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ASP116 EVOLUTION

Lift controller

START-UP AND SETTINGS MANUAL FOR INVERTER ADL300 GEFRAN

Edition
10-2022

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WARNING

DANGEROUS VOLTAGE

● Please read and understand this installation manual before starting to use the inverter **Gefran ADL300**. Installation, settings and repairs, must done by qualified staff.

● Many parts in this inverter, including printed circuit boards, operate at mains voltage. DO NOT TOUCH. Only use tools with electrical isolation

● Do not touch unshielded components or terminal screws when the unit is on

● Do not short-circuit the terminals C / C1 and BR or the DC bus capacitors.

● Install and close all covers before applying power to the drive.

● Before any maintenance or repairs to the drive

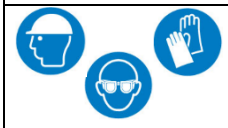
- Cut main power.

- Place a label "DO NOT TURN ON" on the inverter breaker
- Lock the inverter breaker in open position.

● Before working on the inverter, turn off all power including external control power that it is used. **WAIT 15 MINUTES** for the DC bus capacitors to discharge. Follow voltage measurement procedure DC bus specified in the installation manual to verify that the DC voltage is less than 42 V. The inverter DELs are not accurate indicators of the absence of tension DC bus.

If these precautions are not followed, will result in death or serious injury.

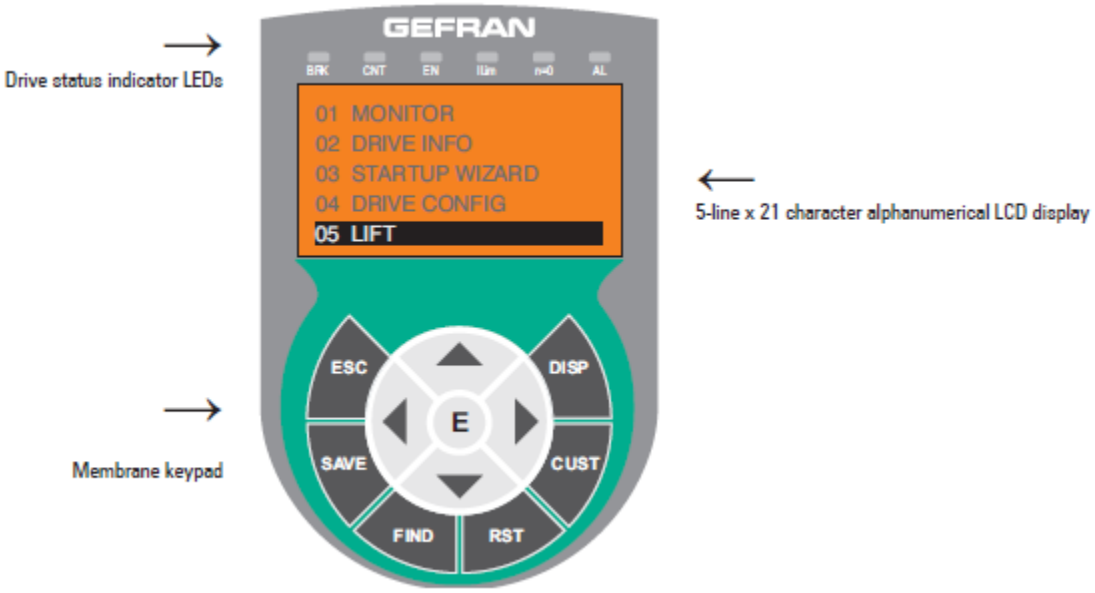
SAFETY INSTRUCTIONS

	Risk of death or personal injury if the procedures/indications are not strictly observed.
	Risk of personal injury or destruction of materiel if the procedures/indications are not strictly observed.
	Danger due to the presence of electrical voltage.
	Risk of damage to the material by electrostatic discharge. When handling the electronic boards/equipements, always wear a grounded anti-static wristband or other appropriated equipments
	Important information.
	General requirement
	Unplug before every maintenance operation.
	PPE required

Document Reference : B-DP-17-003-05

Frequency inverter presentation

1.1 Use of programming « keypad »



Key's functions :

Symbol	Reference	Description
ESC	Escape	Returns to the higher level menu or submenu. Exits a parameter, a list of parameters, the list of the last 10 parameters and the FIND function. Can be used to exit a message that requires use of this.
SAVE	Save	Saves the parameters directly in the non-volatile memory without having to use 4.1 Save parameters
FIND	Find	Enables the function for accessing a parameter using its number. To exit these functions, press the ◀ key.
RST	Reset	Resets alarms, only if the causes have been eliminated.
CUST	Custom	Displays the last 10 parameters that have been modified. To exit these functions, press the ◀ key.
DISP	Display	Displays a list of drive functioning parameters.
E	Enter	Enters the submenu or selected parameter, or selects an operation. It is used when modifying parameters to confirm the new value that has been set.
▲	Up	Moves the selection up in a menu or list of parameters. During modification of a parameter, increases the value of the digit under the cursor.
▼	Down	Moves the selection down in a menu or list of parameters. During modification of a parameter, decreases the value of the digit under the cursor.
◀	Left	Returns to the higher level menu. During modification of a parameter, moves the cursor to the left.
▶	Right	Accesses the submenu or parameter selected. During modification of a parameter, moves the cursor to the right.

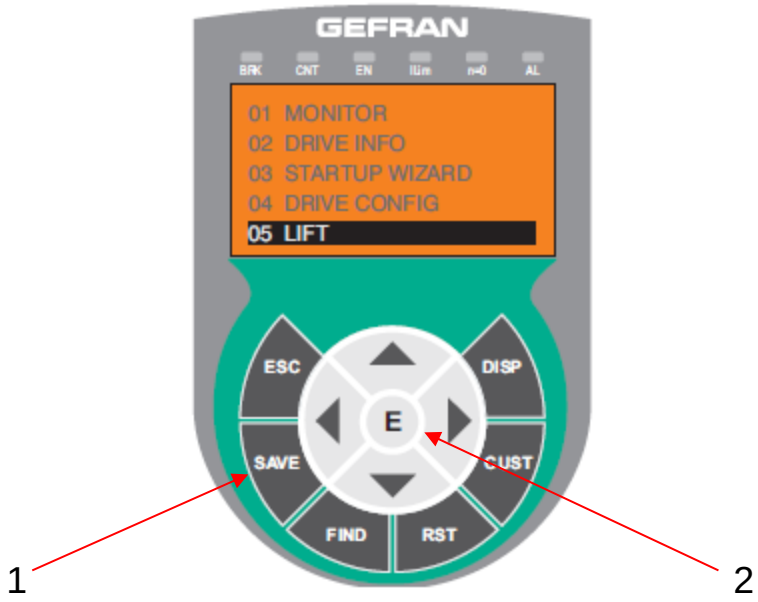
Meaning of DELs

LEDs	Colour	Meaning of LEDs
BRK	Yellow	The LED is lit when the drive has activated the brake release command
CNT	Yellow	The LED is lit when the drive has activated the close contactors command
EN	Green	The LED is lit during IGBT modulation (drive operating)
ILIM	Red	When this LED is lit the drive has reached a current limit condition. During normal functioning, this LED is off.
N=0	Yellow	The LED is lit when motor speed is 0.
AL	Red	The LED is lit when the drive signals that an alarm has been triggered

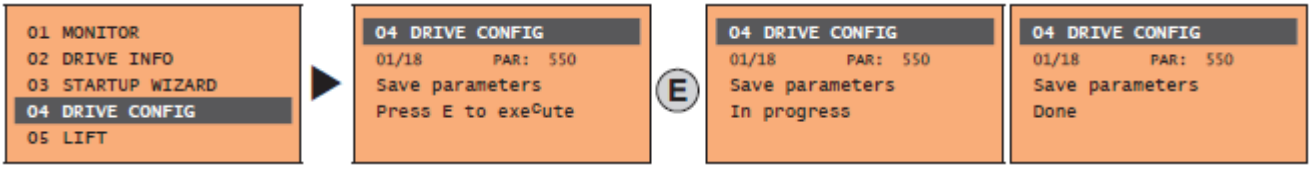
1.2 Saving parameters

After making parameters change into the inverter, it is ESSENTIAL to save the changed setting

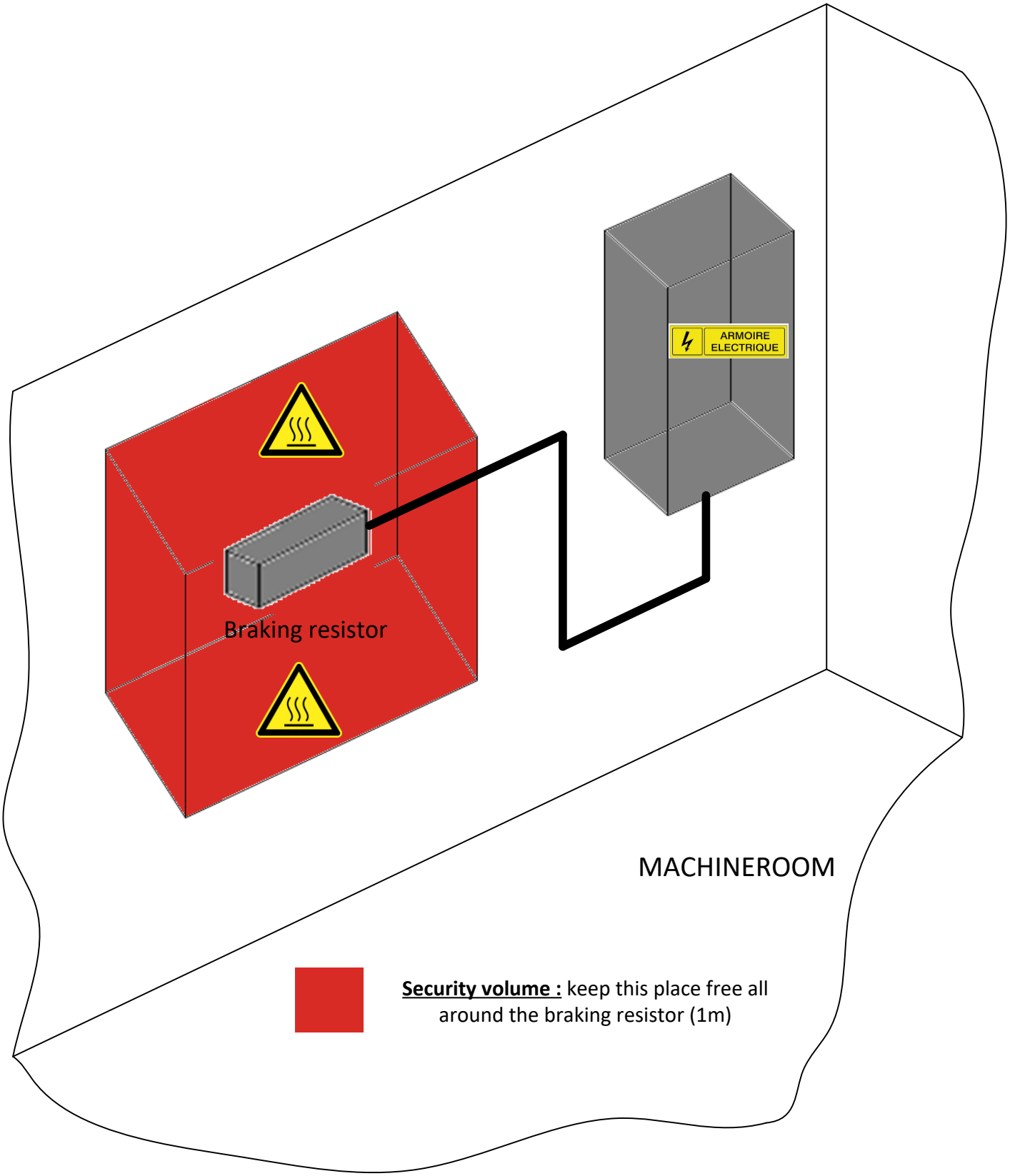
- **Solution 1 :** Press « SAVE » (1) and « E » (2)



- **Solution 2 :** Follow the instructions below :



1 Braking resistor



Security volume : keep this place free all around the braking resistor (1m)

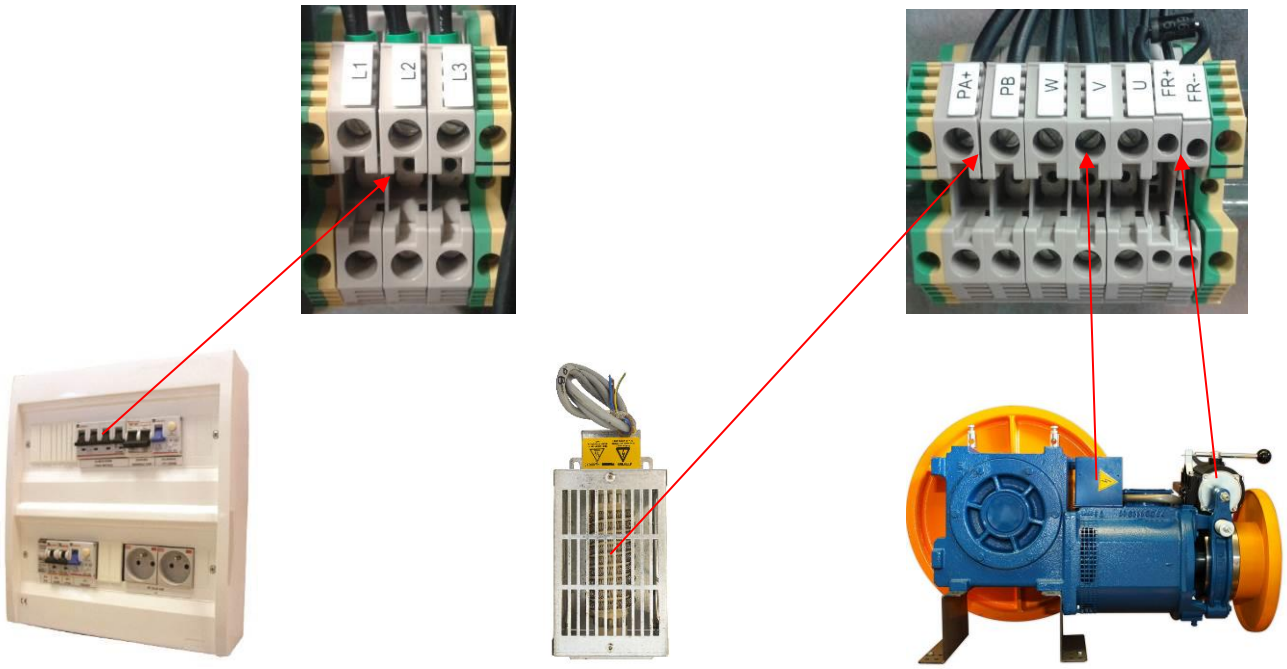
Warning : The braking resistor can be very hot, be sure to keep it away from any inflammable material, otherwise there is a risk of fir

