

**Model:PR-18DC-DA-R**

## GENERAL SPECIFICATIONS

Timers : 1024

Counters : 1024

Function Blocks: 1024

Operation temp.: -20°C-55°C

Storage:-40°C-70°C

Protection: IP20(Non-waterproof)

RTC accuracy : MAX  $\pm 2S/day$

RTC Backup at 25 °C: 20 days

Program and settings Backup :10 years

Data Power-off retentivity: 10 years

Modify parameters via keypad LCD: yes

Dimensions: 95\*90\*55 (Unit: mm)

Certificate: CE

Installation: 35-DIN rail or screw for installation

Expansion capacity: 16 modules (PR-E-16)

Password protection : 4-digit number password protection or disable program upload function

Communication interface : 1 RS232 port & 1 RS485 port

Communication protocol : Modbus RTU/ASCII

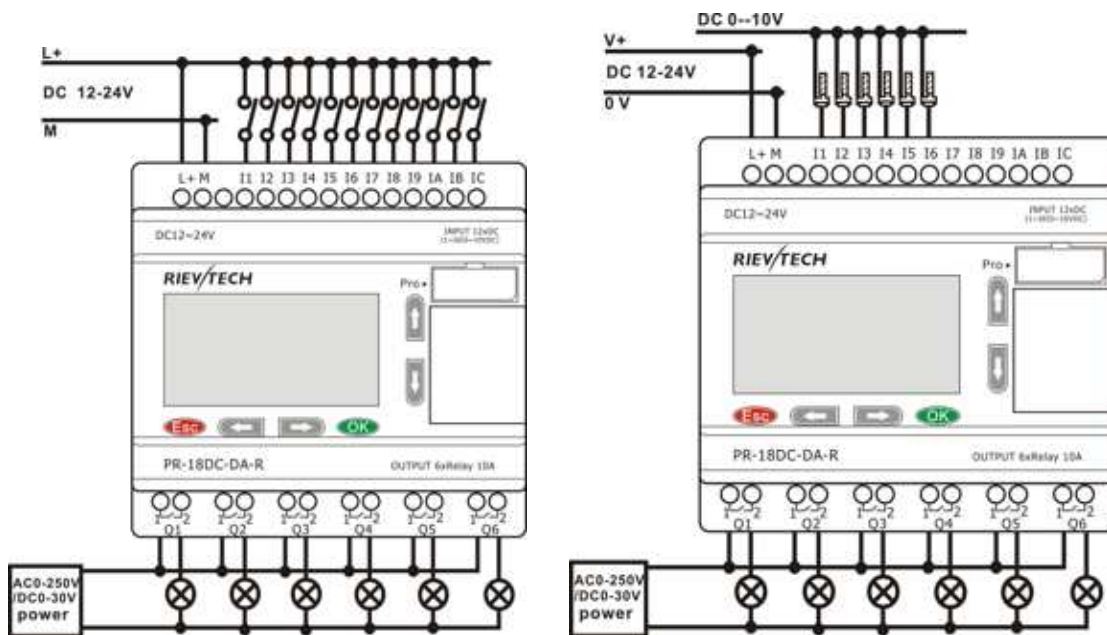
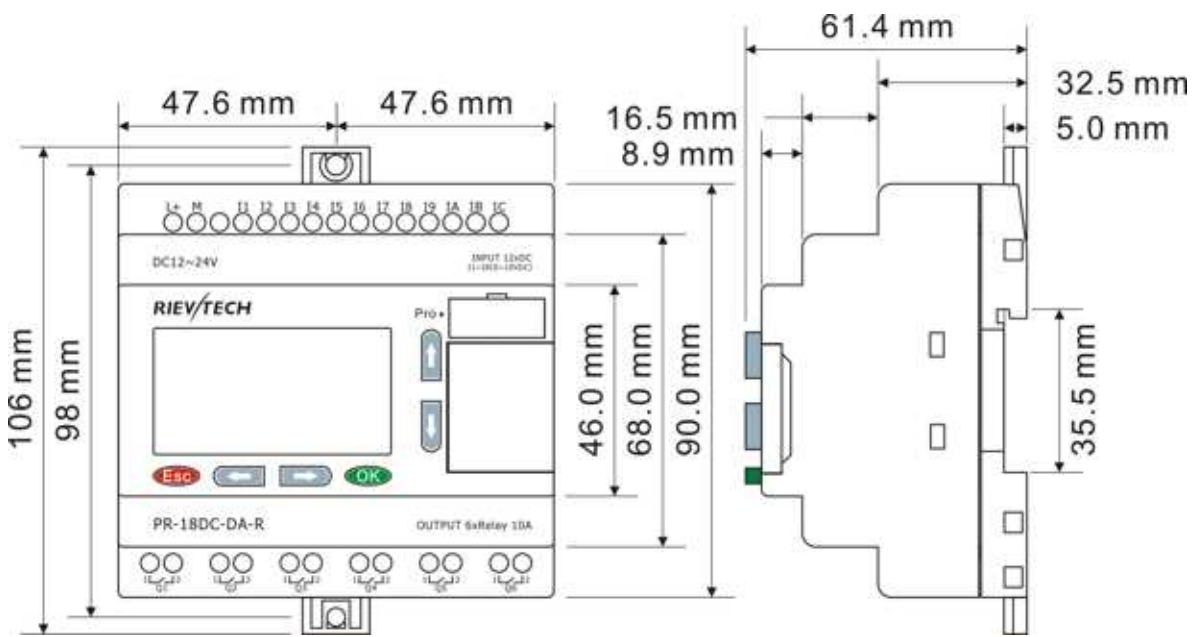


