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Stannah

**TB-MP017**

# TECHNICAL BULLETIN

**INFORMATION ONLY**

| | |
|---|---|
| **For the Attention of :** | Graham Mears, Peter Amura, Dave Franklin, Contract Managers, Service Branch Managers, Testers, Margaret Pitman and all subcontract installers |
| **From:** | Pete Canning – Product Support Manager (Passenger Lifts) |
| **Date :** | 15 March 2016 |
| **Product :** | MP |
| **Subject :** | **MP Magnet Set Up - Microbasic.** |
| **Pages :** | 1 + 7 (attached) = 8 total |

**Background**
There does appear to be a lot of 'discussion' concerning the topic of Magnet set up with MP products.

Following a visit to MP on 14 March, please find attached the extract from the Installation Manual concerning the correct set up of Magnets. Please follow this.

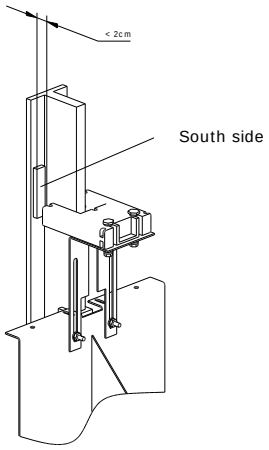
I hope you find this Bulletin to be of help and should you have any questions about this topic or would like to know a little more then please contact me on **Ext 8646 or DDI 01264 34 36 46**

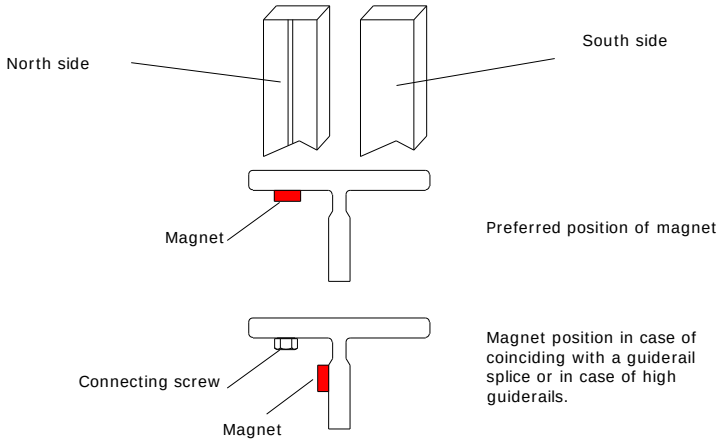
Thanks

### 3.3.4. Magnet fitting

When fitting the magnets, special attention must be paid to their position with reference to the solenoids, directing the magnet sides properly and keeping the specified distances. Always observe the following guidelines:

- It is recommended to previously clean the guiderail.
- No type of adhesive is required.
- Do not fit them near the overspeed governor rope.
- Preferably, fit the magnets on the guiderail base. If impossible, because the magnet position coincides with the screws of a guiderail splice, fit the magnet on the guide rail core (see figures below), so that it does not interfere with the guide shoes or safety gear.
- The distance between the magnet and the solenoid end must be 2 cm maximum (see figure on the left). In case of guiderails with high core, when this requirement cannot be met with the magnet stuck to the base, fit the magnet on the core as in the previous case.
- Always stick the magnets to the guiderail on its north side, except for the case of pulse magnets with solenoid 326. In this case, magnets will be stuck on the south side. The north side will be marked with longitudinal slot as in the figure.

