

## Ethernet PLC

**MODEL: PR-18DC-DAI-R-N**

Simple panels, easier to integrate into your equipment

Built-in Web Server

With embedded configurable sensor

The built-in RS485 interface makes communication more convenient

Support for MQTT protocol, data access to the IoT cloud service directly



Specific characteristics	
<b>Input</b>	I1--I6 : 6DI/AI (0--10V signal) + I7--I8 : 2DI/AI(0--10V/0-20mA signal) + I9--IC: 4DI/HSI
<b>Output</b>	Q1--Q6 ( RELAY 10A 250VAC /5A 30VDC)
<b>Supply</b>	DC 24V
<b>Weight</b>	Approx. 380g
<b>Dimensions</b>	Without packing: 95mm*90mm*61mm With packing: 107mm*96mm*73mm
<b>Expansion</b>	YES(16PCS in max)

General characteristics	
Products certification	CE
Conformity with the low voltage directive (in accordance with BT 2006/95/EC)	IEC/EN 61131-2
Conformity with the EMC directive (in accordance with 2004/108/EC)	IEC/EN 61000-6-1 (Residential, commercial and light-industrial environments) IEC/EN 61000-6-2 (Industrial) IEC/EN 61000-6-3 (Residential, commercial and light-industrial environments) IEC/EN 61000-6-4 (Industrial)
Protection rating	In accordance with IEC/EN 60529: IP20
Overvoltage category	3 in accordance with IEC/EN 60664-1
Mechanical resistance	Immunity to vibrations IEC/EN 60068-2-6 Immunity to shock IEC/EN 60068-2-27
Resistance to electrostatic discharge	IEC/EN 61000-4-2 Severity 3

Resistance to HF interference	Immunity to radiated electrostatic fields IEC/EN 61000-4-3 Immunity to fast transients (burst immunity) IEC/EN 61000-4-4, level 3 Immunity to shock waves IEC/EN 61000-4-5 Severity 3 Radio frequency in common mode IEC/EN 61000-4-6, level 3 Voltage dips and breaks (AC) IEC/EN 61000-4-11 Immunity to damped oscillatory waves IEC/EN 61000-4-12
Conducted and radiated emissions	Class B in accordance with EN 55022
Operating temperature	-25 ~ +55°C in accordance with IEC/EN 60068-2-1 and IEC/EN 60068-2-2
Storage temperature	-40 ~ +70°C in accordance with IEC/EN 60068-2-1 and IEC/EN 60068-2-2
Relative humidity	10 ~ 95 % . (no condensation or dripping water) in accordance with IEC/EN 60068-2-30
Mounting	On 35 mm standard mounting rail, 4 MW, or wall-mounting
Screw terminals connection capacity	Flexible wire with ferrule 1 conductor: 0.25 to 2.5 mm <sup>2</sup> (AWG 24 ~AWG 14)

