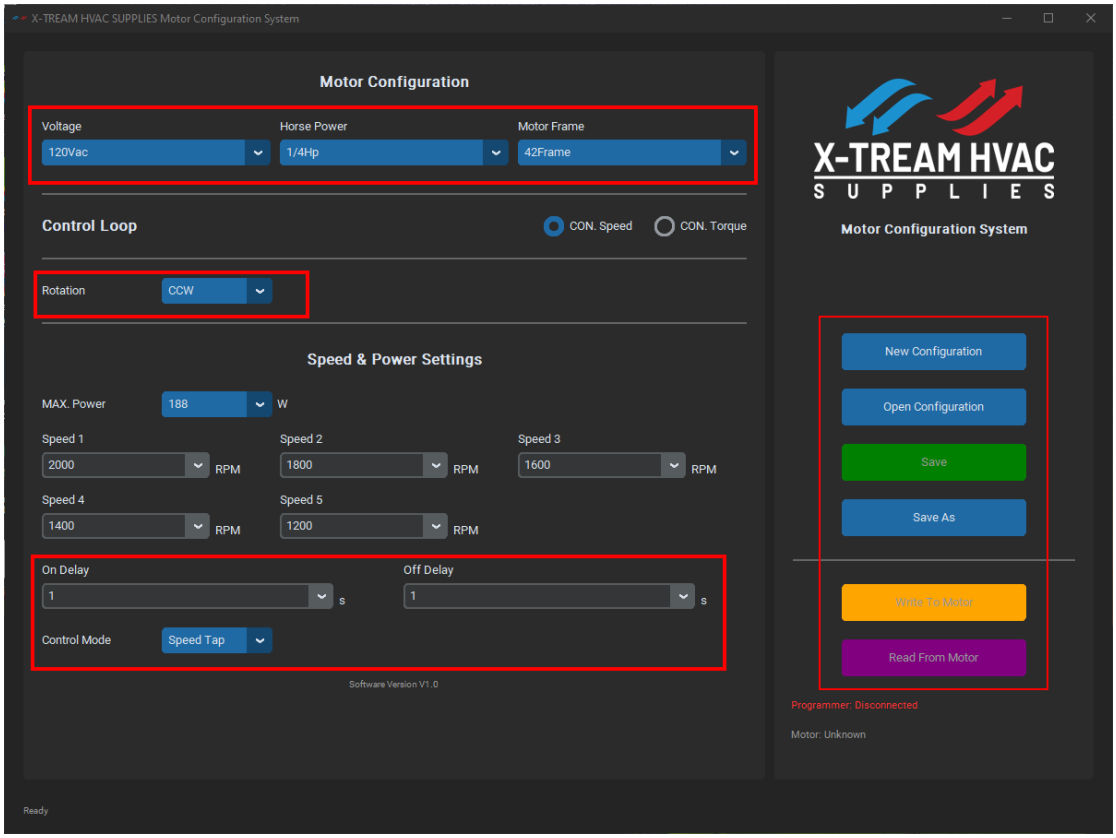
Operation instructions for the host computer

General Settings：



Voltage：

For voltage selection, simply choose a voltage that matches the motor nameplate,

This voltage will not change the actual working voltage of the motor. It is used for reading in cases where the motor's nameplate is missing or similar situations

Obtain and judge the voltage information of the motor.

Horse Power，

For motor output power, it is recommended to set the data consistent with the motor nameplate, which can be used to read and determine the motor power and other information in case the motor nameplate is lost.

Motor frame，

The motor diameter parameters are available in two options: 42 and 48. 42 represents a motor core outer diameter of 120mm, while 48 represents a motor core outer diameter of 140mm.

Rotation：

Select motor direction, and customers can set the motor direction themselves,

On delay：

Power-on delay. The time from the speed regulation signal being connected to the motor starting up when the motor is powered on, with a setting range of 0-60 seconds

Off delay：

Shutdown delay. The time from the speed regulation signal being turned off to the motor stopping running when the motor is powered on, with a setting range of 0-60 seconds

Control mode：

Speed adjustment method, including speed tap (five-speed adjustment),

Vsp：Speed regulation (Vsp voltage default is 0-10V),

PWM：Speed regulation (default frequency 100Hz, voltage 10V)

New，Open，Edit，Save，Save as，Consistent with the commonly used Windows operating mode