2 Quick start for ADL300 with asynchronous motor

2.1 Asynchronous motor startup wizard

Follow the instructions step by step below to start the inverter:

Step 1 - Electrical connections



Set the controller for the autotune :

SECURITY CHAIN MUST BE OPEN (LIGHT OFF)

EMERGENCY OPERA — ENTER + ↑+

Choose CONFIGURATION — ENTER + ↓- … ↓-

CONFIGURATION FREQ. INVERTER — ENTER + ↓- … ↓-

AUTO TUNING NO — ENTER

AUTO TUNING YES — ENTER

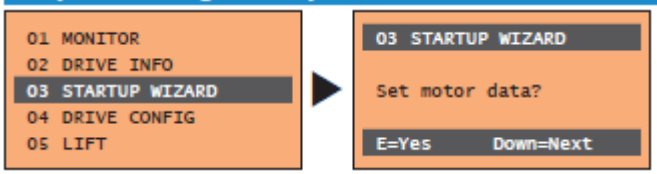
Screen under will appear

PUSH ON UP IN EMCY

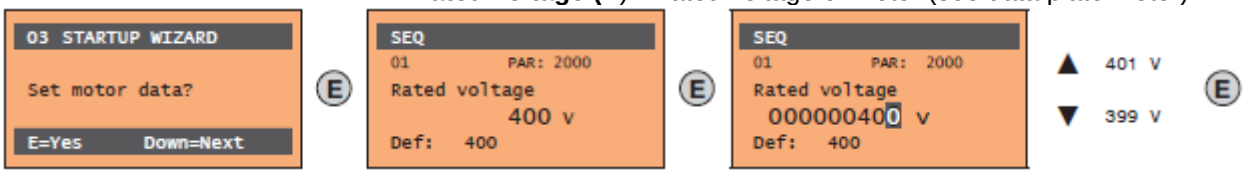
PLEASE WAIT BEFORE PRESS « UP BUTTOM »

Follow the following explained on the inverter :

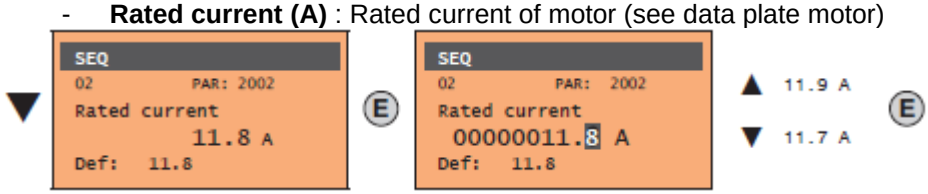
Step 2 - Setting motor parameters



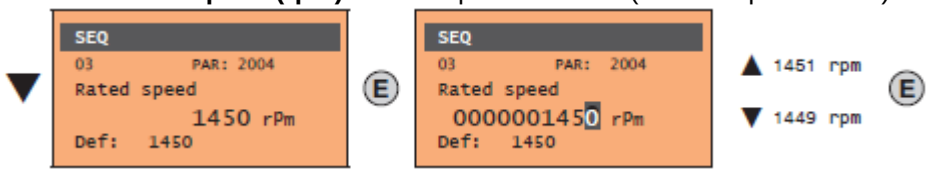
- **Rated voltage (V)** : Rated voltage of motor (see data plate motor)



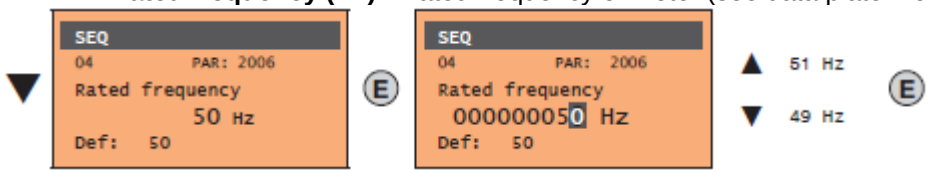
- **Rated current (A)** : Rated current of motor (see data plate motor)



- **Rated speed (rpm)** : Rated speed of motor (see data plate motor).

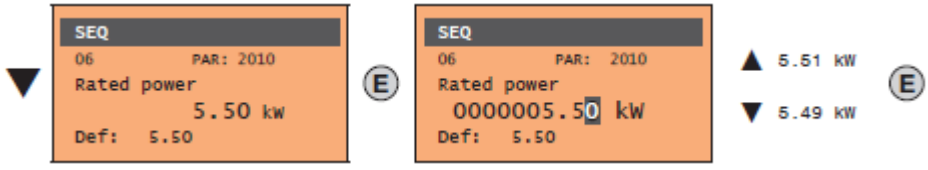


- **Rated frequency (Hz)** : Rated frequency of motor (see data plate motor)

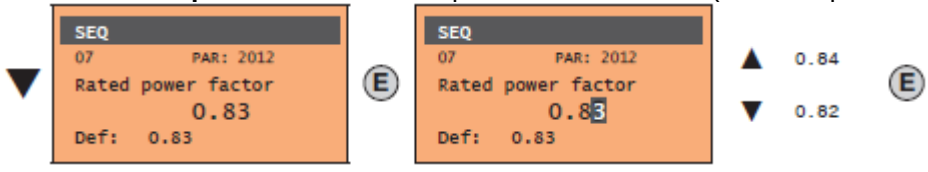


- **Nb of poles pairs (p)** : Number of poles PAIRS of motor (see data plate motor) (p = Hz * 60 / rpm) : motor 1500rpm = 2, motor 1000rpm = 3

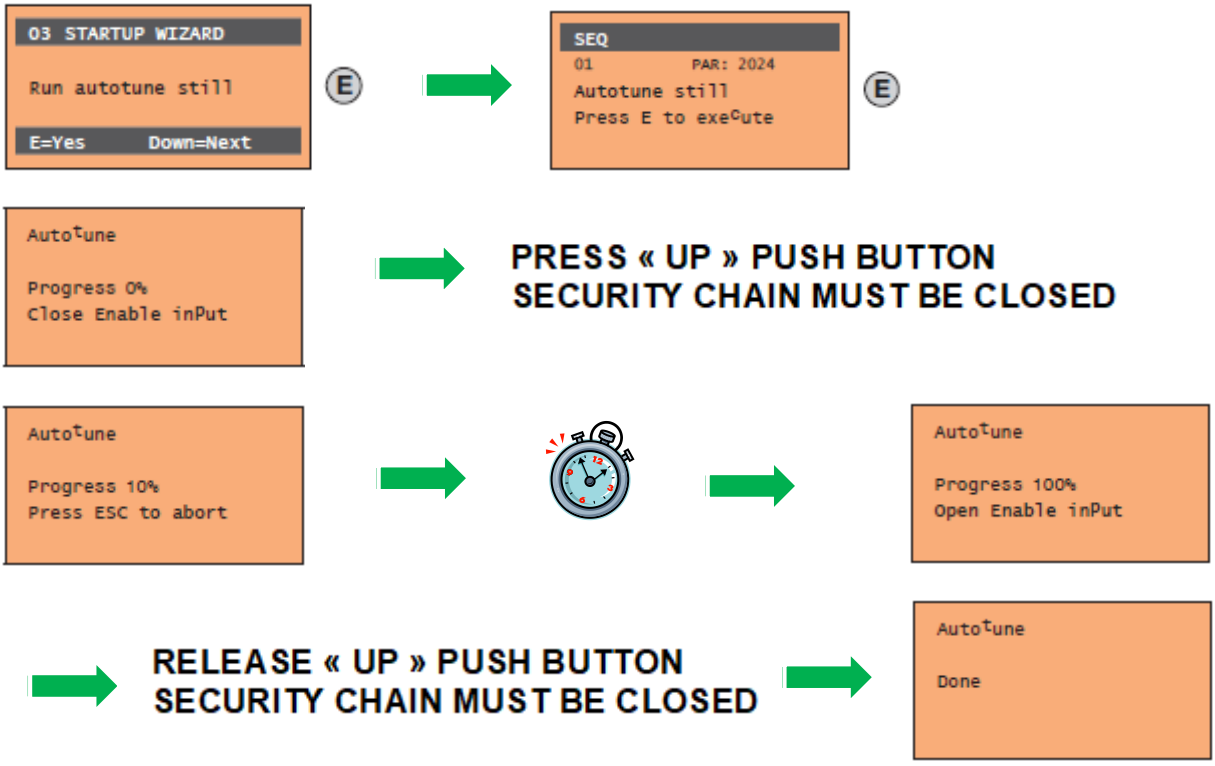
- **Rated power (kW)** : Rated power of motor (see data plate motor)



- **Rated power factor** : Rated power factor of motor (see data plate motor)



Step 3 - Autotune with motor at stand-still or coupled to the load



Step 4 - Setting encoder parameters (only if a feedback card is installed)

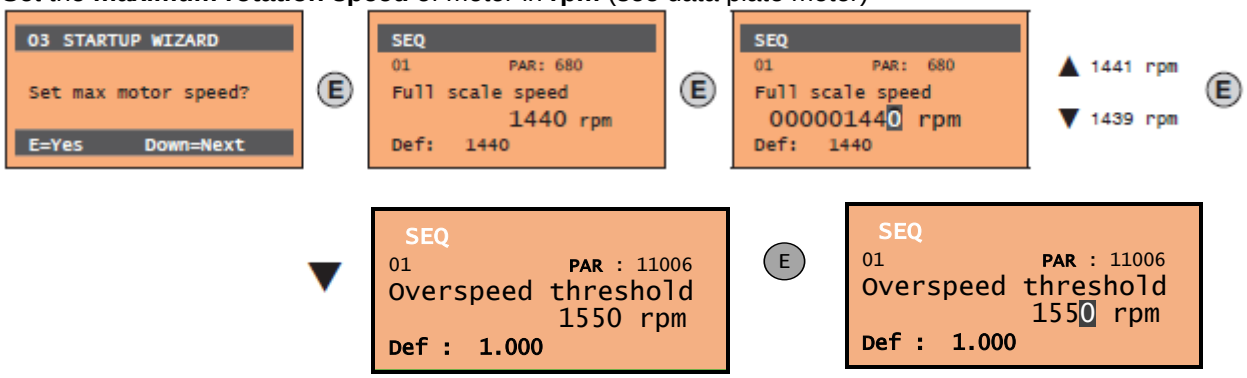
Do not set, go directly on step 6

Step 5 – Encoder phasing

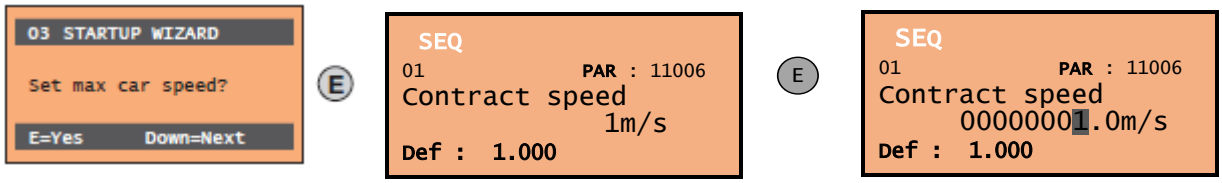
Do not set, go directly on step 6

Step 6 - Setting the maximum speed reference value and system speed

Set the **maximum rotation speed** of motor in **rpm** (see data plate motor)



Set the **maximum travel speed** of motor **m/s (after roping)**
Example : speed machine is 2m/s & roping is 2:1 -> Max car speed = 1m/s



Step 7 - Setting the system weights

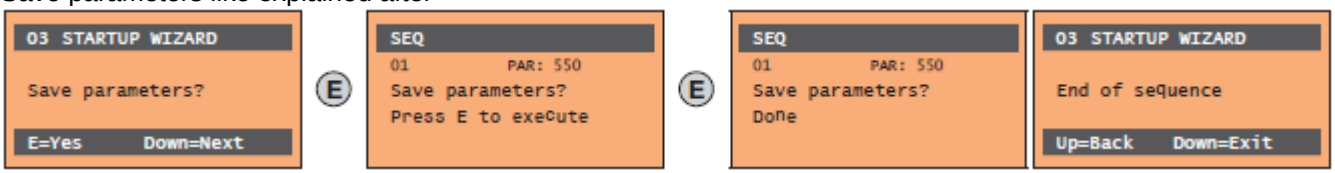
Do not set, go directly to step 9

Step 8 - Setting application parameters

Do not set, go directly to step 9

Step 9 - Save parameters

Save parameters like explained after



Quick start is now finish, try to move the motor to verify it's working well in the good direction (up/down) :

TRY TO MOVE

Go to section 5

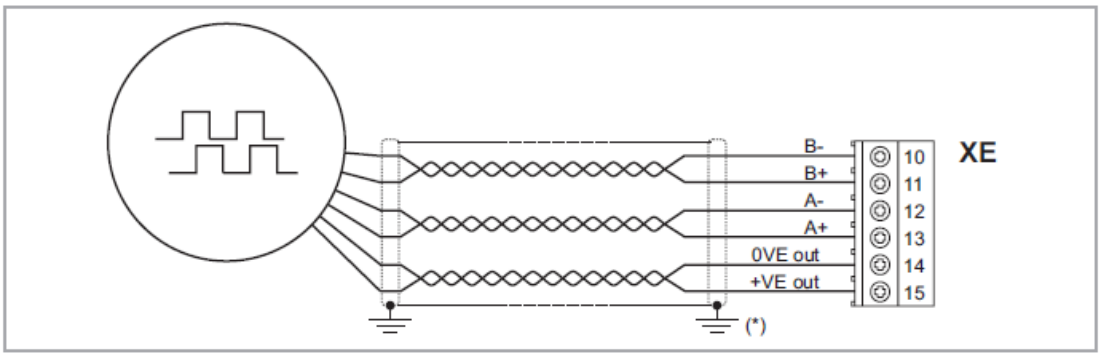
If motor working upside down, reverse 2 motor phases on terminal U, V, W and try again to move

2.2 Wiring and settings of encoder

Caution

The incorrect configuration of the encoder tension can permanently damage the device; therefore, it is advisable to check the values on the encoder's specification plate.

