

◆ **Technical Data:**

**Model: PR-26DC-DAI-RA-N**

**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\*60 (Unit: mm)

Certificate:

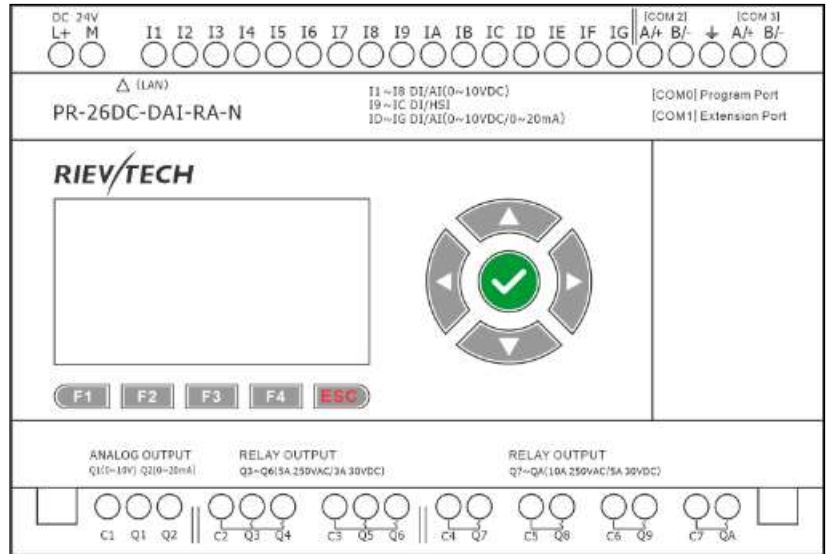
Installation: 35-DIN rail or screw for installation

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

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

Communication interface: 1 RS232 Port (COM0) & 1 RS485 port (COM1 external) available via optional accessory, 2 built-in RS485 (COM2, COM3), 1Ethernet port.

