

◆ Technical Data:

Model:SR-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 $\pm 2S/day$

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

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: 1 RS485 port(COM1 external -- SR-RS485), 1Ethernet port(10M)

Communication protocol: Modbus RTU, Modbus TCP



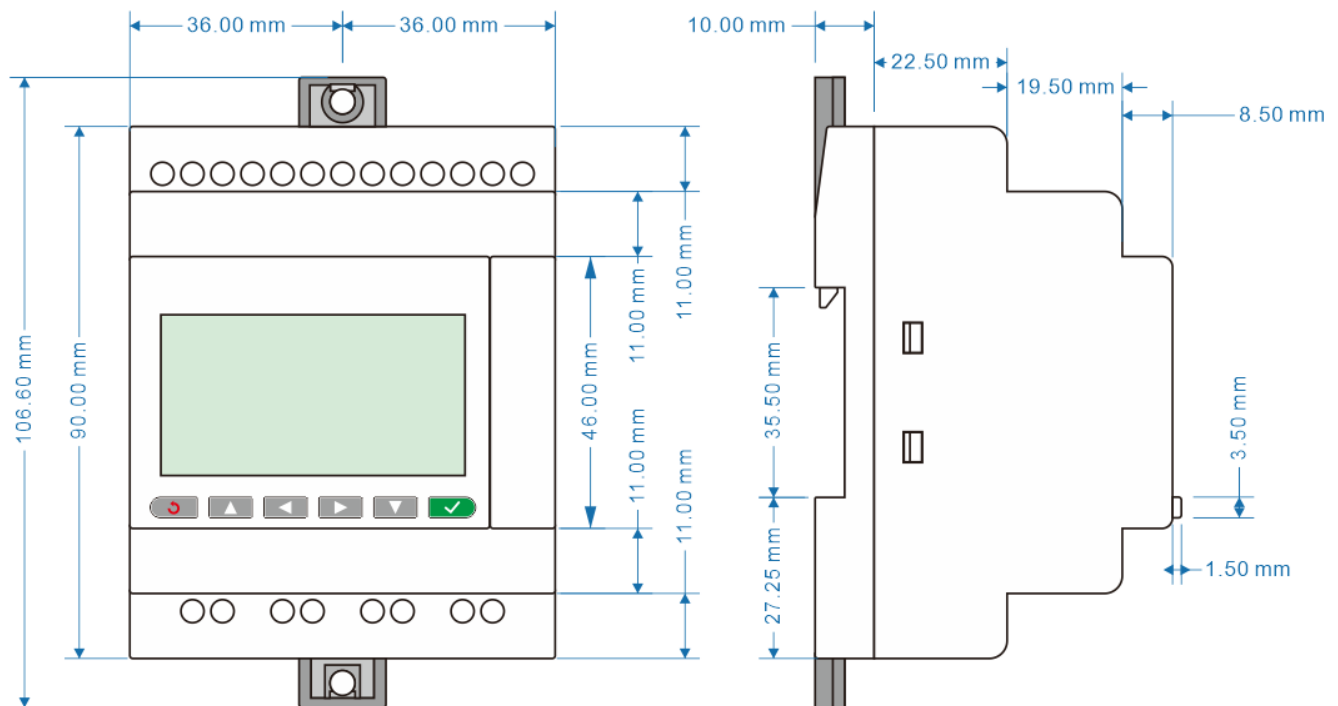
Technical Index

Power supply:	
Nominal voltage	DC12-24V /AC24V
Operating limits	DC 10.8-28.8V AC 21.6-26.4V
Immunity from micro power cuts	Typ.5 ms
Max. Startup current	Max. 0.4A
Max. absorbed power	0.25A (10.8V dc); 0.28A (28.8V dc); 0.25A (24V ac)
Protection against polarity inversions	Yes
Input parameters:	
Input No	8 (I1-I8)
Digital input	8 (I1-I8)
Analogue input	4 (I1-I4) (0...10V DC)
Digital inputs (I5-I8)	
Input voltage	DC 0-28.8V AC 0-24V
Input signal0	< 5V DC; <1 mA < 3V AC
Input signal1	> 8V DC; >1.7 mA > 6V AC

