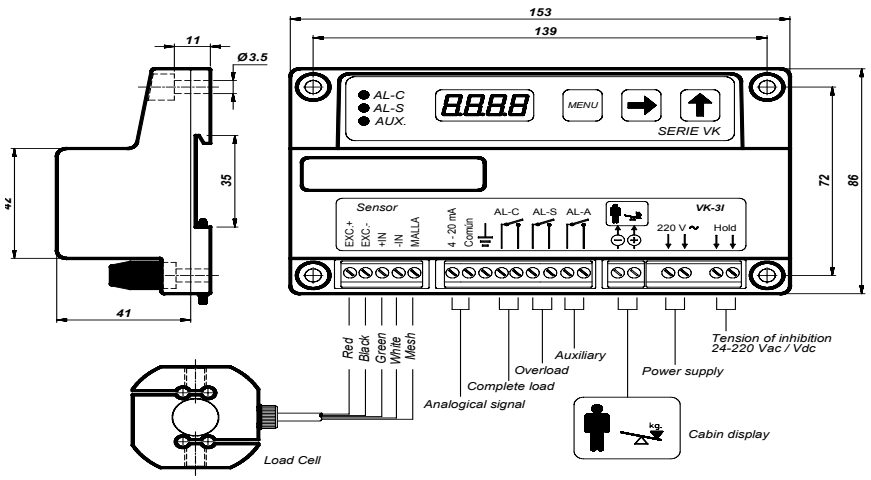
1. Installation



2. Description of the connections.

AL-C (Relay contact of the Complete load)
Change of the state if the load programmed in the parameter [AL C] is overcome

AL-S (Relay contact of the Overload)
Change of the state if the load programmed in the parameter [AL S] is overcome .

AL-A (Relay of the Auxiliary)
Change of the state if the load programmed in the parameter [AL A] is overcome .

HOLD (It activate with a tension between 24 & 220 V alternating or continuous).
When the elevator is in progress, the measure of the weight is not good.The relay could be activated & the cabin display turns unstable.
Activating the entrance of HOLD when the elevator gets in movement.The measure of weight is blocked,then the **display presenting in intermittent**, & the relay together with the cabin display conserves its state until this entrance is disabled, that should be after stopping the elevator.

OUTPUT OF CABIN DISPLAY
It can give two types of output,that which you can select it on the parameter [ConF]
a) Output that is activated in an intermittent way when an overload takes place. The output has polarity, & it can be valid to activate a led and a buzzer (continuous current 7,5V máx.75mA).
b) Activation of progressive display **MB-D** (Two threads connection without polarity).

ANALOGICAL OUTPUT
A current output of **4-20mA**.
4 mA Weight ≤ 0kg (empty elevators)
20 mA Weight ≥ AL-C (elevators complete)

10. Electrical Characteristics

Model: **VK-3i**
Nominal tension: **220V.**
Nominal current: **60mA.**
Nominal frequency:**50-60 Hz**.
Fuse: **100mA**.

11. Change of the fuse

1.)Disconnect the unit
2.)Open the unit removing the 5 screws that hold the back cover.
3.)Take out the circuit of the box, and change the fuse that is in the vertical free mounting fuse holder located next to the transformer.

12. Presentation of Errors

[Err1] Load cell not well connected, damaged load cell or cut cable
- Revise the connection of the load cell.

[Err2] Negative Overflow .
-The load cell is working in a contrary sense or it is not well connected.

[Err3] Positive Overflow. (The load cell is supporting a superior weight than the nominal value.)
-It is necessary to put a load cell that has a superior nominal value.

[Err4] Polarity Error. (This error is detected when the unit adjusts the weight with the polarity of the load cell changed).
-Revise the connection of the load cell.
-Repeat the setting of the zero and the adjust of weight.

[Err5] Short circuit in the output of the cabin display (MB-D).
-Locate & eliminate the short circuit.
-Turn off the unit (VK) and connect it again so that the display [Err5] will disappear

[Err6] Lost of datas in the memory.
- Program again the unit.

Note: When an error takes place all the alarms will be activated and the elevator is blocked. If error [Err6] takes place the contacts of the is open (RELAY = OFF).

AL S — Value of the load indicating that the elevator is in overload.When the content of the elevator overcome this value, the state of the relay change to overload. And the cabin display **MB-D** will indicate that the elevator is in overload by activating the buzzer or by optical warning.

AL A — Value of the load starting from which changes the state of the relay to auxiliary. This relay doesn't have any specific function, it can be programmed with any load value that can be used to light a lamp, to activate a buzzer, to detect a minimum load, etc.

Note:

1) For the setting of the alarms, see section Nº.4(Modification of parameter).

2) It recommend to put the state of rest in **ON** because if a loss of data takes place in the programming, the relay always passes to the state **OFF**.