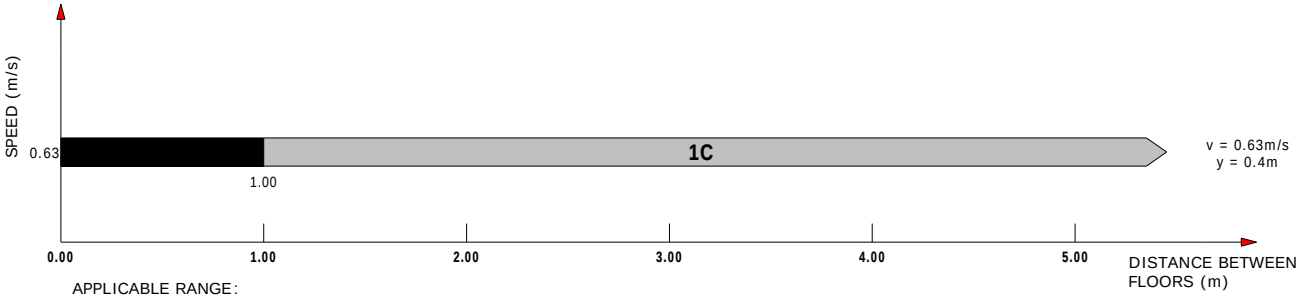



The first thing to be taken into account when fitting magnets is the criterion used by the control to carry out the gear change also called type of change, before stopping.
The type of change will depend on the distance between floors, the gear and the type of lift.
MicroBasic control considers four types of change represented in the following figure:

The table for selecting the type of change according to the gear and distance between floors is displayed below.

- 1-Gear Electric Lift.




APPLICABLE RANGE:

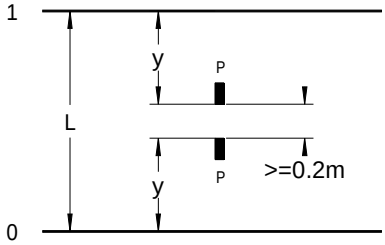
L >= 1 m: CHANGE 1C
y = 0.4

KEY:

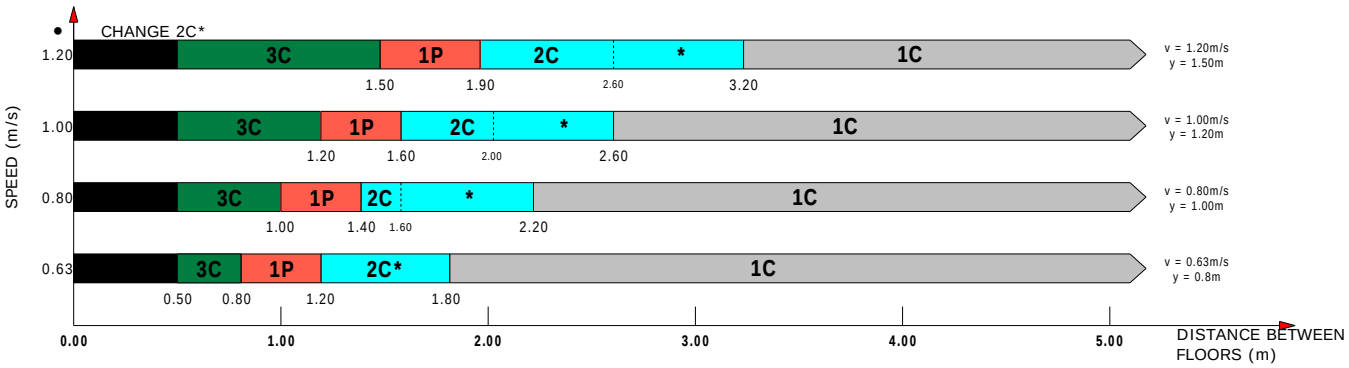
y = braking distance
L = distance between floors
P = pulse screen

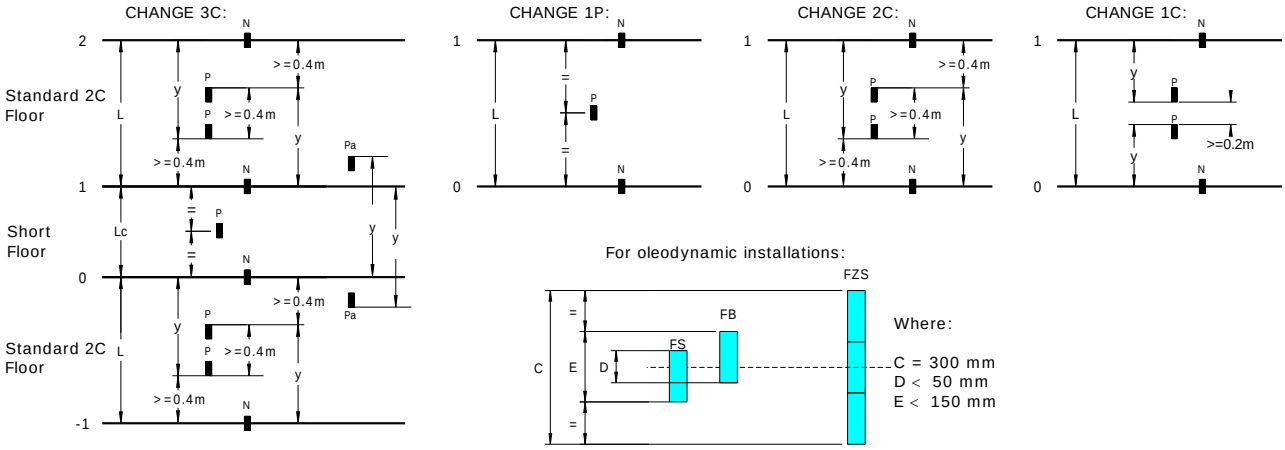
OPERATION MODE:
CHANGE 1C: Gear change with 2nd pulse screen according to service direction.

