

◆ Technical Data:

Model:PR-24DC-DAI-RTA

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

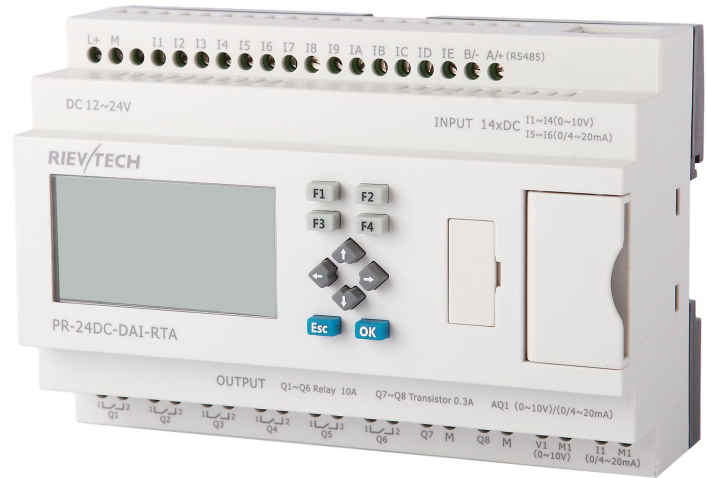
Installation: 35-DIN rail or screw for installation

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



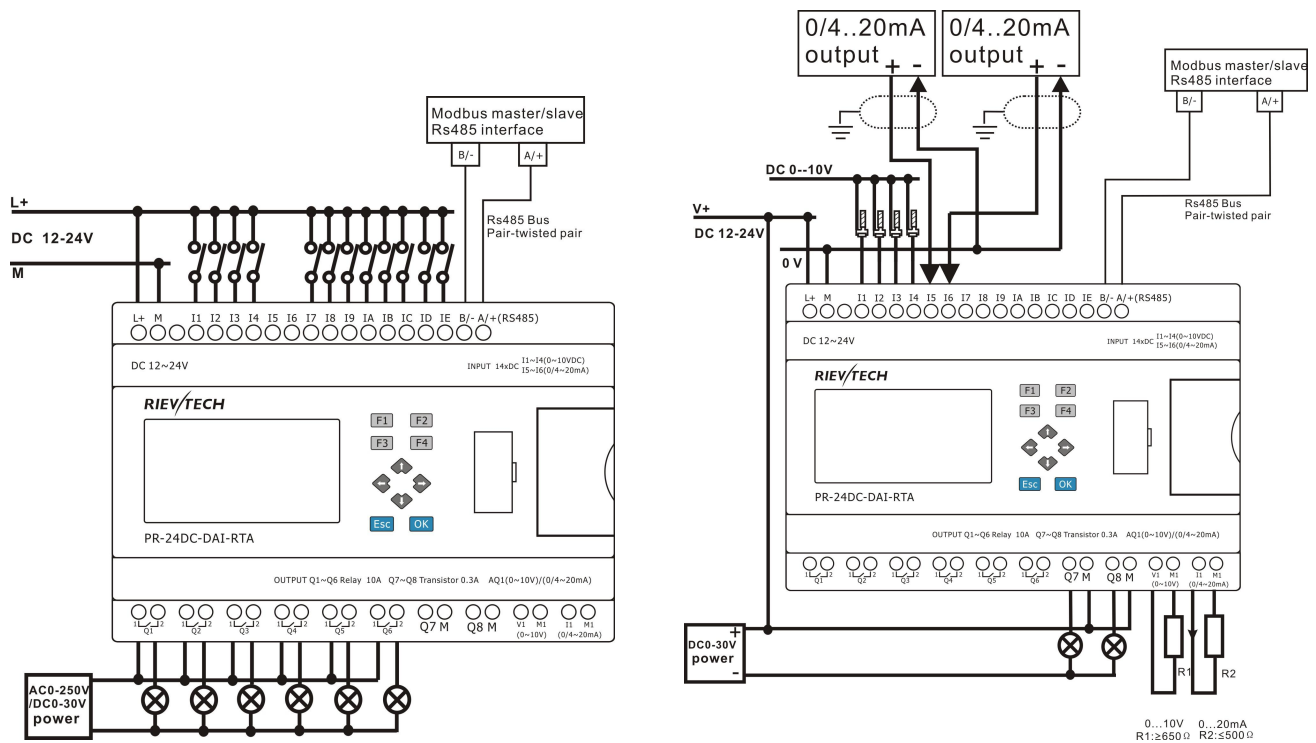
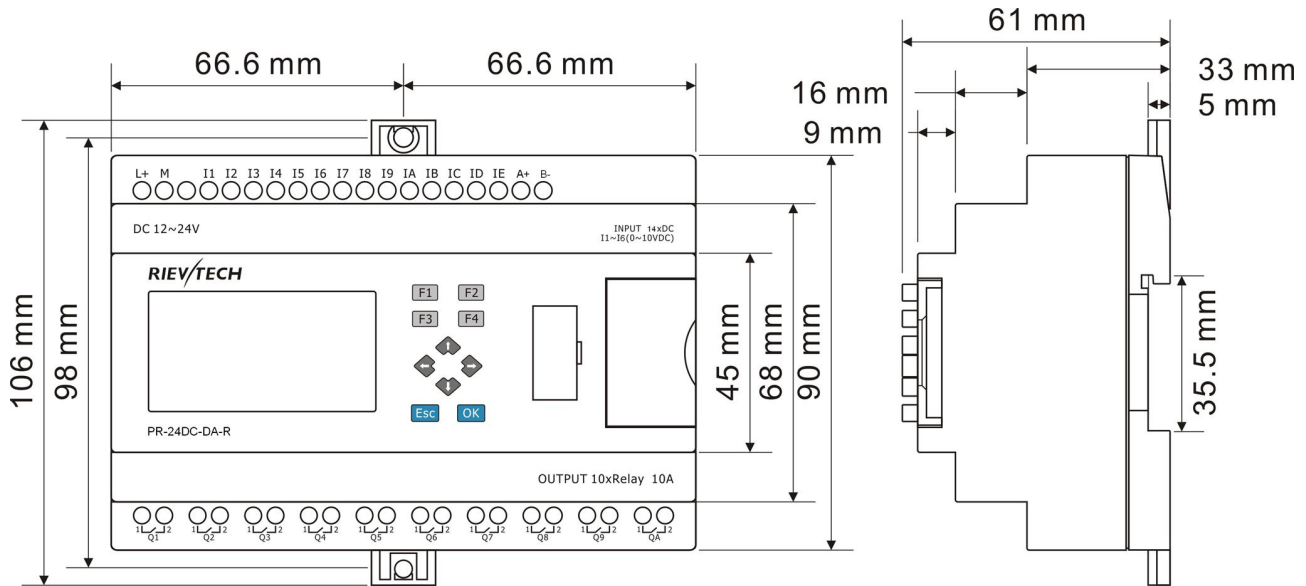
Technical Index