Communication protocol: Modbus RTU/ASCII, Modbus TCP / MQTT



**Technical Index**

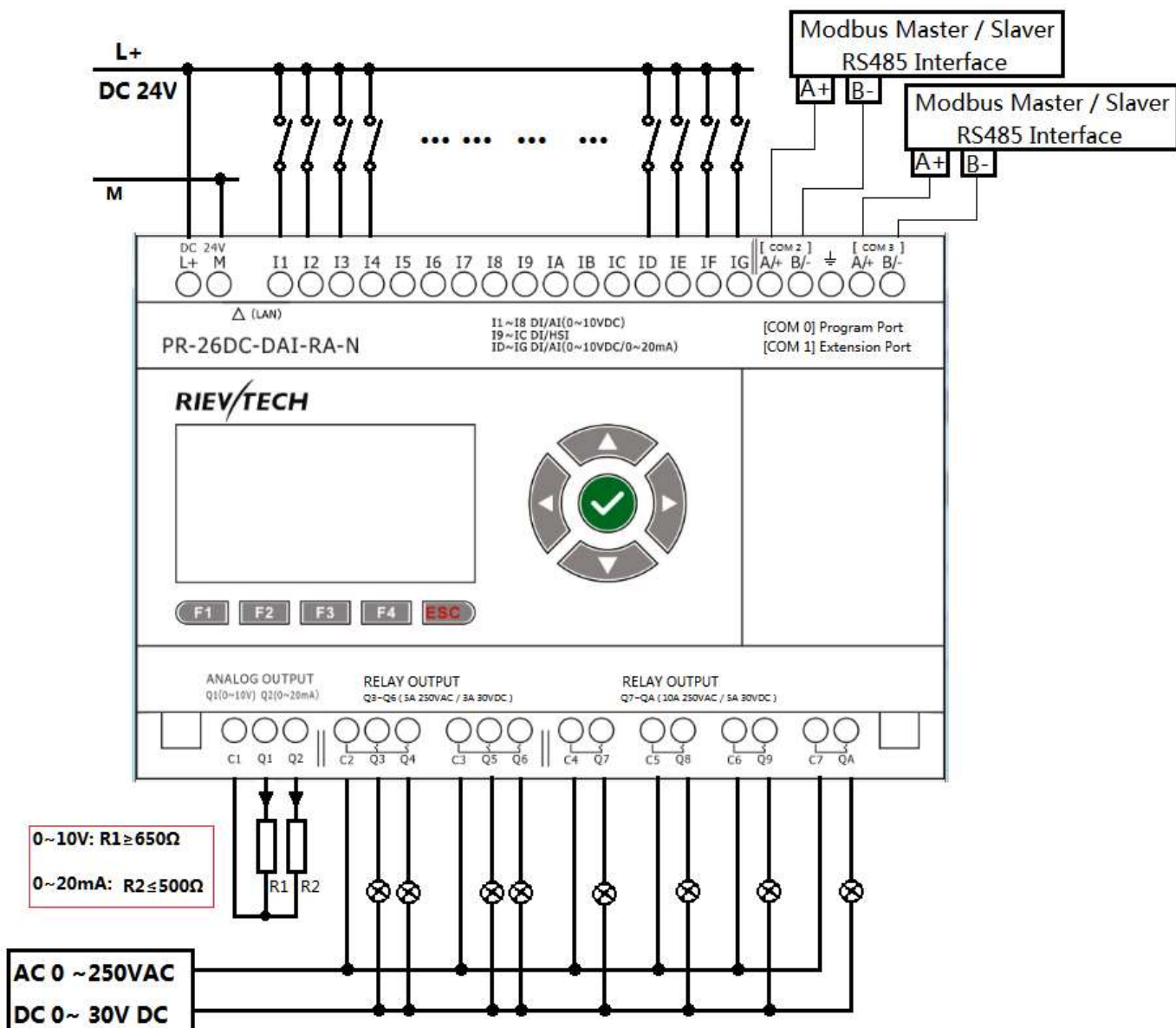
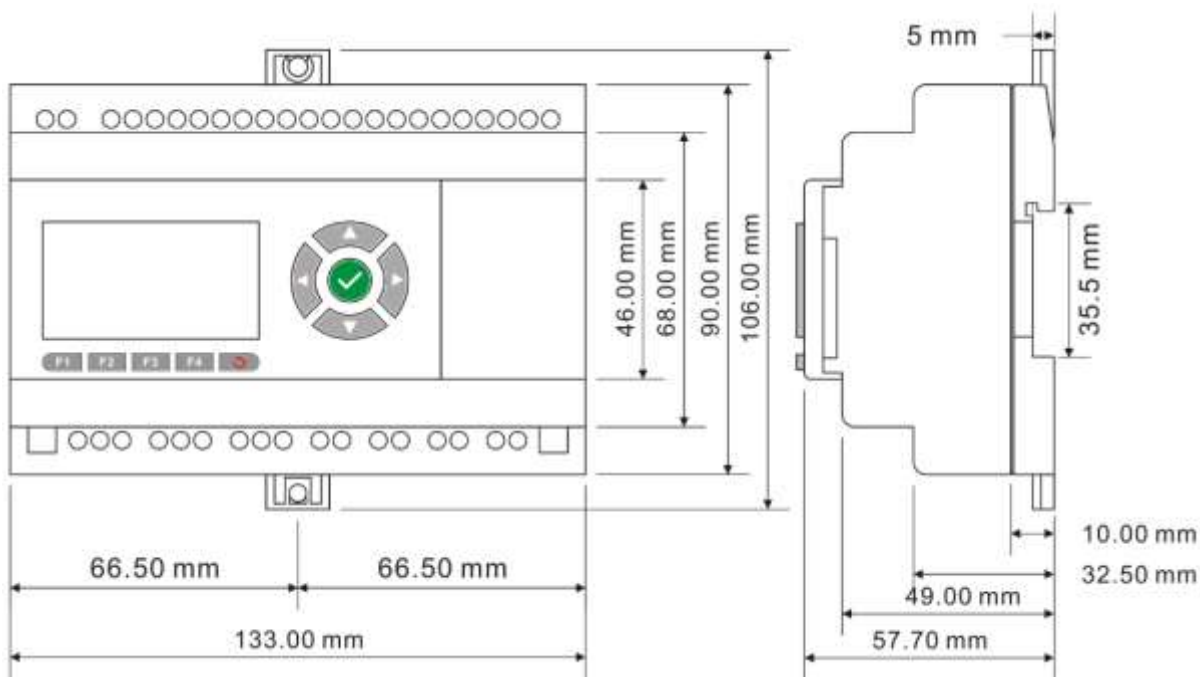
<b>Power supply:</b>	
Nominal voltage	DC 24V
Operating limits	DC 20.4-28.8V
Immunity from micro power cuts	Typ.5 ms
Max. Startup current	Max. 0.3A
Max. absorbed power	10W
Protection against polarity inversions	Yes
<b>Input parameters:</b>	
Input No	16 ( I1-IG)
Digital input	16 ( I1-IG)
Analogue input	8 ( I1-I8)(0..10V DC) +4(ID-IG)(0...20mA OR 0..10V DC)
<b>Digital input and analog inputs (0...10V)10bits( I1-I8 )</b>	
<b>Inputs used as digital inputs( I1-I8 )</b>	
Input voltage	DC0-28.8V
Input signal0	< 5V DC;<0.08mA
Input signal1	> 8 V DC;>0.12mA
Input current	0.16mA @ 10.8V dc 0.18mA @ 12.0 V dc 0.34mA @ 24 V dc 0.41mA @ 28.8 V dc
Response time	0 to 1 : Typ. 10.5 ms ; 1 to 0 : Typ. 1.5 ms