CONNECTIONS IN MACHINE ROOM:
Signal P is connected to terminal 203 in CC2 unit.



## 2-gear electric lift and oleodynamic lift




APPLICABLE RANGE:

CHANGE 3C: L < y
CHANGE 1P: y < L <= y + 0.4
CHANGE 2C: y + 0.4 < L <= 2y + 0.4
CHANGE 2C*: 2y + 0.4 < L < 2y + 0.2
CHANGE 1C: L >= 2y + 0.2

* Range where a 2C type of change is applied, increasing braking distance according to:

y' = (L + 0.4) / 2

KEY:

y = braking distance
y' = extended braking distance
L = distance between floors
Lc = distance between short floors
N = level screen (or magnet)
P = pulse screen (or magnet)
Pa = additional pulse screen (or magnet)
FB = relevelling screen when descending
FS = relevelling screen when ascending
FZS = safety area

For oleodynamic lifts, level signal is made up of the intersection of other two, FB and FS, which overlap in D, within FZS safety area.

CONNECTIONS IN MACHINE ROOM:

In case of 2 gears:

Signal N is connected to terminal 207 in the CC2 unit.
Signal P is connected to terminal 203 in CC2 unit.
Signal Pa is connected to a terminal which be configured through parameters.

OPERATION MODE:

CHANGE 1C: Gear change with the second pulse (P), prior to stop.

CHANGE 2C: Gear change with the first pulse (P), prior to stop.

CHANGE 1P: Gear change with the level (N), prior to services between non-consecutive floors.
For services between consecutive floors, speed will be low.

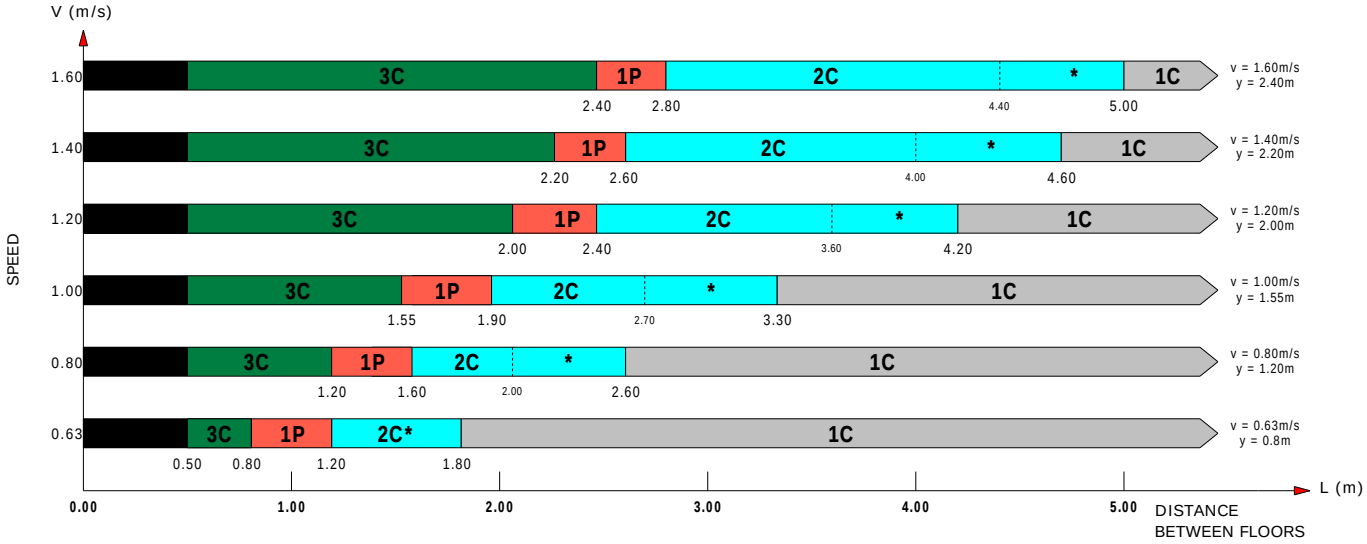
CHANGE 3C: For services between non-consecutive floors, gear change is made with the additional pulse (Pa).
For services between consecutive floors, speed will be low.
This type of change is not possible in several consecutive floors.
However, 3C change is possible on end floors. In this case, the pre-limit will be at the same height as the additional pulse (Pa).