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	14 (I1-IE)
Digital input	12 ((I1-I4)(I7-IE)
Analogue input	4 (I1-I4)(0..10V DC) +2(I5-I6)(0...20mA)
Digital inputs(I7-IE)	
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-I4)	
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-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	\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
Current Input parameters(15-16)	
Input No	2(15-16)
Digital input	None
Analogue input	2 (15-16)
Analogue signal	0/4....20mA current
Resolution	0.02mA
Accuracy at 25 °C	0.05mA
Cycle time for analog value generation	Typ. 50 ms
Output parameters:	
Output No.	(Q1-Q8,AQ1)
Output type	Q1-Q6(Relay)+ Q7-Q8(Transistor),AQ1(0-10V)/(0/4-20mA) output
Relay output(Q1-Q6)	
Max. Allowable Power Force(Resistive)	Relay: CE: 10A,250V AC/DC30V UL/CUL:10A,250V AC; 5A, DC28V Transistor:0.3A / DC5...30V
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 overvoltages and overloads: None
Transistor output(Q7-Q8)	
Output No.	2(Q7-Q8)
Output type	Transistor(PNP)
Breaking voltage	DC 5--30V
Nominal voltage	≤ Supply voltage
Nominal current	Max. 0.3 A per channel
Max. breaking current	0.65 A
Voltage drop	< 2 V for I = 0.3 A (at state 1)
Response time	Make ≤ 1 ms Release ≤ 1 ms
Frequency (Hz)	resistive load : 10 Hz inductive load : 0.5 Hz
Built-in protections	Against overloads and short-circuits: No Against overvoltages (*): No
Galvanic isolation	None
PWM frequency	10K HZ
PWM cyclic ratio	0 to 100 %
PWM accuracy at 120Hz	< 0.5 % (20 % → 80 %) load at 10 mA
Max. Breaking current PWM	50 mA
Max. cable length PWM	20m
Analog output(0...10V):	
Output No	1 AQ1
Output signal	DC 0...10V
Internal value and signal relationship	AQ1(0..1000)= V1(0...10V)
Resolution	0.01V
Accuracy at 25 °C	0.02V
Analog output(0...20mA):	
Output No	1 AQ1
Output signal	0..20mA
Internal value and signal relationship	AQ1(0...1000)= I1(0...20mA)
Resolution	0.02mA
Accuracy at 25 °C	0.05mA
Relay Switch frequency:	
Mechanism	10Hz
Resistor/light load	2Hz
Sensitive load	0.5Hz
Other parameters:	
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							
Maximum Number	1024						
Timing Ranges	10ms--99 h59m						
Counters							
Maximum Number	1024						
Highest Count	99999999						
Resolution	1						
RTC							
Number available	1024						
Resolution	1 min						
Time span available	Week/year-month-day-hour-min						
Flags							
Digital flags	256						
Analog flags	256						
PI Functions							
Number available	30						
Parameter Ranges	1-32767						
Analog Math							
Number available	1024						
Function	ADD, Subtract,Multiply, Divide						
Analog Ramp Function							
Number available	55						
Compare Function							
Number available	1024						
HMI Screens							
Number available	128						
Display/Edit	Preset Current value and Free text						
PWM Functions							
Number available	1024, (2 fast output for Transistor)						
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					
Data-logger Function	Analog watchdog	Analog filter					
Pumps Management	Defrost function	Multiplexer					
Cam Control	Astronomical clock	Stop watch					
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.							