Frequency Control Configuration Attributes

These are the Frequency Control Configuration attributes associated with the Frequency Control method of operation of a Motion Control Axis.

Frequency Control Method

Usage	Access	Data Type	Default	Min	Max	Semantics of Values
Required - F	Set/GSV	USINT	0	-	-	Enumeration 0 = Basic Volts/Hertz (R) 1-127 = Reserved 128 = Fan/Pump Volts/Hertz (O) 129 = Sensorless Vector (O) 130 = Sensorless Vector Economy (O) 128-255 = Vendor Specific

The Frequency Control Method attribute identifies the control method associated with the axis.

The Basic Volts/Hertz control method applies voltage to the motor generally in direct proportion to the commanded frequency or speed.

Sensorless Vector enhances the Basic Volts/Hertz algorithm by utilizing current vectors Iq and Id for superior control at low speeds.

Fan/Pump Volts/Hertz is based on the Basic Volts/Hertz but is specifically tailored for fan/pump applications.

Sensorless Vector Economy applies the Sensorless vector algorithm but seeks to reduce energy consumption when the applied load is less than 50% of rating.

Maximum Voltage

Usage	Access	Data Type	Default	Min	Max	Semantics of Values
Required - F	Set/SSV	REAL	460 FD	0	∞	Volts (RMS)

The Maximum Voltage attribute sets the highest phase-to-phase voltage the drive device can output.

Maximum Frequency

Usage	Access	Data Type	Default	Min	Max	Semantics of Values
Required - F	Set/SSV	REAL	130 FD	0	∞	Hertz

The Maximum Frequency attribute sets the highest frequency the drive device can

output.

Break Voltage

Usage	Access	Data Type	Default	Min	Max	Semantics of Values
Required - F	Set/SSV	REAL	230 FD	0	∞	Volts (RMS)

The Break Voltage attribute sets the phase-to-phase output voltage of the drive device at the Break Frequency where boost ends.

Only applicable in Basic V/Hz mode.

Break Frequency

Usage	Access	Data Type	Default	Min	Max	Semantics of Values
Required - F	Set/SSV	REAL	30 FD	0	∞	Hertz

The Break Frequency attribute sets the output frequency of the drive device at the Break Voltage where boost ends.

Only applicable in Basic V/Hz mode.

Start Boost

Usage	Access	Data Type	Default	Min	Max	Semantics of Values
Required - F	Set/SSV	REAL	8.5 FD	0	∞	Volts (RMS)

The Start Boost attribute sets phase-to-phase voltage boost level for starting and accelerating.

Only applicable in Basic V/Hz mode.

Run Boost

Usage	Access	Data Type	Default	Min	Max	Semantics of Values
Required - F	Set/SSV	REAL	8.5 FD	0	∞	Volts (RMS)

The Run Boost attribute sets the phase-to-phase voltage boost level for steady-state speed or deceleration.

Only applicable in Basic V/Hz mode and Fan/Pump V/Hz modes.

See also

CIP Axis Attributes

- Select/Limit Instructions
- Sequential Function Chart (SFC) Instructions
- Statistical Instructions
- Safety Instructions

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