

## APB Series PLC

### Features:



- ◆ Main module: 12\22\24 points; Extension module: 22 points; It is flexible for extending, and the optimal configuration: 7 I/O extension modules, 1 voice module, and 1 SMS module;
- ◆ Program memory capacity: 320 FBDs, EEPROM;
- ◆ It is allowed to place a Li-ion battery to power the clock;
- ◆ Under the circumstance of DC12-24V, the main machine at most has 12 voltage analog inputs 0-10V, 2 current analog inputs 0/4-20mA and 2 analog outputs 0/4-20mA;
- ◆ High-speed operation: at most 4 high-speed inputs 10KHZ and 2 high-speed outputs 50KHZ;
- ◆ MODBUS protocol, and can be connected to SH-300 (Text Panel);
- ◆ New function blocks: pulse width modulation (PWM), pulse output (PTO), ACC, SMS and analog calculation etc.;

### Technical Parameters

Item	APB-12MRD(L)	APB-12MTD(L)	APB-12MGD(L)	APB-22MRA(L)	APB-24MRD
	APB-22MRD(L)	APB-22MTD(L)	APB-22MGD(L)		
Surge Immunity	2kv(common mode), 1kv(differential mode), Level 3 (IEC61000-4-5)				
Electrostatic Discharge (outer casing)	±8kv(air discharge)/±6kv(contact discharge), Level 3 (IEC61000-4-5)				
Ambient Temperature	-10°C~+55°C				
Storage Temperature	-40°C~+70°C				
Ambient Humidity	5%~95%RH				
Degree of Protection	IP20(Non-waterproof)				
Installation	Fixing with M3 screws or Standard DIN rail mounting				
Dimensions (mm)	71*99*90(12 points) ; 126*99*90(22 points) ; 126*99*90(24 points)				
Programming Language	FBD				
Points	12 points/22 points/24 points/can support 7 I/O extension modules				
Memory Capacity	320 FBDs				
Filtering Duration of Input Signal	It can be set to improve the stability of signal				

Real-time Clock	160h,can place a Li-ion battery if it is necessary				
Password Protection	Multiple passwords protection				
High-speed Operation	At most 4 high-speed inputs 10KHz, and 2 high-speed outputs 50KHz				
Analog Operation	At most 12 voltage 0-10V and 2 current 0/4-20mA analog inputs, and 2 analog outputs 0/4-20mA				
Power Failure Protection	Yes				
Simulate Monitoring	Yes				
Communication Interface	TTL interface; besides, communication module supports 2 RS485 and 1 RS232 interfaces				
Baud Rate	9600bps				
Communication Protocol	MODBUS RTU				
<b>Power Supply</b>					
Rated Voltage	DC12-24V	DC12-24V	DC12-24V	AC110-220V	DC12-24V
Permissible Range	DC11-28V	DC11-28V	DC11-28V	AC85V-265V	DC11-28V
Power Consumption	3.5w				
<b>Digital Input</b>					
Input Type	NPN/PNP	NPN/PNP	NPN/PNP	NPN/PNP	NPN/PNP
Input Signal 0	DC0-5V	DC0-5V	DC0-5V	AC0-70V	DC0-5V
Input Signal 1	DC8.5-28V	DC8.5-28V	DC8.5-28V	AC85-265V	DC8.5-28V
Isolation	Non-isolation	Non-isolation	Non-isolation	Photoelectric isolation	Non-isolation
Isolated Group	--	--	--	14	--
Isolated Voltage	--	--	--	2500/5000Vr.m.s	--
<b>Digital Output</b>					
Output Type	Relay	Transistor(NPN)	Transistor(PNP)	Relay	Relay
Rated Voltage	24VDC/220VAC	24VDC	24VDC	24VDC/220VAC	24VDC/220VAC
Isolation Method	Relay isolation	-	-	Relay isolation	Relay isolation
<b>Analog Input</b>					
Input Type	(DC0-10V)/8 inputs	(DC0-10V)/8 inputs	(DC0-10V)/8 inputs	--	((0)4-20mA)/2 inputs
	(DC0-10V)/12 inputs	(DC0-10V)/12 inputs	(DC0-10V)/12 inputs		(DC0-10V)/12 inputs
A/D Conversion	12 bits	12 bits	12 bits	--	12 bits
<b>Analog Output</b>					
Output Type	--	--	--	--	(0)4-20mA/2inputs
A/D Conversion	--	--	--	--	12 bits
Isolation	Non-isolation	Non-isolation	Non-isolation	Non-isolation	Non-isolation

