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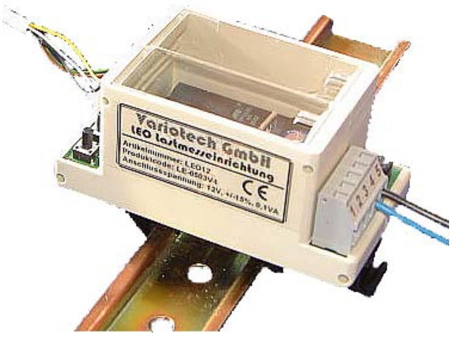
OPERATING INSTRUCTION FOR LOAD WEIGHING CONTROL

LEO 24V



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1 Description

- The load weighing unit LEO with an external load sensor controls and shows the load of a lift car and it meets the requirements of EN81 (14.2.5.1 and 14.2.5.2). The unit has one floating relay for switching over load. LEO can be used for all types of lifts.
- The installation and the setting-up operation of LEO are very simple and need only short time.
  No additional measuring tool is needed. The unit is state-of-the-art with improved and up-to-date electronic.
- The electronic is built in a plastic housing.
- The cable for the load sensor and the connection cable must be mechanical fixed and protected.

2 Specifications

- The load weighing unit LEO is compact and a combination of electronic and (external) load sensor.
- The big advantage of LEO is the simple and fast setting.
- **ADVICE:** The setting of the unit should be done after the safety gear test.
- Connection cable is used for the power supply and the electrical connection to the lift control. (not scope of supply)
- The proper operation can be influenced by:
  - Electromagnetic influences: door motor, contactors, …

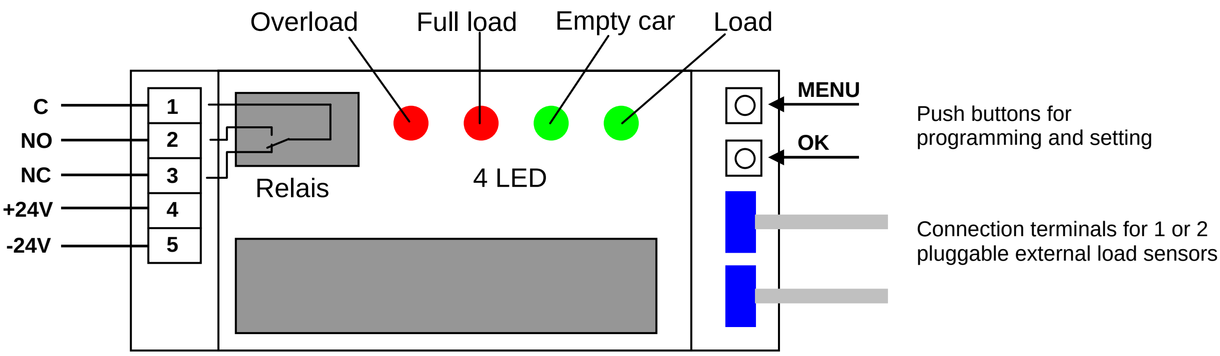
3 Technical specification

electrical data:

power supply:	24 V DC +/- 15%, 0,1VA
relay output for overload;	250V AC, 150 V DC, 1A,
programming / setting	push buttons (Menu, OK)
display of thresholds	LED (red), lights if above thresholds
measures	B= 135mm x L= 170mm x H= 85mm

4 Electrical installation

The load weighing unit needs a power supply of 24VDC. There is 1 potential free relay output for overload which can switch directly 250V / 1A.



5 Operation

4 steps to put the unit into operation:

- mechanical installation
- electrical installation (paragraph 2)
- automatically measurement of the empty car
- Setting of the load and automatically measurement of the load (rated load of the car)

ADVICE!!

- After power on the green LED „load“ will be on. The unit has no own power on/off switch.
- The unit needs after power on 1 hour for internal thermal stabilisation. The settings should not start before.
- During normal operation the green LED „load“ must be on. By pushing the button “menu” the various menus can be selected.
- The wire of the sensor should have a minimum distance of 15 cm to electrical wires and circuits.
- **All settings remain of course during power off.**

5.1 Measurement of the empty car weight

The car must be empty.

1. Push the button „menu“ for ca. 3 seconds till the green LED “empty car” is off.
2. Push the button “menu” again till the LED “empty car” is on.
3. To confirm the start of the measurement you have to push the button “OK”.
4. During the measurement of 20 seconds the LED “empty car” is blinking. The measurement will be ready if the LED “empty car” stops blinking. After that the unit automatically goes back to normal operation and the LED “load” is on again.

5.2 Measurement of rated load

Distribute the rated load evenly in the car.

1. Push the button “menu” till the green LED “load” is on.
2. To confirm the start of the measurement you have to push the button “OK”.
3. During the measurement of 20 seconds the LED “load” is blinking. The measurement will be ready if the LED “load” stops blinking. After that the unit automatically goes back to normal operation and the LED “load” is on again.

5.3 Threshold setting “over load”

The value of the over load is automatically set to the value from rated load +10% according the EN81.
If the rated load is less 750kg the over load value can be changed to rated load +75kg.

1. Push the button “menu” till the red LED “over load” is on.
2. To confirm the change of the over load value you have to push the button “OK”.
3. To control which value is set you have to push the button “menu” till the red LED “over load” is on again. If the LED blinks one time the value is set to +75kg. If the LED is only on the value is +10%.

Remark: EN81(European standard) paragraph 14.2.5.2: „The overload is considered to occur when the rated load is exceeded by 10 % with a minimum of 75 kg..

6 Test of regular operation

The load weighing unit is only in regular operation mode if the LED “load is on.
The regular function of the load weighing unit should be checked in periodical times.
Proceed as follows:

1. The LED “load” must be on.
2. If the load exceeds 10% of the rated load the brightness of the LED “load” will be reduced.
3. Put weight into the car till the rated load will be exceeded. The LED “full load” should be on.
4. Now put some more weight into the car till the overload will be exceeded The LED “overload” should be on and the relay should switch.
5. Unload the car and check if the LED “overload” and “full load” are off.

7 Fault diagnostics

Error:	**procedure:**
LED “Load” is not on	Check power supply and connection cable
The relays do not switch by reaching the thresholds (look at the LED)	Check the connection cable
The relays switch but the control does not react	Check the connection to the lift control.
The thresholds do not comply with the weight.	Check the mounting area of the load sensor. Repeat the content „OPERATION“
Alternate blinking of the top LED and the lowest LED	Less measurement value! Possible causes: • Load sensor not mounted correct • Load sensor mounted on an unsuitable place
Alternate blinking of the green LED	Load sensor not connected correct, Check the connection between sensor and the load weighing unit

8 Other load weighing units

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