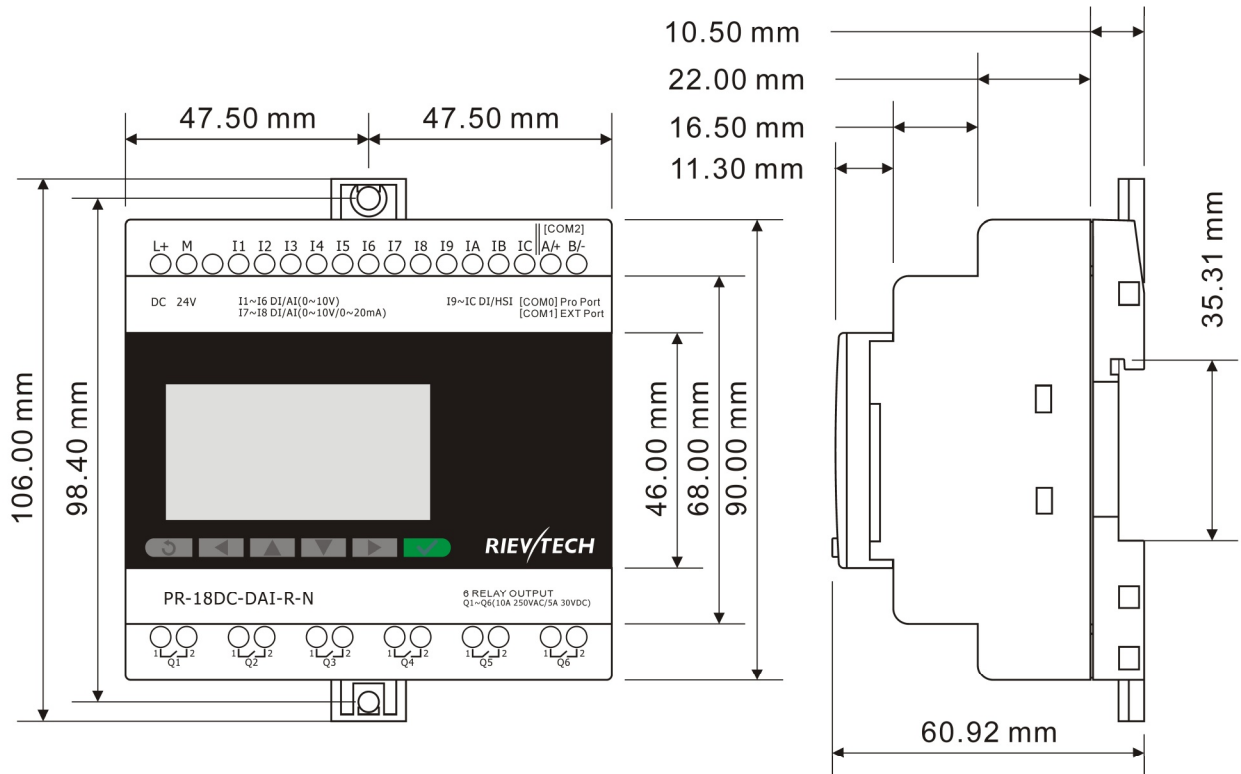
Processing characteristics	
Program size function blocks (FBD)	1024 function blocks
Memory size function blocks (FBD)	64K
LCD display	4 lines of 16 characters and configurable backlighting
Programming method	Function blocks
Program memory	Flash EEPROM
Data Logging	4G TF Card
Back-up time in the event of power failure	Program and settings in the controller: 10 years Program and settings in the plug-in memory: 10 years Data memory: 10 years
Cycle time	FBD: typ. 0.6ms ~ 8.0ms
Response time	Input acquisition time: + 1 to 2 cycle times
Clock data retention	25°C typ. 20 days
Clock Drift	typ. ± 2 s/day
Timer block accuracy	time base :s(Second) Resolution : +10 ms time base :m(Minute) Resolution: +1 s time base :h(Hour) Resolution: +1 min
Start up time on power up	Typ. 4s

