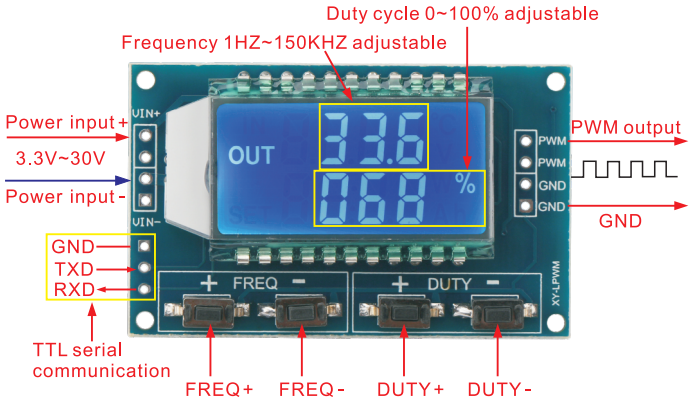
DC LCD Display PWM Module Pulse Frequency Square Wave Rectangular Wave Signal Generator



Output PWM amplitude=Input voltage

First, the module description:

PWM output, you can set the frequency and duty cycle separately;
Frequency is divided into four ranges, automatically switch:
(1) XXX (no decimal point): the smallest unit is 1Hz; the value range is 1Hz ~ 999Hz;
(2) X.XX (decimal point in the hundred) the smallest unit is 0.01Khz, the value range is 1.00Khz ~ 9.99Khz;
(3) XX.X (decimal point in ten): the smallest unit is 0.1Khz; the value range is 10.0KHz ~ 99.9KHz
(4) X.X.X (decimal point in ten and hundred): the smallest unit is 1Khz; the value range is 1KHz ~ 150KHz
E.g. Frequency display: 100 indicates that the PWM output 100Hz pulse;
1.01 indicates that the PWM output 1.01K pulse;
54.1 indicates that the PWM output 54.1 kHz pulse;
1.2.4 indicates that the PWM output 124 kHz pulse;
Duty cycle range: 0 ~ 100%;
All setting parameters will be save automatically when power-down.

Second, the parameter settings:

The module has four independent keys, uses to set the frequency and duty cycle; support short press(increase or decrease a unit) and long press (fast increase or decrease), the setting parameters will be saved automatically, besides, it will not be lost when power down.

Third, the module parameters:

Working voltage: 3.3 ~ 30V;
Frequency range: 1Hz ~ 150KHz;
Frequency accuracy: the accuracy in each range is about 2%;
Signal load capacity: the output current can be about 5 ~ 30ma;
Output amplitude: PWM amplitude equal to the supply voltage;
Ambient temperature: -20 ~ +70 ℃.

Fourth, the scope of application:

1. Used as a square wave signal generator, generate square wave signal for experimental development and use;
2. Used to generate a square wave signal that controls the motor driver;
3. Generate adjustable pulse for MCU use;
4. Generate adjustable pulse to control the relevant circuit (PWM dimming speed and other applications).

Fifth, serial control (single-chip TTL level communication):

Communication standard: 9600 bps Data bits: 8
Stop bit: 1
Check digit: none
Flow control: none

1. Set the PWM frequency
   “F101”: Set the frequency to 101 HZ (001 to 999)
   “F1.05”: set the frequency to 1.05 KHZ (1.00 ~ 9.99)
   “F10.5”: Set the frequency to 10.5KHZ (10.0 ~ 99.9)
   “F1.0.5”: set the frequency of 105KHZ (1.0.0 ~ 1.5.0)
2. Set the PWM duty cycle
   “DXXX”: set the PWM duty cycle to XXX; (001 ~ 100)
   Such as D050, set the PWM duty cycle is 50%
3. Read the set parameters
   Send a “read” string to read the set parameters.

Set successfully return: DOWN;
Setup failed to return: FALL.