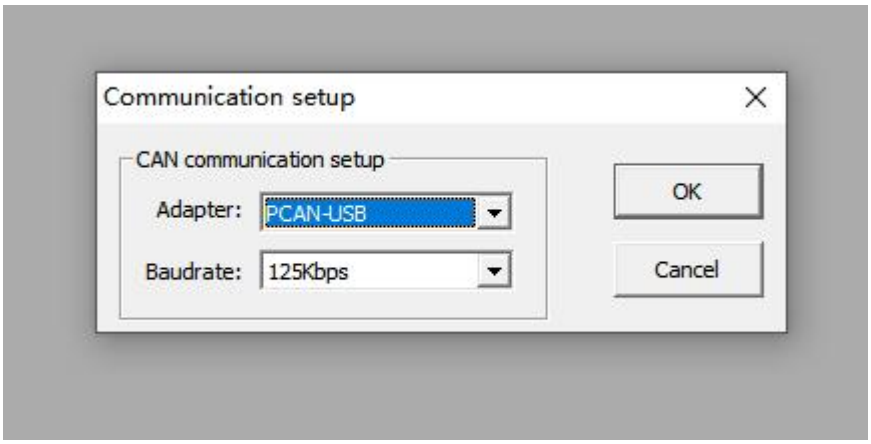
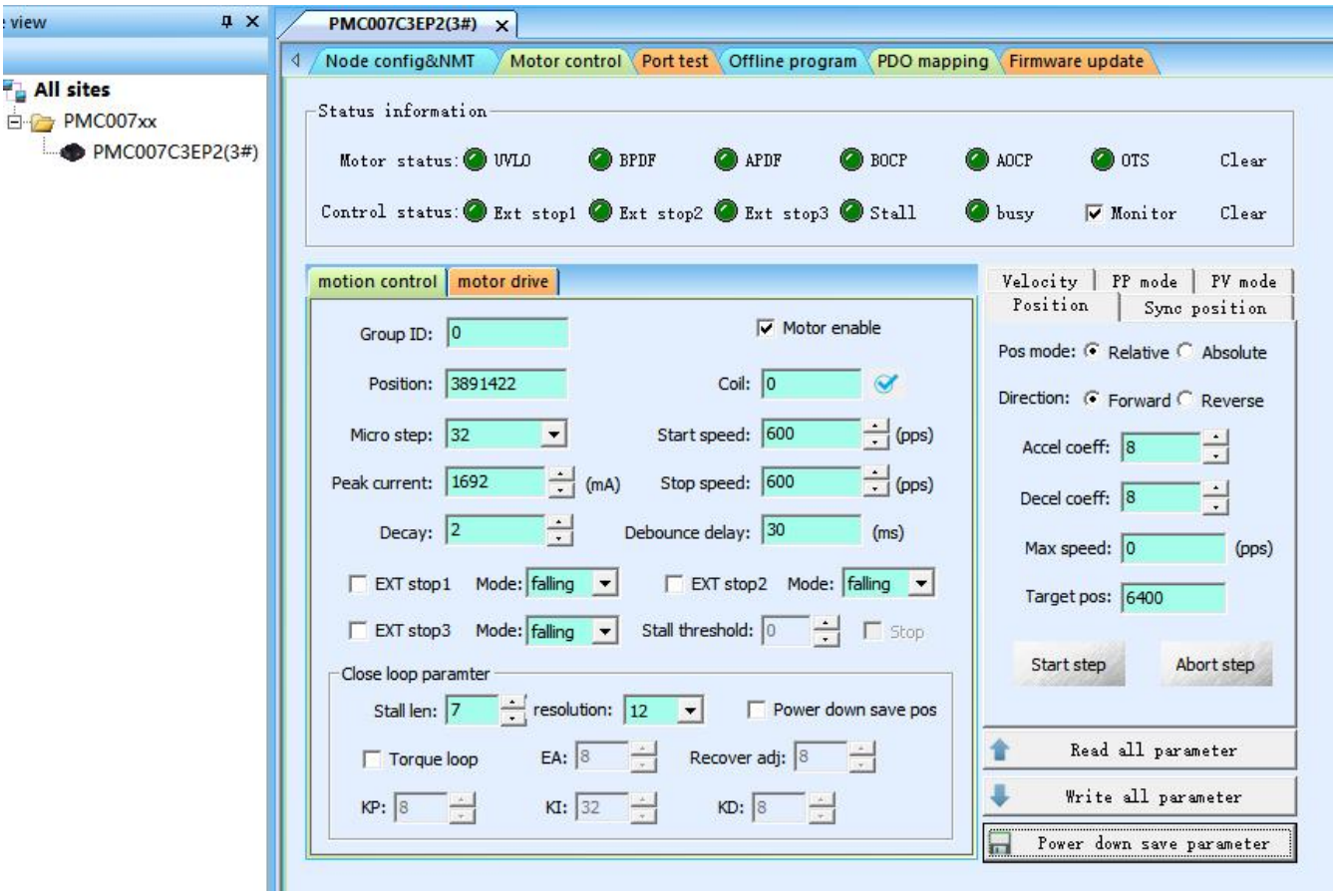
PUSICAN Instructions

First of all please download the latest version of PUSICAN:
https://en.pusirobot.com/2023/10/09/pusican-71_customer-download/
After entering PUSICAN, you need to choose an adapter, we recommend PCAN-USB, which is stable and powerful.



