

Model:PR-18DC-DA-RT

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 $\pm 2S/day$

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*55 (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 & 1 RS485 port

Communication protocol : Modbus RTU/ASCII



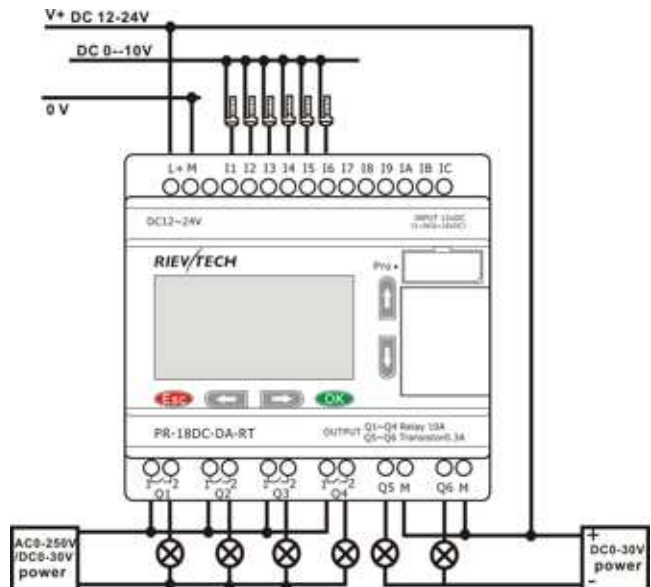
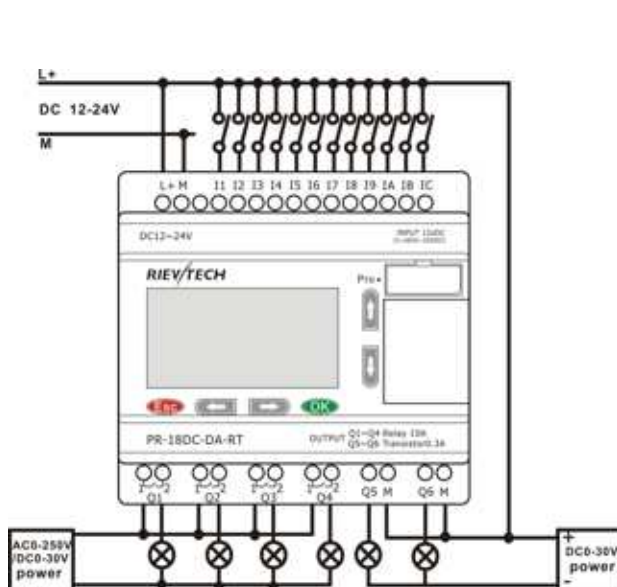
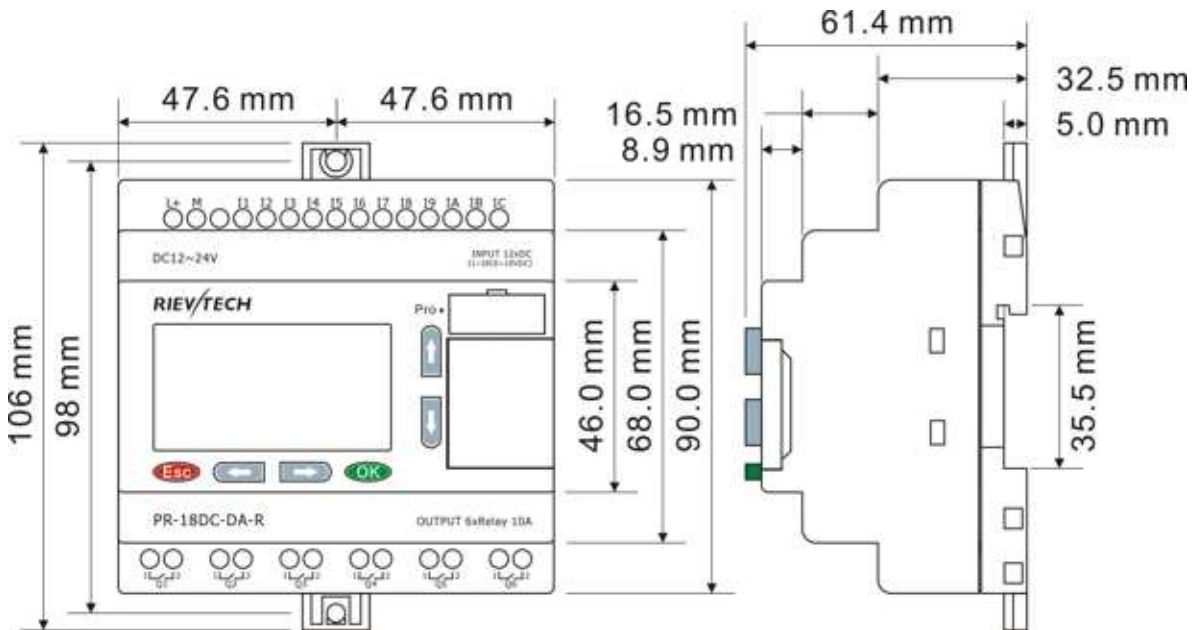
Technical Index

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. 0.25A
Max. absorbed power	3.5 W (10.8V dc) ; 4 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	2.3mA @ 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(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;>0.3mA
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
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	4 (Q1-Q4)Relay output 2 (Q5-Q6)Transistor output
Continuous current	Relay:Resistive load 10A/Inductive load 2A Transistor:0.3A
Max. breaking voltage	Relay:AC 250 V DC 110 V Transistor: DC5...30V
Max. Allowable Power Force	1250VA 300W
Electrical durability Expectancy	10 ⁵ Operations at Rated Resistive Load(relay)
Mechanical life	10 ⁷ Operations at No Load condition(relay)
Response time	Operate Time : 15 mSec. Max. Release Time : 10 mSec. Max.
Built-in protections	Against short-circuits: None Against overvoltages and overloads: None
PWM frequency	10K HZ(Q5,Q6 must have same frequency when PWM works)

PWM accuracy at 500Hz	< 0.5% (20 % → 80 %) load at 10 mA
Switch frequency:	
Mechanism	10Hz
Resistor/light load	2Hz
Sensitive load	0.5Hz
Other parameters:	
Weight	Approx.400g

Installation Dimensions & Wiring Diagram



SYSTEM							
SYSTEM		Operating System requirements		Windows /2000/XP/WIN7/WIN8			
SYSTEM		Programming languages		Function block			
SYSTEM		Program Memory		1024			
SYSTEM		Execution Speed		<0.1ms per function			
SYSTEM		LCD Display		4 lines x 16 characters			
SYSTEM		Functions		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			a.Digital Flag b.Analog Flag
		Flags					
		Digital flags	256				
		Analog flags		256			a.PI Controller
		PI Functions					
		Number available	30				
		Parameter Ranges		1-32767			a.Analog Math b.Analog Math Error detection
		Analog Math					
		Number available	1024				
		Function		ADD, Subtract,Multiply, Divide			a. Analog Ramp
Analog Ramp Function							
Number available		55			a.Analog compactor b.Comparison of 2 values		
Compare Function							
Number available		1024			a.Message texts		
HMI Screens							
Number available	128						
Display/Edit		Preset Current value and Free text				a.PWM	
PWM Functions							
Number available	1024, (2 fast output for Transistor)				a.Modbus write b.Modbus read		
Communication Functions							
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.							