INCREMENTAL DIGITAL ENCODER (DE) PUSH-PULL/LINE DRIVER



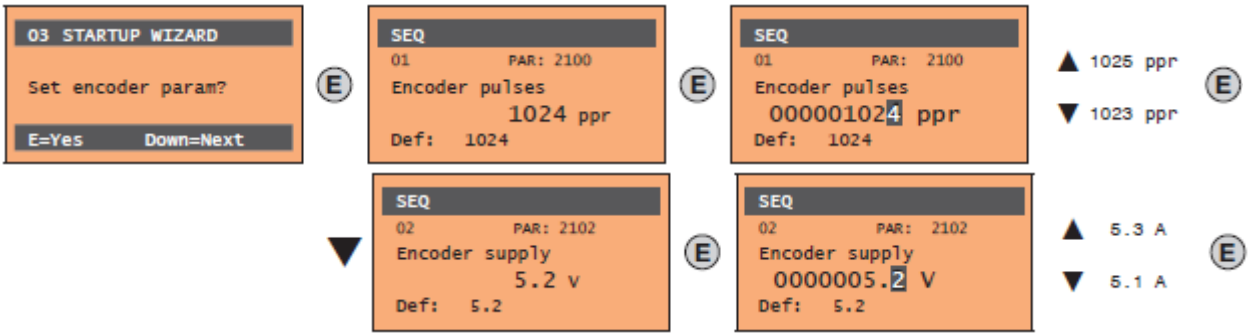
Encoders managed : incremental 5Vdc

Motor	Inverter terminals	A	/A	B	/B	+Vdc	0Vdc
SASSI	LIKA C80-C81-C82	yellow	blue	green	orange	red	black
	LIKA Ixx & MIxx	yellow	blue	green	orange	red	black
MONTANARI	LIKA	yellow	blue	green	orange	red	black
	ELTRA	green	brown	yellow	orange	red	black
	TEKEL	green	brown	yellow	pink	red	black
ALL	KÜBLER	green	yellow	grey	pink	brown	white

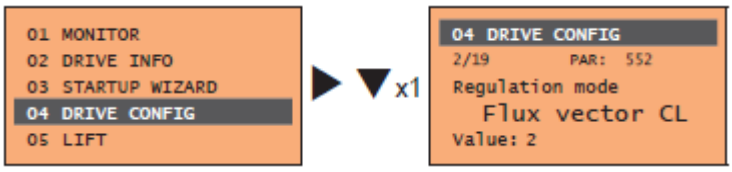
Wiring of encoder's shield

- **Encoder cable must be separated from main power cables**
- **Connect the encoder shield on the drive (earth terminal).**
- **Motor shield connected on the earth controller side and motor side.**

Encoder's settings



2.3 Switch from open loop to close loop on asynchronous motor



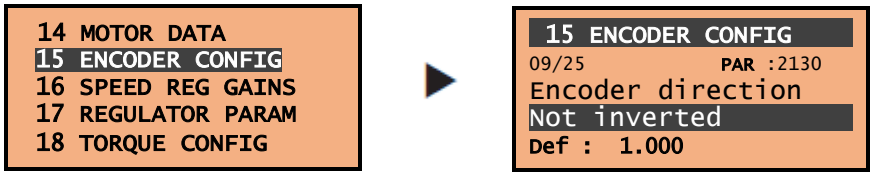
When encoder cable is wired correctly, you need to set inverter in close loop mode : go to below menu and parameter : Regulation mode :

- Switch from « **Flux Vector OL** » to « **Flux vector CL** »

TRY TO MOVE

Go to section 5

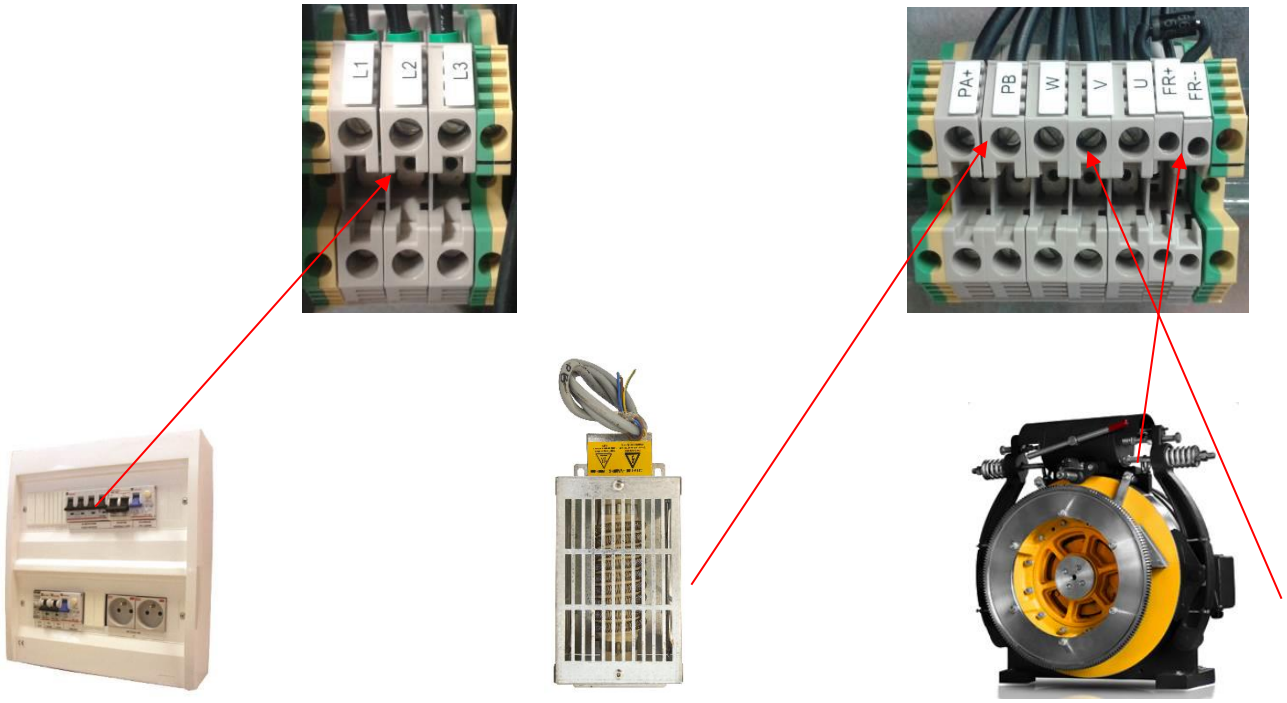
If motor not working well, reverse encoder direction (see below) and try again to move



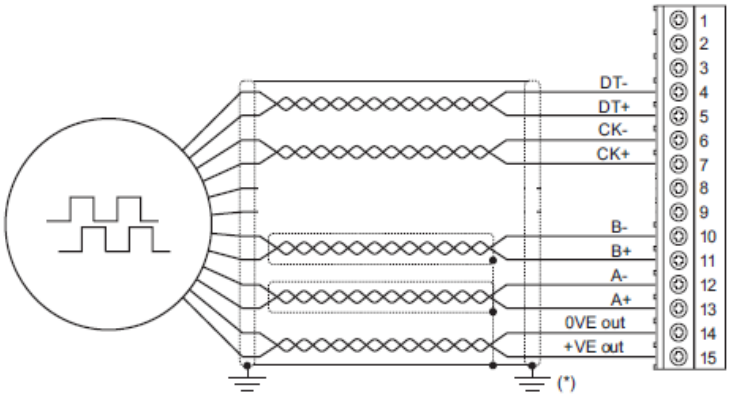
3 “Standard” synchronous motor

Follow the instructions step by step below to start the inverter :

Step 1 - Electrical connections



Encoder wiring



Wiring of encoder’s shield

Encoder managed : Sincos / Endat / Incremental. 5Vdc for all

Encoder wiring : for more explain, please look on the electrical drawing

Inverter terminal	+VE out	0VE out	A+	A-	B+	B-	CK+	CK-	DT+	DT-
Heidenhain Encoder	5V / UP	0V / UN	A+ / COS+	A- / COS-	B+ / SIN+	B- / SIN-	CLOCK+	CLOCK-	DATA+	DATA-

Encoder cable must be separate of main power cables

4 “Ecodisk” synchronous motor

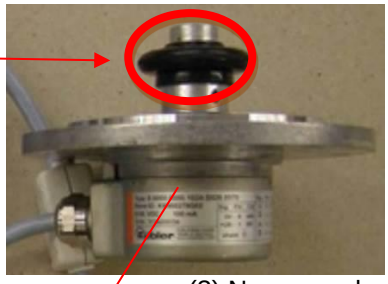
(if not applicable, proceed to next chapter)

4.1 Mechanical installation of encoder provided in place of existing tachymeter

Remove the existing tachymeter (1), recover the pulley (2) and set it up on the new encoder provided (3). After, set up the new encoder (3) in place of the tachymeter on Ecodisk motor (4)

(2) Pulley

(1) Tachymeter

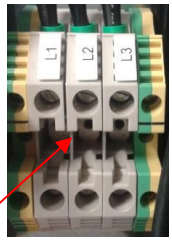


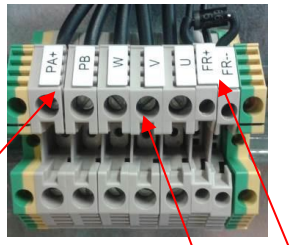
(3) New encoder provided

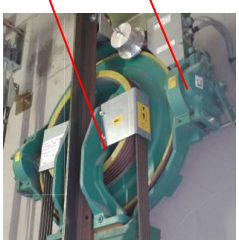
(4) Ecodisk motor

Follow the instructions step by step below to start the inverter :

Pas 1 - branchements d'alimentation



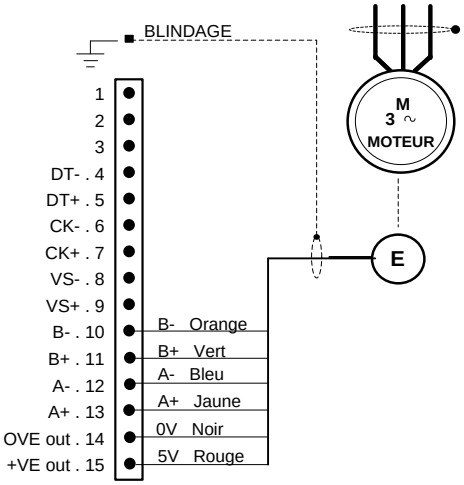


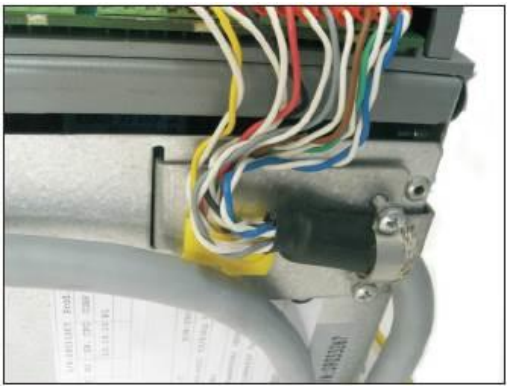


Encoder wiring & shield wiring

Caution

The incorrect configuration of the encoder tension can permanently damage the device; therefore, it is advisable to check the values on the encoder's specification plate.





Encoder cable must be separate of main power cables

5 Autotune of the motor

Set the controller for the autotune :

SECURITY CHAIN MUST BE OPEN (LIGHT OFF)

EMERGENCY OPERA — ENTER + ↑+

Choose CONFIGURATION — ENTER + ↓- … ↓-

CONFIGURATION FREQ. INVERTER — ENTER + ↓- … ↓-

AUTO TUNING NO — ENTER

AUTO TUNING YES — ENTER

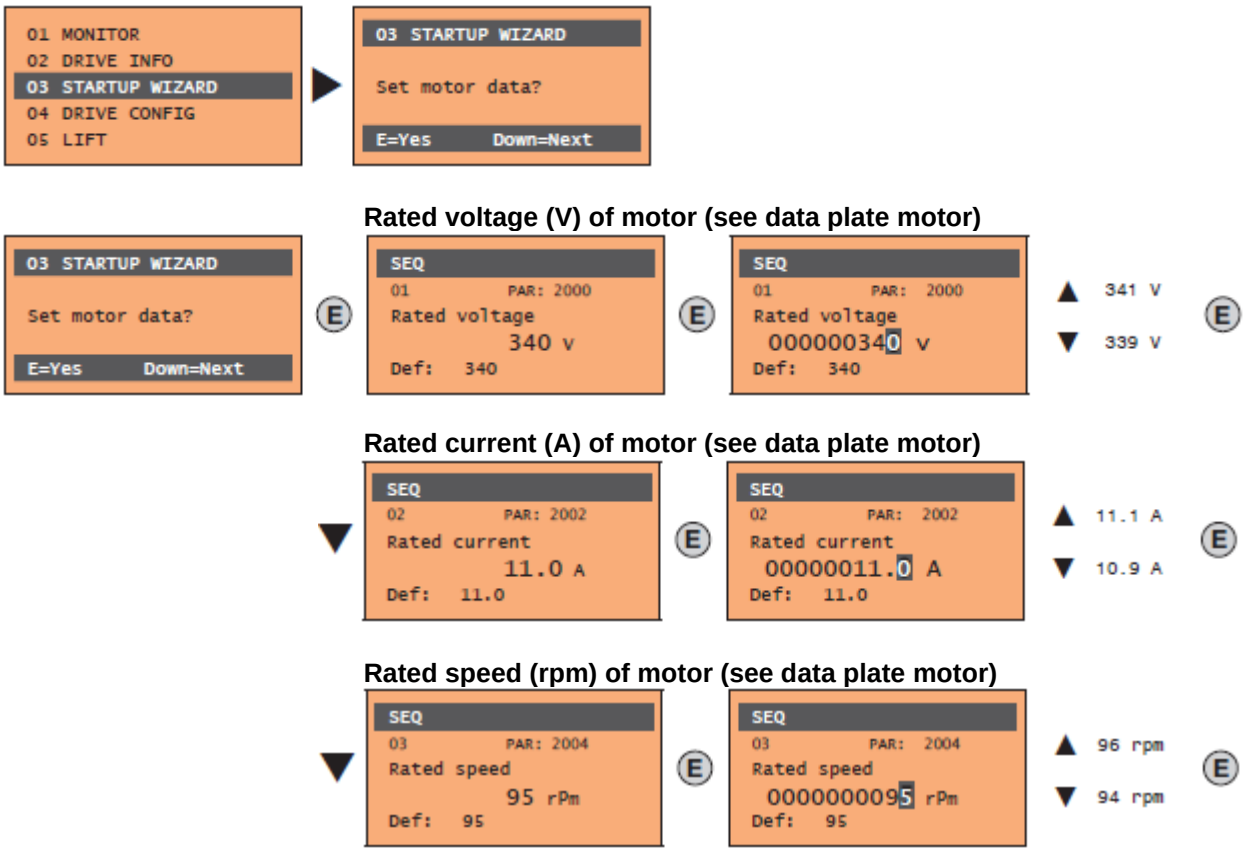
Screen under will appear

PUSH ON UP IN EMCY

PLEASE WAIT BEFORE PRESS « UP BUTTOM »

