

Features:

- 1>.Dual mode:PWM mode and PULSE mode
- 2>.LCD high definition display
- 3>.Support frequency adjustment
- 4>.Support duty cycle adjustment
- 5>.High precision detection
- 6>.Support power-down memory function
- 7>.1-Channel signal output
- 8>.Support reverse protection
- 9>.Support enabled/disabled output

Parameters:

- 1>.Product name: ZK-PP1K PWM Signal Generator
- 2>.Model: ZK-PP1K
- 3>.Work voltage:DC 3.3V-30V
- 4>.Frequency range:1Hz~150KHz
- 5>.Frequency accuracy:2%
- 6>.Duty cycle range:0.00%-100%
- 7>.Output Current:<30mA
- 8>.Number of pulses:1~9999 or Infinite
- 9>.Delay time:0.000s~9999s
- 10>.Pulse width:0.000s~9999s
- 11>.Time accuracy:1ms
- 12>.Output amplitude:Same to input voltage
- 13>.Work Temperature:-20°~85°
- 14>.Work Humidity:0%~95%RH
- 15>.Size:79*43*26mm

Work Mode:

- 1>.PWM Mode:Frequency,Duty cycle
 - 1.1>.It is PWM mode when display '%'.
 - 1.2>.The factory default mode is PWM mode.
 - 1.3>.Button FREQ+ and FREQ- are used to setting output frequency.User can short press by set value in minimum unit or keep press to continuous setting. Frequency range is 1Hz to 150KHz.
 - 1.4>.Button DUTY+ and DUTY- are used to setting output duty cycle for frequency.User can short press by set value in minimum unit or keep press to continuous setting. Duty cycle range is 0.00% to 100%.
 - 1.5>.Short press button 'ON' to enabled or disabled output.It is enabled output when display symbol 'OUT' on left.It is disabled output if no display symbol 'OUT' and module will output 0V.
 - 1.6>.The default factory frequency is 1KHz and the duty cycle is 50%.
 - 1.7>.Switch work mode:Keep press button 'SET' about 6 second.Then it is enter into PULSE mode if symbol '%' disappear on right.
- 2>.PULSE Mode:Pulse width,Delay,Pulse number
 - 2.1>.It is PWM mode without display symbol '%'.
 - 2.2>.Button P+ and P- are used to set time for positive pulse width.Displayed on the first line.Set time range is 0.000s~9999s.
 - 2.3>.Button N+ and N- are used to set time for negative pulse width time.Displayed on the second line.Set time range is 0.000s~9999s.
 - 2.4>.Short press button 'ON' to enabled or disabled output.It is enabled output when display symbol 'OUT' on left.It is disabled output if no display symbol 'OUT' and module will output 0V.
 - 2.5>.The default factory positive pulse width is 0.5 seconds, and the negative pulse width is 0.5 seconds.
 - 2.6>.Long press button 'SET' for 2 seconds to enter into set the number of pulses and delay time.Screen will display

symbol 'SET'

at lower left corner. Note: Once in this mode, the output will be disabled and output pulse will be cleared.

2.7>. Button P+ and P- are used to set delay time. Set time range is 0.000s~9999s.

2.8>. Button N+ and N- are used to set the number of pulses. Set range is 1~9999 or Infinite.

2.9>. The factory default delay time is 0 seconds, and the number of pulses is infinite (display '----').

2.10>. Automatic return to pulse interface by press button 'SET' for 2 seconds.

2.11>. Short press button 'ON' to after set delay time and then start output the set number of pulses.

2.12>. It will automatically output 0V if the number of pulses is sent. The output will be disabled and clear pulse numbers if press

button 'ON' during output.

2.13>. The number of set pulses is output each time when module power on and then stop output or press button 'ON' to restart.

Practical application:

1>. PWM output 20KHz, 60% : Select PWM mode. Set frequency to 20.00 and duty cycle to 060%.

2>. Output turn ON 0.6s, OFF 0.2s, infinite loop : Select PULSE mode. Set positive pulse width to 0.600 and negative pulse width to 0.200. Delay time to 0.000. Number of pulses to '----'.

3>. Delay 5s after power ON or press 'ON' button. Then output turn ON 0.6s, OFF 0.2s, infinite loop : Select PULSE mode. Set positive pulse width to 0.600 and negative pulse width to 0.200. Delay time to 5.000. Number of pulses to '----'.

4>. Delay 5s after power ON or press 'ON' button. Then output 10ms high level signal, 10ms low level signal, cycle 100 times : Select PULSE mode. Set positive pulse width to 0.010 and negative pulse width to 0.010. Delay time to 5.000. Number of pulses to 0100.

5>. Delay 5s after power ON. Then keep output : Select PULSE mode. Set positive pulse width more than 0 (any value) and negative pulse width to 0.000. Delay time to 10.00. Number of pulses to '----'.

Use steps:

1>. Connect to power supply.

2>. Select work mode as following manual.

3>. Short or long press button 'FREQ+' or 'FR



Fre: 1.000Khz

Duty: 50%

PWM mode interface



High: 0.500s

Low: 0.500s

Pulse mode interface



Delay: 1.000s

Number: 9999

Dual mode **PWM** pulse generator

Pulse	ON/OFF	ON/OFF	Fre-	Duty	Pulse	Delay
Number	Button	External	quency	cycle	width	Adjust
			Adjust	Adjust	Adjust	



PWM: 1HZ-150KHZ/0-100%

PULSE: 1ms-9999s/1-9999

1. There is an output waveform when power is turned on;
2. Waveform amplitude = power supply voltage;
3. The number of output pulses reaches the set value, the output is automatically stopped, and 'OUT' disappears;
4. Press the ON button to control the presence or absence of the waveform. OUT disappears to indicate no output waveform, and output 0;
5. Power-on reset or ON button to turn on the output, recalculate the number of pulses;



PWM MODE	Switch mode >6s	Freq+	Freq-	Duty+	Duty-	RUN /STOP	
PULSE MODE	Switch mode >6s	High Level+	High Level-	Low Level+	Low Level-	RUN /STOP	
	SET (>2s)	Power-on delay+	Power-on delay-	Pulse Number+	Pulse Number-	RUN /STOP	