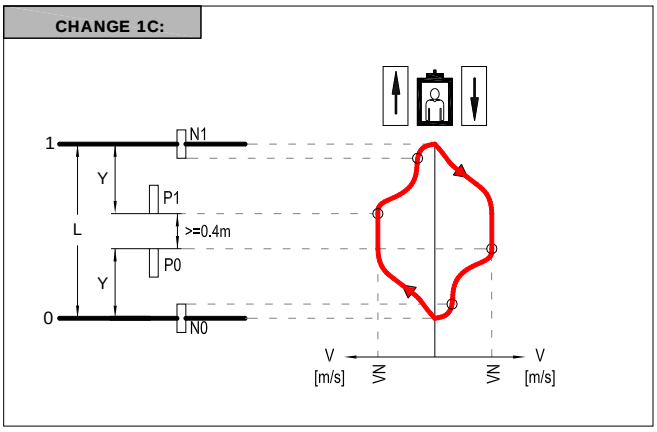
OPERATION MODE:

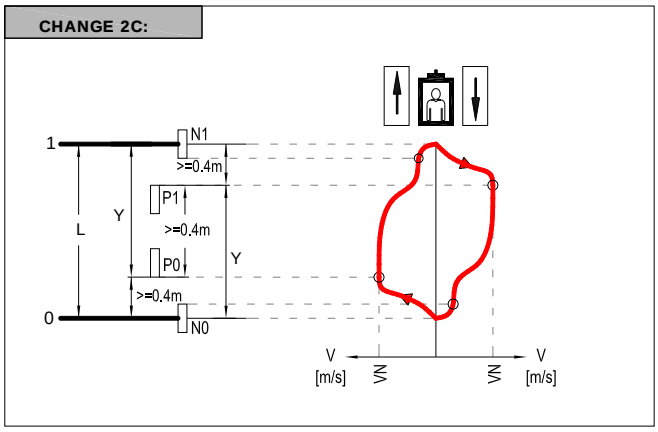
1. - Enter lift speed and the distance of each stop of the following one into the control.
The control will indicate which type of change corresponds (1P, 1C, 2C or 3C) and the braking distance (y).
It will coincide with the information displayed in the following diagram.

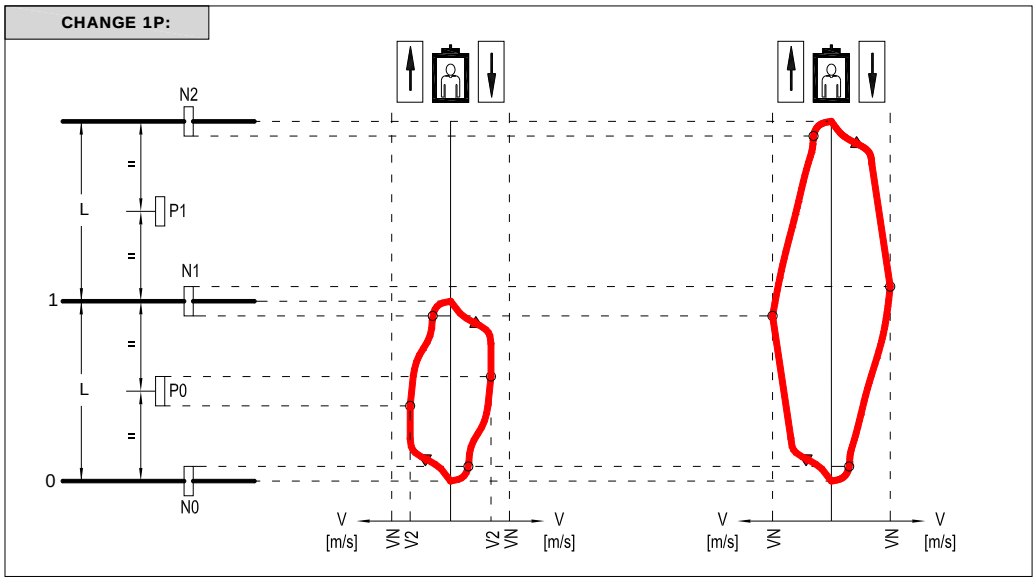
2. - For this plan place pulse magnets (P) paying attention to the type of change.