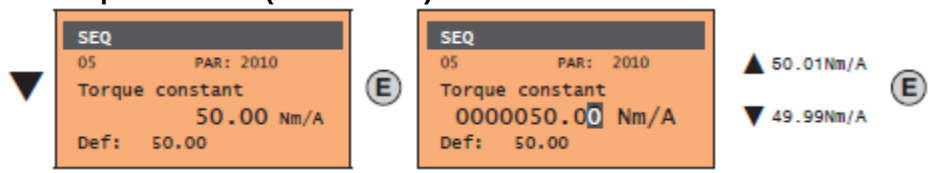
Follow the starting guide below :

Step 2 - Setting motor parameters



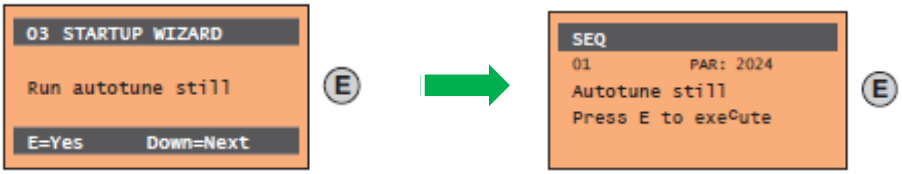
Nb of pairs poles (p) of motor (p = Hz * 60 / rpm)

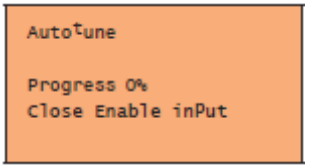
Torque constant (KT = Nm / A)



- **When you can see this display, stop to touch the inverter and go to work on the EVOLUTION controller**

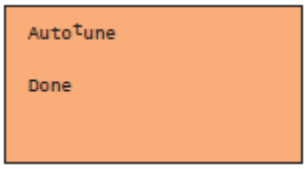
Step 3 - Autotune with motor at stand-still or coupled to the load





PRESS « UP » PUSH BUTTON
SECURITY CHAIN MUST BE CLOSED

RELEASE « UP » PUSH BUTTON
SECURITY CHAIN MUST BE CLOSED



Step must done in emergency mode
Autotune for synchronous motor is so long and so noisy, it's normal
Please save parameters as soon as autotune is finish (see page 6)

Step 4 - Setting encoder parameters (Standard card EXP-SESC-I1R1F2-ADL)

Set the controller for the autotune :

SECURITY CHAIN MUST BE OPEN (LIGHT OFF)

EMERGENCY OPERA — ENTER + ↑+

Choose CONFIGURATION — ENTER + ↓- … ↓-

CONFIGURATION FREQ. INVERTER — ENTER + ↓- … ↓-

AUTO TUNING NO — ENTER

AUTO TUNING YES — ENTER

Screen under will appear

PUSH ON UP IN EMCY

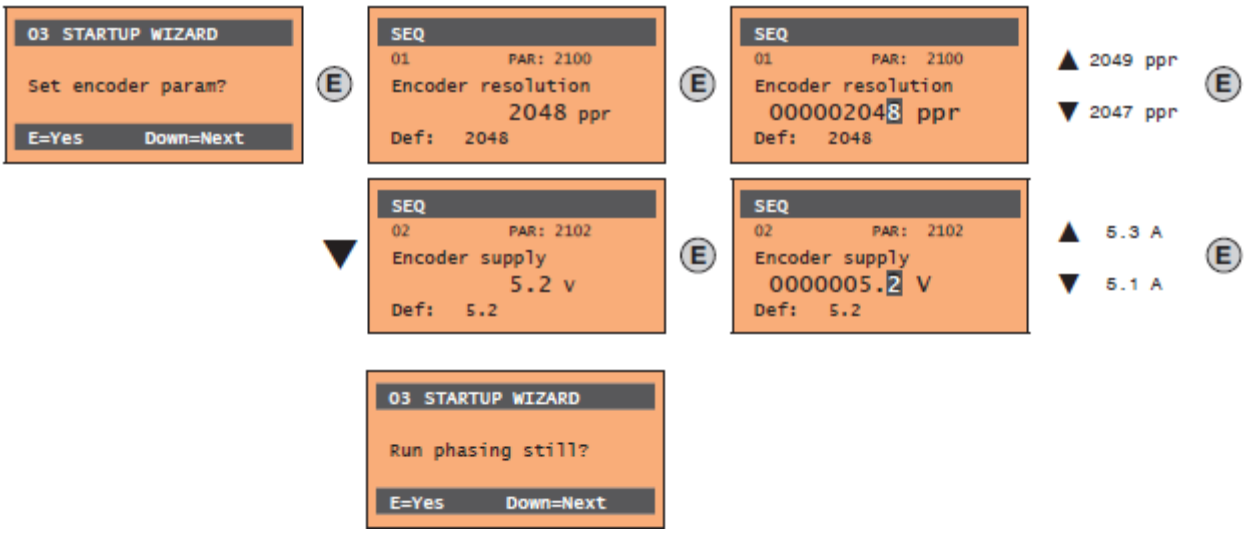
PLEASE WAIT BEFORE PRESS « UP BUTTOM »

Caution

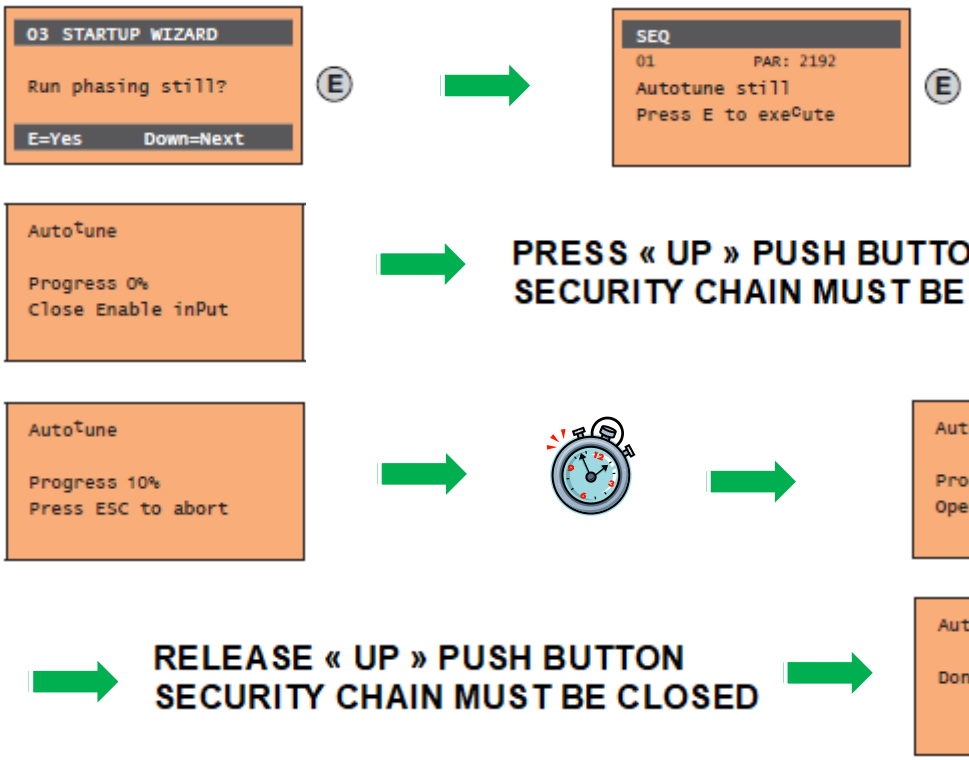
The incorrect configuration of the encoder tension can permanently damage the device; therefore, it is advisable to check the values on the encoder's specification plate.

Then, follow the following wizzard on the drive :

See annex 1 if you need for Ecodisk motor



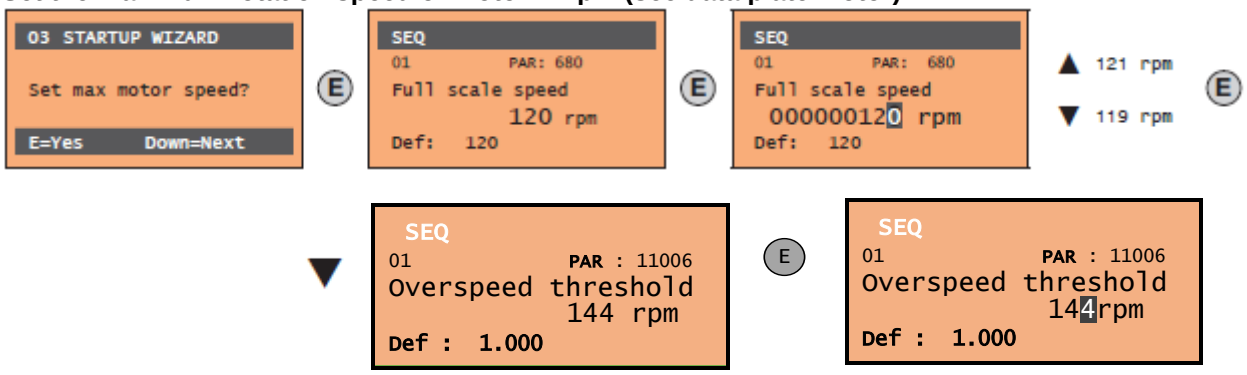
Step 5 - Setting encoder parameters (Standard card EXP-SESC-I1R1F2-ADL)



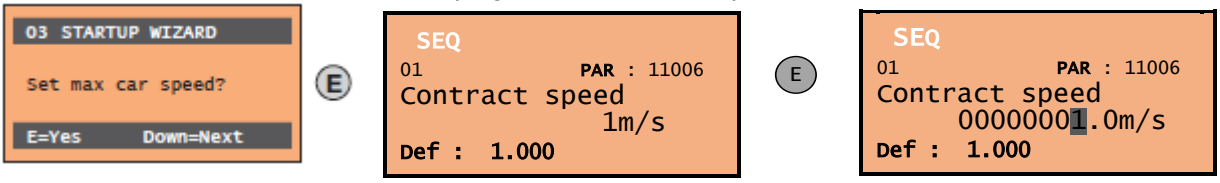
Step must done in emergency mode
Autotune for synchronous motor is so long and so noisy, it's normal
Please save parameters as soon as autotune is finish (see page 6)

Step 6 - Setting the maximum speed reference value and system speed

Set the maximum rotation speed of motor in rpm (see data plate motor)



Set the maximum travel speed of car regarding the maximum speed of the motor (after roping)
Example : speed machine is 2m/s & roping is 2:1 -> Max car speed = 1m/s



Step 7 - Setting the system weights

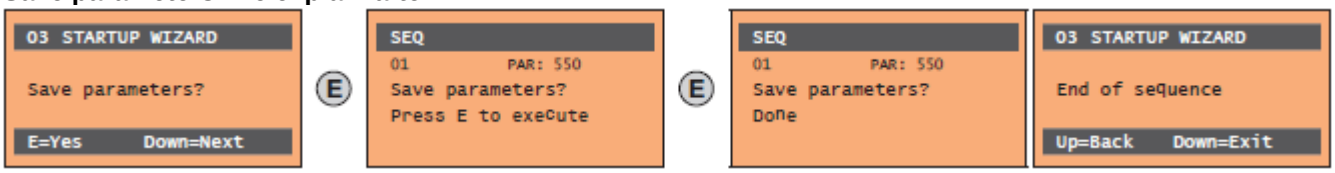
Do not set, go directly to step 9

Step 8 - Setting application parameters

Do not set, go directly to step 9

Step - Save parameters

Save parameters like explain after



Quick start is now finish, try to move the motor to verify it's working well in the good direction (up/down) :

STEP 1

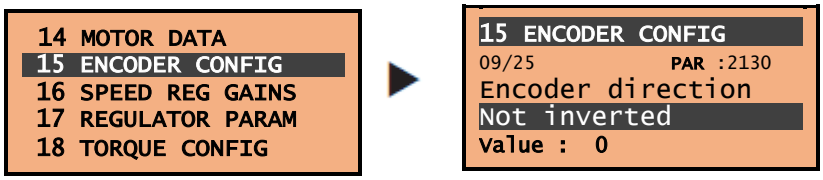
TRY TO MOVE

Go to next step

1 – If motor working not correctly or not at all, reverse encoder's phases following **STEP 2** ,do again Step 5 and try again **STEP 1**

2 – If motor working well, but upside down, (go up when you want to go down and go down when you want to go up) ,reverse motor's phases (U & V on terminal) AND encoder's phases **STEP 2** do again Step 5 and **STEP 1**

STEP 2 : **REVERSE DIRECTION OF ENCODER**



Modify setting from 0 to 1 or inversely

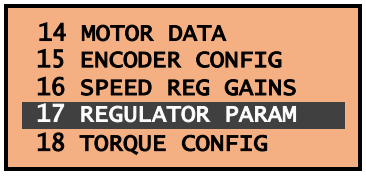
Motor phase order	Encoder phase order
U, V, W	0 - Not inverse
V, U, W	1 - Inverse
U, V, W	0 - Not inverse
V, U, W	1 - Inverse

