

VPD-142N-H

4.3" Touch HMI Device with 2 x RS-232/RS-485



VPD-143N-H

4.3" Touch HMI Device with 2 x RS-232/RS-485, Ethernet (PoE)



VPD-142-H

4.3" Touch HMI Device with 2 x RS-232/RS-485 and Rubber Keypad



VPD-143-H

4.3" 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-142-H/VPD-143-H)
- Free HMIWorks development tool
- Support C language and Ladder Designer
- Modbus TCP/RTU & DCON protocols
- Support user-defined third party protocol (C language)
- Front Panel: IP65 Waterproof
- I/O Expansion Board: XV-board
- Operating Temperature: -20 ~ 50 °C

Introduction

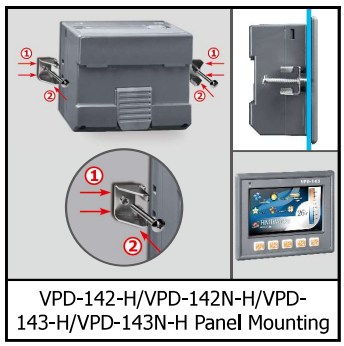
The **TouchPAD VPD 4.3" Series** is a series of industrial touch HMI devices that features 4.3" high-color high-resolution touch screen LCD. With touch screen capability, it is easy to deploy into all kinds of automation systems, and make them more intuitive and efficient. Either setup new system installations 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-143 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.

