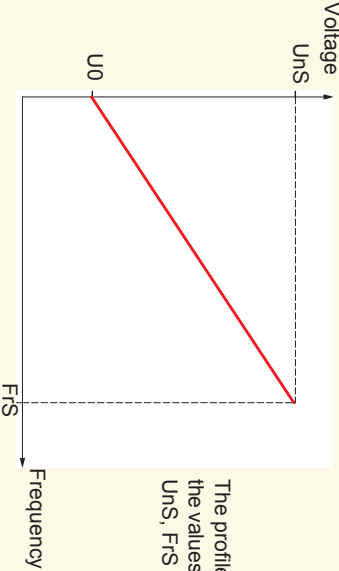
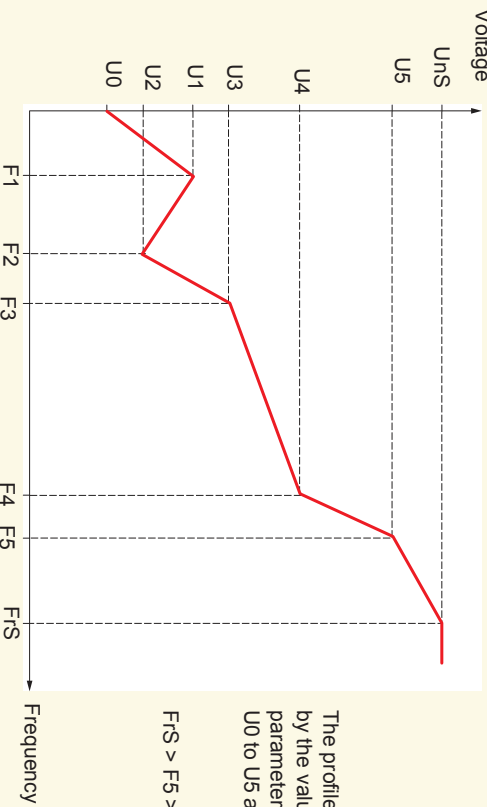


[1.4 MOTOR CONTROL] (drc-)

Code	Name/Description	Adjustment range	Factory setting
[Motor control type]			
UUC	☐ [SVC V] (UUC): Open-loop voltage flux vector control with automatic slip compensation according to the load. This type of control is recommended when replacing an ATV58. It supports operation with a number of motors connected in parallel on the same drive (if the motors are identical).		[sVC V] (uuc)
UUC	☐ [SVC I] (CUC): Open-loop current flux vector control. This type of control is recommended when replacing an ATV58F used in an open-loop configuration. It does not support operation with a number of motors connected in parallel on the same drive.		
FUC	☐ [FVC] (FUC): Closed-loop current flux vector control for motors with incremental encoder type sensor; this option can only be selected if an incremental encoder card has been inserted. This function is not possible, however, when using an encoder that generates signal "A" only. This type of control is recommended when replacing an ATV58F used in a closed-loop configuration. It provides better performance in terms of speed and torque accuracy and enables torque to be obtained at zero speed. It does not support operation with a number of motors connected in parallel on the same drive.  It is essential that the encoder check page 80 is performed successfully before selecting [FVC] (FUC).		
UF2	☐ [V/F 2pts] (UF2): Simple V/F profile without slip compensation. It supports operation with: - Special motors (wound rotor, tapered rotor, etc.) - A number of motors in parallel on the same drive - High-speed motors - Motors with a low power rating in comparison to that of the drive  The profile is defined by the values of parameters UnS, FrS and U0.		
UF5	☐ [V/F 5pts] (UF5): 5-segment V/F profile. As V/F 2 pts profile but also supports the avoidance of resonance (saturation).  The profile is defined by the values of parameters UnS, FrS, U0 to U5 and F1 to F5. $FrS > F5 > F4 > F3 > F2 > F1$		
SYn	☐ [Sync. mot.] (SYn): For synchronous permanent magnet motors with sinusoidal electromotive force (EMF) only. This selection is prohibited with ATV71●●●Y (500 to 690 V). This selection makes the asynchronous motor parameters inaccessible, and the synchronous motor parameters accessible.		

[1.4 MOTOR CONTROL] (drc-)

Synchronous motor parameters:

These parameters can be accessed if [Motor control type] (Ctt) page Z3 = [Sync. mot.] (SYn). In this case, the asynchronous motor parameters cannot be accessed.

Code	Name/Description	Adjustment range	Factory setting
n L r 5	☐ [Nominal I sync.] Rated synchronous motor current given on the nameplate.	0.25 to 1.5 In (Z)	According to drive rating
n 5 P 5	☐ [Nom motor spdsync] Rated motor speed given on the nameplate. On the integrated display unit: 0 to 9999 rpm then 10.00 to 60.00 krpm.	0 to 60000 rpm	According to drive rating
P P n 5	☐ [Pole pairs] Number of pairs of poles on the synchronous motor.	1 to 50	According to drive rating
P H 5	☐ [Syn. EMF constant] Synchronous motor EMF constant, in mV per rpm (peak voltage per phase). On the integrated display unit: 0 to 9999 then 10.00 to 65.53 (10000 to 65536).	0 to 65535	According to drive rating
L d 5	☐ [Autotune L d-axis] Axis "d" stator inductance in mH (per phase). On motors with smooth poles [Autotune L d-axis] (Ld5) = [Autotune L q-axis] (Lq5) = Stator inductance L.	0 to 655.3	According to drive rating
L q 5	☐ [Autotune L q-axis] Axis "q" stator inductance in mH (per phase). On motors with smooth poles [Autotune L d-axis] (Ld5) = [Autotune L q-axis] (Lq5) = Stator inductance L.	0 to 655.3	According to drive rating
r 5 H 5	☐ [Cust. stator R syn] Cold state stator resistance (per winding) The factory setting is replaced by the result of the auto-tuning operation, if it has been performed. The value can be entered by the user, if he knows it. Value in milliohms (mΩ) up to 75 kW (100 HP), in hundredths of milliohms (mΩ/100) above 75 kW (100 HP). On the integrated display unit: 0 to 9999 then 10.00 to 65.53 (10000 to 65536).	According to drive rating	According to drive rating

Code	Name/Description	Adjustment range	Factory setting
u F r	☐ [IR compensation] The parameter can be accessed if [Motor control type] (Ctt) is not [V/F 2pts] (UF2) and [V/F 5pts] (UF5). Used to optimize the torque at very low speed (increase [IR compensation] (UFr) if the torque is insufficient). Check that the [IR compensation] (UFr) value is not too high when the motor is warm (risk of instability).	(1) 25 to 200%	100%
5 L P	☐ [Slip compensation] The parameter can be accessed if [Motor control type] (Ctt) is not [V/F 2pts] (UF2), [V/F 5pts] (UF5) and [Sync. mot.] (SYn). Adjusts the slip compensation around the value set by the rated motor speed. The speeds given on motor nameplates are not necessarily exact. • If slip setting < actual slip: The motor is not rotating at the correct speed in steady state, but at a speed lower than the reference. • If slip setting > actual slip: The motor is overcompensated and the speed is unstable.	(1) 0 to 300%	100%
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(1) The parameter can also be accessed in the [1.3 SETTINGS] (SE-) menu.

(2) In corresponds to the rated drive current indicated in the Installation Manual and on the drive nameplate.

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Parameter that can be modified during operation or when stopped.