

◆ **Technical Data:**

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 ±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*61 (Unit: mm)

Certificate: CE

Installation: 35-DIN rail or screw for installation

Modify parameters via keypad LCD: yes

Supported programming language: FBD & Ladder

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

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

Communication interface: 1 RS232 port (COM0 – RS232 Cable) & 2 RS485 port (COM1 external - SR-RS485, COM2 built-in)

Communication protocol: Modbus RTU/ASCII



Technical Index

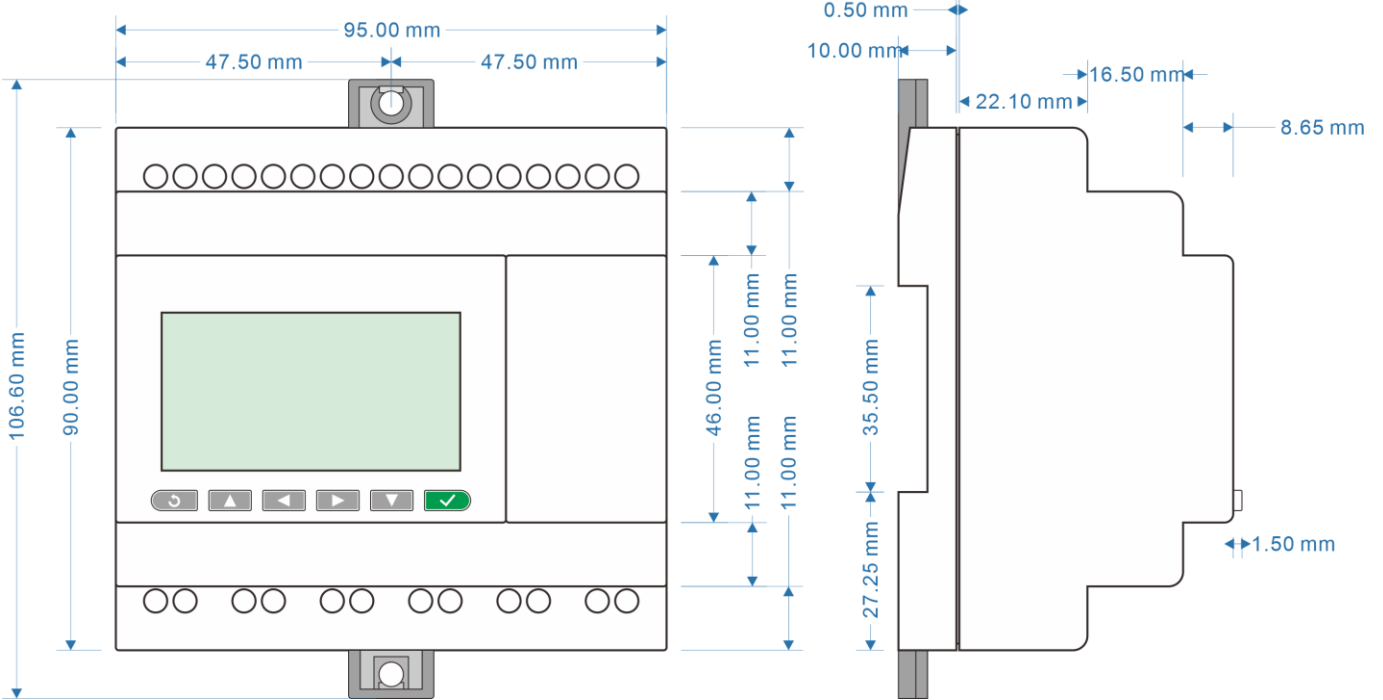
Power supply:	
Nominal voltage	DC 12-24V
Operating limits	DC 10.8-28.8V
Immunity from micro power cuts	Typ.5 ms
Max. Startup current	Max. 0.45A
Max. absorbed power	4.5 W (10.8V dc); 5.5 W (28.8V dc)
Protection against polarity inversions	Yes
Input parameters:	
Input No	12 (I1-IC)
Digital input	12 (I1-IC)
Analogue input	6 (I1-I6) (0..10V DC)
Digital inputs(I7-IC)	
Input voltage	DC0-28.8V
Input signal0	< 5V DC; <1mA
Input signal1	> 8 V DC;>1.7mA
Input current	2.2mA @ 10.8V dc 2.3mA @ 12.0 V dc 4.6 mA @ 24 V dc

