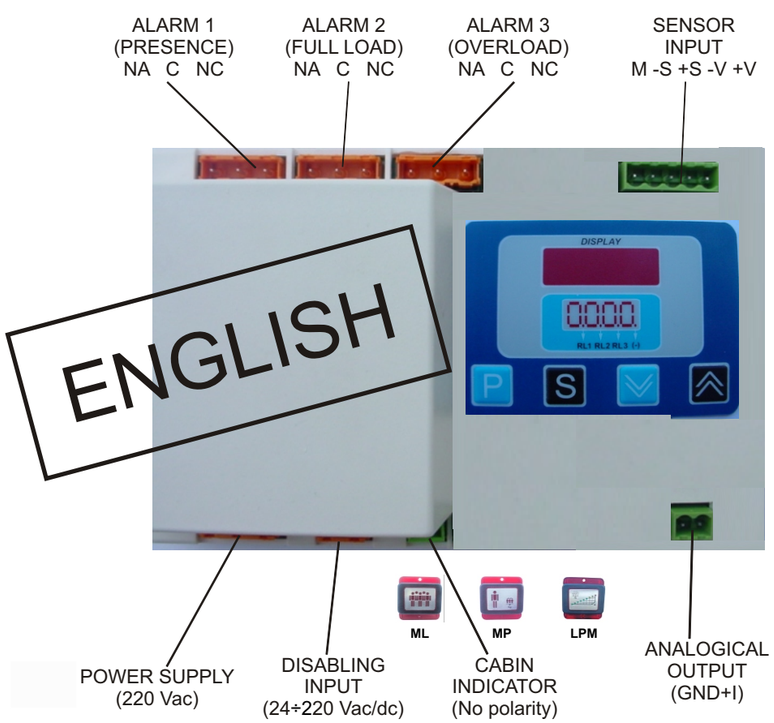
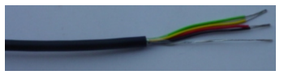
LM3D INSTALLATION PROCEDURE: (3 STEPS)

1 DIAGRAM OF CONNECTIONS:





SENSOR CONNECTING CODE:

M ..... MESH
- S .....- Signal (YELLOW).
+ S .....+ Signal (GREEN).
- V .....- Vdc (BLACK).
+ V .....+ Vdc (RED).

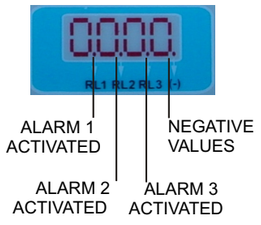
ALARM CONNECTING CODE:

NA ..... Normally open.
C ..... Common.
NC ..... Normally closed.

Relays electrical ratings: 250Vdc / 3 A

ANALOGICAL OUTPUT:
The maximum value for the analogical output corresponds with the programmed alarm 3 value.

2 KEYS AND FIGURES:



NOTE: The display remains switched off after 5 minutes of normal operation. Pressing any key the display value is visualised again.

PROGRAMMING KEY "P"
This key allows to go through the different menus in order to perform the settings and to introduce the lift parameters. Once introduced, by pressing the "P" key parameters are saved in eeprom (a non volatile memory to save data in case of power failure).

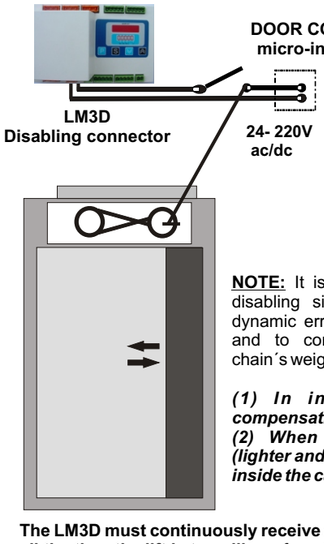
EXIT KEY "S"
It allows to leave the menus without saving data in eeprom. In the alarm menus, we go from one alarm to another without going through their parameters. In the measuring mode, keeping this key pressed on enables the visualisation of the installation´s real weight without the compensating chain correction.

DOWN KEY "▼"
This key enables the user to decrease the parameter values in each menu. It has two speeds; one by one or, if pressed on, twenty by twenty.

UP KEY "▲"
This key enables the user to increase the parameter values in each menu. It has two speeds; one by one or, if pressed on, twenty by twenty.