Only one solution is available

EASY SETTINGS OF THE INVERTER

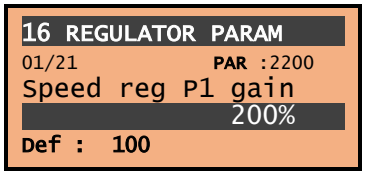
6 Easy settings of the inverter

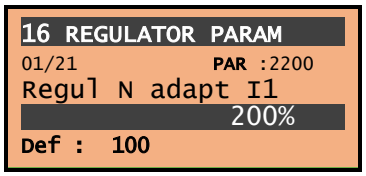
6.1 Gain speed loop settings



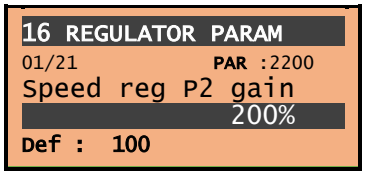
Basic settings :Set the 4 below parameters to 200%

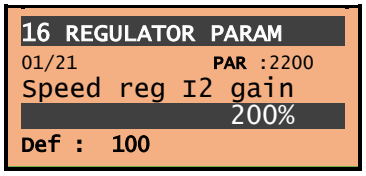
« Speed loop » during all the travel





« Rollback management »





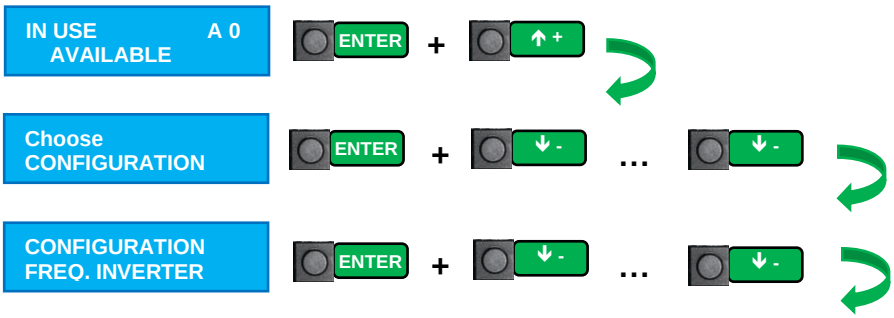
Try to move up and down and look is there is rollback at start or not :

If yes, you need to increase 2 « Rollback management » parameters above (by 50% step more for twice).
If motor is vibrating, you need to decrease 2 « Rollback management » parameters above (by 50% step less for twice).

Try to move up and down and look the motor work during the travel :

If you can see a "wave", you need to increase 2 « Speed loop » parameters above (by 50% step more for twice).
If motor is vibrating during the travel, you need to decrease 2 « Speed loop » parameters above (by 50% step less for twice).

6.2 – Different speed settings

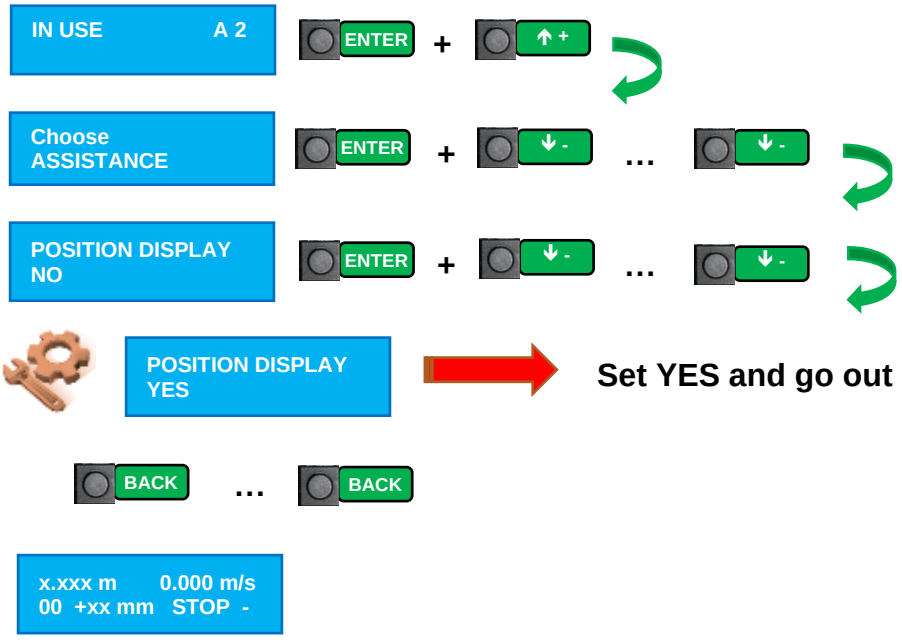


Nominal speed of the lift

Levelling speed, just before stop (unused in « SMART TRAVEL » mode)

Inspection speed

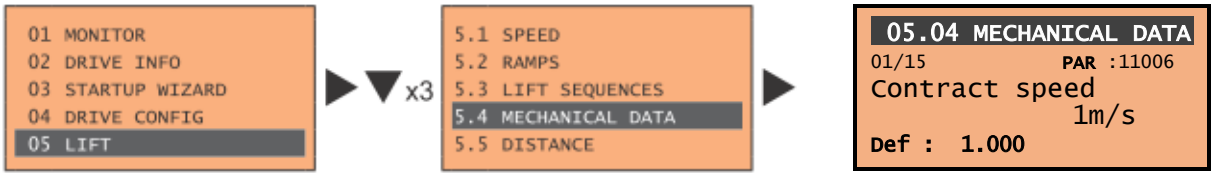
6.3 – Real speed travel checking (SMART TRAVEL enabled)



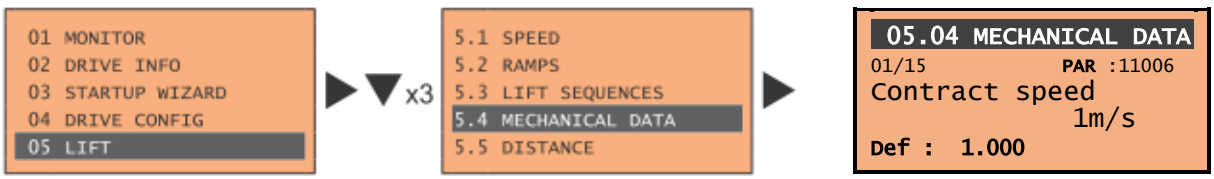
Set YES and go out of menu

Make a long travel in ou/down direction and look the speed diplayed on the screen. This speed must be the same than speed set just above in “NOMINAL SPEED” parameter, into the EVOLUTION controler. More the speed is close than speed requested, more settings will be esay and accurate

- **If speed watch is over than speed set : increase the following parameter into the drive :**



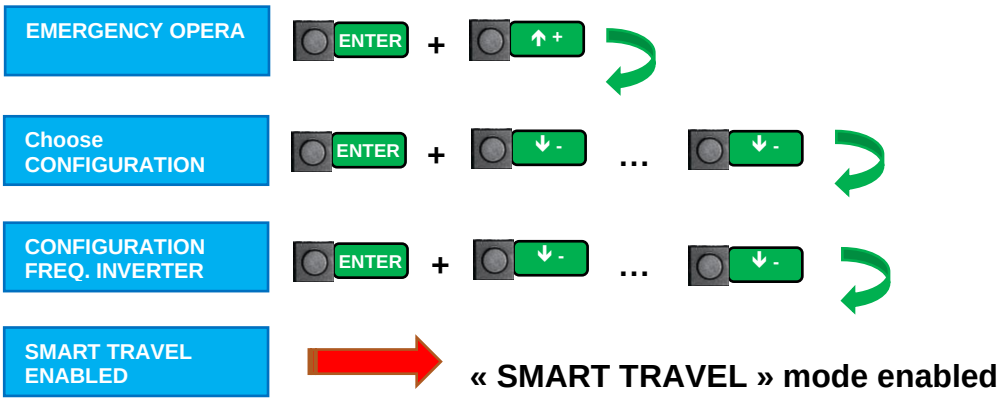
- **If speed watch is less than speed set : decrease the following parameter into the drive :**



OPTIMIZED SETTINGS OF THE INVERTER

7 Optimized settings of the inverter (optional)

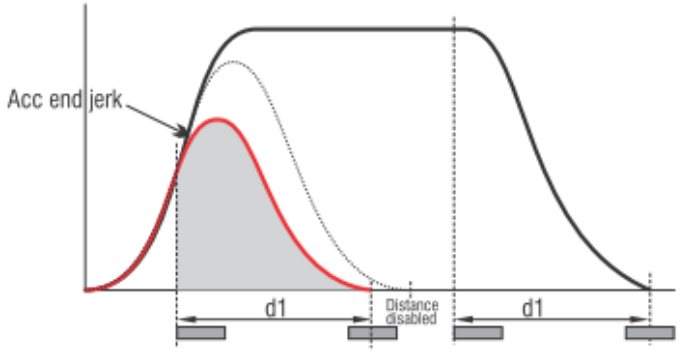
7.1 Smart travel mode



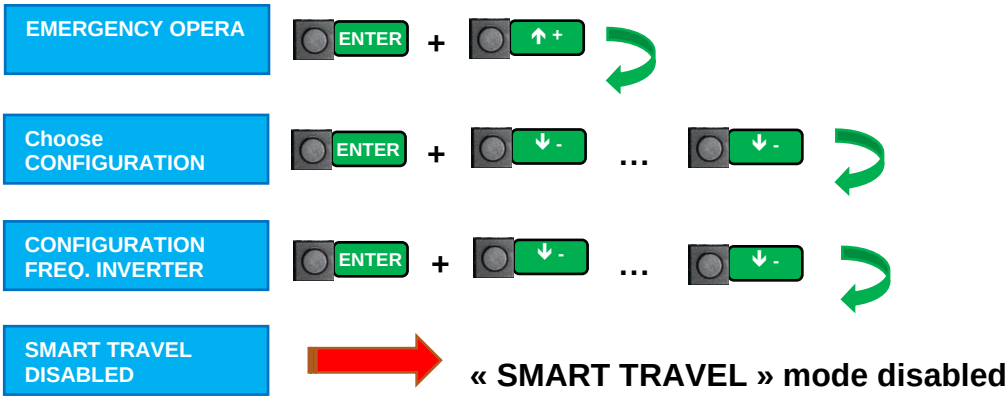
Essential configuration :

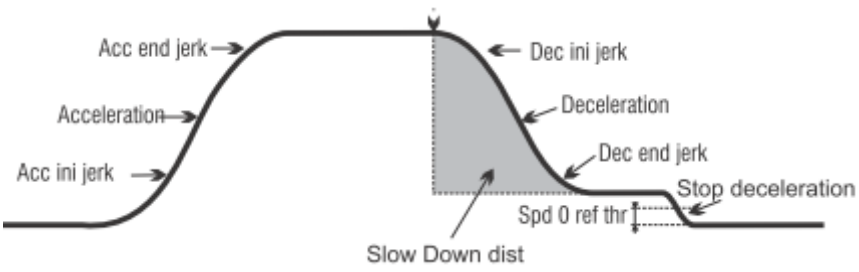
- Absolute encoder K04SP in shaft with toothed belt
- Synchronous or asynchronous motor in close loop (with encoder)

SMART TRAVEL



7.2 « STANDARD » mode



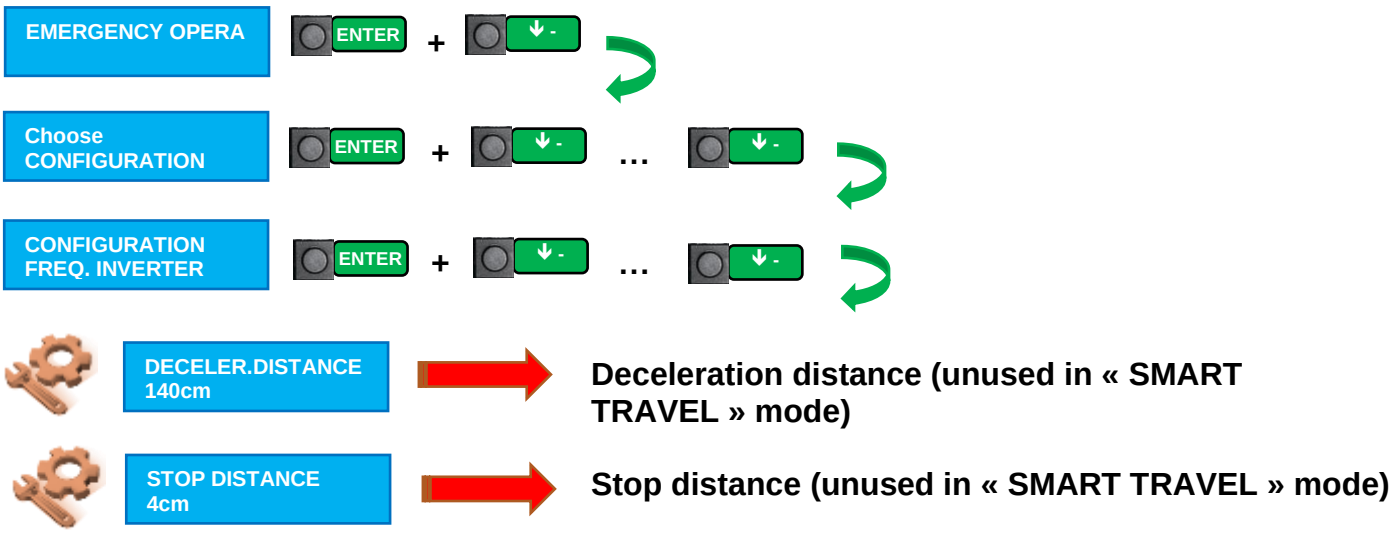


STANDARD MODE

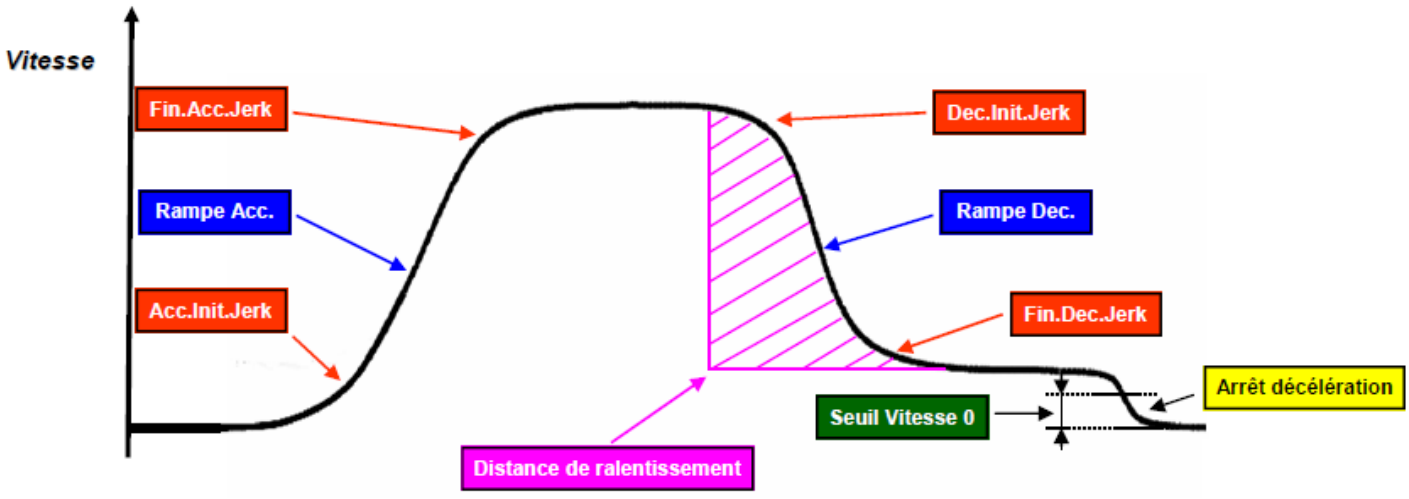
7.3 Suggestion for slowing distances (unused in “SMART TRAVEL” mode)

