Motion List

Independent Motions

Motion List				
	Continuous motion			
	Homing	Homing		
Basic function of controller		Origin escaping		
		Origin searching		
	Positioning	PTP motion		
		Zero point return motion		
		Single step motion		
		Timer motion		
		Restart		
Supported by software (Multi-function DLL: FBIMTN.DLL)	Homing	Control signal input reverse motion mode		
	Positioning	<u>CP motion</u>		
		Continuous PTP		

Interpolation Motions

In addition to the independent motions of each axis, the following interpolation motions are available.

- *1 The relation among interpolation control axis, master axis, and slave axis in the interpolation axes is important to configure interpolation motion.
- *2 Constant control of combining velocity is available in linear interpolation 1, continuous linear interpolation 1, and circular interpolation motions.

Motion List			
Basic function of controller	Linear interpolation 1		
	Continuous linear interpolation 1		
	Linear interpolation 2		
	Continuous linear interpolation 2		

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	Circular interpolation
Supported by software (Multi-function DLL: FBIMTN.DLL)	Continuous interpolation

Interpolation Control Axis

In <u>Linear interpolation 1</u>, <u>Continuous linear interpolation 1</u>, and <u>Circular interpolation motions</u>, the velocity is set to only one axis, and the axis is called "interpolation control axis".

The interpolation control axis is the lowest number axis among the interpolation axes. (X, Y, Z, U order)

When the circular interpolation and linear interpolation are performed simultaneously, the number of the interpolation control axes is two.

In linear interpolation 2, each axis is interpolation axis.

X-axis: first axis Y-axis: second axis Z-axis: third axis U-axis: fourth axis

[The relationship between interpolation motion and interpolation control axes]

No	Interpolation Motion	Interpolation Control Axis
1	Linear interpolation 1 of X, Y, Z and U axes	X-axis
2	Linear interpolation 1 of X, Y and Z axes	X-axis
3	Linear interpolation 1 of Y, Z and U axes	Y-axis
4	Linear interpolation 1 of Y and U axes	Y-axis
5	Circular interpolation of X and U axes	X-axis
6	Circular interpolation of X and Z axes and linear interpolation 1 of Y and U axes	Circular interpolation: X-axis linear interpolation 1: Y-axis

"Master Axis" and "Slave Axes"

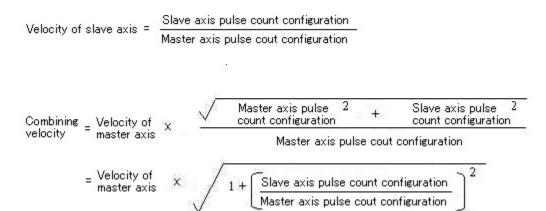
In linear interpolation motion, the axis whose specified moving quantity is largest is called **master axis** and the other axis is called **slave axis**.

When the configurations are the same between axes, the interpolation control axis is the master axis.

The master axis always outputs pulses and the slave axis outputs pulses in the timing of the ratio of the specified moving quantity of the master axis.

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Relation of velocity between master axis and slave axis



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