3 DISABLING OR BLOCKING VOLTAGE:

The disabling signal range is **(24-220 V ac/dc)**



Disabling signal with Door Contact:

Closed contact when door begins to close and open contact when door finishes to open.

NOTE: It is compulsory to use the disabling signal in order to avoid dynamic errors in the measurement and to correct the compensating chain´s weight in these two cases:

(1) In installations with a compensating chain.
(2) When any cabin indicator (lighter and/or sounder) is installed inside the cabin.

The LM3D must continuously receive a blocking signal during all the time the lift is travelling, from the moment the doors are closing until the cabin gets on floor and the lift opens doors again.
NOTE: Continuously (Voltage 24-220Vac/dc).

The display value will keep freezed after receiving this signal.

Connect the disabling or blocking wIres using for example, **a (door contact micro) fed with voltage once the door begins to close.**

LM3D PROGRAMMING PROCEDURE: (11 STEPS)

Press the "P" key during 3 seconds to begin the programming procedure.

1 SENSOR SELECTION:
Choose between the wire rope sensor (**"LMC"**) or the **"BEAM"** sensor.

2 ZERO CALIBRATION (AT UPPER FLOOR): "TARE"
Make the zero setting with empty cabin at upper floor selecting **"YES"**. It is recommendend to jump before inside the cabin in order to avoid any possible cabin "hooks" on the guide rails. After that, pressing the **"P"** key the equipment begins to flicker for 15 seconds to permit the installer to leave the cabin totally empty.

3 SENSOR CONFIGURATION:
**** LMC (wire rope sensor):**
- Automatically ("DIAM" = Diameter): the diameter in millimetres of the wire ropes has to be introduced from **6.0** to **16.0 mm.**
- Manually ("LOAD"): *place inside the cabin a real known weight, which must be - at least - half the useful load. Introduce by means of the keys this weight value.*
**** BEAM (beam sensor):**
- Manually: *place inside the cabin a real known weight, which must be - at least - half the useful load. Introduce by means of the keys this weight value.*

4 NUMBER OF PEOPLE:
Select the maximum number of persons inside the cabin, between **2** and **30.** All the alarm values will be automatically assigned. The factory alarm 1 value will be 9999, although all these alarm values can be modified manually as shown on **point 7**.

5 TYPE OF INSTALLATION: "LIFT"
We must select the type of roping of our installation:
Direct traction system **1:1** or indirect systems **2:1** or **4:1**.

6 WIRE ROPES WEIGHT (AT LOWEST FLOOR): "CHAI"
In the **"CHAI"** menu we must send the cabin to the lowest floor. After pressing the **"P"** key, the display will flicker for is seconds, then the display will show the wire ropes weight. If **"ERR6"** appears this means that at this floor we have got a "hook" on guide rails higher than the wire ropes weight, and then we have to send the cabin one floor up and make the wire ropes tare again or go to the **point 11** (manual correction **"CHAI"** parameter), and change this value manually with the up and down keys.