Supply	
Nominal voltage	DC 24V

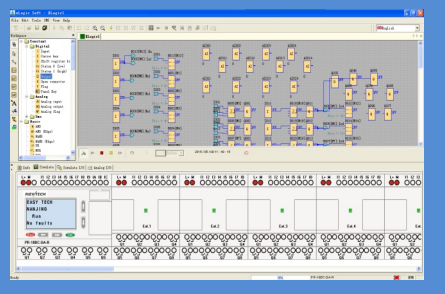

















Operating limits	DC 20.4-28.8V
Supply frequency range	NO
Max. absorbed power	1.2 W (24V dc) ; 1.3 W (28.8V dc)
Isolation voltage	None
<b>Inputs</b>	
Input voltage	DC0-28.8V
Input current	0.4mA ; 10.8V dc 0.5mA ; 12.0 V dc 1.2mA ; 24 V dc 1.5mA ; 28.8 V dc
Resolution Ratio (Analog Input)	0.01V (0~10v) 0.02mA (0~02mA)
Accuracy at 25 °C (Analog Input)	±0.02V ±0.05mA
Logic 1 voltage threshold	> 8 VDC;>0.3mA
Logic 0 voltage threshold	< 5 VDC;<0.1mA
Input Response Time	Delay time at 0 to 1: I1-I8:Typ. 2.5 ms I9-IC:Typ. 1.5 ms Delay time at 1 to 0: Typ. 1.5 ms
Maximum counting frequency	Typ.: 4 HZ; HSI: 60kHz(I9--IC)
Sensor type	Contact or 3-wire PNP
Input type	Resistive
<b>Outputs</b>	
Rated voltage	AC 250 V / DC 30 V
Rated current	AC 250 V: 10 A DC 30 V ; 5A
Electrical durability Expectancy	10 <sup>5</sup> Operations at Rated Resistive Load
Mechanical life	10 <sup>7</sup> Operations at No Load condition
Response time	Operate Time : 15 mSec. Max. Release Time : 10 mSec. Max.
Frequency (Hz)	resistive load : 2 Hz inductive load : 0.5 Hz
<b>Communication ports parameters:</b>	
COM0_TTL port	COM0 : optional RS232/RS485 (via accessories :RS232 CABLE/PRO-RS485) Band Rate: 4800; 9600; 19200; 38400; 57600; 115200 Communication Protocol: MODBUS RTU; MODBUS ASCII
Ext RS485	COM1: optional RS485 (Via PR-RS485 expansion module) Band Rate: 4800; 9600; 19200 Communication Protocol: MODBUS RTU; MODBUS ASCII
Built-in RS485	COM2: Built-in RS485

	Band Rate: <b>4800; 9600; 19200; 38400; 57600; 115200</b> Communication Protocol: MODBUS RTU; MODBUS ASCII
Ethernet port:	Built-In(10M/100M), 1.Can be used as program or communication 2.Can be used as modbus master or slave <b>Communication Protocol: MODBUS TCP RTU ; MODBUS RTU</b>
Monitoring webservice page	Yes
Xlogic<--->Xlogic(by Ethernet)	1 xlogic works as tcp server can connect with 8 tcp client xlogics or other tcp devices.
Xlogic<--->Ethernet/Internet:	1 xlogic works as TCP clients can connect with 8 different tcp servers separately in maximum

## Dimension



## Program(xlogicsoft) Specification
















<b>System</b>	Operating System			
	Requirements	Windows /2000/Xp/Win7/Win8		
	Programming Languages	Function Block		
	Program Memory	64K		
	Execution Speed	<0.1ms Per Function		
	Lcd Display	No		
	Functions	Up To 1024 Function Blocks		
<b>Constant</b>	Input	12		
	Cursor Key	4		
	Shift Register Bit	32		
	Status 0	1024		
	Status 1	1024		
	Output	6		
	Open Connector	1024		
	Flag	256		
	Panel Key	6		
	Analog Input	8(DC Type)		
	Analog Output	None		
	Analog Flag	256		
<b>MATT</b>	VB	1024	Byte	
	VD	1024	WORD	
	VW	1024	DWORD	
	String to Integer	1024		
	String Comparator	1024		

	Publish with MQTT	143				
	Subscribe with MQTT	143				
Basic	AND	1024				
	AND(Edge)	1024				
	NAND	1024				
	NAND(Edge)	1024				
	OR	1024				
	NOR	1024				
	XOR	1024				
	NOT	1024				
	Boolean Function	1024				
Timer	On-Delay	1024	10ms--99 h59m	DWORD	Retentivity Protection	
	Off-Delay	1024	10ms--99 h59m	DWORD	Retentivity Protection	
	On-/Off-Delay	1024	10ms--99 h59m	DWORD	Retentivity Protection	
	Retentive On-Delay	1024	10ms--99 h59m	DWORD	Retentivity Protection	
	Wiping Relay(Pulse Output)	1024	10ms--99 h59m	DWORD	Retentivity Protection	
	Edge Triggered Wiping Relay	1024	10ms--99 h59m	DWORD	Retentivity Protection	
	Asynchronous Pulse Generator	1024	10ms--99 h59m	DWORD	Retentivity Protection	
	Random Generator	1024	10ms--99 h59m	DWORD	Protection	
	Stairway Light Switch	1024	10ms--99 h59m	DWORD	Retentivity Protection	
	Multiple Function Switch	1024	10ms--99 h59m	DWORD	Retentivity Protection	

