

## ◆ Technical Data:

**Model:PR-12DC-DA-R**

### GENERAL SPECIFICATIONS

Timers : 512  
 Counters : 512  
 Function Blocks: 512  
 Operation temp.: -20°C-55°C  
 Storage : -40°C-70°C  
 Protection : IP20(Non-waterproof)  
 RTC accuracy: MAX ±2S/day  
 RTC Backup at 25 °C: 20 days  
 Program and settings Backup:10 years  
 Data Power-off retentivity: 10 years  
 Dimensions : 72\*90\*61 (Unit, mm)  
 Certificate : CE  
 Installation : 35mm-DIN rail or screw for installation  
 Modify parameters via keypad LCD: yes  
 Modbus RTU/ASCII:yes(Master or slave with RS232/RS485)  
 Expansion: No

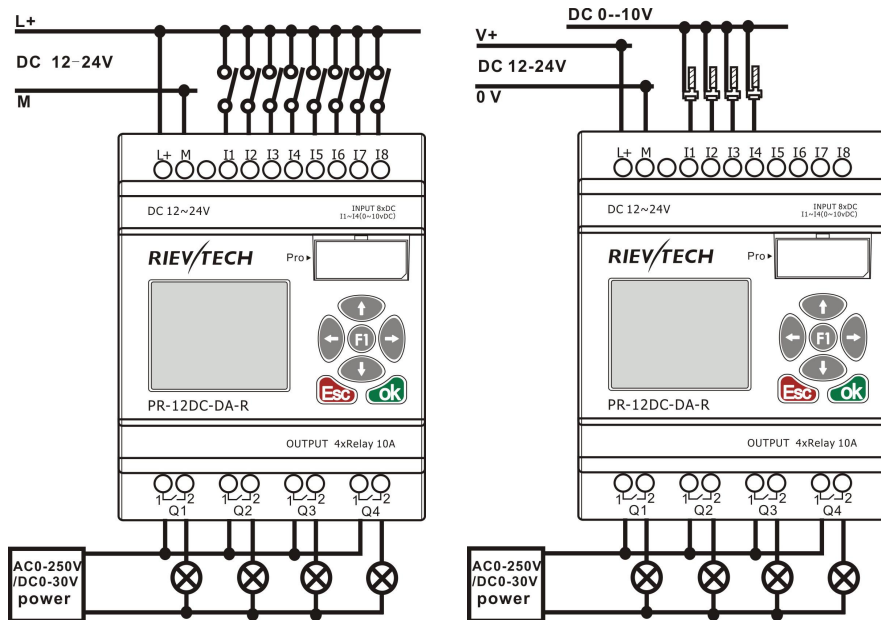
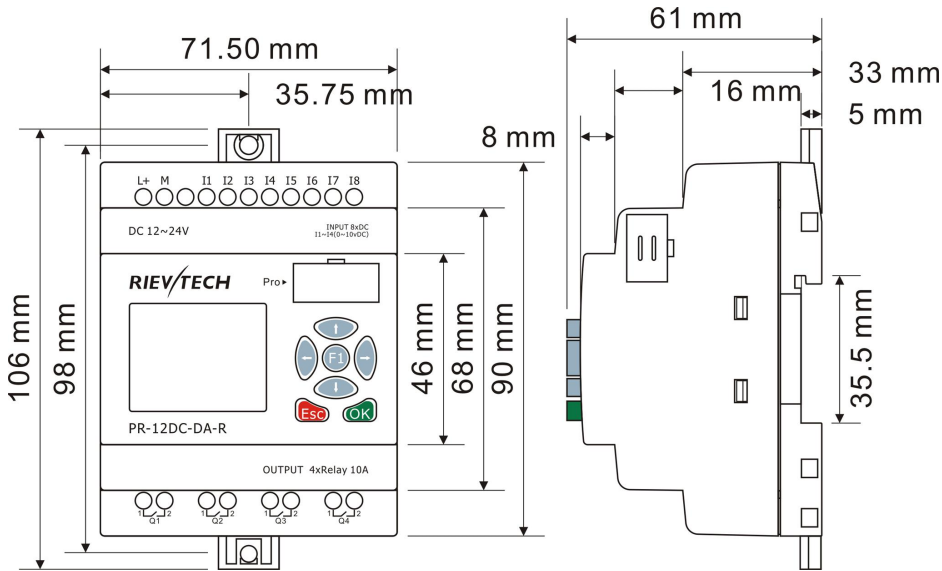


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<b>Power supply:</b>	
Nominal voltage	DC 12-24V
Operating limits	DC 10.8-28.8V
Immunity from micro power cuts	Typ.5 ms
Max. Startup current	Max. 0.25A
Max. absorbed power	3.5 W (10.8V dc) ; 4 W (28.8V dc)
Protection against polarity inversions	Yes
<b>Input parameters:</b>	
Input No	8 ( I1-I8 )
Digital input	8 ( I1-I8 )
Analogue input	4 ( I1-I4)(0..10V DC)
<b>Digital inputs( I5-I8 )</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(I5--I8)
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-I4 )</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-I4 )</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.	4 (Q1-Q4)
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.300g

# Installation Dimensions & Wiring Diagram



SYSTEM							
Operating System requirements		Windows /2000/XP/WIN7/WIN8					
Programming languages		Function block					
Program Memory		512					
Execution Speed		<0.1ms per function					
LCD Display		4 lines x 16 characters					
Functions		Up to 70 function blocks					
BASIC							
Timers							
Maximum Number	512	a.On-delay; b.Off-delay etc. Up to 12 kind Timers					
Timing Ranges	10ms--99 h59m						
Counters							
Maximum Number	512			a.Up/down Counter b.Hours Counter c.Frequency Threshold Trigger			
Highest Count	99999999						
Resolution	1						
RTC							
Number available	512	a.Weekly Timer b.Yearly Timer					
Resolution	1 min						
Time span available	Week/year-month-day-hour-min						
Flags							
Digital flags	256	a.Digital Flag b.Analog Flag					
Analog flags	256						
PI Functions							
Number available	30	a.PI Controller					
Parameter Ranges	1-32767						
Analog Math							
Number available	512	a.Analog Math b.Analog Math Error detection					
Function	ADD, Subtract,Multiply, Divide						
Analog Ramp Function							
Number available	55	a. Analog Ramp					
Compare Function							
Number available	512			a.Analog compactor b.Comparison of 2 values			
Special Functions							
HMI Screens							
Number available	64	a.Message texts					
Display/Edit	Preset Current value and Free text						
PWM Functions							
Number available	512, (2 fast output for Transistor)	a.PWM					
Communication Functions							
Number available	512(Only CPU works as Master need these 2 blocks, slave does not need)			a.Modbus write b.Modbus read			
Word/bit data Conversion	Square Boot	Sin/Cos	RS latch relay				
Data-logger Function	Analog watchdog	Analog filter	Average value				
Pumps Management	Defrost function	Multiplexer	Pulse Relay				
Cam Control	Astronomical clock	Stop watch	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.							