Electric Lift with Frequency Variation

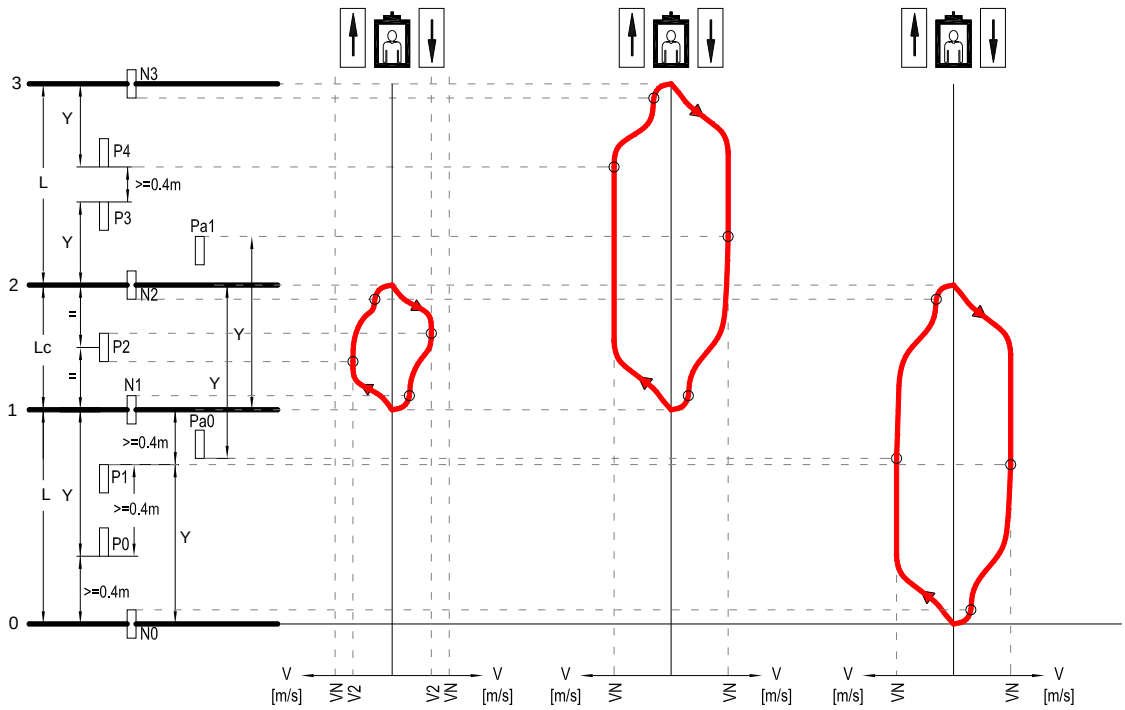


**CHANGE 3C:**




APPLICABLE RANGE:

CHANGE 3C: L < y
CHANGE 1P: y < L <= y + 0.4
CHANGE 2C: y + 0.4 < L <= 2y + 0.4
CHANGE 2C*: 2y + 0.4 < L < 2y + 0.2
CHANGE 1C: L >= 2y + 0.2

* Range where a 2C type of change is applied, increasing braking distance according to:

Y' = (L + 0.4) / 2

Key:

y = braking distance
Y' = extended braking distance
L = distance between floors
Lc = distance between short floors
N = level screen (or magnet)
P = pulse screen (or magnet)
Pa = additional pulse screen (or magnet)
VN = Rated Speed
V2 = Medium Speed

CONNECTIONS IN MACHINE ROOM:

Signal N is connected to terminal 207 in the CC2 unit.
Signal P is connected to terminal 203 in the CC2 unit.
Signal Pa is connected to a terminal which be configured through parameters.

