

◆ **Technical Data:**

**Model:PR-24AC-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 ±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: 133\*90\*61 (Unit: mm)

Certificate: CE

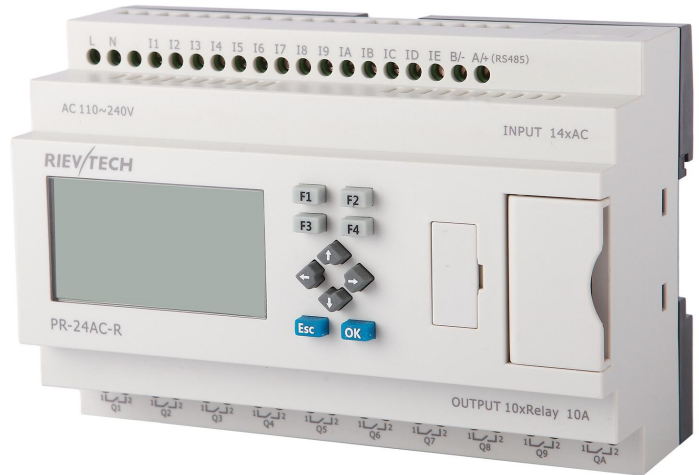
Installation: 35-DIN rail or screw for installation

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

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

Communication interface : 1 RS232 port & 2 RS485 port

Communication protocol : Modbus RTU/ASCII

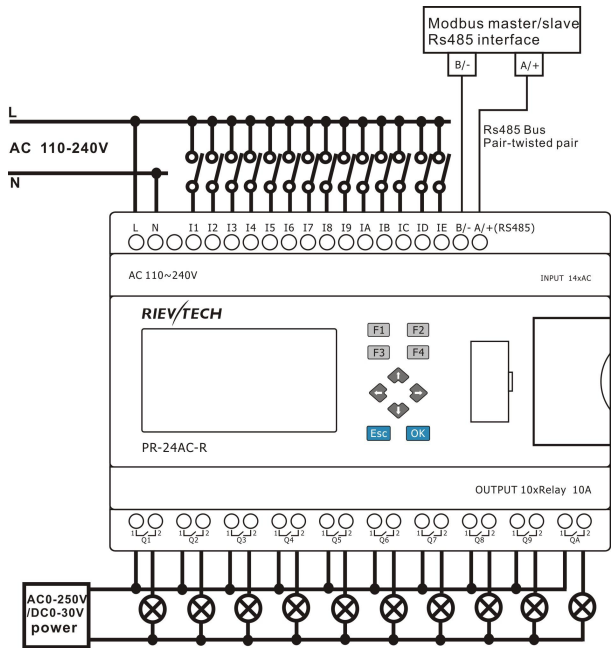
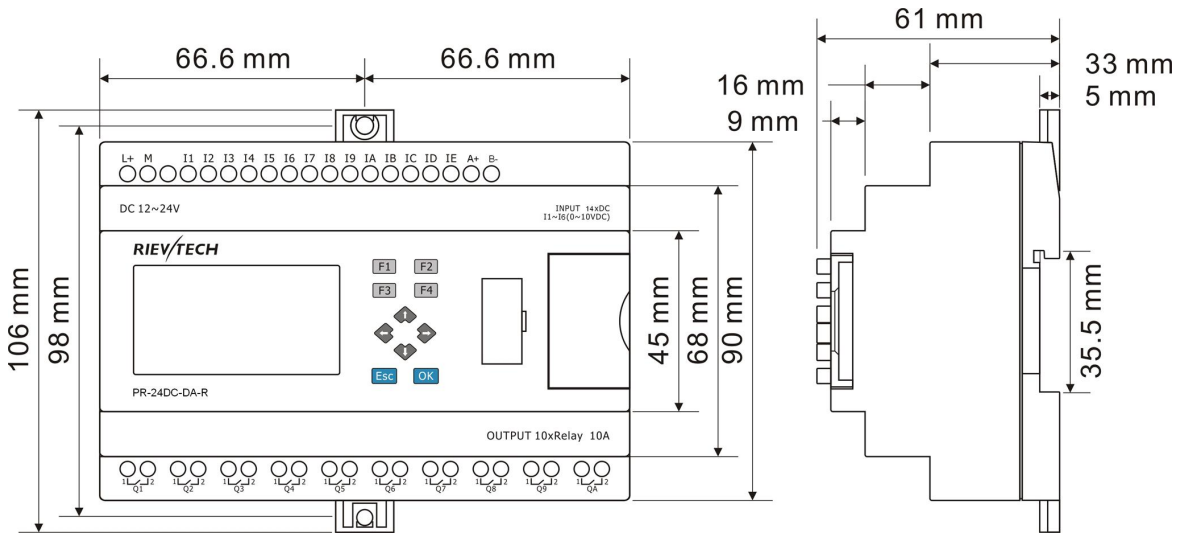