	Weekly Timer	1024	0:00--23:59	-----	Protection	
	Yearly Timer	1024	2000.1.1-- 2099.1.1	-----	Protection	
	Astronomical Clock	1024	-----	-----	Protection	
	Stopwatch	1024	-----	DWORD	Retentivity Protection	
Counter	Up/Down Counter	1024	0--9999 9999	DWORD	Protection	
	Hours Counter	10	0h--9999h	DWORD	Protection	
	Threshold Trigger	1024	0--99999	DWORD	Protection	
Analog	Analog Comparator	1024	-10000--20000	-----	Protection	
	Analog Threshold Trigger	1024	-10000--20000	DWORD	Protection	
	Analog Amplifier	1024	-10000--20000	DWORD	Protection	
	Analog Watchdog	1024	-10000--20000	DWORD	Retentivity Protection	
	Analog Differential Trigger	1024	-10000--20000	DWORD	Protection	
	Analog MUX	1024	-32768---32767	DWORD	Protection	
	PI Controller	1024	-10000--20000	-----	Protection	
	Analog Ramp	1024	-10000--20000	-----	Protection	
	Analog Math	1024	-32768---32767	DWORD	Protection	
	Long Datas Math	1024	-2147483648--- 2147483647	DWORD	Protection	
	Analog Math Error Detection	1024	0--1	DWORD	Retentivity	
	Analog Filter	4	-----	DWORD	Protection	
	Max/Min	1024	-32768---32767	DWORD	Retentivity Protection	
	Average Value	1024	1--365	DWORD	Retentivity Protection	
	Latching Relay	1024	-----	Bit	Retentivity Protection	

Miscellaneous	Pulse Relay	1024	-----	Bit	Retentivity	
	Message Texts	128	-----	Bit	-----	
	Soft key	1024	-----	Bit	Retentivity Protection	
	Shift Register	4	-----	Bit	Retentivity	
	PWM	1024	0--10KHz	-----	Retentivity	
	Modbus Read	1024	-----	-----	-----	
	Modbus Write	1024	-----	-----	-----	
	Modbus Read Write	1024	-----	-----	-----	
	Data Latching Relay	1024	-32768---32767	DWORD	Retentivity Protection	
	Long Data Latching Relay	1024	-32768---32767	DWORD	Retentivity Protection	
	Memory Write	1024	-2147483648---2147483647	DWORD	Retentivity Protection	
	Memory Read	1024	-----	-----	-----	
	Word to Bit	1024	-----	Bit	Retentivity Protection	
	Bit to Word	1024	-32768---32767	DWORD	Retentivity Protection	
	Device Reset	None	-----	Bit	Retentivity	
	Comport status	1024	-----	-----	-----	
	RH MATH	1024	0--32767	DWORD	Retentivity	
	Sound Play	None	-----	-----	-----	
	Email Send Error Detection	None	-----	-----	-----	
	WiFi Mode Set	None	-----	-----	-----	
APP	Cam Control	656	-----	-----	Retentivity Protection	



Angular Cam Timer	1024	-----	-----	-----	
Pumps Management	1024	-----	-----	Retentivity	
Defrost	1024	-----	-----	-----	
Comparison of 2 values	1024	-----	-----	-----	
Multicompare	1024	-----	-----	-----	
Compare in Zone	1024	-----	-----	-----	
Conversion Word bits	1024	-----	-----	-----	
Conversion bits word	1024	-----	-----	-----	
Demultiplexer	1024	-----	-----	Retentivity	
Multiplexing	1024	-----	-----	-----	
Multiplexer	1024	-----	-----	Retentivity	
Square root	1024	-----	-----	-----	
Sin/Cos	1024	-----	-----	-----	
Absolute Humidity	1024	-----	-----	Protection	
Analog Table	None	-----	-----	-----	

## Notes

1. 40 FBD Retentivity can be used
2. AF1~AF64 can set the start value and default retentivity function.