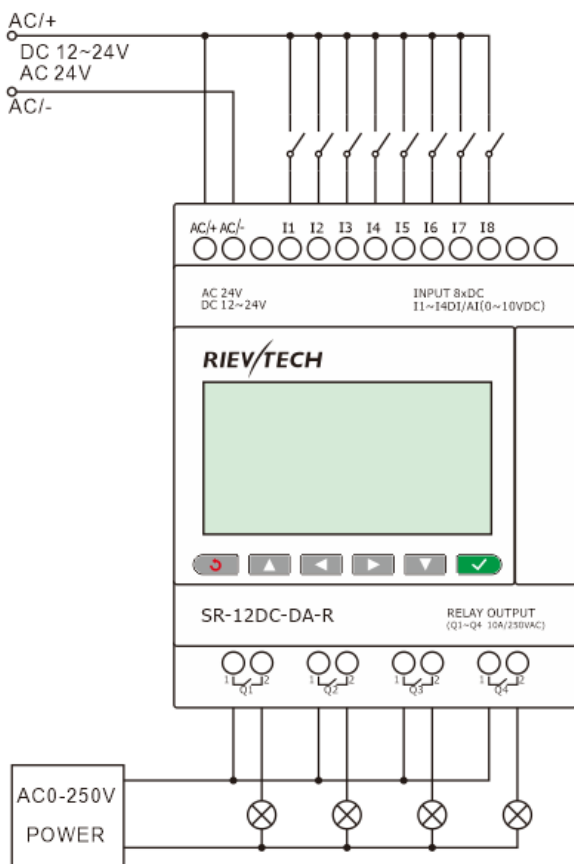
Input current	2.05mA @ 10.8V dc 2.28mA @ 12.0 V dc 4.55 mA @ 24 V dc 5.46 mA @ 28.8 V dc 4.76 mA @ 24 V ac
Response time	DC12-24V 0 to 1: Typ. 3ms; 1 to 0: Typ. 3ms AC24V 0 to 1: Typ. 72ms; 1 to 0: Typ. 72ms
Maximum counting frequency	65k Hz(I5—I8)
Sensor type	Contact or 3-wire PNP
Input type	Resistive
Isolation between power supply and inputs	None
Isolation between inputs	None
Inputs used as digital inputs (I1-I4)	
Input voltage	DC 0-28.8V AC 0-24V
Input signal0	< 5V DC; <0.09 mA < 3V AC
Input signal1	> 8V DC; >0.15mA > 5V AC
Input current	0.16mA @ 10.8V dc 0.18mA @ 12.0 V dc 0.49mA @ 24 V dc 0.62mA @ 28.8 V dc 0.58 mA @ 24 V ac
Response time	DC12-24V 0 to 1: Typ. 5 ms; 1 to 0: Typ. 5 ms AC24V 0 to 1: Typ. 40ms 1 to 0: Typ. 40ms
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
Inputs used as analog inputs (I1-I4)	
Measurement range	DC 0---10V
Input impedance	Min, 24K Ω ; Max. 72K Ω
Input voltage	28.8 V DC max
Resolution	10bit ,0.01V
Accuracy at 25 °C	± (Max.0.2)V
Isolation between analog channel and power supply	None
Cable length	10 m max. shielded and twisted

Output parameters:	
Output No.	4 (Q1-Q4)
Output type	Relay output
Safety certified load (resistive)	10A,250V AC
Min switching load	6V 1A
Electrical endurance (360ops/h)	10 ⁵ (at room temperature)
Mechanical endurance 10,800ops/h	10 ⁷ (at room temperature)
Response time	Operate Time: 15 mSec. Max. Release Time: 10 mSec. Max.
Built-in protections	Against short-circuits: None Against over-voltages and overloads: None
Switch frequency:	
Mechanism	10Hz
Resistor/light load	2Hz
Sensitive load	0.5Hz
Other parameters:	
Weight	206.5g / 242.9g(packaging)