OPERATION MODE:

CHANGE 1C: Gear change with the second pulse (P), prior to stop.

CHANGE 2C: Gear change with the first pulse (P), prior to stop.

CHANGE 1P: Gear change with the level (N), prior to services between non-consecutive floors.
For services between consecutive floors, start-up in second gear and change with medium pulse (P).

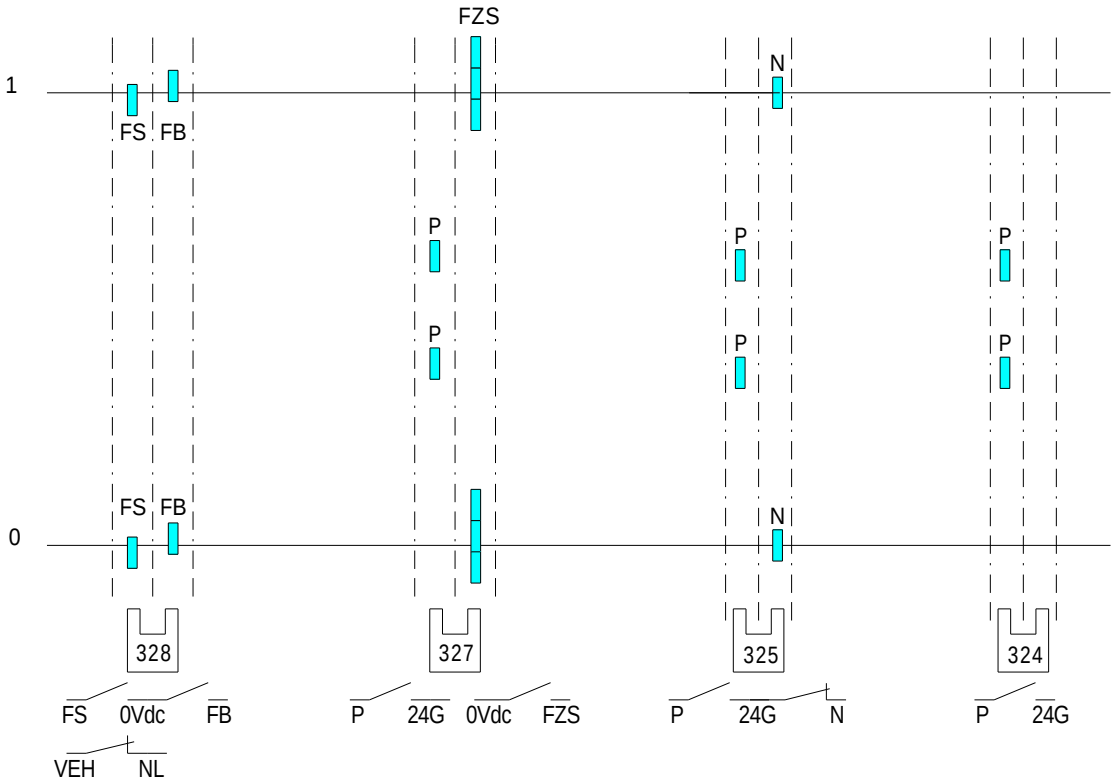
CHANGE 3C: For services between non-consecutive floors, changing gears will occur with the additional pulse (Pa).
For services between consecutive floors, start-up in second gear and change with medium pulse (P).
This type of change is not possible in several consecutive floors.
However, 3C change is possible on end floors. In this case, the pre-limit will be at the same height as the additional pulse (Pa)

OPERATION MODE:

1. - Enter lift speed and the distance of each stop of the following one into the control.
The control will indicate which type of change corresponds (1P, 1C, 2C or 3C) and the braking distance (y).
It will coincide with the information displayed in the previous diagrams.

2. - For this plan place pulse magnets
(P) paying attention to the type of change

In the following figure, the different possible settings of the solenoids / magnet rows, depending on the type of lift, are displayed.