	5.6 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
Inputs used as digital inputs(I1-I6)	
Input voltage	DC0-28.8V
Input signal0	< 5V DC;<0.1mA
Input signal1	> 8 V DC;>0.2mA
Input current	0.16mA @ 10.8V dc 0.18mA @ 12.0 V dc 0.36mA @ 24 V dc 0.41mA @ 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
Inputs used as analog inputs(I1-I6)	
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	\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
Output parameters:	
Output No.	6 (Q1-Q6)
Output type	Relay output
Safety certified load (resistive)	10A 250V AC
Min switching load	6V 1A
Electrical durability Expectancy	10 ⁵ Operations at Rated Resistive Load
Mechanical life	10 ⁷ 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 over-voltages and overloads: None
Switch frequency:	
Mechanism	10Hz
Resistor/light load	2Hz
Sensitive load	0.5Hz
Other parameters:	

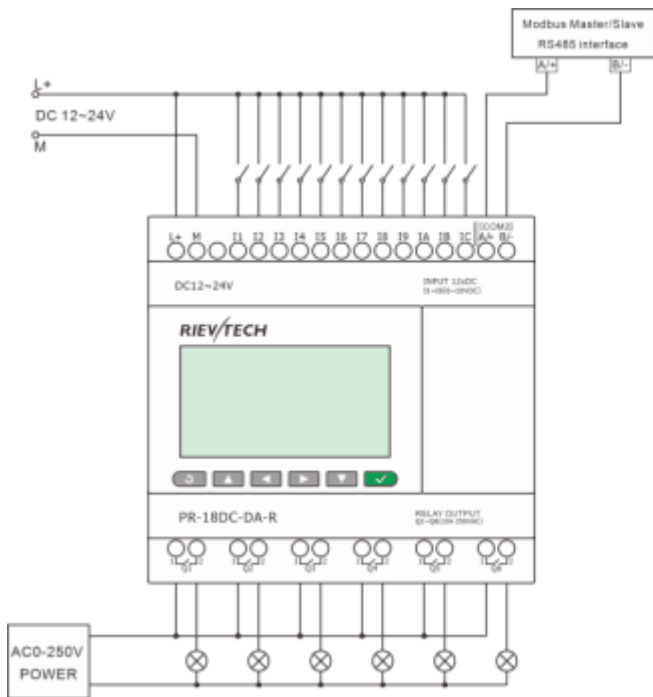
Weight

Approx.300g

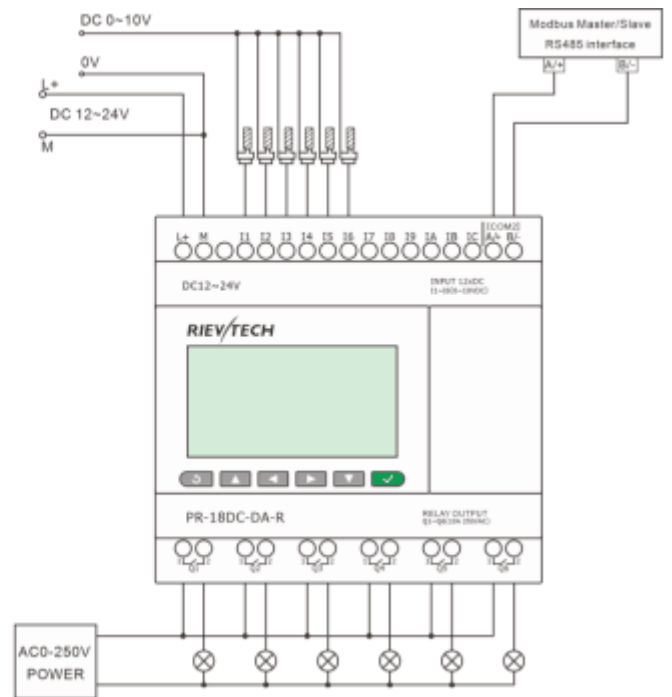
Installation Dimensions & Wiring Diagram



Digital Input / Output



0~10V analog input



SYSTEM		Operating System requirements Programming languages Program Memory Execution Speed LCD Display Functions		Windows xp/7/8/10/11 Function block 1024 <0.1ms per function 4 lines x 16 characters Up to 70 function blocks			
BASIC	Timers					a.On-delay; b.Off-delay etc. Up to 12 kind Timers	
	Maximum Number	1024					
	Timing Ranges	10ms--99 h59m					
	Counters					a.Up/down Counter b.Hours Counter c.Frequency Threshold Trigger	
	Maximum Number	1024					
	Highest Count	99999999					
	Resolution	1					
	RTC					a.Weekly Timer b.Yearly Timer	
	Number available	1024					
	Resolution	1 min					
	Time span available	Week/year-month-day-hour-min					
	Flags					a.Digital Flag 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 b.Analog Math Error detection		
Number available	1024						
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	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 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		
<p>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.</p>							

