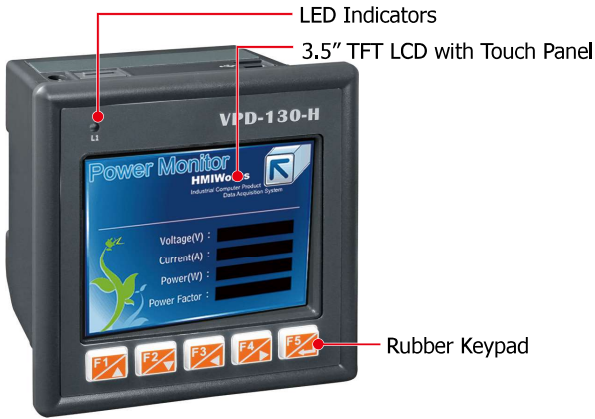


VPD-132(N)H/VPD-133(N)-H(2)



Appearance

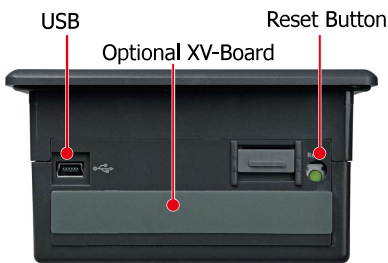
VPD-130N-H(2)/132N-H/133N-H(2) Front View



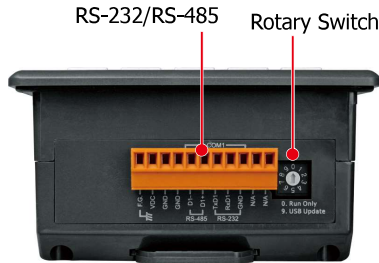
VPD-130-H(2)/132-H/133-H(2) Front View



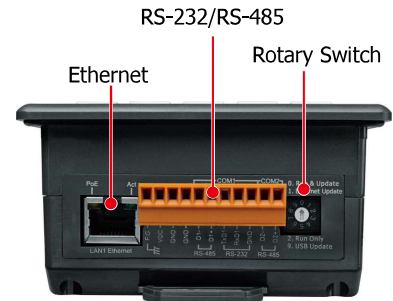
VPD-130(N)-H(2)/132(N)-H/
133(N)-H(2) Top View



