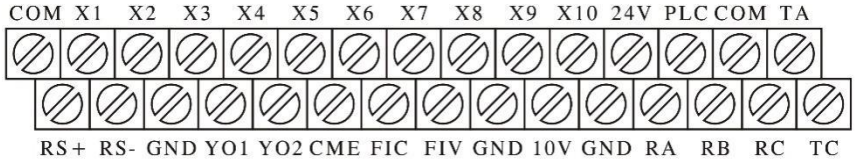
Simple process of hoisting inverter debugging

1. Wiring

A. Is the high voltage line connected?
B. Is the control line connected?



The default value is shown in the table below, connect X1-X5 to the operating handle.

Terminal	Set value	Description	
X1	1	Crane goes up	If the orientation is wrong, swap the V and W motor wires
X2	2	Crane goes down	
X3	8	Multi-speed selection 1	Choose different speed
X4	9	Multi-speed selection 2	
X5	3	fault reset	

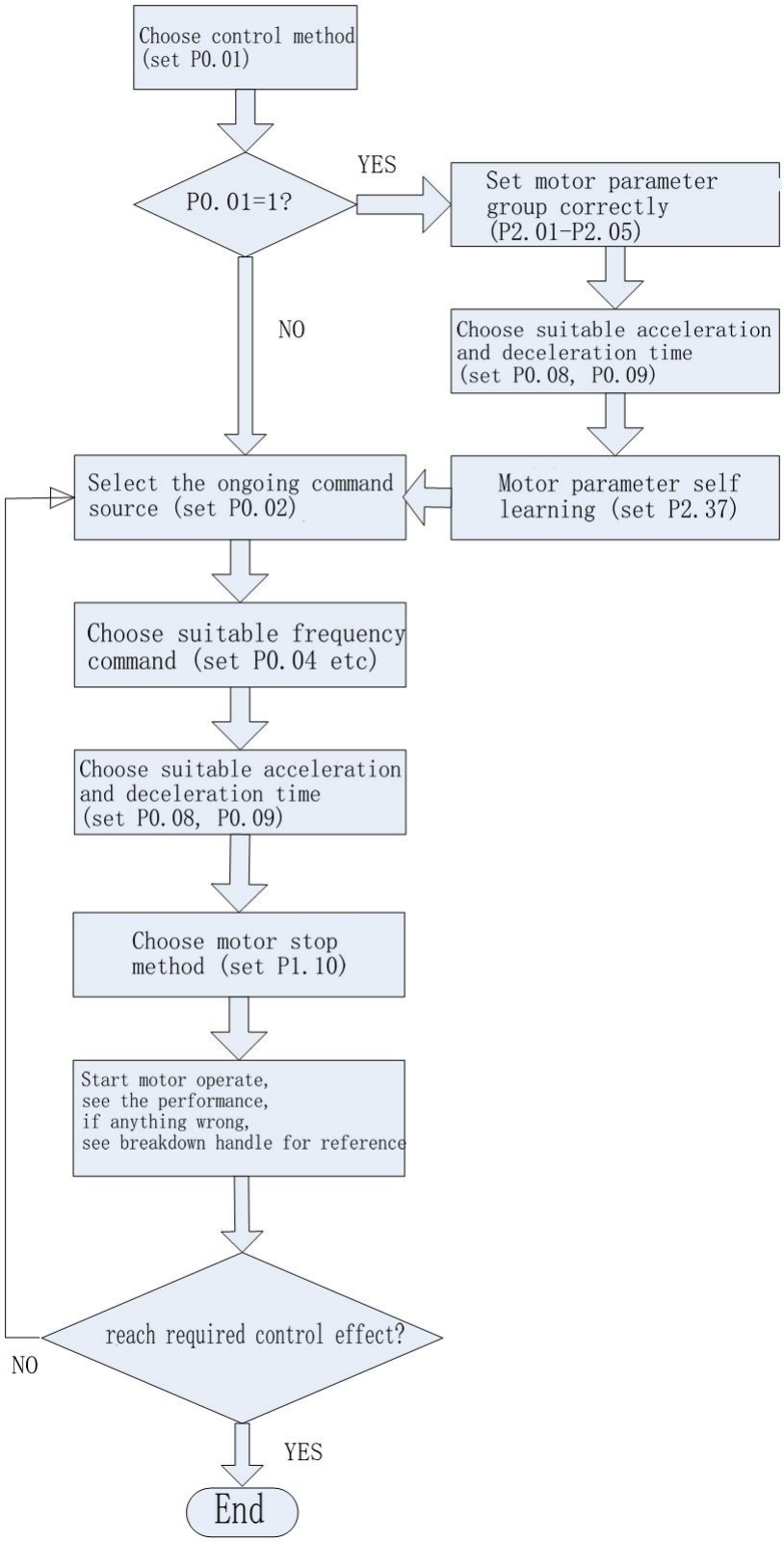
2. Set parameter

The hoisting inverter is generally controlled by SVC, and the cart and trolley are generally controlled by VF. Whether it is VF control or SVC control, the nameplate parameters of the motor must be input accurately, and the inverter will match the standard motor parameters according to the nameplate parameters:

P2.01: Motor rated power;
P2.02: Motor rated voltage;
P2.03: Motor rated current;
P2.04: Motor rated frequency;
P2.05: Motor rated speed.

If it is a hoisting inverter, it runs in SVC mode. In order to obtain good control performance, it is recommended to perform motor parameter self-learning. The self-learning operation steps are as follows: First, select the running command channel selection (P0.02) as the keyboard command channel, and set P2.37 to 3. Static comprehensive self-learning, and the keyboard will display STUDY. When the keyboard displays the frequency, the motor parameter self-learning process is over.

3. Frequency inverter debugging process



4. Debugging of lifting and lowering effects

P1.16	Brake opening frequency	Factory default	2.00Hz
	Set range	P0.16～15.00Hz	
P1.17	Brake opening current	Factory default	30. 0%
	Set range	0.0～150.0%	

P1.18	Brake opening mechanical time		Factory default	0.50s
	Set range		0.00～5.00s	
P1.19	Running direction when brake open		Factory default	0
	Set range	0	The brake opening torque is the same as the running direction	
		1	The brake opening torque is always in the forward direction	

The brake opening frequency refers to the output frequency of the inverter before the brake is fully opened, that is, the lowest frequency that the motor can output full torque. The brake opening current is a percentage of the rated motor current. When the output current of the inverter reaches this value, the brake release command is output immediately. The mechanical brake opening time refers to the time from the start opening of the mechanical brake to the complete opening. During this period, the inverter maintains the brake opening frequency (P1.16) output.

When the brake is opened, the running direction refers to the running direction of the motor when the brake is opened. If it is set to 1, the brake is always opened when FWD. Setting it to 0 is consistent with the actual given direction.

P1.20	Brake frequency	Factory default	2.00Hz
	Set range	P0.16～15.00Hz	
P1.21	Brake mechanical time	Factory default	0.50s
	Set range	0.00～5.00s	
P1.22	Brake delay	Factory default	0.0s
	Set range	0.0～30.0s	

The parameter P1.20 indicates that the output frequency of the inverter is lower than the set value of this parameter during the deceleration process after canceling the running command, and the brake closing command will be output immediately.

Brake mechanical time refers to the time from the start of closing to the complete closing of the mechanical brake, during which the inverter maintains the brake frequency output.

The brake delay parameter means that when the brake closing condition is met, the brake closing command will not be output immediately, but the brake closing command will be output after the time delay set by this parameter. This function is invalid during fast stop and freewheel stop.