## Where:

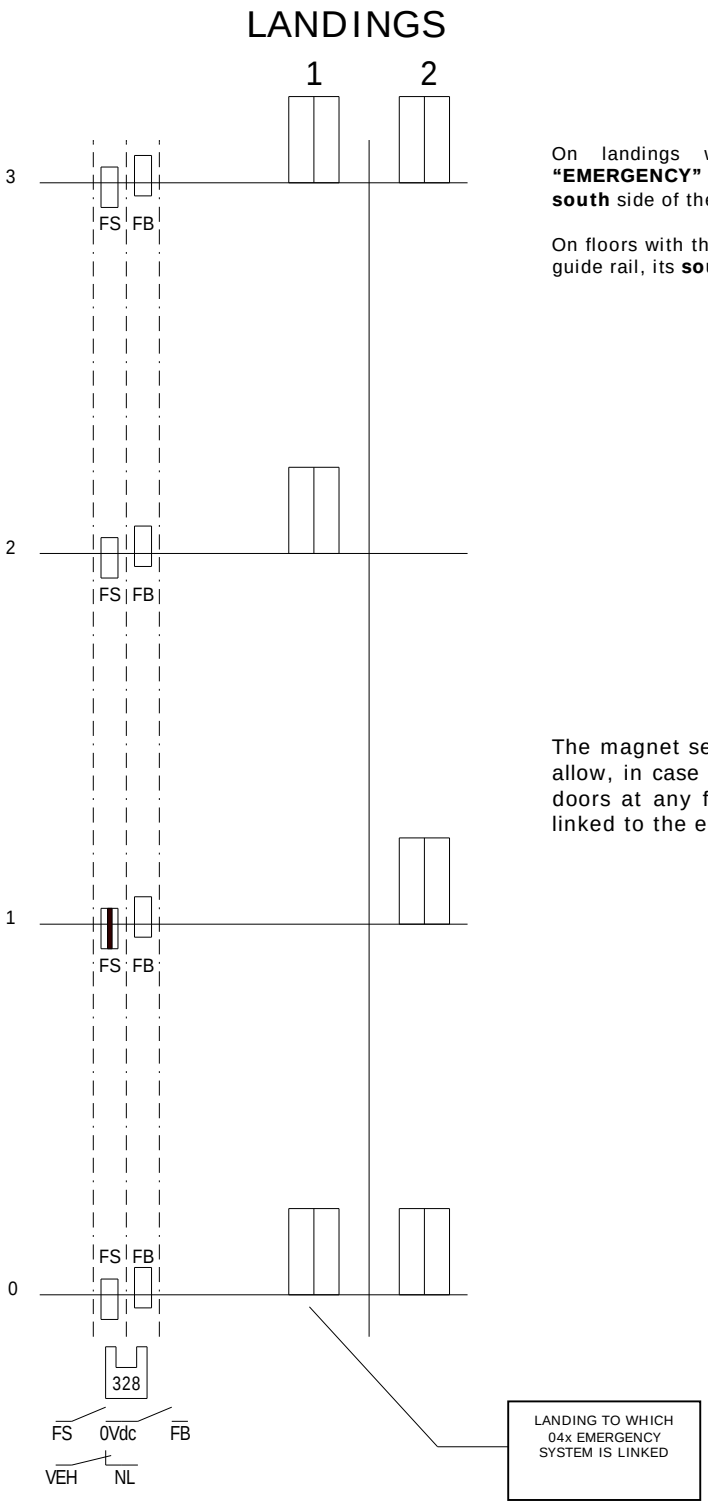
324: Only for one-gear installations
325: For electrical installations without open door approach.
327 and 328: For electrical installations with open door approach and oleodynamic installations with open door relevelling

FB: Relevelling signal when descending
FS: Relevelling signal when ascending
FZS: Safety area signal
N: Level signal
NL: Emergency level signal
P: Pulse signal

In case of using cylindrical solenoids instead of MP switches, the equivalence will be as follows:

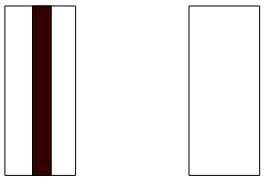
324: 1 switch 1 NA contact
325: 1 switch 1 NA contact + 1 switch 1 NA contact
327: 2 switches 1 NA contact
328: 1 switch 1 NA contact + 1 switch (1 NA contact + 1 NC contact)

- Case of a 04x Emergency system for oleodynamic lift with double landing.




On landings where there is no landing linked to the **"EMERGENCY"** 04x system, the magnet will be stuck on the **south** side of the guide rail, its **north** side therefore visible.

On floors with this landing, it will be stuck on the **north** side of the guide rail, its **south** side therefore visible.

