6.19.6 Output voltage adjustment/Supply voltage correction

[uLu] : Base frequency voltage 1

[F307]: Supply voltage correction (output voltage limitation)

• Function

Supply voltage correction: Prevent torque decline during low-speed operation.
Maintains a constant V/F ratio, even when the input voltage fluctuates.

Output voltage limitation: Limits the voltage at frequencies exceeding the base frequency (uL) to prevent outputting the voltage exceeding base frequency voltage (uLu). Applied when operating a special motor with low induced voltage.

[Parameter setting]

Title	Function	Adjustment range	Default setting
uLu	Base frequency voltage1	50-330 (240V class) 50-660 (500V class)	*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: Default setting values vary depending on the setup menu setting. Refer to section 11.5.

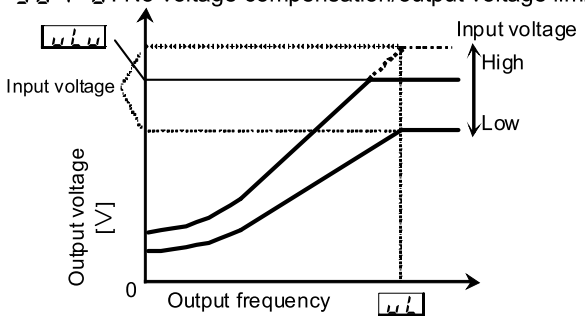
☆ If F307 is set to "0" or "2", the output voltage will change in proportion to the input voltage.

☆ Even if the base frequency voltage (uLu parameter) is set above the input voltage, the output voltage will not exceed the input voltage.

☆ The ratio of voltage to frequency can be adjusted according to the rated motor voltage and frequency. 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 (Pt) is set to any number between 2 to 6, the supply voltage is corrected regardless of the setting of F307.

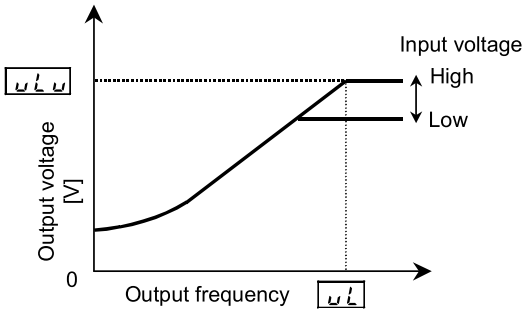
[F307=0: No voltage compensation/output voltage limited]



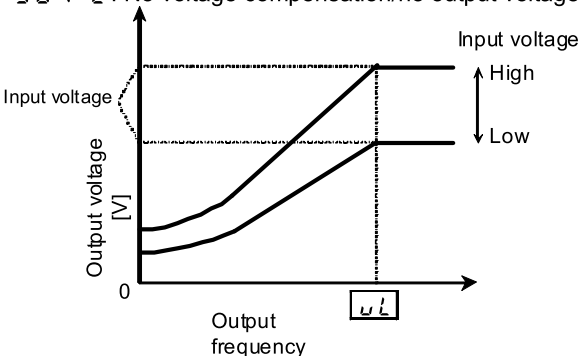
* The above is applied when V/F control mode selection parameter PT is set to "0" or "1".

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

[F307=1: Voltage compensation/output voltage limited]



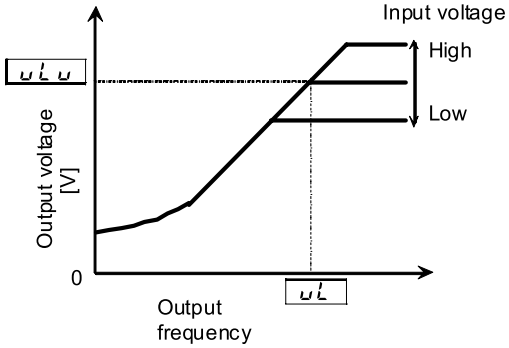
[F307=2: No voltage compensation/no output voltage limit]



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

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

[F307=3: Voltage compensation/no output voltage control]



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

Note: Rated voltage is fixed at 200V for 240V class and 400V for 500V class.