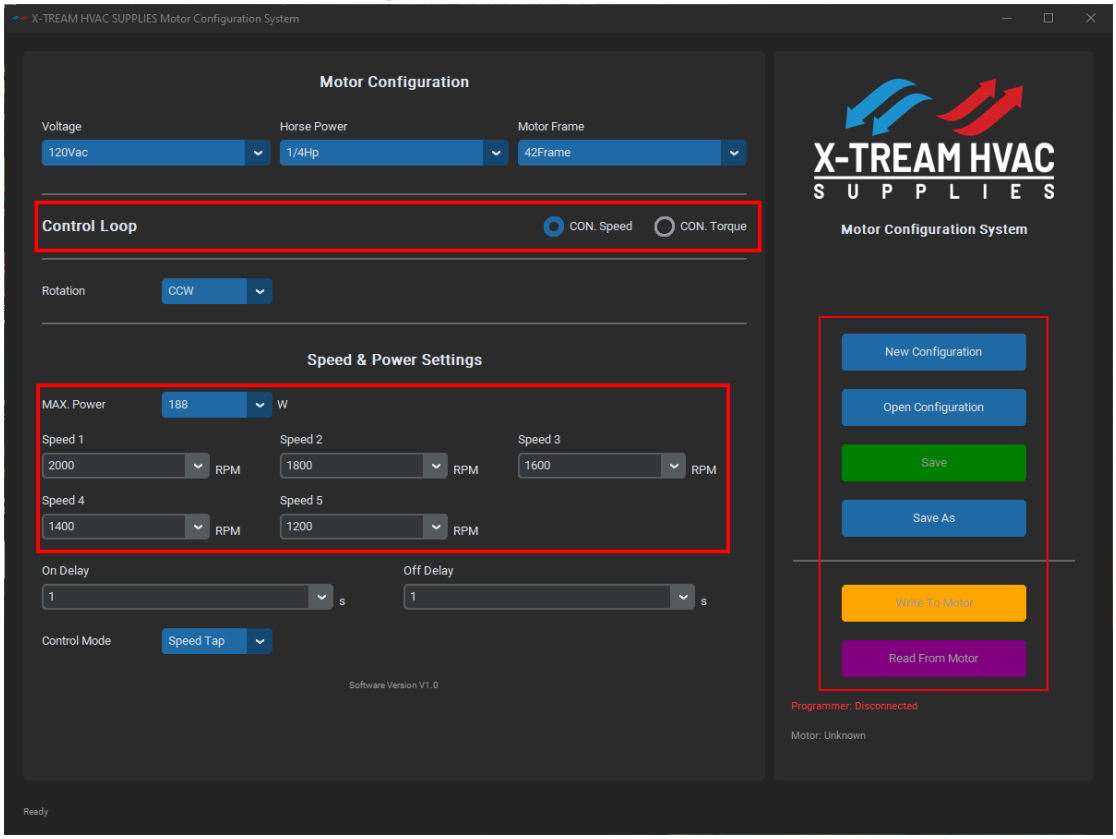
Write to motor：

Download the set parameters to the motor,

Read from motor：

Read the previously set data of the motor,

Constant speed mode setting



Remark：

1. In constant speed mode, the motor speed is only related to the set speed value. Within the maximum power range of the motor, changes in load will not cause fluctuations in speed,

2. Depending on the needs, the five gears of the motor can be set to different speeds or the same speed. There is no priority for speed settings Speed1-5. The speed of Speed1 can be higher or lower than that of other gears,

Max.power，The maximum input power for the motor is set as follows: 1/2Hp has a maximum input power of 450W, 1/3Hp has a maximum power of 320W, and 1Hp has a maximum power of 950W,

Practical operation and troubleshooting methods：

Case 1：

A 1/2 Hp motor, with constant speed setting, MAX. Power: 450W,

Speed1：1500RPM，Speed2：1000RPM，Speed3：800RPM，Speed4：600RPM，Speed5：400RPM，

When the motor operates with a load, the actual test results for Speeds 2, 3, 4, and 5 all reached their corresponding set speeds, while the actual test result for Speed 1 was only 1200 RPM. This situation indicates that at 1200 RPM, the output power of the motor under this load has already reached 1/2 HP. When operating at 1500 RPM, the output power required from the motor is much greater than 1/2 HP. Therefore, it is necessary to adjust the load or replace it with a higher-power motor.