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| <b>Power supply:</b>                   |  |
|--|--|
| Nominal voltage                        | AC110V-240V  |
| Operating limits                       | AC85 - 265 V   |
| The main frequency range               | 47-63Hz  |
| Max. absorbed power                    | 49mA (85V ac) ; 37mA (265V ac)   |
| Isolation voltage                      | 1780V AC   |
| Protection against polarity inversions | Yes  |
| <b>Input parameters:</b>               |  |
| Input No                               | 14( I1-IE)   |
| Digital input                          | 14 ( I1-IE)  |
| Analogue input                         | None   |
| Input voltage                          | AC110-240V   |
| Input signal0                          | AC0-40V; <0.03mA   |
| Input signal1                          | AC79-240V; >0.06mA   |
| Input Response Time                    | Delay time at 0 to 1:<br>120V AC : Typ. 50 ms<br>240V AC : Typ. 30 ms<br>Delay time at 1 to 0:<br>120V AC : Typ. 90 ms<br>240V AC : Typ.100 ms |
| Maximum counting frequency             | Typ. 4Hz   |

|   |  |
|---|--|
| Sensor type                               | Contact or 3-wire PNP  |
| Isolation between power supply and inputs | None   |
| Isolation between inputs                  | None   |
| Protection against polarity inversions    | Yes  |
| <b>Output parameters:</b>                 |  |
| Output No.                                | 10 (Q1-QA)   |
| Output type                               | Relay output   |
| Max. Allowable Power Force(Resistive)     | CE: 10A,250V AC/DC30V  |
| 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.<br>Release Time : 10 mSec. Max.             |
| Built-in protections                      | Against short-circuits: None<br>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.500g  |

## Installation Dimensions & Wiring Diagram



| SYSTEM  |                                |   |                  |  |  |
|---|--------------------------------|---|------------------|--|--|
| Operating System requirements   |                                | Windows /2000/XP/WIN7/WIN8  |                  |  |  |
| Programming languages   |                                | Function block  |                  |  |  |
| Program Memory  |                                | 1024  |                  |  |  |
| Execution Speed   |                                | <0.1ms per function   |                  |  |  |
| LCD Display   |                                | 4 lines x 16 characters   |                  |  |  |
| Functions   |                                | Up to 70 function blocks  |                  |  |  |
| BASIC   | Timers                         |   |                  |  | a.On-delay;<br>b.Off-delay etc.<br>Up to 12 kind Timers                  |
|   | Maximum Number                 | 1024  |                  |  |  |
|   | Timing Ranges                  | 10ms--99 h59m   |                  |  |  |
|   | Counters                       |   |                  |  | a.Up/down Counter<br>b.Hours Counter<br>c.Frequency Threshold<br>Trigger |
|   | Maximum Number                 | 1024  |                  |  |  |
|   | Highest Count                  | 99999999  |                  |  |  |
|   | Resolution                     | 1   |                  |  |  |
|   | RTC                            |   |                  |  | a.Weekly Timer<br>b.Yearly Timer   |
|   | Number available               | 1024  |                  |  |  |
|   | Resolution                     | 1 min   |                  |  |  |
|   | Time span available            | Week/year-month-day-hour-min  |                  |  |  |
|   | Flags                          |   |                  |  | a.Digital Flag<br>b.Analog Flag  |
|   | Digital flags                  | 256   |                  |  |  |
|   | Analog flags                   | 256   |                  |  |  |
|   | PI Functions                   |   |                  |  | a.PI Controller  |
|   | Number available               | 30  |                  |  |  |
|   | Parameter Ranges               | 1-32767   |                  |  |  |
|   | Analog Math                    |   |                  |  | a.Analog Math<br>b.Analog Math<br>Error detection                        |
| Number available  | 1024                           |   |                  |  |  |
| Function  | ADD, Subtract,Multiply, Divide |   |                  |  |  |
| Analog Ramp Function  |                                |   |                  | a. Analog Ramp                                 |  |
| Number available  | 55                             |   |                  |  |  |
| Compare Function  |                                |   |                  | a.Analog compactor<br>b.Comparison of 2 values |  |
| Number available  | 1024                           |   |                  |  |  |
| Special Functions   | HMI Screens                    |   |                  |  | a.Message texts  |
|   | Number available               | 128   |                  |  |  |
|   | Display/Edit                   | Preset Current value and Free text                                      |                  |  |  |
|   | PWM Functions                  |   |                  |  | a.PWM  |
|   | Number available               | 1024, (2 fast output for Transistor)                                    |                  |  |  |
|   | Communication Functions        |   |                  |  | a.Modbus write<br>b.Modbus read  |
|   | Number available               | 1024(Only CPU works as Master need these 2 blocks, slave does not need) |                  |  |  |
|   | 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. |                                |   |                  |  |  |