## Technical Index

<b>Power supply:</b>	
Nominal voltage	DC 12-24V
Operating limits	DC 10.8-28.8V
Immunity from micro power cuts	Typ.5 ms
Max. Startup current	Max. 0.25A
Max. absorbed power	3.5 W (10.8V dc) ; 4 W (28.8V dc)
Protection against polarity inversions	Yes
<b>Input parameters:</b>	
Input No	12 ( I1-IC )
Digital input	12 ( I1-IC )
Analogue input	6 ( I1-I6)(0..10V DC)
<b>Digital inputs( I7-IC )</b>	
Input voltage	DC0-28.8V
Input signal0	< 5V DC; <1mA
Input signal1	> 8 V DC;>1.7mA
Input current	2.3mA @ 10.8V dc 2.6mA @ 12.0 V dc 5.2 mA @ 24 V dc 6.3 mA @ 28.8 V dc
Response time	0 to 1 : <1 ms ; 1 to 0 : <1 ms
Maximum counting frequency	60k Hz(I9--IC)

Sensor type	Contact or 3-wire PNP
Input type	Resistive
Isolation between power supply and inputs	None
Isolation between inputs	None
<b>Inputs used as digital inputs( I1-I6 )</b>	
Input voltage	DC0-28.8V
Input signal0	< 5V DC;<0.1mA
Input signal1	> 8 V DC;>0.3mA
Input current	0.4mA @ 10.8V dc 0.5mA @ 12.0 V dc 1.2mA @ 24 V dc 1.5mA @ 28.8 V dc
Response time	0 to 1 : Typ. 1.5 ms ; 1 to 0 : Typ. 1.5 ms
Maximum counting frequency	Typ.: 4 HZ
Sensor type	Contact or 3-wire PNP
Input type	Resistive
Isolation between power supply and inputs	None
Isolation between inputs	None
<b>Inputs used as analog inputs( I1-I6 )</b>	
Measurement range	DC 0---10V
Input impedance	Min, 24K $\Omega$ ; Max. 72K $\Omega$
Input voltage	28.8 V DC max
Resolution	10bit ,0.01V
Accuracy at 25 °C	$\pm$ (Max.0.02)V
Accuracy at 55 °C	$\pm$ (Max.0.04)V
Isolation between analog channel and power supply	None
Cable length	10 m max. shielded and twisted
<b>Output parameters:</b>	
Output No.	6 (Q1-Q6)
Output type	Relay output
Continuous current	Resistive load 10A/Inductive load 2A
Max. breaking voltage	AC 250 V DC 110 V
Max. Allowable Power Force	1250VA 300W
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.
Built-in protections	Against short-circuits: None Against overvoltages and overloads: None
<b>Switch frequency:</b>	
Mechanism	10Hz
Resistor/light load	2Hz
Sensitive load	0.5Hz
<b>Other parameters:</b>	
Weight	Approx.400g

# Installation Dimensions & Wiring Diagram



SYSTEM					
SYSTEM		Operating System requirements	Windows /2000/XP/WIN7/WIN8		
SYSTEM		Programming languages	Function block		
SYSTEM		Program Memory	1024		
SYSTEM		Execution Speed	<0.1ms per function		
SYSTEM		LCD Display	4 lines x 16 characters		
SYSTEM		Functions	Up to 70 function blocks		
BASIC		Timers			
BASIC		Maximum Number	1024		
BASIC		Timing Ranges	10ms--99 h59m		
BASIC		Counters			
BASIC		Maximum Number	1024		
BASIC		Highest Count	99999999		
BASIC		Resolution	1		
BASIC		RTC			
BASIC		Number available	1024		
BASIC		Resolution	1 min		
BASIC		Time span available	Week/year-month-day-hour-min		
BASIC		Flags			
BASIC		Digital flags	256		
BASIC		Analog flags	256		
BASIC		PI Functions			
BASIC		Number available	30		
BASIC		Parameter Ranges	1-32767		
BASIC		Analog Math			
BASIC		Number available	1024		
BASIC		Function	ADD, Subtract,Multiply, Divide		
BASIC		Analog Ramp Function			
BASIC		Number available	55		
BASIC		Compare Function			
BASIC		Number available	1024		
Special Functions		HMI Screens			
Special Functions		Number available	128		
Special Functions		Display/Edit	Preset Current value and Free text		
Special Functions		PWM Functions			
Special Functions		Number available	1024, (2 fast output for Transistor)		
Special Functions		Communication Functions			
Special Functions		Number available	1024(Only CPU works as Master need these 2 blocks, slave does not need)		
Special Functions		Word/bit data Conversion	Square Boot	Sin/Cos	
Special Functions		Data-logger Function	Analog watchdog	Analog filter	
Special Functions		Pumps Management	Defrost function	Multiplexer	
Special Functions		Cam Control	Astronomical clock	Stop watch	
Special Functions				Boolean function	

Note: 1.Not all program functions are listed in this table i.e. AND,NAND,OR,NOT,NOR,XOR,SHIFT REGISTER,DATA LATCHING RELAY, COMPORT STATUS etc.