VPD-130(N)-H(2)/132(N)-H
Bottom View

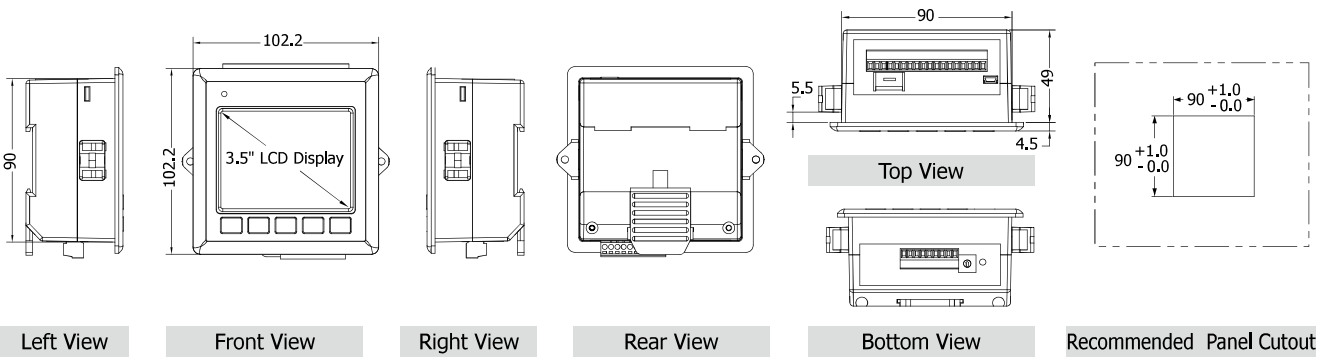


VPD-133(N)-H(2) Bottom View

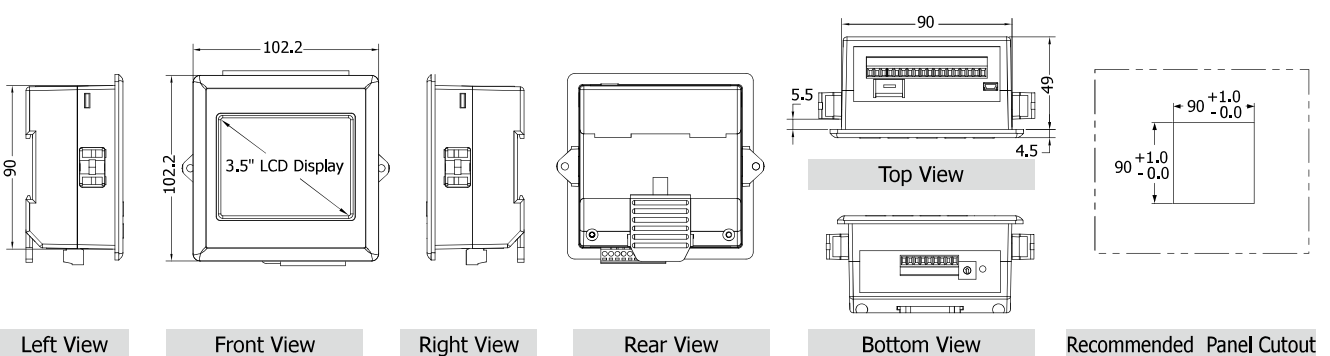


Dimensions (Units: mm)

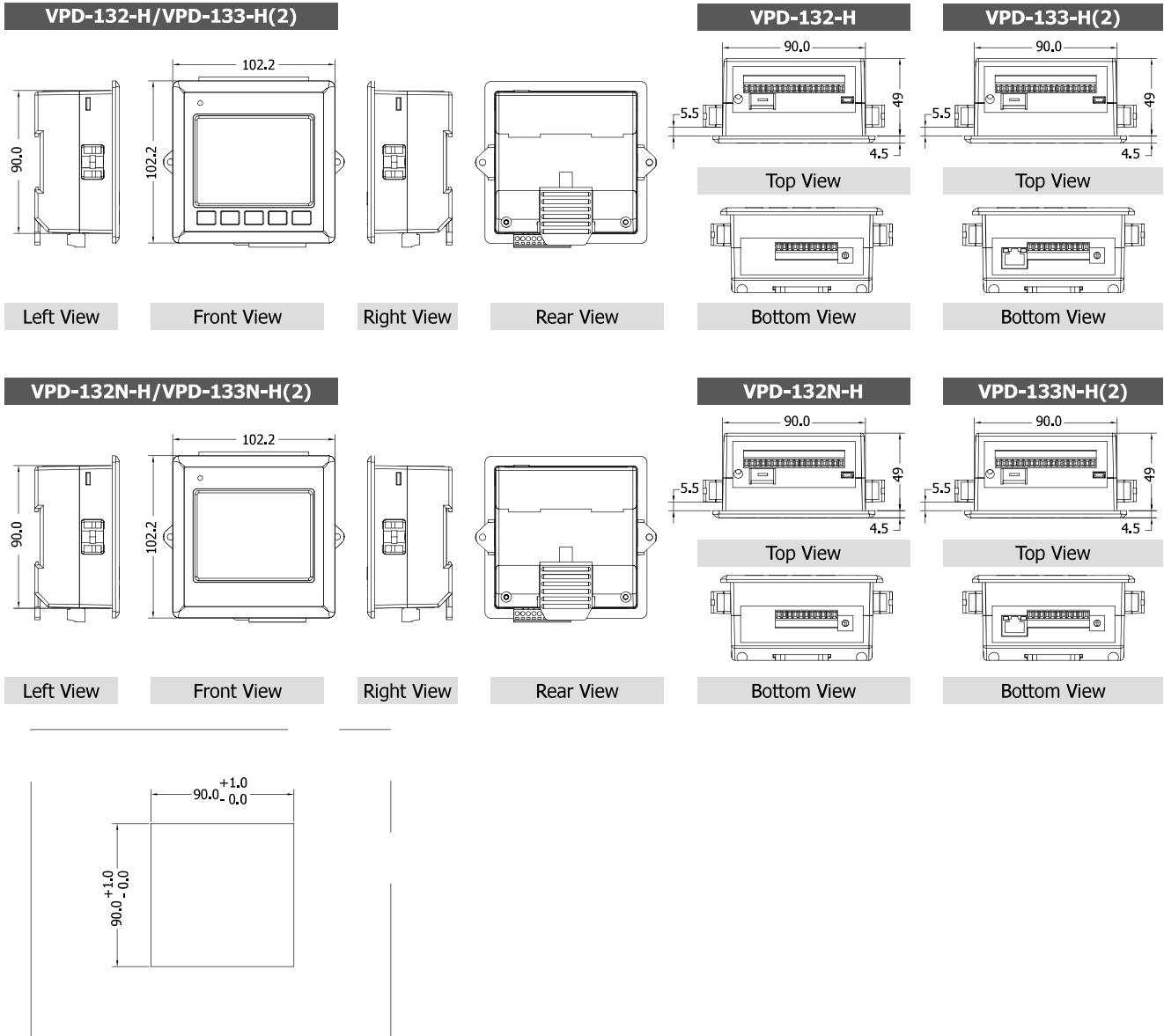
VPD-130-H(2)