NOMINAL CAR SPEED	DECELERATION DISTANCE
(m/s)	cm
0.40	**70**
0.60	**90**
0.80	**110**
1.00	**140**
1.20	**170**
1.40	**200**
1.60	**220**

Deceleration distance settings : see under (only with absolute encoder K04SP)
Optical reader or magnetic sensors, deceleration distance is set into the shaft directly

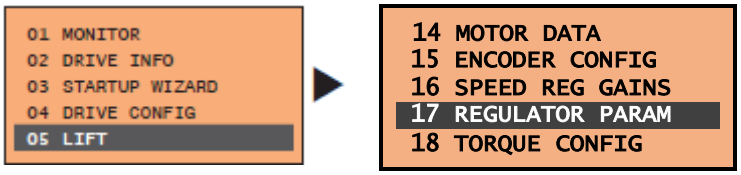


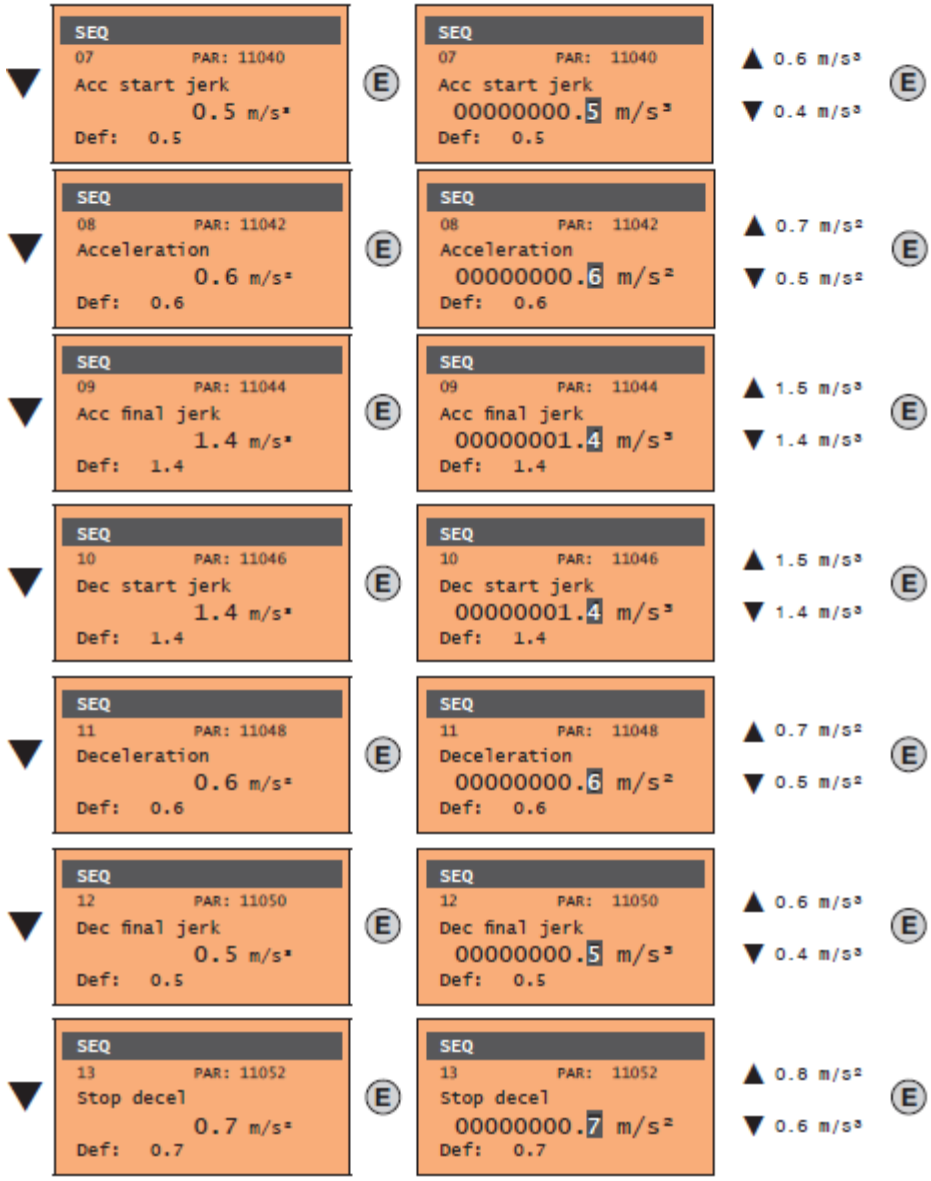
7.4 Overview of the theoretical operation comfort



7.5 Setting of comfort operation

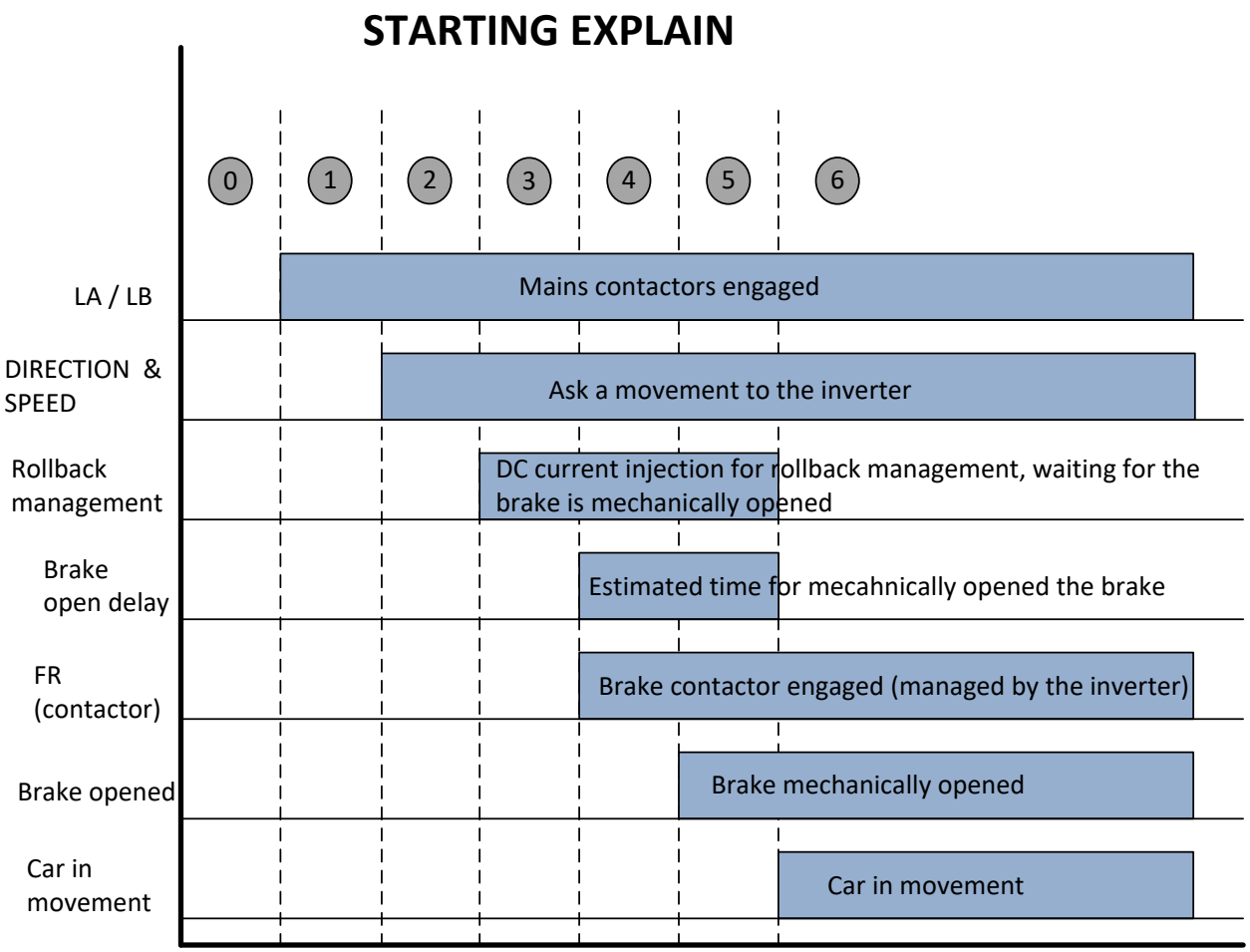
To accelerate/decelerate FASTER, INCREASE jerk values under
To accelerate/decelerate SOFTLY, DECREASE jerk values under





Functionnement will be better if lift is well balanced. (See section 10.1 Checking the car's balance)

7.6 Starting explain



0 The controler received a travel order

1 Main contactors are engaged, the inverter is enabled

2 The inverter received a travel order

3 The inverter start to power the motor (magnetization)

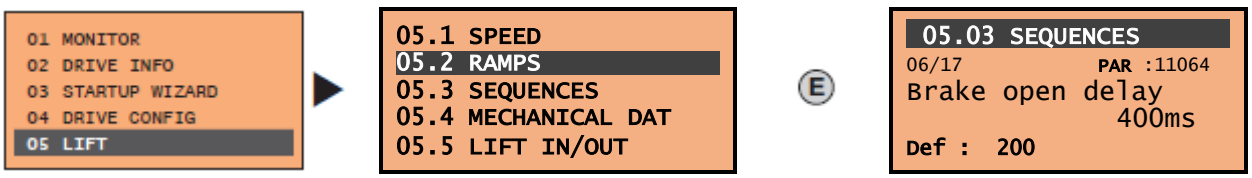
4 The inverter managed the brake contactor, and keep the motor powered for no move

5 The brake is now open mechanically
The inverter will stop the DC current injection and wil start to move trhe motor

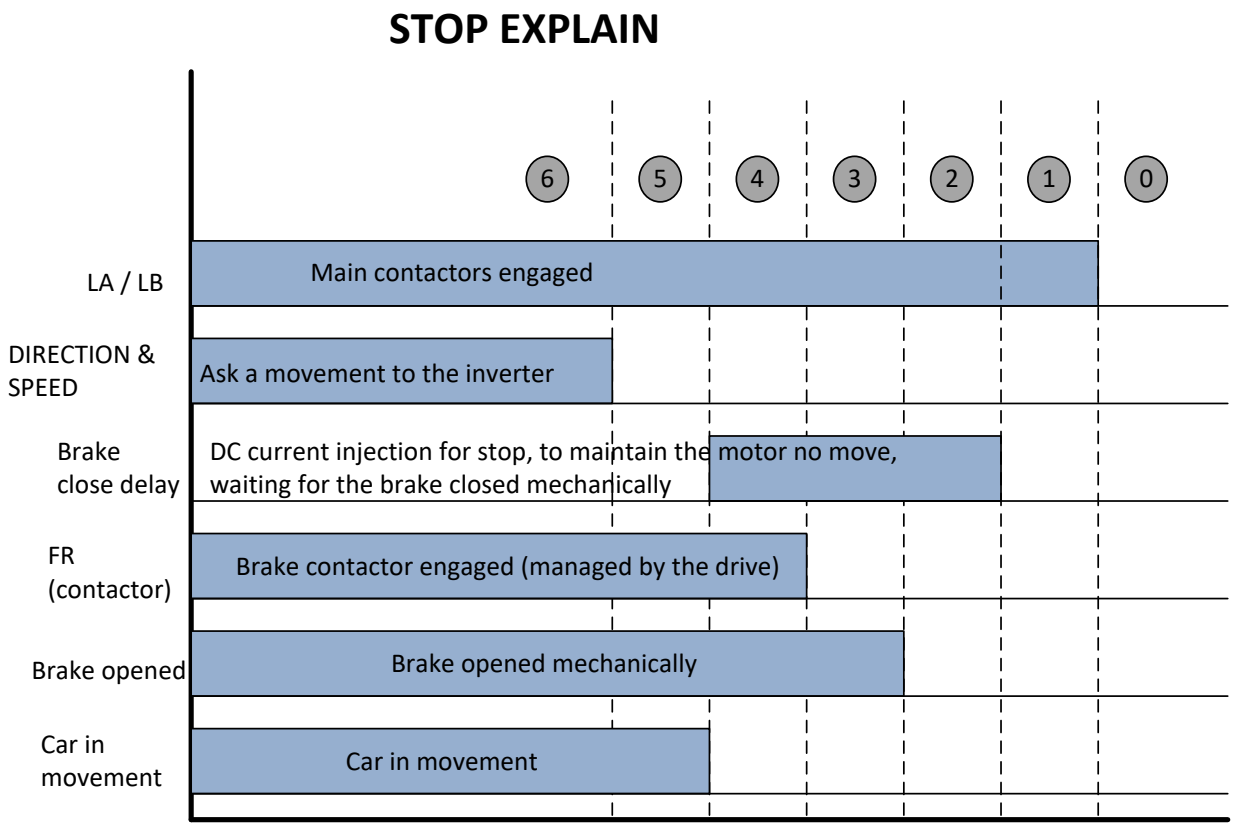
6 The motor is moving
The car is moving

7.7 Start settings

If the motor is starting to move while the brake isn't open, you need to increase the following parameter :