Case 2：

A 1/2 Hp motor, with constant speed setting, MAX. Power: 450W,

Speed1：1800RPM，Speed2：1500RPM，Speed3：1000RPM，Speed4：800RPM，Speed5：1600RPM，

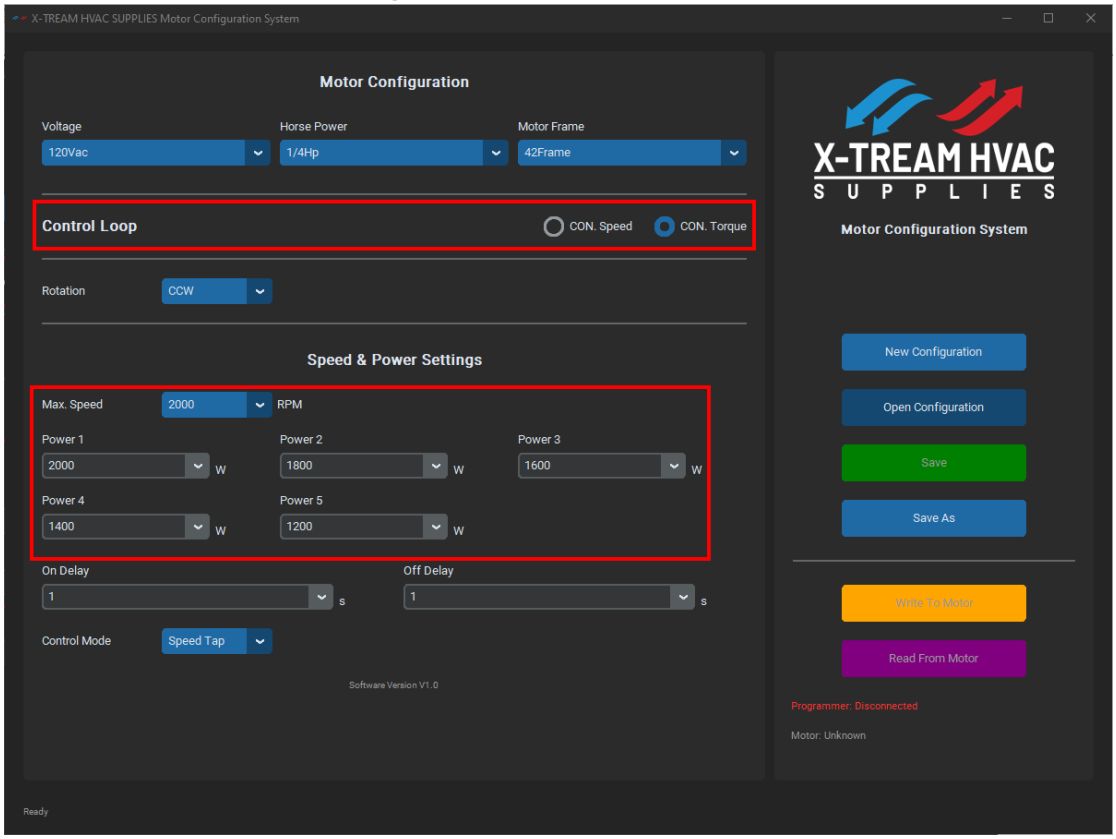
When the motor operates with load, the actual test results for Speeds 1, 2, 3, 4, and 5 all reach the corresponding set speeds. This indicates that all gear positions of the motor operate at a constant speed.

The working state of constant speed mode can be simply understood as: speed priority, maximum power limit,

Within the power range, the motor first executes the set speed and controls the speed at the set value (case 2 above),

If the power exceeds the range and the motor capacity is insufficient, it cannot maintain the set speed and will slow down (Speed1 in the above case 1).

Constant torque mode setting



Remark：

1，Max.speed，

The highest speed that the motor can achieve within its power range,

2，Speed1-speed5

The maximum input power for each gear position of the motor,

For example, the maximum input power is set to 450W for 1/2Hp, 320W for 1/3Hp, and 950W for 1Hp,

Speed1-5 have no priority. Speed1 can be higher or lower than other gears,

Practical operation and troubleshooting methods：

A 1/2 Hp motor, with constant torque setting, MAX.speed: 1800RPM, Speed1: 450W,

Case 1:

If the motor is operating with a load, the actual test speed is 1300RPM, which is lower than the set speed of 1800RPM. At this point, increasing the static pressure will increase the motor speed. The more static pressure is added, the more the speed increases. When the speed reaches the set speed of 1800RPM, further increasing the static pressure will not result in any further speed increase.