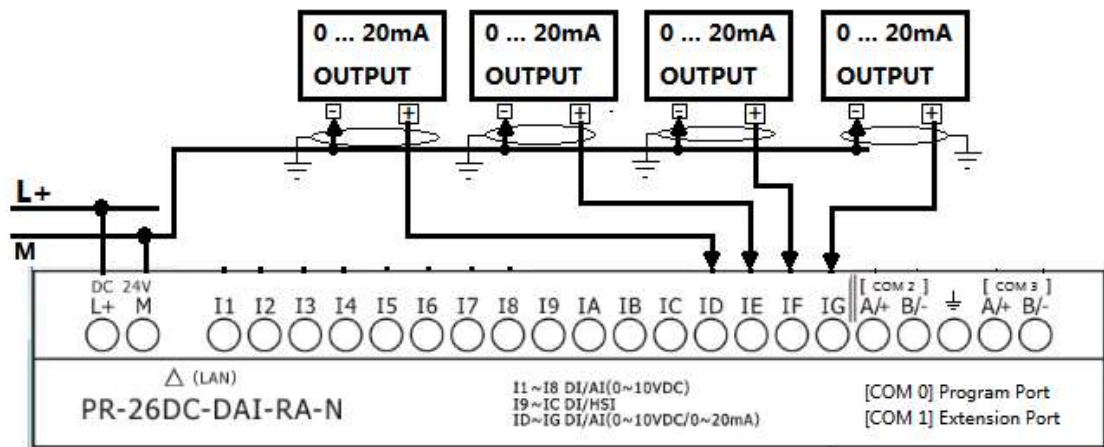
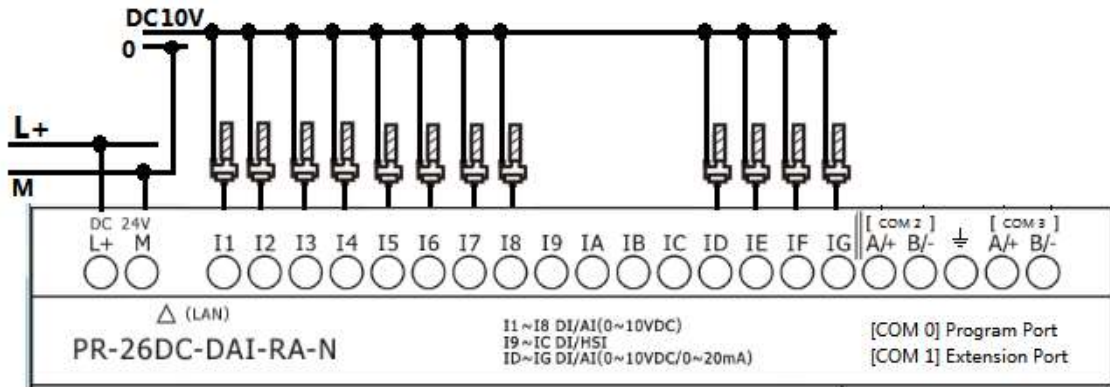
Maximum counting frequency	Typ.: 4 HZ
Sensor type	Contact or 3-wire PNP
Input type	Resistive
Isolation between power supply and inputs	None
Isolation between inputs	None
<b>Inputs used as analog inputs(0..10V)( I1-I8 )</b>	
Measurement range	DC 0---10V
Input impedance	Min, 24K $\Omega$ ; Max. 72K $\Omega$
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
<b>Digital and high speed inputs(I9--IC)</b>	
<b>Digital inputs( I9-IC )</b>	
Input voltage	DC0-28.8V
Input signal0	< 5V DC; <1mA
Input signal1	> 8 V DC;>1.6mA
Input current	2.1mA @ 10.8V dc 2.3mA @ 12.0 V dc 4.6 mA @ 24 V dc 5.5 mA @ 28.8 V dc
Response time	0 to 1 : <1 ms ; 1 to 0 : <1 ms
<b>High speed inputs( I9-IC )</b>	
Maximum counting frequency	60kHz(I9--IC)
<b>Digital and analog(0--10V)&amp;analog(0...20mA)(ID-IG)</b>	
<b>Inputs used as digital inputs( ID-IG )</b>	
Input voltage	DC0-28.8V
Input signal0	< 5V DC;<0.08mA
Input signal1	> 8 V DC;>0.12mA
Input current	0.16mA @ 10.8V dc 0.18mA @ 12.0 V dc 0.34mA @ 24 V dc 0.41mA @ 28.8 V dc
Response time	0 to 1 : Typ. 10.5 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
<b>Inputs used as analog inputs(0..10V)( ID-IG )</b>	
Measurement range	DC 0---10V
Input impedance	Min, 24K $\Omega$ ; Max. 72K $\Omega$
Input voltage	28.8 V DC max

