

◆ Technical Data:

Model:PR-12DC-DA-TN

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 ±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
 Modbus RTU/ASCII:yes(Master or slave with RS232/RS485)
 Expansion: No

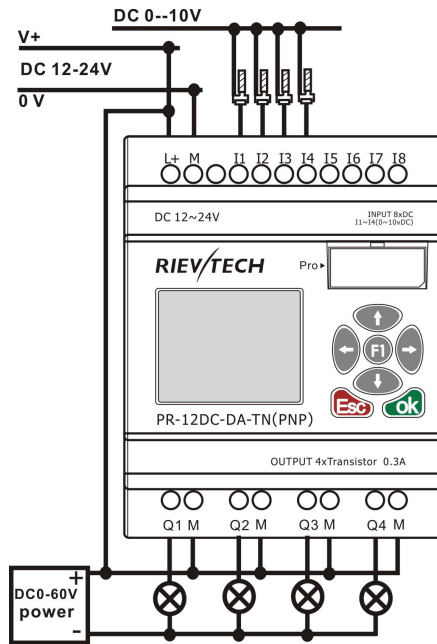
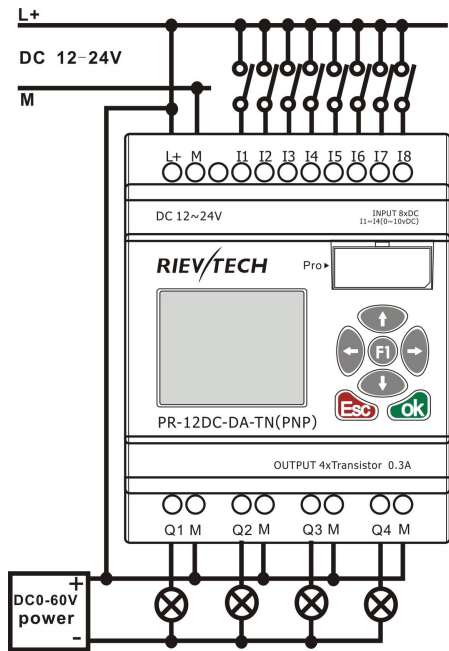
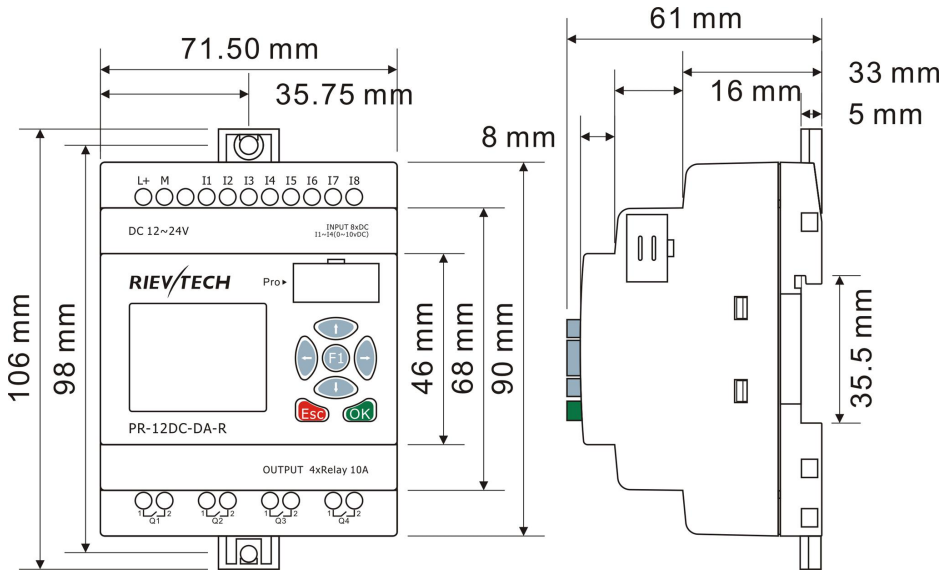


Technical Index

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. 0.1A
Max. absorbed power	2 W (10.8V dc) ; 2.3 W (28.8V dc)
Protection against polarity inversions	Yes
Input parameters:	
Input No	8 (I1-I4)
Digital input	8 (I1-I4)
Analogue input	4 (I1-I4)(0..10V DC)
Digital inputs(I5-I8)	
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(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	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
Output parameters:	
Output No.	4 (Q1-Q4)
Output type	Transistor(PNP)
Breaking voltage	DC 5--30V
Nominal voltage	\leq 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 \leq 1 ms Release \leq 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 % \rightarrow 80 %) load at 10 mA
Max. Breaking current PWM	50 mA
Max. cable length PWM	20m
PWM accuracy at 500Hz	< 0.5% (20 % \rightarrow 80 %) load at 10 mA
Other parameters:	
Weight	Approx.300g

Installation Dimensions & Wiring Diagram



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			
	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	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	64			
	Display/Edit	Preset Current value and Free text			
	PWM Functions				a.PWM
	Number available	512, (2 fast output for Transistor)			
	Communication Functions				a.Modbus write b.Modbus read
	Number available	512(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.					