

◆ **Technical Data:**

**Model: SR-22AC-R**

**GENERAL SPECIFICATIONS**

Timers : 256

Counters: 256

Function Blocks: 256

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 : 133\*90\*60 (Unit, mm)

Certificate : CE

Installation : 35mm-DIN rail or screw for installation

Modify parameters via keypad LCD: Yes

Supported programming language: FBD & Ladder

Expansion capacity: 3 modules (SR-E)

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

Communication interface: 2 RS485 port (COM1 external - SR-RS485, COM2 built-in), 1 Ethernet port(10M)

Communication protocol: Modbus RTU, Modbus TCP

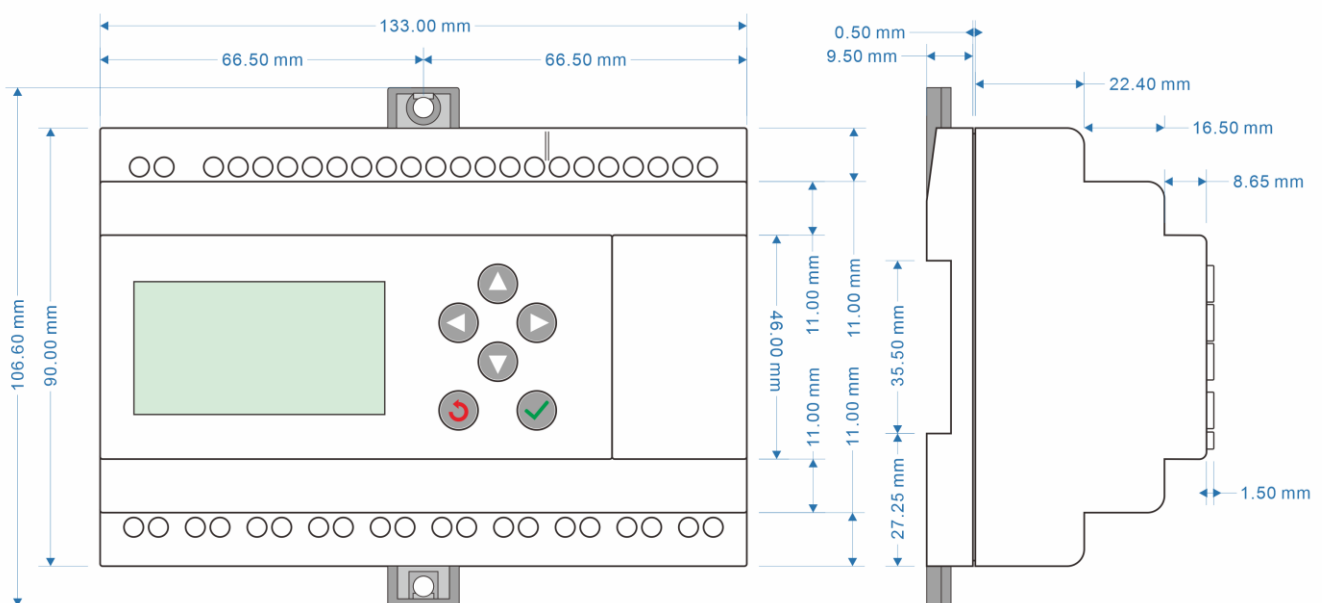


**Technical Index**

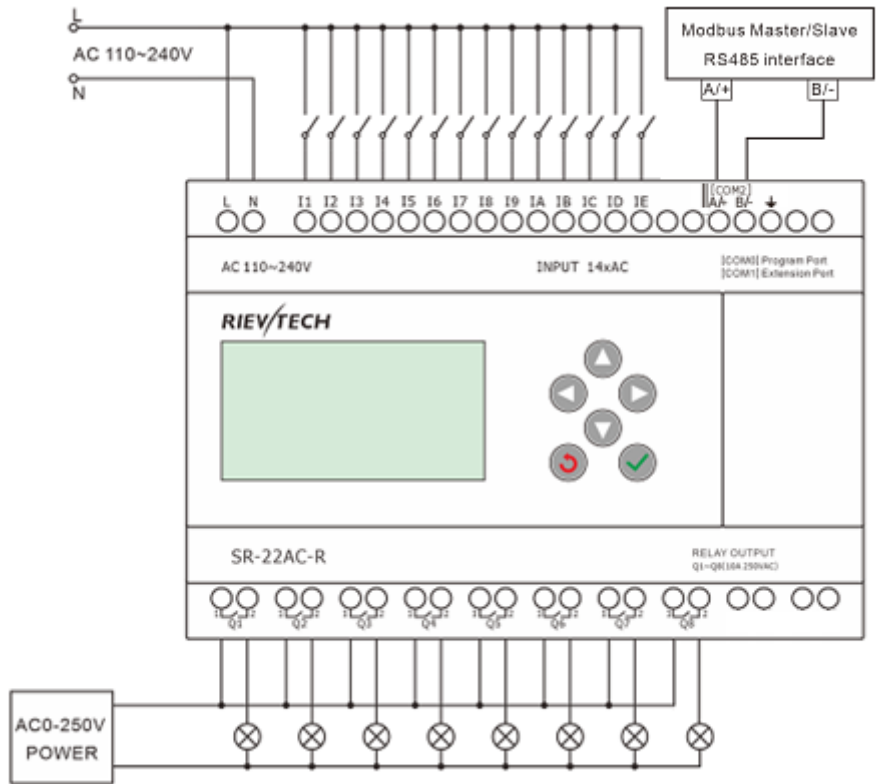
| <b>Power supply:</b>                   |  |
|--|--|
| Nominal voltage                        | AC110V-240V  |
| Operating limits                       | AC85-265 V   |
| The main frequency range               | 47-63Hz  |
| Max. absorbed power                    | 100mA (85V ac); 50mA (265V ac)   |
| 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. 30 ms<br>240V AC: Typ. 20 ms<br>Delay time at 1 to 0: |