7.8 Stop explain



6 The motor is moving
The car is moving

5 We ask to the inverter to stop the motor
The car will stop to move
The motor will stop to rotate

4 The inverter continue to power the motor with DC current to keep it no move
Motor isn't rotate
Waiting for the brake closing

3 The inverter managed the brake contactor, it's opening
Brake coil is not powered

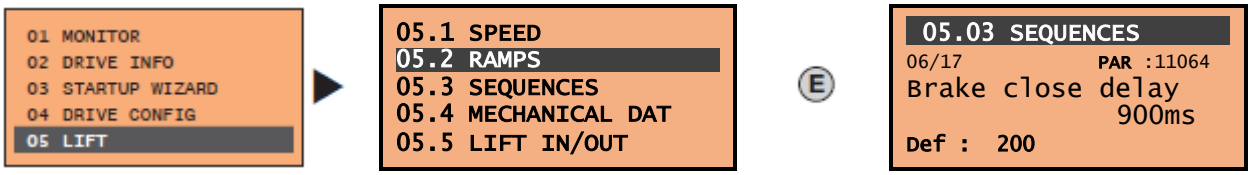
2 Brake is mechanically closed, motor is mechanically blocked
Inverter will be able to stop the DC current injection

1 DC current injection is now finished
Main contactors will be able to open

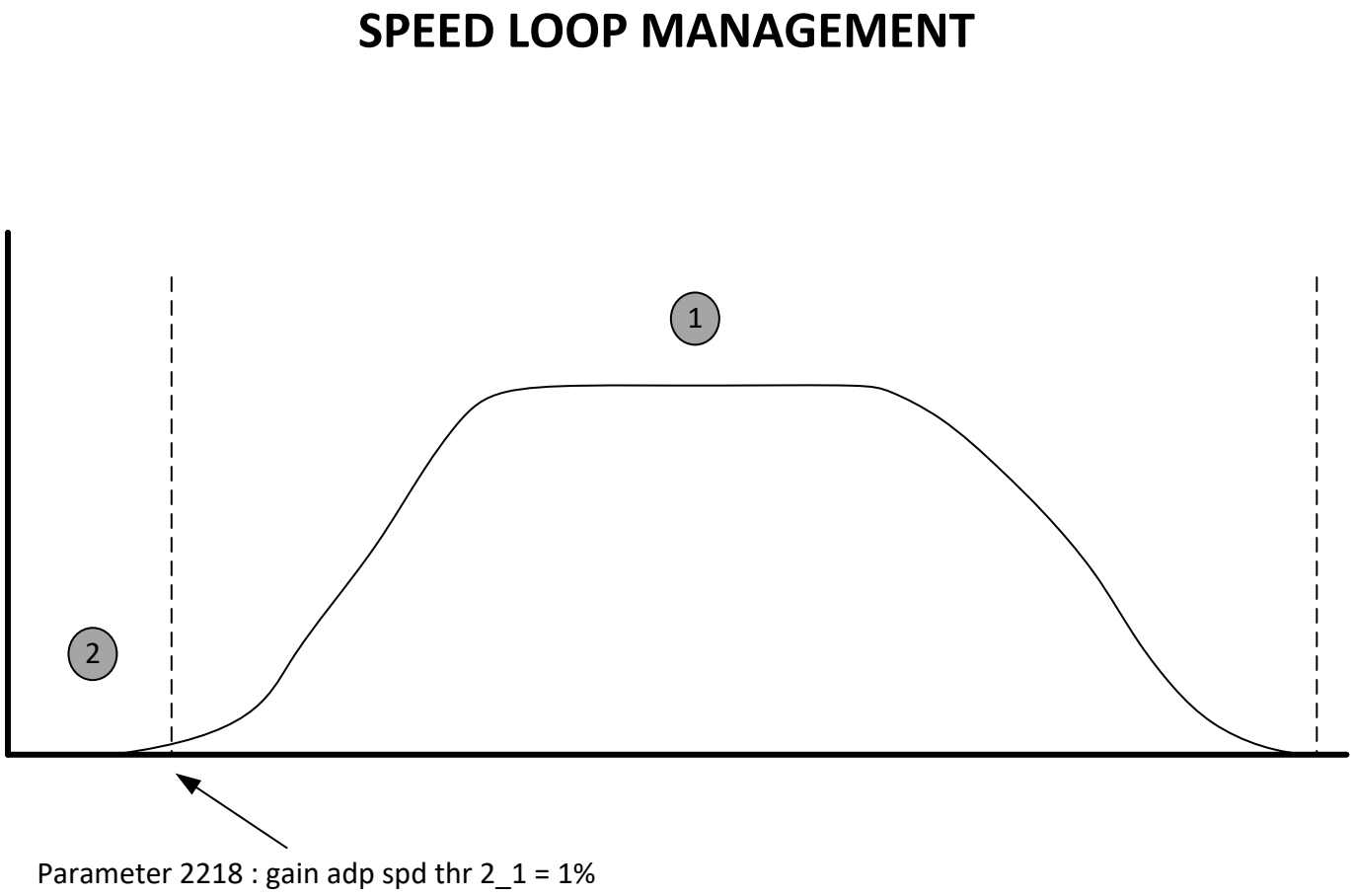
0 Main contactors are disengaged, car door is open
Car is waiting for a new call

7.9 Stop settings

If the motor is starting to move while the brake isn't open, you need to increase the following parameter :



7.10 Speed loop functionment



Percentage of the nominal speed of the motor which we go from gain 2 to gain 1… This is used to separate rollback management to travel management. We can set different valuefor gain 1 & gain 2.
Most of time, rollback gain are much higher than travel gain

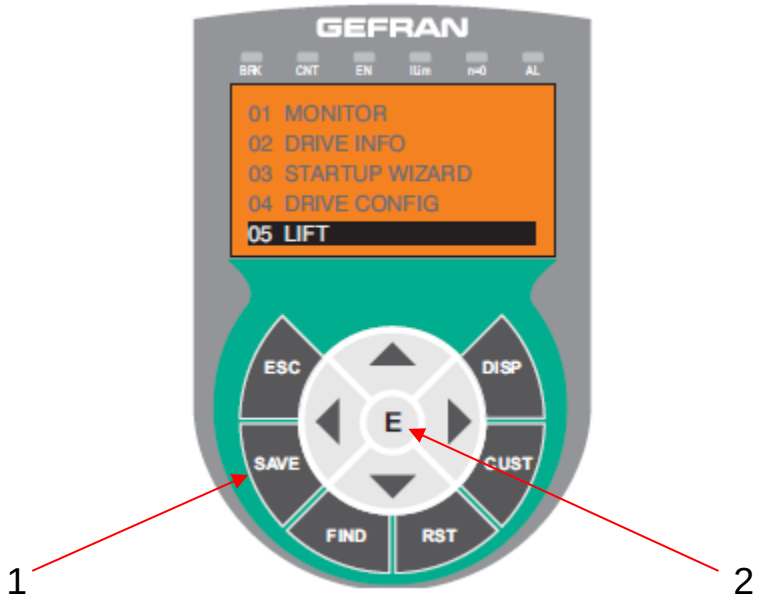
2 Gains used during the rollback management : P2 & I2

1 Gains used during the travel : P1 & I1

7.11 Saving modified parameters

After making parameters change into the inverter, it is ESSENTIAL to save the changed settings

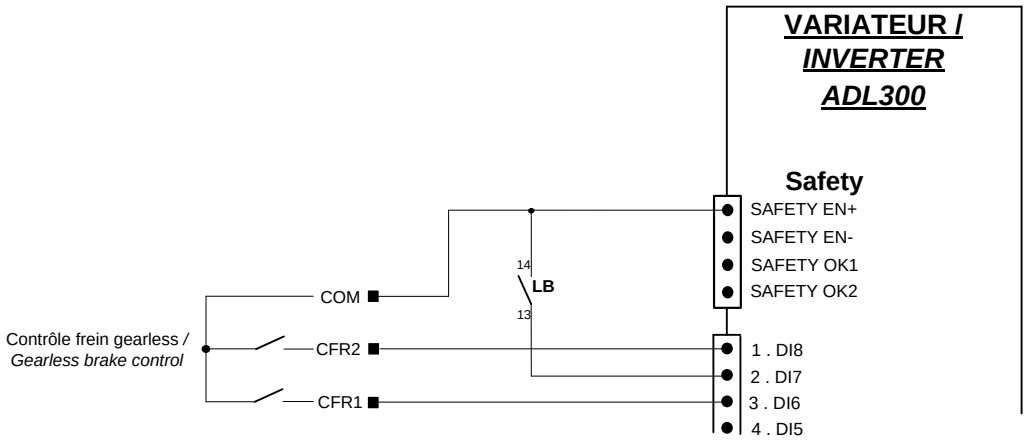
Solution 1 : Press « SAVE » (1) and « E » (2)



- **Solution 2 :** Follow the instructions below :

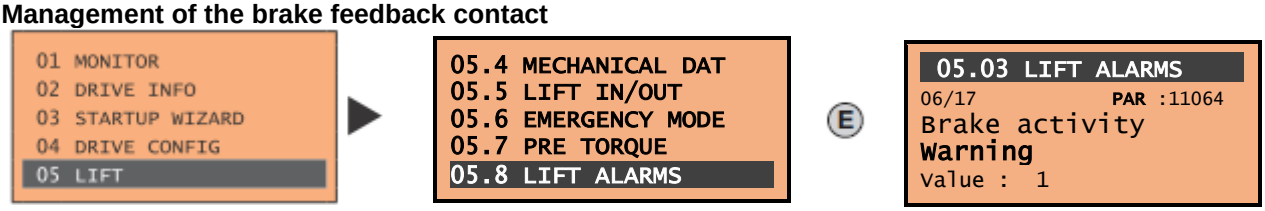
8 Brake feedback & A3 control

8.1 Brake feedback wiring



8.2 Inverter settings

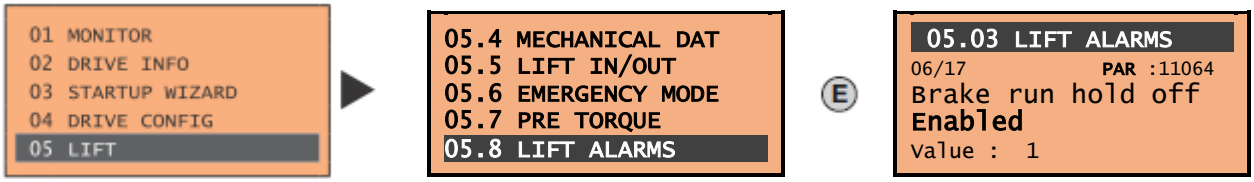
Management of the brake feedback contact



Many settings are possible :

- **IGNORE** : Brake activity isn't managed
- **WARNING** : brake activity is managed

Management of the fault detection of brake feedback

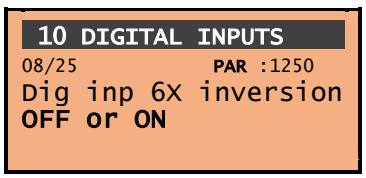


Many settings are possible :

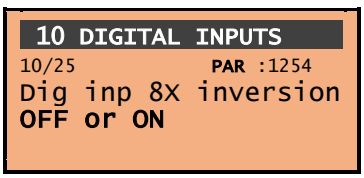
- **ENABLED** : When the default happen, it's stored during all the travel. When the car is stopped, the "BRAKE FEEDBACK" fault appear on the inverter and the lift is out of service
- **DISABLED** : When the default happen, the car is stopped immediately, the "BRAKE FEEDBACK" fault appear on the inverter and the lift is out of service, where it is.

Inversion of the direction of the brake feedback into the drive (NO & NC) :

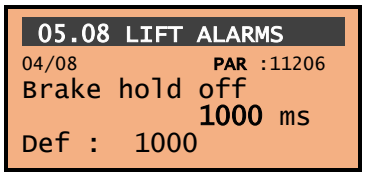
NO contact = OFF



NF contact = ON

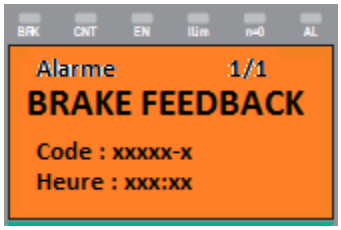


Fault detection time delay setting :

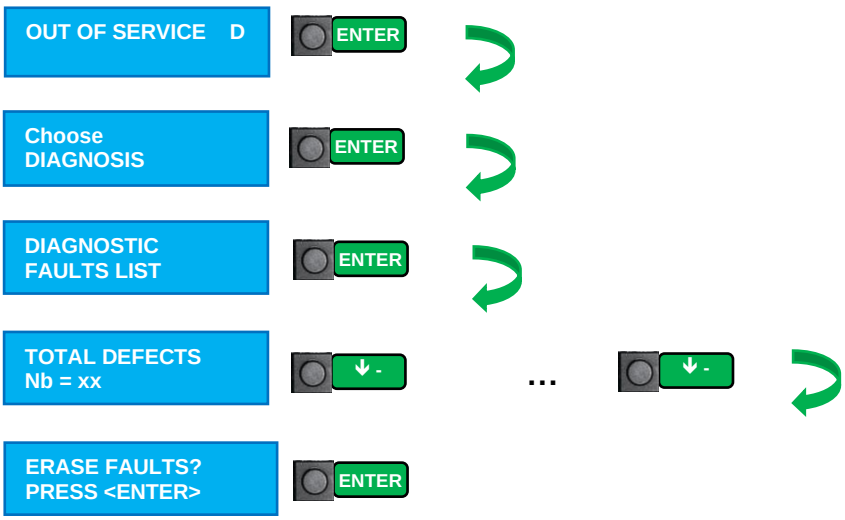


8.3 Reset the brake feedback fault

See under the screen when drive detect a brake feedback fault :



You need to clear all the fault in the EVOLUTION controller. Like this :