Resolution	10bit ,0.01V
Accuracy at 25 °C	± (Max.0.02)V
Accuracy at 55 °C	± (Max.0.04)V
Isolation between analog channel and power supply	None
Cable length	10 m max. shielded and twisted
Input signal0	< 5V DC; <0.08mA
Input signal1	> 8 V DC; >0.12mA
Input current	0.16mA @ 10.8V dc 0.18mA @ 12.0 V dc 0.34mA @ 24 V dc 0.41mA @ 28.8 V dc
Response time	0 to 1 : Typ. 10.5 ms ; 1 to 0 : Typ. 1.5 ms
Sensor type	Contact or 3-wire PNP
Input type	Resistive
Isolation between power supply and inputs	None
Isolation between inputs	None
<b>Inputs used as analog inputs(0..20mA)( ID-IG )</b>	
Analogue signal	0/4....20mA current
Input impedance	260Ω
Resolution	0.02mA
Accuracy at 25 °C	0.05mA
Cycle time for analog value generation	Typ. 50 ms
Protection against polarity inversions	yes
Overvoltage protection	Yes, if the input voltage is >6.5V, this one is automatically switched on 0--10V configuration
Isolation between power supply and inputs	No
Cable length	<=30M with shielded twisted cable(sensor not isolated)
<b>Output ( 2 Analog output + 8 Relay output)</b>	
<b>Analog output(0...10V)/Analog output(0...20mA):AQ1--AQ2(Can be switched for voltage or current output)</b>	
Output No.	2 (AQ1:0~10V AQ2:0~20mA)
Output signal	C1-Q1: DC 0...10V
Internal value and signal relationship	(0..1000)=( 0...10V)
Resolution	0.01V
Accuracy at 25 °C	0.02V
Output signal	C1-Q2: DC 0..20mA
Internal value and signal relationship	(0...1000)=( 0...20mA)
Resolution	0.02mA
Accuracy at 25 °C	0.05mA
<b>5A Relay 4 outputs from Q3 to Q6</b>	
Max. breaking voltage	CE:AC 250 V/DC 30 V 5A UL:AC 250 V/DC 30 V 3A
Electrical durability Expectancy	10 <sup>5</sup> Operations at Rated Resistive Load
Mechanical life	10 <sup>7</sup> 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
<b>10A Relay 4 outputs from Q7 to QA</b>	
Max. breaking voltage	CE:AC 250 V/DC 30 V 10A UL:AC 250 V/DC 28 V 5A
Max. Allowable Power Force	1250VA
Electrical durability Expectancy	10 <sup>5</sup> Operations at Rated Resistive Load
Mechanical life	10 <sup>7</sup> 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
<b>Communication ports parameters:</b>	
COM0_TTL port	Can be used as program port with PR-RS232&PR-USB; Also can be convert to RS232 port with PR-RS232 Can be convert to RS485 port with PRO-RS485 Note:Need move away the expand cover to use it Can be used as modbus master or slave
Built-in RS485 COM2	1 built-in RS485 port (Terminal A+,B-) Can be used as modbus master or slave
Built-in RS485 COM3	1 built-in RS485 port (Terminal A+,B-) Can be used as modbus master or slave
Ext RS485 COM1	Need use with PR-E-RS485 module Can be used as modbus master or slave
Ethernet port:	Built-In(10M/100M), 1.Can be used as program or communication 2.Can be used as modbus master or slave
Monitoring webserver page	Yes
Xlogic<--->Xlogic(by Ethernet)	1 xlogic works as tcp server can connect with 8 tcp client xlogics or other tcp devices.
Xlogic<--->Ethernet/Internet:	1 xlogic works as TCP clients can connect with 8 different tcp servers separately in maximum
<b>Other parameter</b>	
Weight	Approx.400g

# Dimension and wiring





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																						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																							
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.																													