

6.12.5 Output voltage adjustment/Supply voltage correction

ULU: Base frequency voltage 1

F307: Supply voltage correction (output voltage limitation)

- Function

Base frequency voltage1

The **F307** parameter adjusts the voltage corresponding to the base frequency 1 **ULU** so that no voltage exceeding the **ULU** set value is put out. (This function is enabled only when **F307** is set to either "0" or "1".)

Supply voltage correction

The **F307** parameter maintains a constant V/F ratio, even when the input voltage decreases. The torque during low-speed operation is prevented from decreasing.

Supply voltage correction: Maintains a constant V/F ratio, even when the input voltage fluctuates.

Output voltage limitation: Limits the voltage at frequencies exceeding the base frequency. Applied when operating a special motor with low induced voltage.

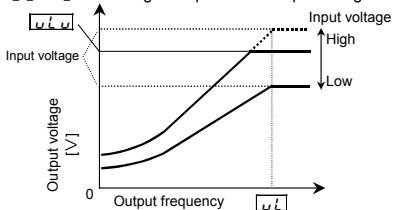
[Parameter setting]

Title	Function	Adjustment range	Default setting
ULU	Base frequency voltage1	50-330 (V)	*1
F307	Supply voltage correction (output voltage limitation)	0: Supply voltage uncorrected, output voltage limited 1: Supply voltage corrected, output voltage limited 2: Supply voltage uncorrected, output voltage unlimited 3: Supply voltage corrected, output voltage unlimited	*1

*1: Depends upon the setup menu settings.

- ★ If **F307** is set to "0" or "2", the output voltage will change in proportion to the input voltage.
- ★ Even if the base frequency voltage (**ULU** parameter) is set above the input voltage, the output voltage will not exceed the input voltage.
- ★ The rate of voltage to frequency can be adjusted according to the rated motor capacity. For example, setting **F307** to "0" or "1" prevents the output voltage from increasing, even if the input voltage changes when operation frequency exceeds the base frequency.
- ★ When the V/F control mode selection parameter (**P1**) is set to any number between 2 to 4, the supply voltage is corrected regardless of the setting of **F307**.

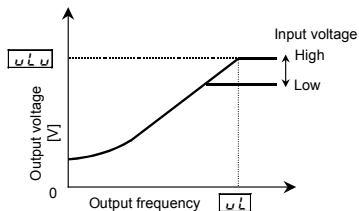
[F 30 7=0: No voltage compensation/output voltage limited]



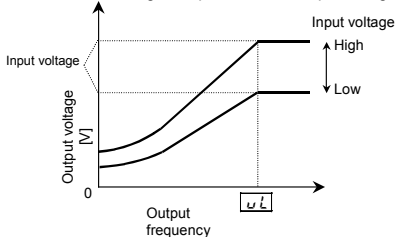
* The above applies when V/F control mode selection parameter P₇ is set to "0" or "1".

$\frac{uL u}{\text{Rated voltage}} > 1$ the output voltage can be prevented from exceeding the input voltage.

[F 30 7=1: Voltage compensation/output voltage limited]



[F 30 7=2: No voltage compensation/no output voltage limit]

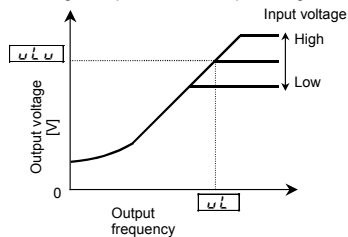


* The above applies when V/F control mode selection parameter P₇ is set to "0" or "1".

$\frac{uL u}{\text{Rated voltage}} > 1$ the output voltage can be prevented from exceeding the input voltage.

Note: Rated voltage is fixed at 200 V.

[F 30 7=3: Voltage compensation/no output voltage control]



* Note that even if the input voltage is set less than $uL u$ for a base frequency of uL or higher output frequency, then an output voltage over $uL u$ occurs.