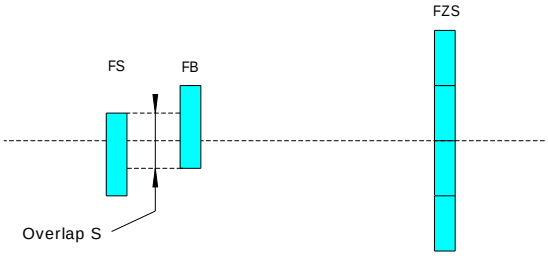


MAGNET STUCK ON THE SOUTH SIDE, NORTH SIDE VISIBLE

MAGNET STUCK ON THE NORTH SIDE, SOUTH SIDE VISIBLE

The magnet setting in the example (figure on the left) will allow, in case of an emergency, the car to stop and open doors at any floor where its boarding coincides with that linked to the emergency system (here, floors 0, 2 and 3)

Finally, the magnet layout in the different cases of approaching / relevelling with doors open is displayed.

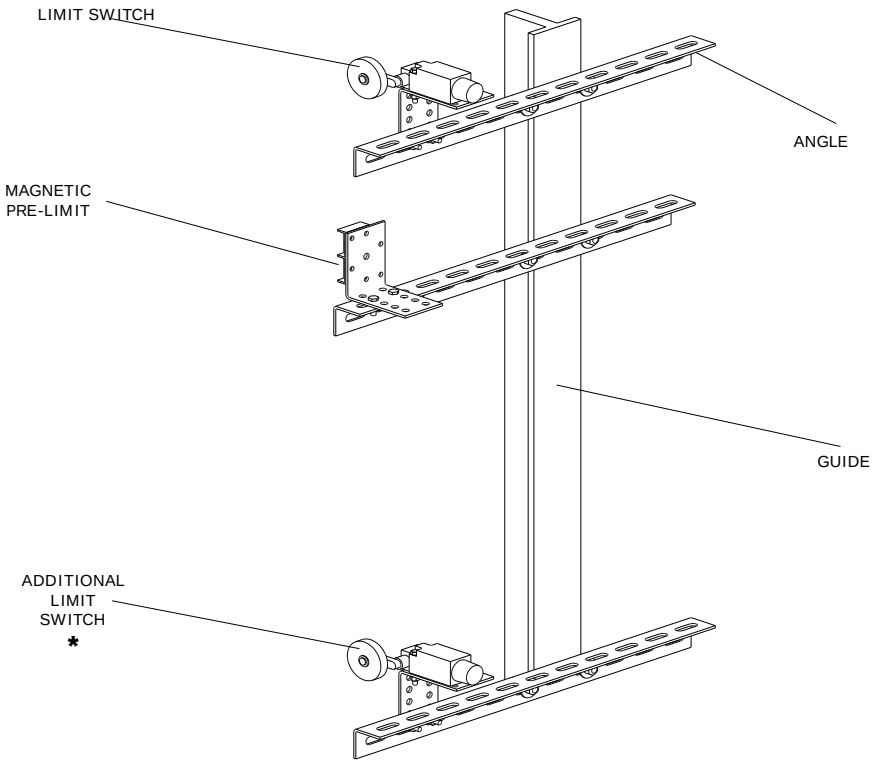



| NUMBER OF MAGNETS PER FLOOR | FS | FB | FZS | S |
|---|---|---|---|---|
| ELECTRICAL v ≤ 1.4 m/s | 1 x 150 mm | 1 x 150 mm | 4 x 100 mm | 100 mm |
| ELECTRICAL v > 1.4 m/s | 2 x 100 mm | 2 x 100 mm | 4 x 150 mm | 150 mm |
| OLEODYNAMIC | 1 X 100 mm | 1 X 100 mm | 3 X 100 mm | 50 mm |

Where:

FB: Relevelling signal when descending
FS: Relevelling signal when ascending
FZS: Safety area screen
S: Overlap.

### 3.3.5. Fitting an additional limit switches




* The additional limit switch must be placed in such a way that, when activated by the actuating slide in the car, there is a distance higher than 1.5 m between the car ceiling and the Well headroom

This device is only available in case of reduced headroom or pit and will only operate in INSPECTION mode.

This 1.5 m distance is the safety distance for an operator to work on the car ceiling without any risk of crushing, in case of an accident.