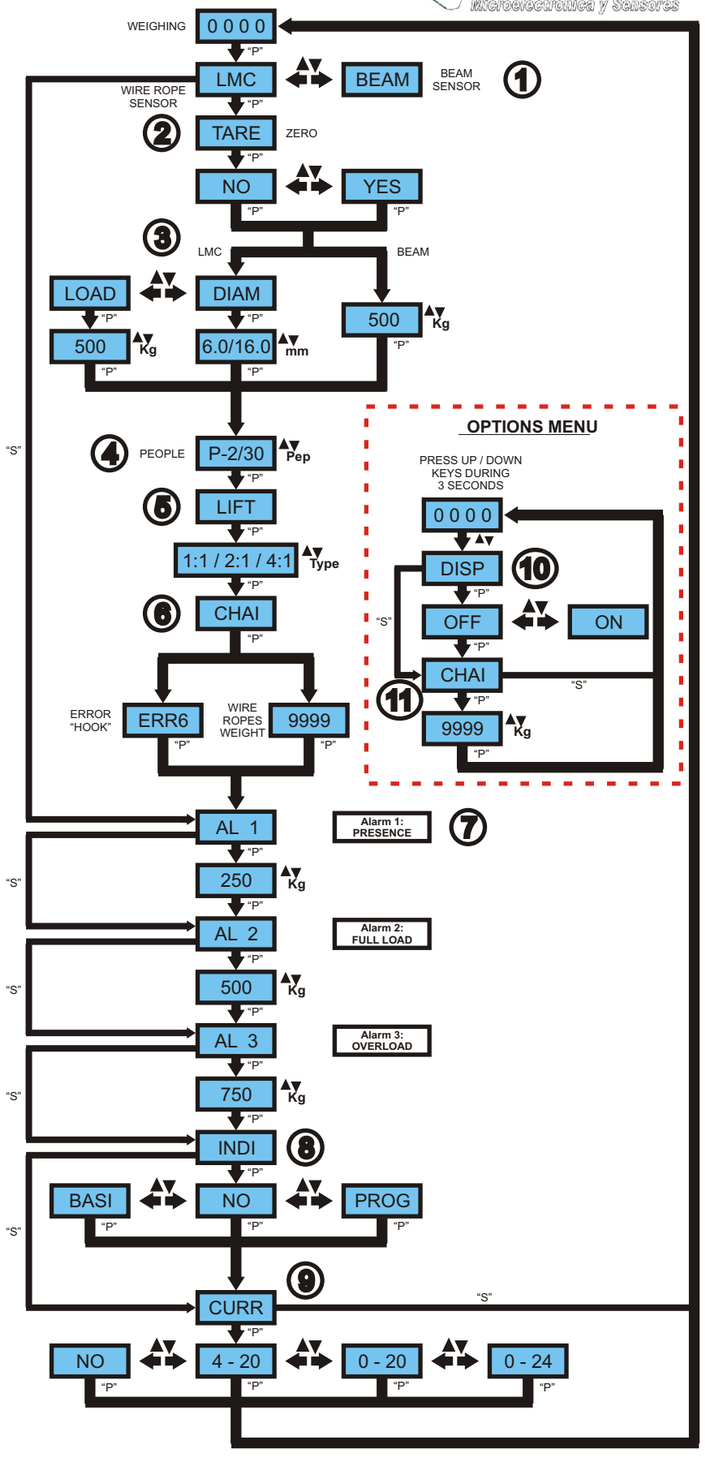
7 ALARM VALUES:
The electronic control unit has three alarms:
Alarm 3 ("AL 3): It is always assigned to **OVERLOAD** (100% useful load).
Alarm 2 ("AL 2): It can be assigned to **FULL LOAD** (80% useful load).
Alarm 1 ("AL 1): It can be assigned to **PRESENCE** or **ANTINUISANCE**.

8 CABIN INDICATOR: "INDI"
"NO": No indicator installed inside the cabin.
"PROG": MICELECT progressive models (MP or LPM).
"BASI": MICELECT basic indicator ML model or any lighter-sounder system powered by 24Vdc.

9 ANALOGICAL OUTPUT: "CURR"
"NO": We do not activate the analogical output.
"4-20": Lineal signal (4-20 mA).
"0-20": Lineal signal (0-20 mA).
"0-24": Lineal signal (0-24 mA).
NOTE: The analogical output provides a lineal signal.
The maximum value (20/24 mA) corresponds to the value in of alarm 3 plus **"CHAI"**.

10 DISPLAY TURN OFF: "DISP"
We enter this menu from the weighing mode pressing the up & down keys at the same time during 3 seconds. After **"DISP"** appears we press the **"P"** key and we select **"ON"** in order to leave the display always turned on or **"OFF"** if we want the display turned off after 5 minutes of inactivity.

11 "CHAIN" PARAMETER CORRECTION: "CHAI"
If we want to correct the wire ropes weight in the **"CHAI"** menu, due to some registered hooks on the guide rails, we can do it by means of this menu. Pressing the **"P"** key the display will show the previous weight of the wire ropes registered in the chai menu. We can change this value using the up&down keys.



ERROR CODES:
ERR1: No saved data.
ERR2: Overload.
ERR3: Power supply low.
ERR4: Negative known weight.
ERR5: Known weight Low/high.
ERR6: Negative wire ropes weight.
ERR7: Known weight low/high.

SOLUTIONS:
ERR1: Make again the settings.
ERR2: Useful Load > 9999 Kg.
ERR3: Check the Power Supply.
ERR4: Some possible "Hooks" / Wrong wiring **sensor** (check sensor colour code).
ERR5: See part 2 "Programming procedure" (LOAD). Correct useful Load.
ERR6: Repeat step 5.
ERR7: Repeat full calibration.

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