|   |   |
|---|---|
|   | 120V AC: Typ. 130 ms<br>240V AC: Typ. 120 ms                              |
| Maximum counting frequency                | Typ. 2Hz  |
| 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.                                | 8 (Q1-Q8)   |
| Output type                               | Relay output  |
| Safety certified load (resistive)         | 10A,250V AC   |
| Min switching load                        | 6V 1A   |
| 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 over-voltages and overloads: None |
| <b>Switch frequency:</b>                  |   |
| Mechanism                                 | 10Hz  |
| Resistor/light load                       | 2Hz   |
| Sensitive load                            | 0.5Hz   |
| <b>Other parameters:</b>                  |   |
| Weight                                    | 250g  |

## Installation Dimensions & Wiring Diagram



# Digital Input / Output



| SYSTEM            |                          | Operating System requirements<br>Windows /2000/XP/WIN7/WIN8         |               | Function block<br>256 | Execution Speed<br><0.1ms per function | LCD Display<br>4 lines x 16 characters | Functions<br>Up to 70 function blocks |  |   |
|-------------------|--------------------------|---|---------------|-----------------------|--|--|---------------------------------------|--|---|
| BASIC             |                          | Timers  |               |                       |  |  |                                       |  |   |
|                   | Maximum Number           | 256   |               |                       |  |  |                                       |  |   |
|                   | Timing Ranges            | 10ms--99 h59m   |               |                       |  |  |                                       |  |   |
|                   | Counters                 |   |               |                       |  |  |                                       |  | a.Up/down Counter<br>b.Hours Counter<br>c.Frequency Threshold Trigger |
|                   | Maximum Number           | 256   |               |                       |  |  |                                       |  |   |
|                   | Highest Count            | 99999999  |               |                       |  |  |                                       |  |   |
|                   | Resolution               | 1   |               |                       |  |  |                                       |  |   |
|                   | RTC                      |   |               |                       |  |  |                                       |  | a.Weekly Timer<br>b.Yearly Timer                                      |
|                   | Number available         | 256   |               |                       |  |  |                                       |  |   |
|                   | Resolution               | 1 min   |               |                       |  |  |                                       |  |   |
|                   | Time span available      | Week/year-month-day-hour-min  |               |                       |  |  |                                       |  |   |
|                   | Flags                    |   |               |                       |  |  |                                       |  | a.Digital Flag<br>b.Analog Flag                                       |
|                   | Digital flags            | 128   |               |                       |  |  |                                       |  |   |
|                   | Analog flags             | 128   |               |                       |  |  |                                       |  |   |
|                   | PI Functions             |   |               |                       |  |  |                                       |  | a.PI Controller   |
|                   | Number available         | 30  |               |                       |  |  |                                       |  |   |
|                   | Parameter Ranges         | 1-32767   |               |                       |  |  |                                       |  |   |
|                   | Analog Math              |   |               |                       |  |  |                                       |  | a.Analog Math<br>b.Analog Math Error detection                        |
|                   | Number available         | 256   |               |                       |  |  |                                       |  |   |
|                   | 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         | 256   |               |                       |  |  |                                       |  |   |
| Special Functions |                          | HMI Screens   |               |                       |  |  |                                       |  | a.Message texts   |
|                   | Number available         | 16  |               |                       |  |  |                                       |  |   |
|                   | Display/Edit             | Preset Current value and Free text                                  |               |                       |  |  |                                       |  |   |
|                   | Communication Functions  |   |               |                       |  |  |                                       |  | a.Modbus read write   |
|                   | Number available         | 256 (Only CPU works as Master need this block, slave does not need) |               |                       |  |  |                                       |  |   |
|                   | Word/bit data Conversion | Analog watchdog   | Analog filter |                       |  |  |                                       |  | RS latch relay  |
|                   | Boolean function         | Stop watch  | Pulse Relay   |                       |  |  |                                       |  | Average value   |
|                   | Astronomical clock       |   |               |                       |  |  |                                       |  |   |

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.