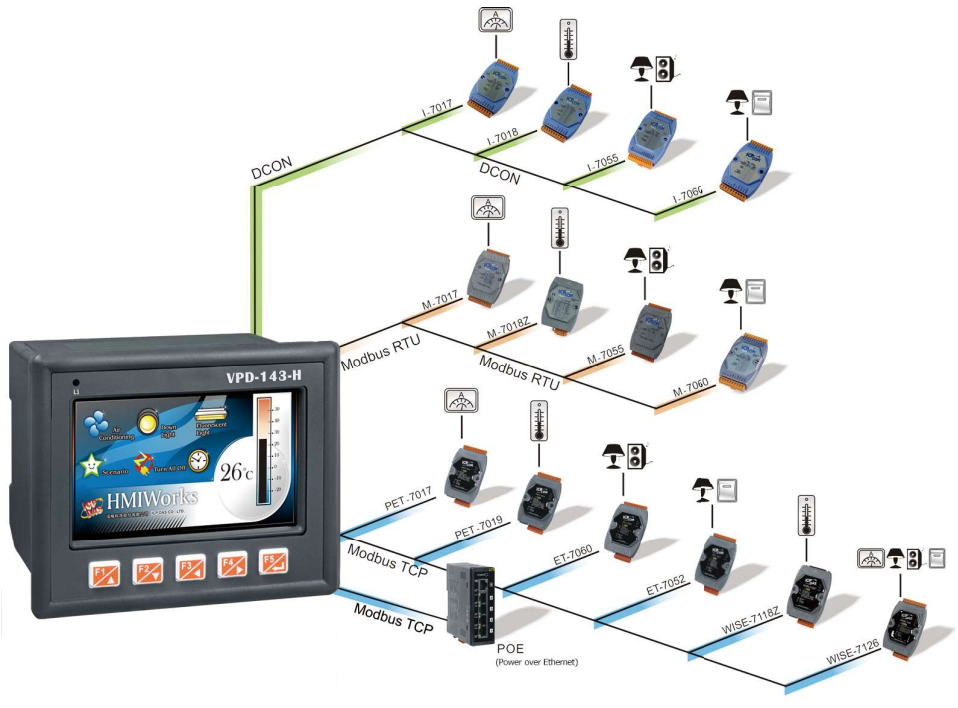
Applications



VPD-142-H/VPD-142N-H/VPD-143-H/VPD-143N-H with DIN-Rail Mounting

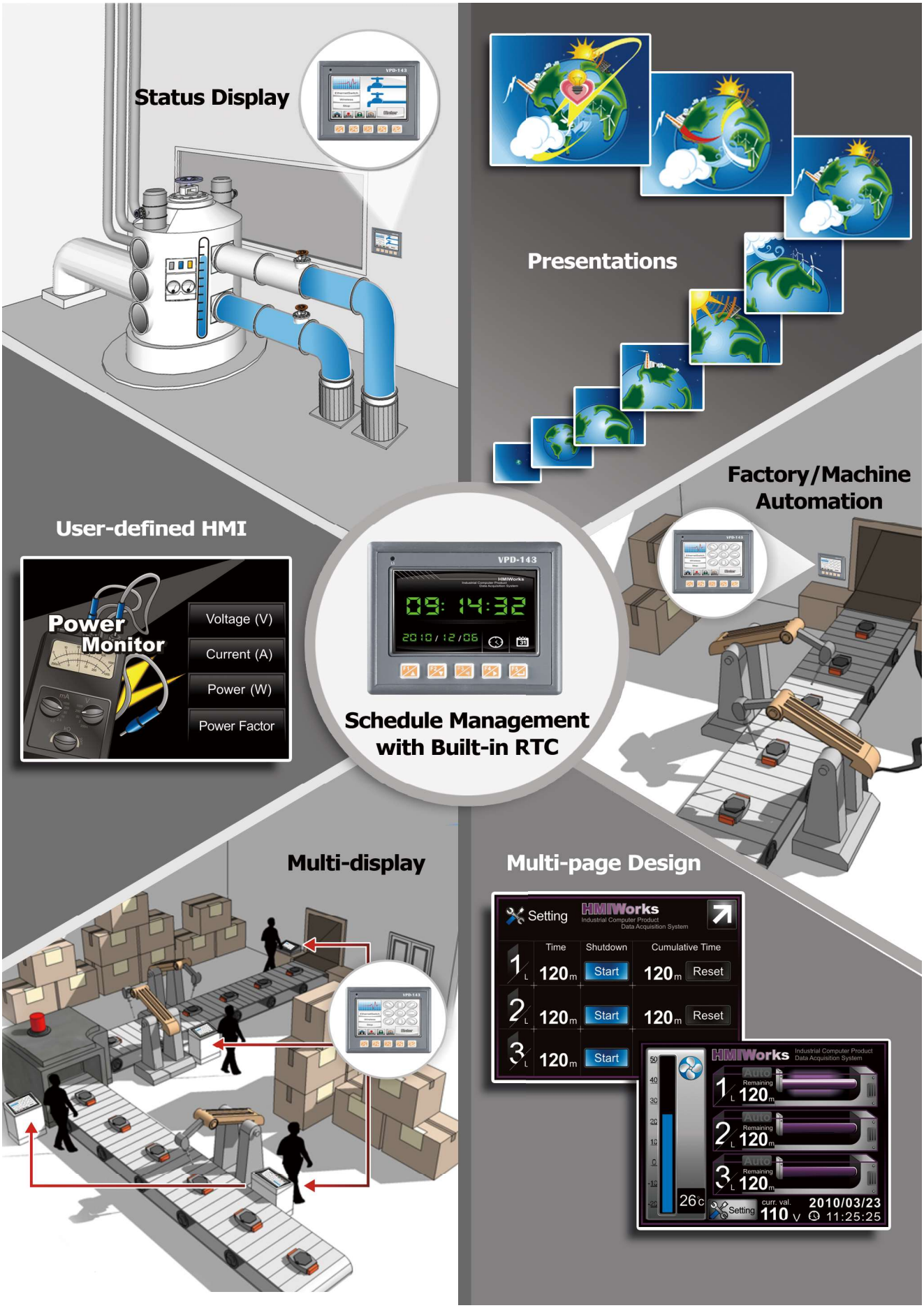


VPD-142-H/VPD-142N-H/VPD-143-H/VPD-143N-H Panel Mounting



LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Applications



LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

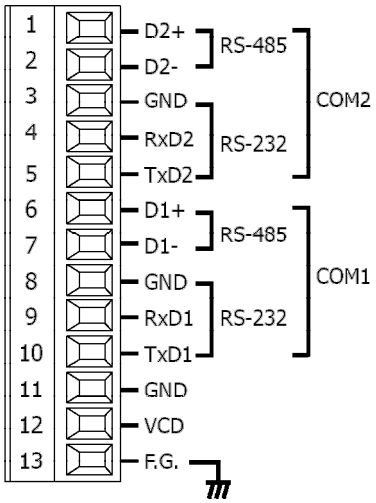
Specifications

Model	VPD-142-H	VPD-142N-H	VPD-143-H	VPD-143N-H
Main Unit				
CPU	32-bit RISC CPU			
Storage	16 MB SDRAM/16 MB Flash			
Real Time Clock	Yes			
Display				
Type	LCD 4.3" TFT (Resolution 480 X 272, 65535 colors), defective pixels <= 3			
Backlight Life	20,000 hours			
Brightness	400 cd/m2			
Touch Panel	Yes			
LED Indicators				
Status	1 LED			
COM Ports				
Ports	2 x RS-232/RS-485 including Self-Tuner			
HMI				
Buzzer	Yes			
Rotary Switch	Yes			