VPD-130N-H(2)



■ Dimensions (Units: mm)



■ Ordering Information

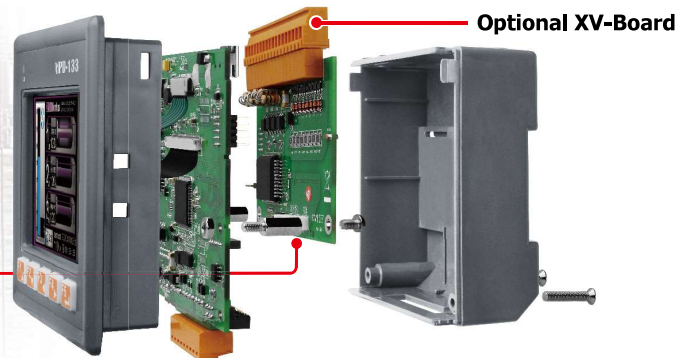
VPD-130-H CR	3,5" Touch HMI Device with 1 x RS-232/RS-485, RTC, USB Download Port and Rubber Keypad (RoHS)
VPD-130-H2 CR	
VPD-130N-H CR	3,5" Touch HMI Device with 1x RS-232/RS-485, RTC and USB Download Port (RoHS)
VPD-130N-H2 CR	
VPD-132-H CR	3,5" Touch HMI Device with 1 x RS-232/RS-485 and 1 x RS-485, RTC, USB Download Port and Rubber Keypad (RoHS)
VPD-132N-H CR	3,5" Touch HMI Device with 1 x RS-232/RS-485 and 1 x RS-485, RTC and USB Download Port (RoHS)
VPD-133-H CR	3,5" Touch HMI Device with 1 x RS-232/RS-485 and 1 x RS-485, Ethernet (PoE), RTC, USB Download Port and Rubber Keypad (RoHS)
VPD-133-H2 CR	
VPD-133N-H CR	3,5" Touch HMI Device with 1 x RS-232/RS-485 and 1 x RS-485, Ethernet (PoE), RTC and USB Download Port (RoHS)
VPD-133N-H2 CR	

■ Accessories






CA-USB10	USB to 5P Mini-USB, 28AWG, 1.5 m
MDR-60-24 CR	24 VDC/2.5A, 60 W Power Supply with DIN-Rail Mounting (RoHS)

XV-Board Series

Making VPD series
have its own I/O to control!



Model	DIO Board					Relay Output Board		
	XV107	XV107A	XV110	XV111	XV111A	XV116		
Image								
Digital Input								
Channel	8	8	16			5		
Contact	Wet	Wet	Dry+Wet			Wet		
Sink/Source (NPN/PNP)	Source	Sink	Sink/Source			Sink/Source		
Wet Contact	On Voltage Level	+3.5 VDC ~ +50 VDC					+3.5 Vdc ~ +50 Vdc	
	Off Voltage Level	+1 VDC Max.					+1 VDC Max.	
Dry Contact	On Voltage Level	-	Close to GND			-		
	Off Voltage Level	-	Open			-		
Counters	Channels	8	16			5		
	Max. Count	32-bit (0 ~ 4, 294, 967, 285)					32-bit (0 ~ 4, 294, 967, 285)	
	Max. Input Frequency	50 Hz					50 Hz	
	Min. Pulse Width	10 ms					10 ms	
Input Impedance	10 KΩ, 0.5 W					10 KΩ, 0.5 W		
Overvoltage Protection	70 VDC					70 VDC		
Digital Output								
Channel	8			16				
Type	Open Collector	Open Emitter		Open Collector	Open Emitter			
Sink/Source (NPN/PNP)	Sink	Source		Sink	Source			
Load Voltage	+3.5 VDC ~ 50 VDC	+10 VDC ~ 40 VDC		+3.5 VDC ~ 50 VDC	+10 VDC ~ 40 VDC			
Max. Load Current	700 mA/channel	650 mA/channel		600 mA/channel				
Overload Protection	1.4 A			1.4 A				
Relay Output								
Channel						2 (channel 0, 1)	4 (channel 2~5)	
Type						Signal Relay	Power Relay	
Form A Relay	Contact Rating						2 A @ 30 VDC 0.24 A @ 220 VDC 0.25 A @ 250 VAC	6 A @ 35 VDC 6 A @ 240 VAC
	Min. Contact Load						10 mA @ 20 mV	100 mA @ ≥ 12 V
	Contact Material						Silver Nickel, Gold-covered	Silver Cadmium Alloy
	Operate Time						3 ms (typical)	5 ms (typical)
	Release Time						4 ms (typical)	1 ms (typical)
	Mechanical Endurance						10 ⁸ ops.	30 X 10 ⁶ ops.
	Electrical Endurance						2 X 10 ⁵ ops.	1 X 10 ⁵ ops.
Isolation								
Intra-module Isolation	3750 VDC (Field to Logic)							
Power Requirements								
Consumption	0.15 W	0.45 W	0.25 W	0.2 W	0.8 W	1.2 W		