After your communication is successful, the following debugging page will appear.



Possible causes of communication failure:

1. You are using an adapter that is not supported by PUSICAN
2. You've reversed the communication wire

***Note**: Recommend 24V, 5A power input*

You must click 'Write all parameter' after modification of any parameter, then click 'Read all parameter' to see if it successes, finally click 'Power down save parameter'. (It is normal for the peak current to change automatically after modification)

The following is an explanation of each parameter：

Group ID: Can be used to distinguish between multiple groups of motors

Position: The location of the motor. Only the motor with encoder can feedback and record the motor position. Incremental encoders can only feedback the position after power-up, multi turn encoders can record position after power-down.

Micro step: Recommended value 32.High speed decreases, low speed increases.

Peak current:

NEMA17	1200-1600 mA
NEMA23	2500-3000 mA
NEMA34	4500-6000 mA

Decay: The current decay index that passes through the motor when it is not rotating.

0	Not recommended. The current does not decay and is the peak current set, cause the motor to heat up
1	Decay 25%
2	Decay 50%
3	Decay 75%

Motor enable: After unchecking, you can rotate the power-on motor shaft

Coil: Available when an external solenoid valve/brake is connected. Turn it to 100 (peak current) to fully open the solenoid valve, then gradually lower it to the threshold to reduce heat generation.

Start/Stop speed: The instantaneous initial velocity reached when the motor starts to rotate / before it stops. Recommended value 600.

Debounce delay: Available when connected to external stops. To prevent errors caused by device jitter, when read the first external stop signal, after (value) ms then read again to ensure that the stop position has been reached.

EXT stop mode falling/rising: Can be checked when connected to external stops. Stops the motor when it detects that the level changes from high to low/low to high.

Close loop parameter

Stall len: Over a period of time, the difference between the theoretically obtained position at the pulse velocity emitted by the controller, and the actual position read by the encoder. This difference is judged to be a stall length.

When this difference is reached, it is judged to be stalled, the motor will stop, and the 'stall' indicator will light up.
The smaller the set stall length, the higher the accuracy.

Resolution: No point in changing. A default value of 2 to the power of 12 is equal to 4096

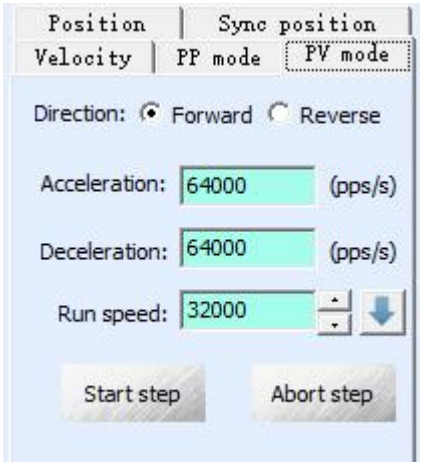
Power down save pos: Available when connected to incremental encoder. After checking, the controller can save the motor position of the last read.(click 'Read all parameter' before power down)

Torque loop: Available when connected to incremental encoder. After checking, the motor will not stop after stalling, it will reduce the speed and still run to the specified position, but the 'stall' indicator light will be on.

Accel/Decel coeff: The larger the selected value, the slower the acceleration increases. As shown below.

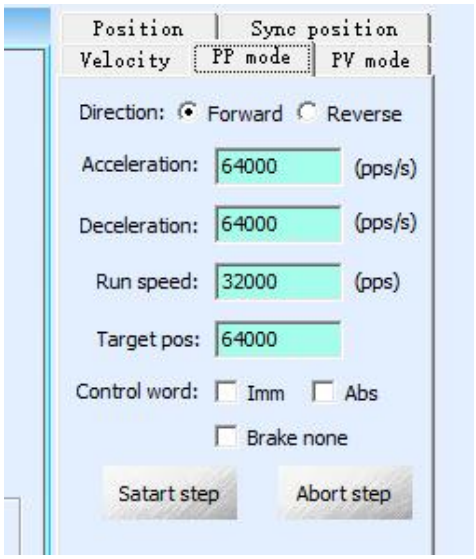
Gear	Acceleration and deceleration value（PPS^2）
0	Acceleration and deceleration cannot be enable
1	77440
2	48410
3	27170
4	21510
5	14080
6	10460
7	6915
8	5210

Common mode instruction: **PV mode**



The speed can be changed during running by long-pressing the up or down key, the speed changes smoother.
You can also directly enter the target speed, click ⬇ jump to the target speed, but too large speed change can cause stalling.

Common mode instruction: **PP mode**



When unchecking Control word, after clicking 'Start step' several times in a row, the motor will start the next task as soon as it completes the first target position.

when checked ‘Imm’, after several clicks, the motor aborts the first task and immediately executes the last task.

When checked ‘Abs’, the target position changes from relative to absolute.

When checked ‘Brake none’, after the first task, the motor will stop for a while before moving on to the next task.