Case 2:

If the motor is operating with a load, the actual test speed is Speed1: 1750RPM, which is not quite up to the set speed of 1800RPM, but it is quite close. At this point, a slight increase in static pressure can bring it up to 1800RPM,

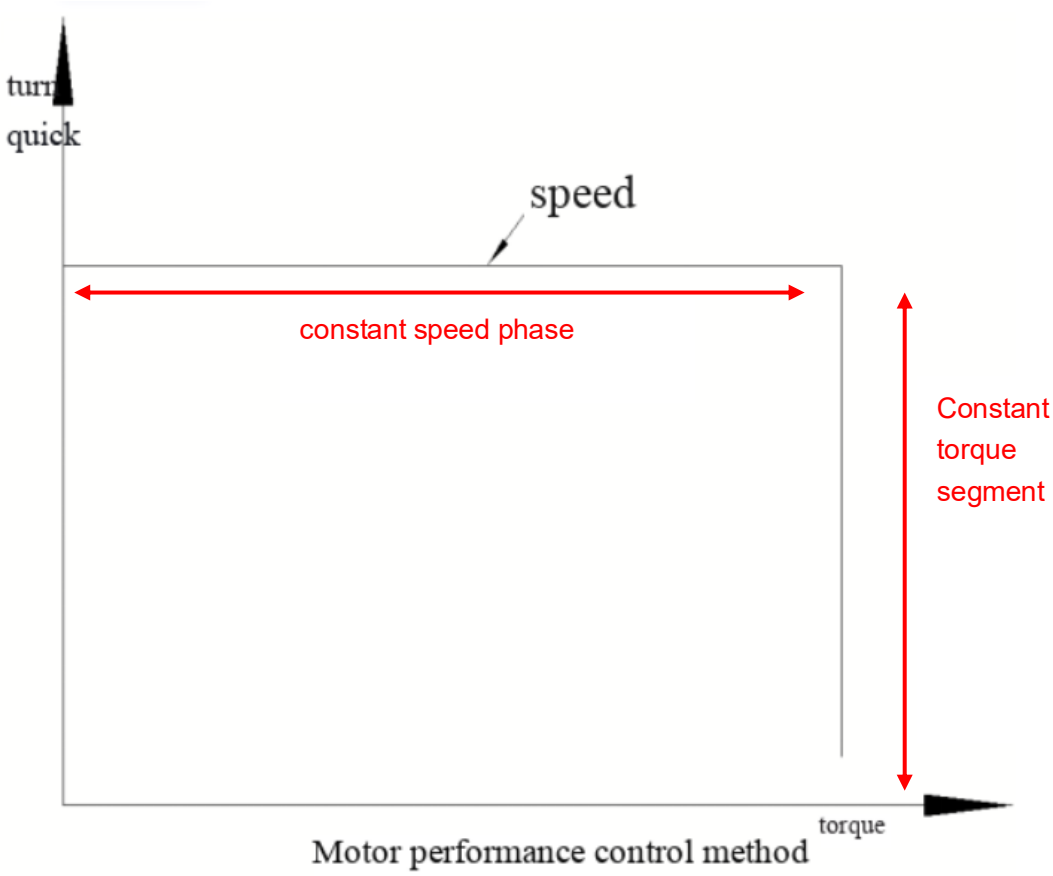
Case 3:

If the motor operates with a load, the actual test speed is 1800RPM. When the motor reaches the set speed of 1800RPM, further increasing the static pressure will not cause any change to the motor,

The working state of constant torque mode can be simply understood as: torque priority, with maximum speed limit,

When the motor is under load, its power is always controlled at a set value (which is also the torque set value). When the static pressure increases (load resistance decreases, and motor output torque decreases), the motor increases its speed to increase output torque in order to maintain a constant torque.

Motor output curve characteristics



The Y-axis represents rotational speed, while the X-axis represents torque,
At the constant speed stage, the output speed of the motor remains unchanged as torque increases. This is known as the constant speed stage.
Neither load changes (replacing the wind wheel) nor changes in the static pressure faced by the load can cause changes in the motor speed.
In the vertical segment and constant torque segment, the motor torque no longer increases. The output speed decreases as the load resistance increases (static pressure decreases), and increases as the load resistance decreases (static pressure increases).
Changes in load resistance (changes in static pressure) only cause changes in the motor output speed, while the output torque remains unchanged.