High-speed Operation					
Input Type	4 inputs /10KHz	4 inputs /10KHz	4 inputs /10KHz	--	4 inputs /10KHz
	Support single-phase counter and two-phase counter	Support single-phase counter and two-phase counter	Support single-phase counter and two-phase counter	--	Support single-phase counter and two-phase counter
Output Type	--	2 outputs / 50KHZ	2 outputs / 50KHZ	--	--
		Supports multiple outputs: PTO pulse output, PWM pulse width modulation and acceleration/deceleration single-phase pulse	Supports multiple outputs: PTO pulse output, PWM pulse width modulation and acceleration/deceleration single-phase pulse		

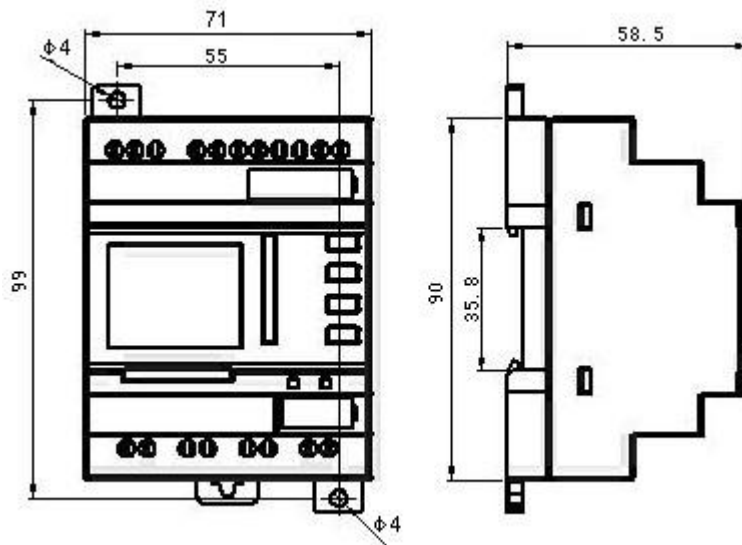
## Type

Note: The economical type is supplied without LCD panel, and the basic type is supplied with LCD panel.

APB-12MRD(L)	DC12V-24V	8 points digital input (can be used as analog inputs); I4-I7 can be high-speed ports	4 points relay output
APB-12MTD(L)	DC12V-24V	8 points digital input (can be used as analog inputs); I4-I7 can be high-speed ports	4 points NPN transistor output Q2、Q3 can be high-speed output ports
APB-12MGD(L)	DC12V-24V	8 points digital input (can be used as analog inputs); I4-I7 can be high-speed ports	4 points PNP transistor output Q2、Q3 can be high-speed output ports
APB-22MRA(L)	AC100V-240V	14 points input	8 points relay output
APB-22MRD(L)	DC12V-24V	14 points digital input (the first 12 points can be analog inputs); I4-I7 can be high-speed ports	8 points relay output
APB-22MTD(L)	DC12V-24V	14 points digital input (the first 12 points can be analog inputs); I4-I7 can be high-speed ports	8 points NPN transistor output Q2、Q3 can be high-speed output ports
APB-22MGD(L)	DC12V-24V	14 points digital input (the first 12 points can be analog inputs); I4-I7 can be high-speed ports	8 points PNP transistor output Q2、Q3 can be high-speed output ports
APB-24MRD	DC12V-24V	2points for current input, and 14points for digital input (the first 12 points can be 0~10V analog inputs); I4-I7 can be high-speed ports	6 points relay output + 2 analog outputs
APB-22ERA	AC100V-240V	14 points digital input	8 points relay output
APB-22ERD	DC12V-24V	14 points digital input	8 points relay output
APB-22ETD	DC12V-24V	14 points digital input	8 point NPN transistor output
APB-22EGD	DC12V-24V	14 points digital input	8 point NPN transistor output

## Dimensions

Take the 12 points module as an example. The 12 points, 22 points, and 24 points modules and other extension modules share the same width and height, the only one difference exists in the length.



Type	Dimensions(mm)
12 points main module	71*99*90
22 points main module	126*99*90
24 points main module	126*99*90
I/O extension module	126*99*90
SMS extension module	71*99*90