The lift is now in use

8.4 Brake feedback test

Follow the following instructions for test the brake feedback :

1. Disconnect the wire corresponding to the 1st brake contact (CFR1 terminal)

2. Try to move the car to another floor, once the lift is arriving at the floor, the drive will be faulty with “BRAKE FEEDBACK” error. The test is OK, go to step 3. If no fault appear, test is NOT OK. Verify inverter settings again (section 8.2 drive settings)

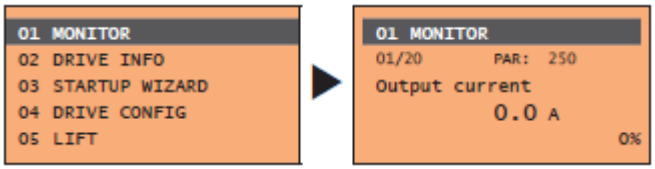
3. Reset the fault following section 8.3

4. Repeat step 1, 2 & 3 disconnecting wire corresponding to 2nd brake contact (CFR2 terminal)

9 Help

9.1 Checking the car's balance

To verify the balance of your car, you have to survey the current's consumption during up AND down travel, with the car half-loaded. To do this, look at value on parameter under. If current's consumption is different between up and down, add or remove weight in counterweight



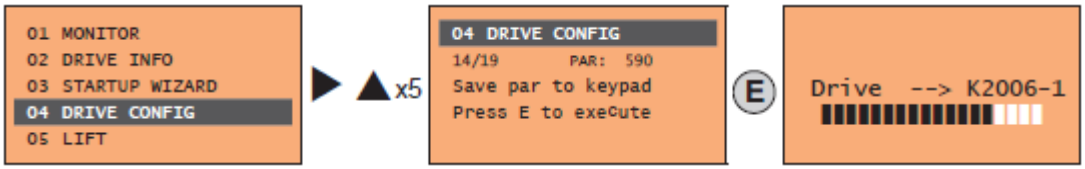
9.2 To know

- Encoder cable must be separate to main power cables (put shield on earth)

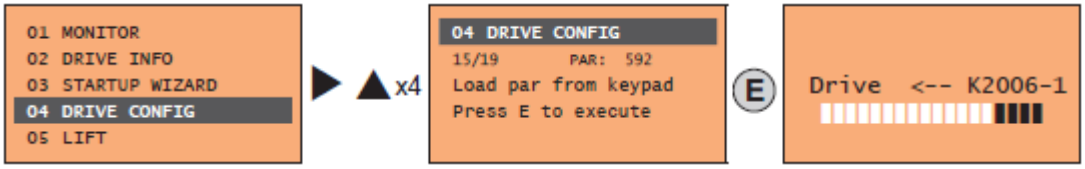
- The GFCI breaker 300mA of electric panel « *collum shoe* » *must detect* alternative and continue faults  and must be selective S to avoid untimely launching when power is on.

9.3 Saving parameters into « keypad »

It's possible to save parameters into inverter keypad following procedure below :



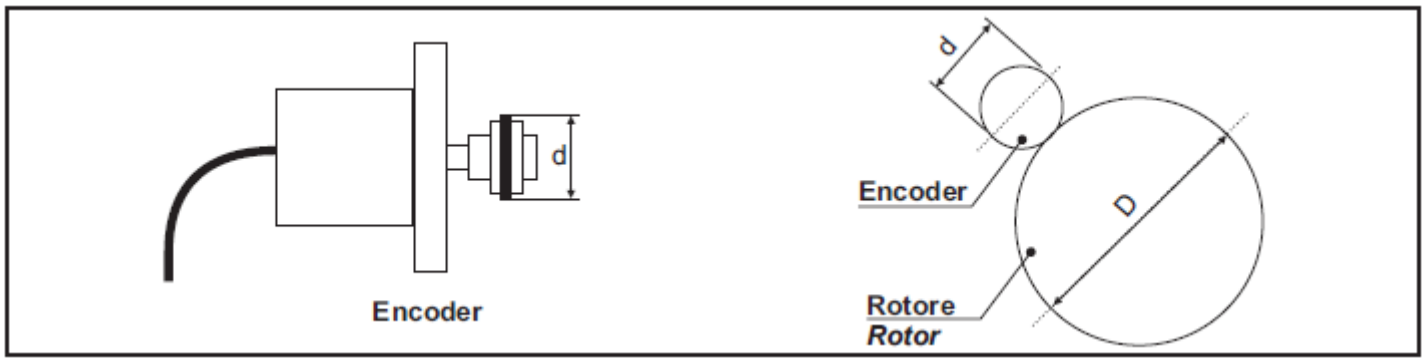
It's also possible to put parameters saved into keypad into inverter (or another if it's compatible) following procedure below :



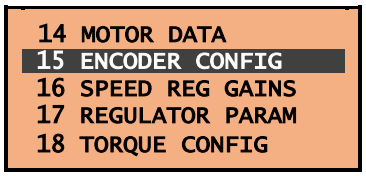
10 Annex

10.1 Annex 1 : Ecodisk encoder setting

The encoder is fitted like the drawing below :



Set up parameters in following menu « ENCODER CONFIG »:



Number of encoder pulses : 1024 (see encoder data) :

Menu	PAR	Description	UM	Type	FB BIT	Def	Min	Max	Acc	Mod
15.1	2100	Encoder pulses	ppr	UINT16		1024	128	16384	RWZ	F__

Setting of the number of feedback encoder impulses. During setup, for incremental sinusoidal encoders + absolute EnDat and Hiperface encoders this value is set automatically by reading the number of incremental encoder impulses.

Voltage encoder supply : 5Vdc(see encoder data) :

Menu	PAR	Description	UM	Type	FB BIT	Def	Min	Max	Acc	Mod
15.2	2102	Encoder supply	V	FLOAT		5.2	5.2	CALCF	ERWZ	F__

Setting of the encoder supply voltage supplied by the relative optional card. Min and max values are modified according to the type of encoder card applied.

Set the encoder mode (set « Digital FP ») :

Menu	PAR	Description	UM	Type	FB BIT	Def	Min	Max	Acc	Mod
15.10	2132	Encoder mode		ENUM		Nessuna	CALCI	CALCI	ERWZ	FVS

The parameter must be configured to "Digital F" (value 2)

Peripheral encoder mode (set « 1 ») :

Menu	PAR	Description	UM	Type	FB BIT	Def	Min	Max	Acc	Mod
15.11	2136	PeripheralEncoder		BOOL		0	0	1	ERWZ	FVS

The parameter must be configured to 1.

External diameter of motor pulley (measure « D » and set up the value in mm, see drawing 1 above)

Menu	PAR	Description	UM	Type	FB BIT	Def	Min	Max	Acc	Mod
15.13	2184	Ext Diam motor	mm	UINT16		1	1	65535	ERWZ	FVS

Configure the value of the external diameter of the motor rotor (D).

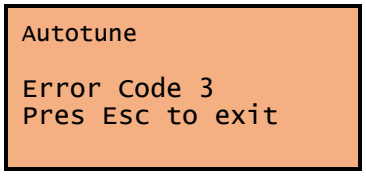
Encoder pulley diameter : 370

Menu	PAR	Description	UM	Type	FB BIT	Def	Min	Max	Acc	Mod
15.14	2186	Enc Pulley diam	mm	UINT16		1	1	65535	ERWZ	FVS

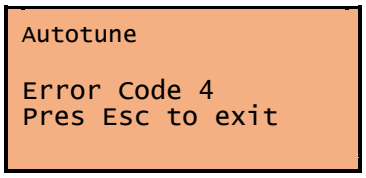
Configure the value of the diameter of the incremental encoder pulley (d).

11 Diagnosis / fault list

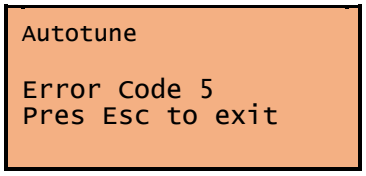
11.1 Autotune fault



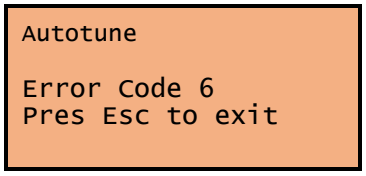
Motor's data was modified and **"TAKE PARAMETERS" (PAR 2020)** wasn't validated. Validate **"TAKE PARAMETERS" (PAR 2020)** and try again.



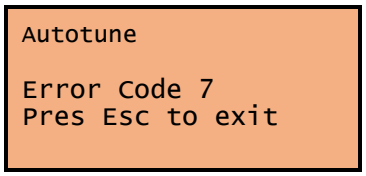
The inverter didn't detect the motor : Check wiring between motor and inverter. Check LA & LB contactors are well engaged. Check main power LA & LB contactn.



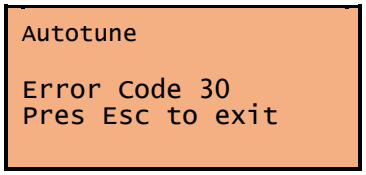
The autotune process wasn't done well : main contactors LA &LB must be engaged only when the inverter display **"CLOSE ENABLE INPUT".**



Data calculated by the autotune are inconsistent, check data motor set regarding motor nameplate

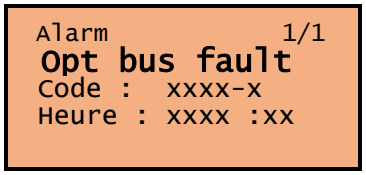


LA & LB main contactors were disengaged before the end of the autotune. Try again the autotune process

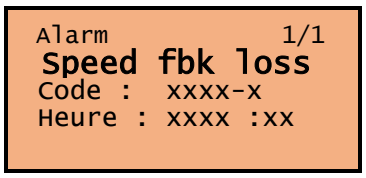


The autotune process wasn't done well : main contactors LA &LB must be engaged only when the inverter display **"CLOSE ENABLE INPUT".**

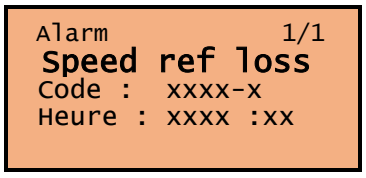
11.2 Autotune fault



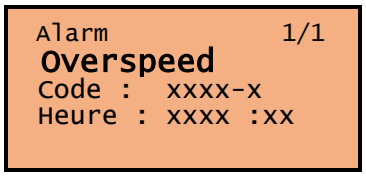
CanOpen lift bus dialogue between EVOLUTION and inverter was lost. Check shield, earth connections, suppressors. This fault appear after each "RESET" on the controler



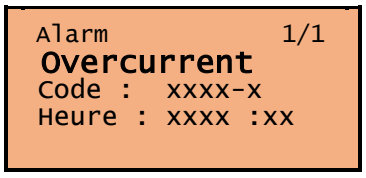
The motor encoder isn't detect by the inverter : check the wiring. Check the encoder settings



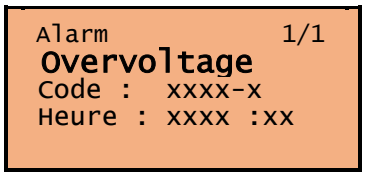
Travel speed asked is too different than real travel speed. Increase speed loop gain. Check motor and encoder settings



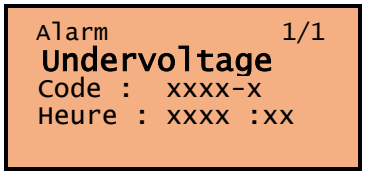
TMotor speed was over than "overspeed threshold" parameter into startup wizard menu. Increase speed loop gain. Check motor and encoder settings



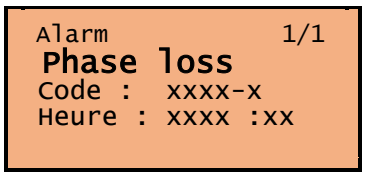
LA & LB contactors were open and the motor sill rotate, delay the opening time for the contactors



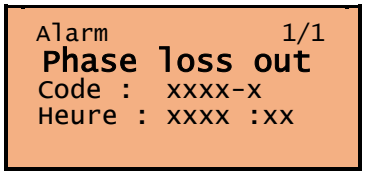
Too much voltage is sent on the brake resistor during the braking phase. Check the braking resistor, Check the braking resistor have the good value. Decrease deceleration parameters



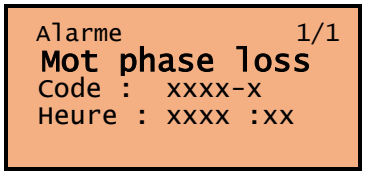
Main power supply is too low regarding the data set in parameter "MAINS VOLTAGE" (PAR 560). Check the main voltage



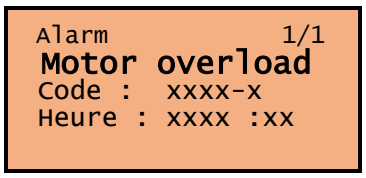
The inverter detect an input phase absence : check the main power supply



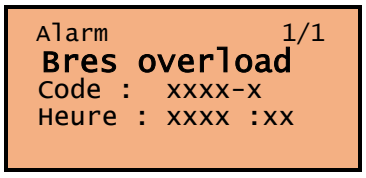
The inverter detect a phase absence between the inverter and the motor : check the wiring between the inverter and the motor : check main contactors LA & LB contacts



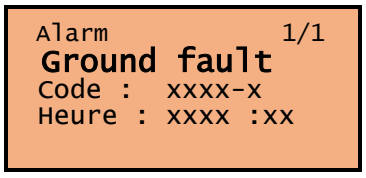
The inverter detect a phase absence between the inverter and the motor : check the wiring between the inverter and the motor : check main contactors LA & LB contacts



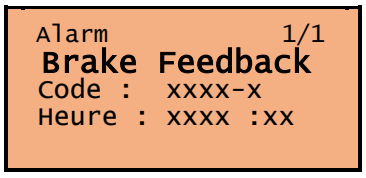
Motor current consumption is over than motor current set into the motor data. Check if brake opening well, check mechanical problems



The current sent into the brake resistor is too high. Check the braking resistor, Check the braking resistor have the good value. Decrease deceleration parameters



The motor encoder isn't detect by the inverter : check the wiring. Check the encoder settings



The inverter detect a problem with brake micro contact control (not opened or not closed). Check the well working of brake and micro contact. To put the lift in use, erase the fault into the EVOLUTION controller