Product details:

P-PMC programmable controller

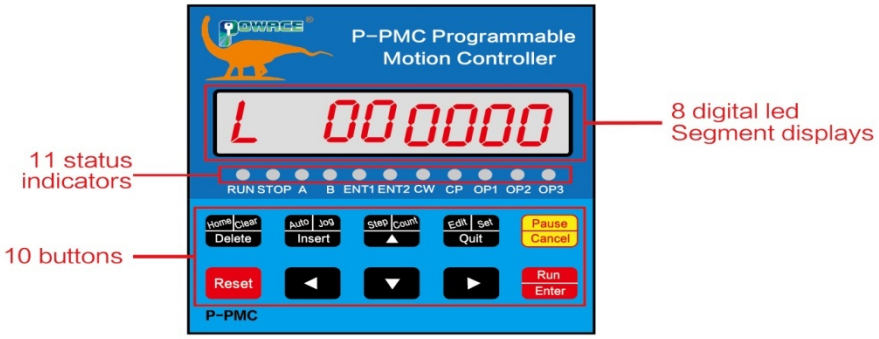
Package included:

- 1x Single axis motion programmable controller
- 1x Universal plug converter

Product description:

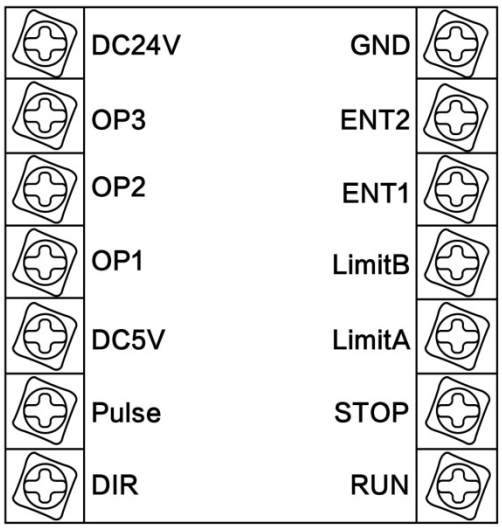
- ★ Number of controlled axis: Single axis;can achieve a variety of complex operation: positioning control and non-positioning control;
- ★ The maximum output frequency: 40KHZ;
- ★ Output frequency resolution: 1Hz;
- ★ Programmable maximum number of rows: 99;
- ★ Signal input: 6 (optical isolation);
- ★ Signal output: 3 (optical isolation);
- ★ A continuous displacement range: -7,999,999 ~ 7,999,999;
- ★ Operating state: Auto-run mode, manual operation, the program edit mode, parameter setting status;
- ★ Lifting speed curve: 2 (optimization);
- ★ Display digits: 8 digital display, manual / automatic status display, run / stop status display, the number of steps / counts / procedures display, edit the program, parameter display, input / output status display, pulse and direction display ;
- ★ Auto-run feature: You can edit, you can control the start and stop operation ect. automatically through the panel buttons and adding switches that connected to the back of the terminals;
- ★ Manual operation functions: position adjustment (manual jog speed and jog the number of steps can be set);
- ★ Parameter setting function: Starting frequency, acceleration and deceleration curve, reverse clearance, manually run length, manual speed, back to zero speed and interrupt jump the line all can be set;
- ★ Program editing functions: You can insert, delete, modify the program. The controller can identify the error Instruction;
- ★ Return to Zero features: It can return to zero from the positive and negative directions automatically
- ★ The number of programming instructions: 14;
- ★ External operating functions: interrupt operation through parameter setting and add switches that connected to the terminals A and B;
- ★ Power supply:AC220V ± 15%;

Panel introduce:



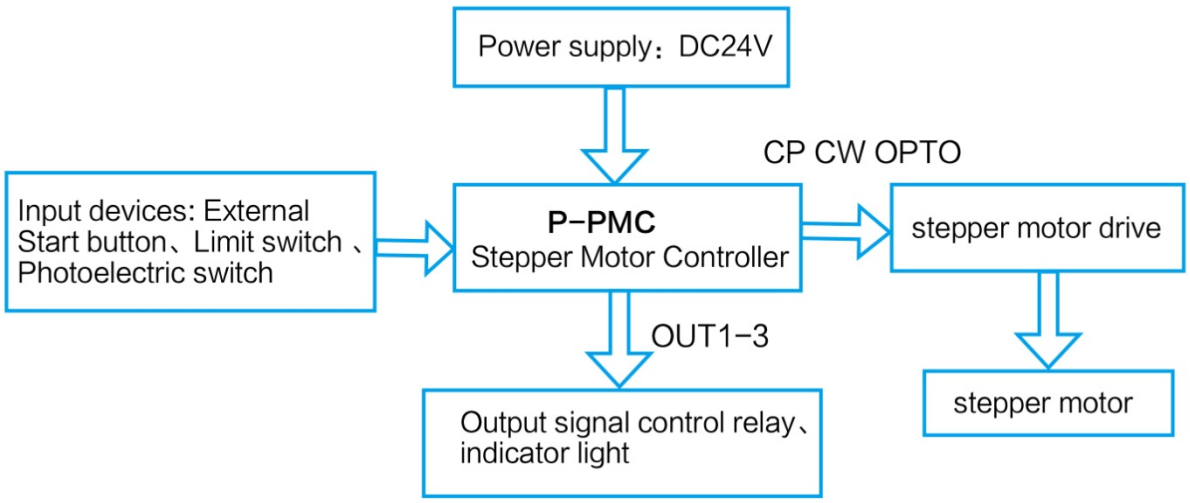
Button	Function	Instruction	Use of state	Use method
Run Enter	Run	Start the program runs; startup program continues to run	Auto waiting to run status; run automatically stopped state; When executing directive pause	Click
	Enter	Confirm the modification of the parameters are valid; Confirm the changes or enter the program effective	Parameter setting state; program edit state	Click
Pause Cancel	Pause	Pause program is run automatically; pause the program is being run	Automatic operation; manual operation status	Click
	Cancel	Cancel modified parameters; Cancel modify or entry process	Parameter setting state; program edit status	Click
Home Clear Delete	Home	let motor return to zero (position when power is on)	Auto waiting to run status; The automatic operation stop status;	Click
	Clear	Clear all entered program;	Program edit status;	Click for 2 seconds or more
	Delete	Delete the current line program	Program edit status;	Click
Auto Jog Insert	Auto	Converted to automatic status	manual status;	Click
	Jog	Converted to manual status	automatic status;	Click
	Insert	Position in the program above the current row insert a new row program	Program edit status;	Click
Step Count ▲	Step	Displays the status switches to coordinate (steps) display	Auto waiting to run status	Click
	Count	Displays the status switch to count display mode	Auto waiting to run status	Click
	Program	Displays the status switch to program display mode	Auto waiting to run status	Click
Edit Set Quit	Edit	Enter the program edit status	manual status;	Click
	Set	Enter the parameter setting status	manual status;	Click for 2 seconds or more
	Quit	From the program edit state or parameter setting state return to manual mode, and save the file to save the modified program or parameters	Program edit status; parameter setting status	Click
◀	Move cursor	Current position move to the left	Program edit status; parameter setting status	Click
	Quick View	Return after browsing program, only the line number and program name, as this program to see the data, click this	Program edit status	Click
▼	Move cursor to down	Current position move down one line	Program edit status; parameter setting status	Click
	Counter is cleared	The current counter value is cleared	Auto waiting to run status	Click
▶	Move cursor to right	Current position move to the right	Program edit status; parameter setting status	Click
	Counter save	Save the current counter value	Auto waiting to run status	Click
Reset	Reset	Reset Controller		Click

Back panel signal descriptions:



1. **Run:** Start running the program, The same function as "Run" of the operation panel;
2. **Stop:** Pause the running program, which is equivalent to the stop button on the panel. After restarting, the program continues to run.
3. **(Limit A) A operation** and **(Limit B) B operation** are a major feature of this controller: For stepper motors, we generally perform quantitative positioning control, such as controlling the motor to run at a certain speed and a certain displacement. This method is easy to solve, just program the speed and displacement. But there are quite a lot of controls that cannot be positioned in advance. For example, the stepper motor is controlled to run in one direction from the starting point until it stops when it hits a travel switch, and of course, it runs in the reverse direction and returns to the starting point. For another example, the stepper motor is required to reciprocate n times between two limit switches, and so on. In these operations, we do not know the specific value of the displacement of the stepper motor in advance, how should we program it? This controller uses: "interrupt operation", which we call "(limit position A) A operation" and "(limit position B) B operation". Take "(limit position A)A operation" as an example, the work flow is: when the program is running, if "(limit position A)A operation" is input again, the motor will slow down and stop, the program is interrupted here, and the program is recorded Hold the coordinates of the interruption, the program jumps to the program specified by the entry address of "(limit A) A operation" to run the program.
4. **ENT1** and **ENT2** Switching signal input terminal.
5. **OUT1, OUT2** and **OUT3** Switching signal output terminal,
6. **COM+, COM−** input and output switch value external power supply, this power supply is **DC24V/0.2A**, this power supply is provided by the internal isolation of the controller.
7. 220V controller power input terminal. Input signal and output signal interface circuit: **"Start", "Stop", "(Limit A)A operation", "(Limit B)B operation", "Input 1", "Input 2"** of this controller are For input signals, they have the same input interface circuit. **"Output 1", "Output 2", and "Output 3"** are called output signals. They have the same output interface circuit. The input and output circuits are optically isolated to ensure that there is no mutual interference inside the controller. The internal working power supply **(+5V)** of the controller and the external working power supply **(+24V)** are independent of each other, and there is no connection. These two sets of power supplies are controlled by the controller. Two independent windings of the internal transformer are provided. The status of the switch input signal output signal corresponds to the indicator light on the panel respectively. For the input quantity, the input low level (when the switch is closed) the light is on, otherwise the light is off; for the output quantity, when the output is 0, it is the low level, the indicator light is off, otherwise the light is on.

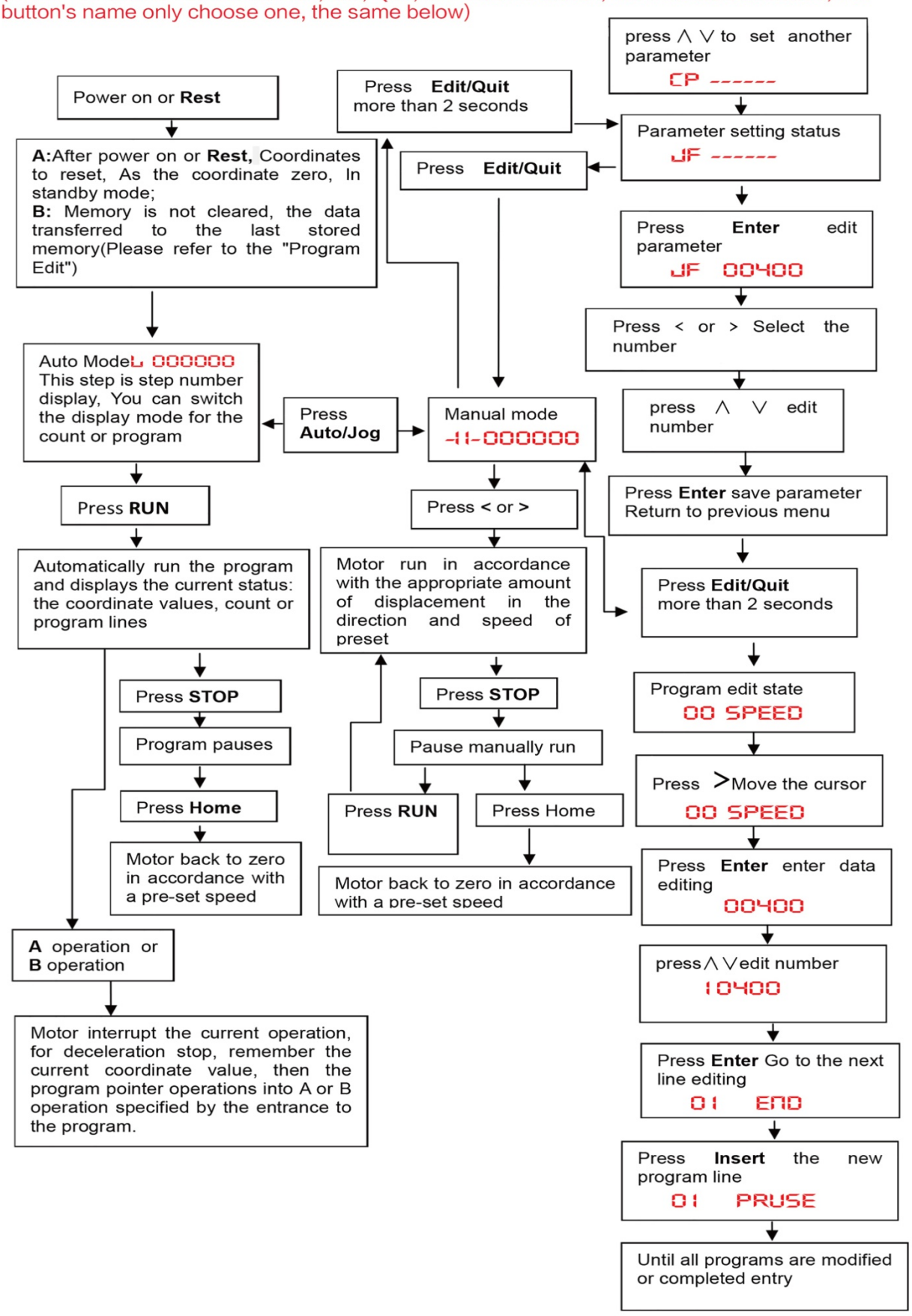
Controller wiring diagram:

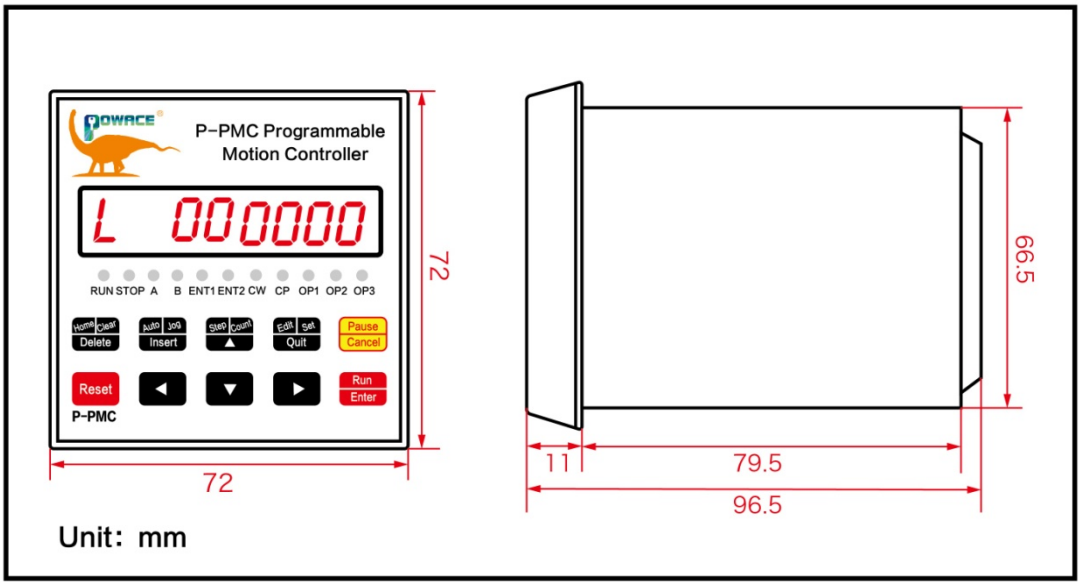


Operation flow chart:

Controller always operate in one of four states: automatic mode, manual mode, the program edit mode, parameter setting state. Power or press the Reset, Controller to be run in automatic mode, the cursor coordinates 0, then you can start the program to run automatically or switch to manual mode, program editing state and parameter setting status can only switch in manual mode. Editing completed or parameter setting procedure is completed, press the Quit to return to manual mode (the program will be saved) ,in manual mode, if you switch to program edit mode, simply press the Edit button, if you switch to the parameter setting state, press Set more than 2 seconds.

(Note: The above mentioned Edit, Set, Quit, is the same button, we introduce a feature, the button's name only choose one, the same below)





Front panel introduce

1. 8 digital led Segment displays;
2. 6 input status indicator;
3. 3 output status indicator;
4. CP pulse signal indicator;
5. CW direction signal indicator;
6. Keys: Total 10 keys, and most of the composite keys,
they represent different functions in different states (In the eglish manual will have detail instructions)

This controller adopts embedded instrument shell,
small size and light weight (500g),
the front panel is 71mm×71mm square, and the length is 120mm. The specific dimensions are shown in the figure below.

Back panel diagram and signal descriptions

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“Run” of the operation panel;
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