8. Auxiliary Functions

CAdE — Option of the chain compensation.This option allows to compensate the difference of weight between floor taken place by the chain. To use this option it is necessary to introduce the approximate weight of the chain, keeping in mind that the allowed maximum value is **50kg**. In the event of putting it to zero the chain compensation will be annulled.

ConF — Allows to configure the output of cabin display and the condition of the relay.

Conf.	Display of low consumption	Output of cabin display
ConF = 0	ON	Intermittent activation (LED)
ConF = 1	ON	Progressive activation (MB-D)
ConF = 2	OFF	Intermittent activation (LED)
ConF = 3	OFF	Progressive activation (MB-D)

9. Mode of low consumption

As the display is the most that consumes and it is not an element that is visible.It has been keep in mind a way of a low consumption, that once the display turns off automatically, the display presents a rotating segment to indicate that it is continuesly working.

Cases that the unit enters in the function of low consumption.

1) When connecting the unit to the power supply, it presents the weight during 3 minutes. And in the event of not touching any key, automatically it will pass to the mode of low consumption.

2) When it passed one hour since the last time that having played the key.

3) When the unit is presenting the weight, pressing the key MENU during two seconds.

Note: To leave the function of low consumption it is necessary to press any key.

3. Keys of access to the parameters of menu's

The unit has a menu to accede to the adjustment of the parameters.

MENU — Pressing this key successively, will go going to all programmable parameters of the menu in a cycle way.
To return to the visual presentation of weight, press the key several time until to arrive at the end of the menu, or just press it during 2 seconds.

→ — Pressing this key enters in the selected option and once inside we will be able to select the digit to modify.

↑ — Pressing this key will modify the selected digit.
Also by pressing this key when you are located on the selected parameter, the display presents its content.

4. Modification of the parameter

A) MODIFICATION OF AN ALARM

1) Press the key MENU ssuccessively until being place on the desired alarm.
2) Press the key → to enter in **modification of the parameter**, being the left digit in intermittent.
3) Put in the display the wanted value, using this keys → ↑.
4) Press MENU to introduce the selected value.
5) Change the state of the relay with this key ↑.(ON/OFF)
6) Press twice MENU to saved the change. In the event of only pressing once, you comes out without saving.

B) MODIFICATION OF A PARAMETER (NOT ALARM)

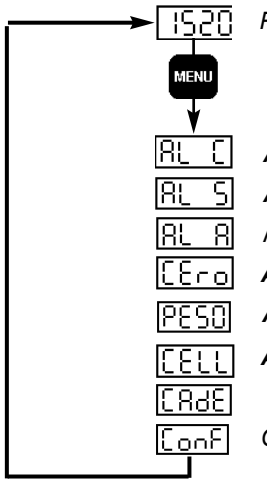
1) Press the key MENU successively until being place on the desired parameter.
2) Press the key → to enter in **modification of the parameter**, being the left digit in intermittent.
3) Put in the display the wanted value, using this keys → ↑.
4) Press the key MENU twice to save the assignated value. Then the display will present the next parameter.

Notes:

a) If you haven't press MENU 2 times, the operation will not stored,and the display presents again the parameters that you was modifying.

b) To modify the parameters PESO & CEro, please consult section **Nº.6** (Calibration of the unit).

5. Programming Structure of the Menu's



Presentation of the weight

***Alarm** of complete load (ON/OFF)*

***Alarm** of overload (ON/OFF)*

Auxiliary ***Alarm*** *(ON/OFF)*

***Adjust** of zero setting*

***Adjust** with a well-known weight*

***Adjust** of the cells with direct load value*

Chain compensation of the weight

Configuration of the cabin display, & the condition of relay

6. Calibration of the Unit

This section is necessary so that the unit knows the relationship between the signal of the cell and the weight introduced in the cabin.

There are two ways to calibrate the unit:

I) NORMAL CALIBRATION (VALID FOR ALL TYPES OF LOAD CELLS)..

1) SETTING OF THE ZERO:

a))Situate in the option of menu CEro

b) Check that the cabin is empty and press the key ➔,& then press MENU, while is in intermittent the operation will be confirmed with a count-down. And when it finished, the display will present the parameter PESO .

Note: If you don't press the MENU before finishing the intermittence, the operation will not stored, and the display presents again the parameter CEro

2) ADJUST OF THE WEIGHT:

a) Situate in the option of menu PESO

b) Introduce inside the cabin a **well-known weight** (It is recommended at least as minimum 50% of the complete load) & press ➔

c) Put the value of the weight placed in the cabin using the keys ➔ ↑

d) To save the value press the key MENU 2 times (The unit will start to count -down and the value will be save). Then the display will present the next parameter CELL .

