

To enter parameter mode, set the key switch to PROG and press the four corner buttons +1, -1, +F and down arrow for a few seconds.

To step through the different parameters, press down-arrow for the next and up-arrow for the previous parameter. Most of the parameters have separate values for X, Y and Z. To change these values, use buttons +X, -X, +Y, -Y, +Z and -Z. To speed up the change of large span values, use buttons +1 and/or right arrow. To exit parameter mode, just turn the key switch over to AUTO.

Position Range (0-8000000)

The range of position values per revolution. For axis Y and Z this value must be exact so the correct positions are maintained regardless of the number of turns it makes. Let's say you enter the value 2400, which may be given by a position encoder with 100 pulses / revolution (times 4), and a ratio of 6:1 between the encoder and machine output. $100 \times 4 \times 6 = 2400$. The position value will in the plus direction count from 0 to 2399 and then turn over to 0 again. The same thing happens in the minus direction counting down and turning over from 0 till 2399. Axis X is a linear movement that must have a sufficiently high value to never reach 0.

Home Position (0-7999999)

Here you set the position values you want it to have at the calibration point. Normally set to 0 for Y and Z. Like in the Position Range, X must have a value high enough to not reach 0. It must also be less than the value set in Position Range.

Sector Begin and Sector End (0-7999999)

You can define one position area per axis where one common relay output is activated. The axes that have value 0 in both begin and end, do not affect the output. The output is activated (relay contact closes) if the axes present positions is within their specified range. Note that this feature does not meet the requirements for machine safety.

High Speed (1-100%)

This is the current speed value, when running in manual mode. This is also the value that is registered for each program step when programming. If you, for example, has a very big object or one with a large overhang that should not be rotating at full speed, you can use this parameter to reduce the speed for that axis.

Low Speed (1-100%)

Here you set the value for low speed. When running in manual mode, this speed is used for the first second. If you keep the 0 button pressed it continues to run in low speed. Low speed is also used in auto mode just before reaching the destination.

Acceleration (500-5000)

At each axis start, the movement accelerates up to the selected high speed. Increased value means faster acceleration. The inverters own acceleration setting must be set to fastest possible.

Retardation (500-5000)

When the control system is stopping a movement, it slows down according to this value. Down to a complete halt in manual mode or down to low speed in automatic mode. Increased value means faster retardation. Too slow retardation (over 0.5 sec) can trig the safety system to shut down all axes when the pedal is released. The inverters own retardation/deceleration setting must be set to fastest possible.

Low Speed Distance + (1-10000)

This is the position distance before target where automatic movements slows down to low speed. Too low and you miss the target. To high and you lose time.

Low Speed Distance - (1-10000)

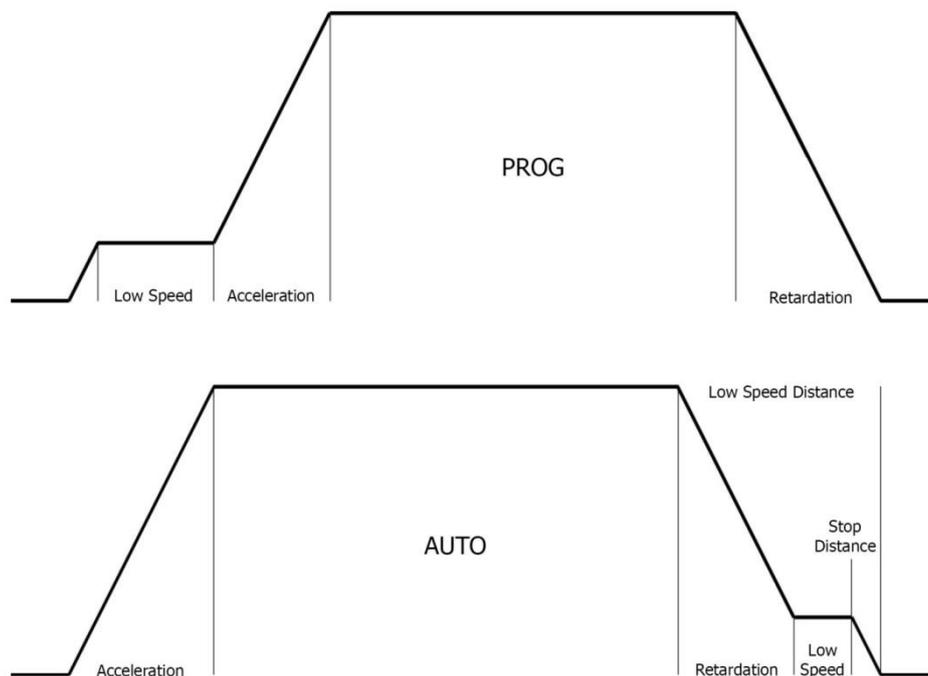
The same as the previous setting, but for the minus direction.

Stop Distance + (1-5000)

The position distance before target where automatic movement halts completely.

Stop Distance - (1-5000)

Same as the previous setting but for the minus direction.



Brake Delay Start (1-250)

When using mechanical brakes in motors, maybe due to non-self-locking gearboxes, this parameter can keep the brake active a specified time, to give the inverter time to build up power. This will avoid a startup where the axis first moves in the wrong direction. Specified in 20 millisecond steps.

Brake Delay Stop (1-250)

Same as previous except that this setting defines when to activate the brake before inverter stop.

The following parameters are not connected to X, Y and Z axes. Adjust them with +1 or -1.

Ext Start Safety Delay (0-60 sec)

Not used.

Program Erase Flag (0-1)

Set to 1 to erase all 1000 program steps. Erase starts when you exit parameter mode by turning key switch to AUTO. This parameter will automatically return to 0. No other parameter is affected.

Option Flags (0-255)

This parameter is the sum of the functions according to the table below. A standard machine has the value 128 as we connect all (normally on) error outputs in series. If there is a two machine setup (slave), you add 32.

1	
2	
4	
8	
16	Auto calibration
32	Slave machine present
64	
128	Trip signal normally on

Output Drive Type (0-7)

When we started using electric motors on the Ergo Control, the inverters we used was controlled by one start signal (RUN) and one direction signal (REV). To run in minus direction, both signals were activated. The inverters we use today have separate signals for forward and reverse. The setting should be the sum according to this table. Normally set to 7 today.

1	If X is controlled with separate signals for UP & DOWN
2	If Y is controlled with separate signals for FWD & REV
4	If Z is controlled with separate signals for FWD & REV