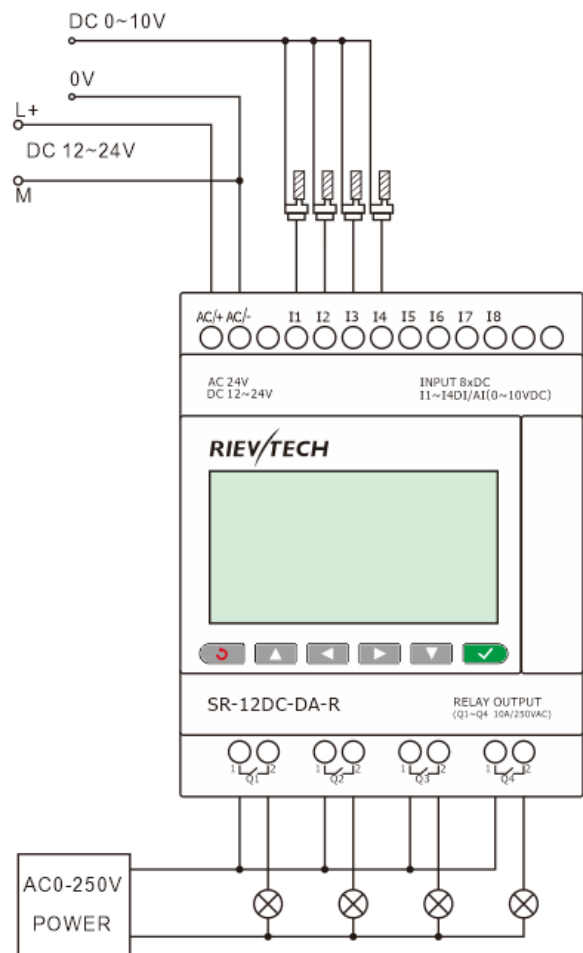
Installation Dimensions & Wiring Diagram

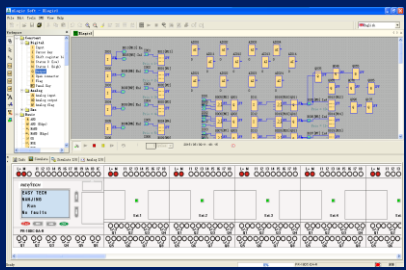


Digital Input / Output



0~10V Analog Input



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					a.On-delay; b.Off-delay etc. Up to 12 kind Timers	
	Maximum Number	512					
	Timing Ranges	10ms--99 h59m					
	Counters					a.Up/down Counter b.Hours Counter c.Frequency Threshold Trigger	
	Maximum Number	512					
	Highest Count	99999999					
	Resolution	1					
	RTC					a.Weekly Timer b.Yearly Timer	
	Number available	512					
	Resolution	1 min					
	Time span available		Week/year-month-day-hour-min			a.Digital Flag b.Analog Flag	
	Flags						
	Digital flags	128					
	Analog flags	128					
	PI Functions					a.PI Controller	
	Number available	30					
	Parameter Ranges	1-32767					
	Analog Math					a.Analog Math b.Analog Math Error detection	
	Number available	512					
	Function	ADD, Subtract,Multiply, Divide					
	Analog Ramp Function					a. Analog Ramp	
	Number available	55					
	Compare Function					a.Analog compactor b.Comparison of 2 values	
	Number available	512					
	Special Functions	HMI Screens					a.Message texts
		Number available	16				
		Display/Edit	Preset Current value and Free text				
		Communication Functions					Modbus read write
Number available		512(Only CPU works as Master need this block, slave does not need)					
Word/bit data Conversion		Analog watchdog	Analog filter				
Boolean function		Stop watch	Pulse Relay	RS latch relay			
Astronomical clock				Average value			
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.							

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