Note: If you haven't press the MENU for the 2nd time, the operation will not stored, and the display presents again the parameter PESO

II) CALIBRATION OF THE CELL FOR DIRECT TRANSMISSION (TCE MODEL)

** To fulfill this operation it is not necessary to introduce a well-known weight in the cabin.*

1) ***SETTING OF THE ZERO*** (same as the operation of the normal calibration).

2) ADJUST OF THE WEIGHT:

a) Situate in the option of menu CELL

b) To enter and be able to asigned a value press ➔.

c) Put the calibrated value of the cell using this keys ➔ ↑

(This data comes at the end of the cables, and it belongs to the calibration value of the manufacturer.)

d) To save the value press the key MENU **2 times**(The value stored in the memory).

then the display will present the next parameter CAdE .

Note: If you haven't press MENU for the **2nd time** the operation will not stored,

and the display presents again the parameter CELL

7. Alarms

The alarms are the load levels in which that change the state of the relay. To adjust them it is ***not necessary any weight***, just program them and indicate its state.

AL C Value of the load indicating that the elevators is complete. When the content of the elevator overcome this value, the state of the relay change to indicate the complete load, and the cabin display MB-D will light on up to the head of the dummy. The value of **AL-C** it also defines the necessary load so that the analogical output gives us **20 mA**.

13. QUICK PROGRAMMING GUIDE

1) Install the sensor and connect it to the unit control.

To connect properly the sensor to the unit control, please see section Nº.1 (Installation)

<u>This section is to knows quickly the keys of this unit.</u>

a) To find the parameter that is wanted to change press successively MENU and to accede to the parameter press →

b) Modify using this keys → ↑

c) To save the data press 2 times MENU

2)Before to start to calibrate the unit control, please be advise to do the following:

a) Down the cabin to the lower plant of the building. (in the half way of the itinerary)

b) Bounce inside the cabin to avoid possible hooks on the guide rail.

3) Most important parameters to calibrate step by step:

1º. **Set the Zero** of the unit with the empty elevators:

- situate in the parameter [CEro],
- press → MENU, and will start to count-down.

2º. **Adjust of the Weight** (Peso):

- Put a well known weight inside the cabin (at least **50%** of the complete load)
- Introduce in [PESO] the value of the load that has been placed in the cabin using this keys. → ↑ then to save it press MENU 2 times and the unit will start to count-down

3º. Put in [AL C] the value of the load, starting from which is required to activate the alarm of **complete load**.

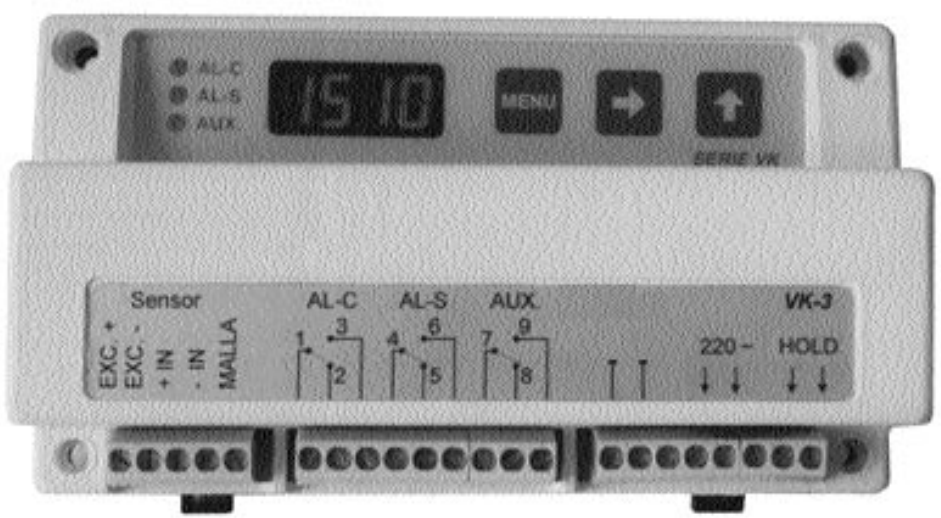
4º. Put in [AL S] the value of the load, starting from which is required to activate the alarm of **overload**.

5º. Put in [AL A] the value of the load, starting from which is required to activate the alarm of **auxiliary** (if it will be used).

Note: *It is important to calibrate the **setting of zero** before doing the operation of the **adjust of the weight**.*

Dinacell Electrónica, s.l.
Pol. Ind. Santa Ana - C/ Torno, 8 - 28529 Rivas-Vaciamadrid (Madrid) España
Tel. 913 001 435 - Fax: 913 001 645
E-mail: dinacell@dinacell.com - http://www.dinacell.com

Ref.: MI-0004 (ENG)
Rev. 05/02



UNIT CONTROL VK-3I

Instructions Manual