Rubber Keypad	5 keys (Programmable)	-	5 keys (Programmable)	-
Reset Button	Yes			
Ethernet				
Ports	RJ-45 x 1, 10/100 Base-TX			
Power				
Consumption	2.5 W			
Powered from PoE	-		IEEE 802.3af, Class1 (48 V)	
Powered from Terminal Block	+12 ~ 48 VDC			
Mechanical				
Dimensions (mm)	131 mm x 105 mm x 54 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			

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Pin Assignments

VPD-142-H/142N-H/143-H/143N-H



Appearance

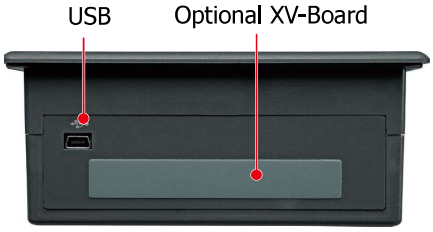
VPD-142N-H/143N-H Front View



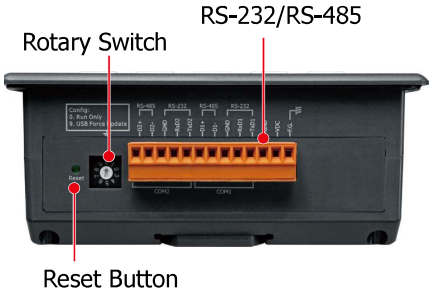
VPD-142-H/143-H Front View



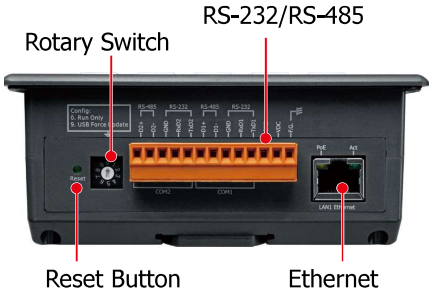
VPD-142(N)-H/143(N)-H Top View



VPD-142(N)-H Bottom View



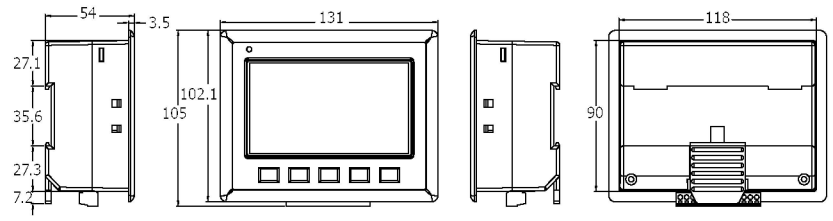
VPD-143(N)-H Bottom View



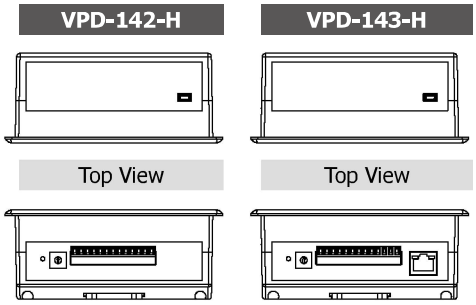
LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Dimensions (Units: mm)