Multifunction Board					
Model	XV303	XV306	XV307	XV308	XV310
Image					
Analog Input					
Channel		4		8	4
Sensor Type		$\pm 1\text{ V}, \pm 2.5\text{ V}, \pm 5\text{ V}, \pm 10\text{ V}, 0 \sim 20\text{ mA}, 4 \sim 20\text{ mA}, \pm 20\text{ mA}$ (Jumper selectable)		$\pm 1\text{ V}, \pm 2.5\text{ V}, \pm 5\text{ V}, \pm 10\text{ V}, 0 \sim 20\text{ mA}, 4 \sim 20\text{ mA}, +/-20\text{ mA}$ (Jumper selectable)	
Resolution	-	16-bit	-	16-bit	
Sampling Rate	Normal Mode	10 Hz		10 Hz	
	Fast Mode	200 Hz		200 Hz	
Input Impedance		20 M Ω		20 M Ω	
Overvoltage Protection		120 VDC		120 VDC	
Analog Output					
Channel	4		2		2
Range	0 V ~ +5 V, $\pm 5\text{ V}$, 0 V ~ +10 V, $\pm 10\text{ V}$, 0 mA ~ +20 mA, +4 mA ~ +20 mA (Jumper Selectable)	-	0 V ~ +5 V, $\pm 5\text{ V}$, 0 V ~ +10 V, $\pm 10\text{ V}$, 0 mA ~ +20 mA, +4 mA ~ +20 mA (Jumper Selectable)	-	0 V ~ +5 V, $\pm 5\text{ V}$, 0 V ~ +10 V, $\pm 10\text{ V}$, 0 mA ~ +20 mA, +4 mA ~ +20 mA (Jumper Selectable)
Resolution	12-bit		12-bit		12-bit
Voltage Output Capability	10 V @ 20 mA		10 V @ 20 mA		10 V @ 20 mA
Current Load Resistance	500 Ω		500 Ω		500 Ω
Universal Digital Input/Output					
Channel		-		DI+DO=8 (by Wire)	-
Digital Input					
Channel	4	4	-	-	4
Sink/Source (NPN/PNP)	Sink/Source	Sink/Source	Source		Source
Wet Contact	On Voltage Level	$+3.5 \sim +50\text{ VDC}$		+1 VDC Max.	-
	Off Voltage Level	$+1\text{ VDC Max.}$		+4 ~ 30 VDC	-
Dry Contact	On Voltage Level	-		Close to GND	Close to GND
	Off Voltage Level	-		Open	Open
Counters	Max. Count	32-bit (0~4,294,967,285)			
	Max. Input Frequency	50 Hz			
	Min. Pulse Width	10 ms			
Overload Protection	70 VDC	70 VDC	60 VDC		60 VDC
Digital Output					
Channel		4		-	4
Type		Power Relay (Form A)		Sink	Source
Load Voltage				3.5 ~ 50 VDC	+10 ~ +40 VDC
Max. Load Current				700 mA	650 mA/channel
Overload Protection				60 VDC	47 VDC
Contact Rating		6 A @ 35 VDC 6 A @ 240 VAC			
Min. Contact Load		100 mA @ $\geq 12\text{ V}$			
Operate/Release Time		5 ms (typical)/1 ms (typical)			
Mechanical/Electrical Endurance		30 x 10 ⁶ ops./1 x 10 ⁵ ops.			
Isolation					
Intra-module Isolation, Field to Logic		2000 VDC			
Power Requirements					
Consumption		1.6 W		0.8 W	1.6 W