VPD-142-H/VPD-143-H



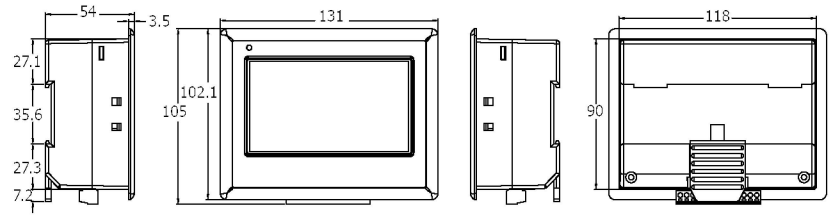
Left View | Front View | Right View | Rear View



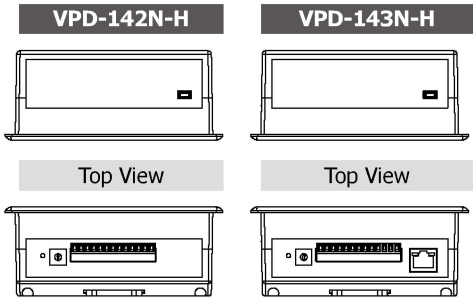
VPD-142-H: Top View, Bottom View

VPD-143-H: Top View, Bottom View

VPD-142N-H/VPD-143N-H



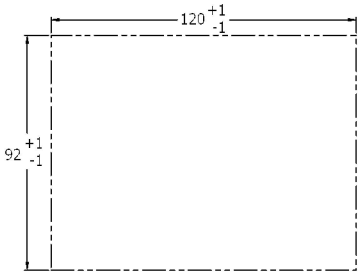
Left View | Front View | Right View | Rear View



VPD-142N-H: Top View, Bottom View

VPD-143N-H: Top View, Bottom View

VPD-142-H/142N-H/143-H/143N-H



Recommended Panel Cutout

Ordering Information

VPD-142-H CR	4.3" Touch HMI Device with 2 x RS-232/RS-485, RTC, USB Download Port and Rubber Keypad (RoHS
VPD-142N-H CR	4.3" Touch HMI Device with 2 x RS-232/RS-485, RTC and USB Download Port (RoHS)
VPD-143-H CR	4.3" Touch HMI Device with 2 x RS-232/RS-485, Ethernet (PoE), RTC, USB Download Port and Rubber Keypad (RoHS)
VPD-143N-H CR	4.3" Touch HMI Device with 2 x RS-232/RS-485, Ethernet (PoE), RTC and USB Download Port (RoHS)

Accessories

 CA-USB10 CR	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)

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

XV-Board Series



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	

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Multifunction Board						
Model		**XV303**	**XV306**	**XV307**	**XV308**	**XV310**
Image						
Analog Input						
Channel		-	4	-	8	4
Sensor Type			± 1 V, ± 2.5 V, ± 5 V, ±10 V, 0 ~ 20 mA, 4 ~ 20 mA, ±20 mA (Jumper selectable)		±1 V, ±2.5 V, ± 5 V, ± 10 V, 0 ~ 20 mA, 4 ~ 20 mA, +/-20 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 MΩ		20 MΩ	
Overvoltage Protection			120 VDC		120 VDC	
Analog Output						
Channel		4	-	2	-	2
Range		0 V ~ +5 V, ±5 V, 0 V ~ +10 V, ±10 V, 0 mA ~ +20 mA, +4 mA ~ +20 mA (Jumper Selectable)		0 V ~ +5 V, ±5 V, 0 V ~ +10 V, ±10 V, 0 mA ~ +20 mA, +4 mA ~ +20 mA (Jumper Selectable)		0 V ~ +5 V, ±5 V, 0 V ~ +10 V, ±10 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 ~ +50 VDC			+1 VDC Max.	-
	Off Voltage Level	+1 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 @ ≧ 12 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		2000 VDC				
Power Requirements						
Consumption		1.6 W			0.8 W	1.6 W

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000