

AE-MAESTRO

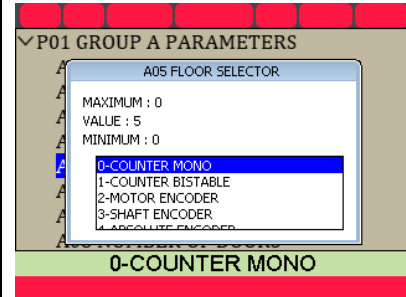
Integrated Lift Control System

APPENDIX-1

AP-01 AE-MAESTRO FLOOR SELECTOR INSTALLATION MANUAL FOR COUNTER MONO

PREFACE

- The purpose of this document is to explain the installation of the **floor selector system** and adjustment of floor levels in case of floor selector is selected as **COUNTER MONO**, where **A05=0**.
- If your system uses any encoder as floor selector use other related documents to guide you.
- A more detailed discussion about floor selector systems can be found in **users manual in section 5.1**.



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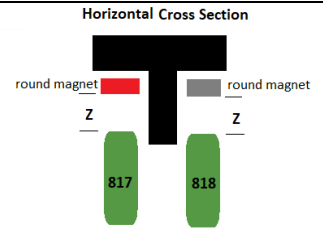
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INSTALLING REFERENCE LIMIT SWITCHES 817 AND 818

- **817** and **818** are used as bottom and top position reference switches respectively to reset and calibrate car positioning system.
- 817 and 818 switches are **Bi-stable** magnetic switches.
- They must be defined in inputs.
- Mount the 817 and 818 magnetic limit switches to the car frame on top of the car by using the given holder as shown in the picture.



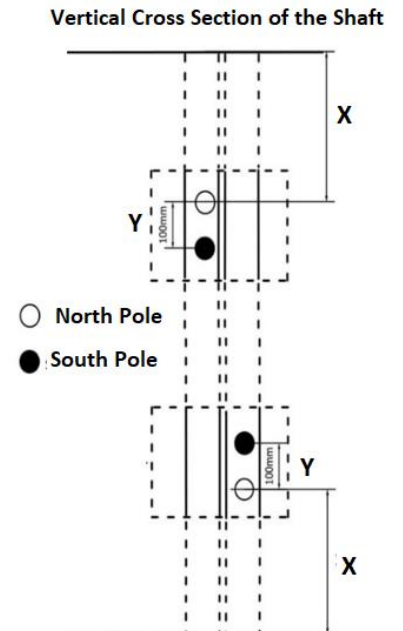
- Place the round magnets onto the rails as shown in figure.
- The distance between magnetic switch and magnet **Z** should be **minimum 10mm and maximum 20 mm**.
- This should be achieved everywhere along the shaft.



- The distance of the first magnet from the base and top floors is denoted a X in the Figure.
- X varies depending on the nominal speed of the lift. Some sample x values are shown in Table below.

Nominal Speed (m/s)	Deceleration Distance	Minimum X
0,60 m/s	83 cm	80 cm
0,80 m/s	123 cm	120 cm
1,0 m/s	143 cm	140 cm
1,20 m/s	183 cm	180 cm

- X is the distance of forced slow down for the lift. If the car comes to 817 or 818 level with nominal speed then the controller makes the car slow down.
- The controller must see 817 and 818 after entering the deceleration path. Otherwise the deceleration to the top and bottom floors is always forced and this decreases travel comfort.
- While placing magnets the pole of the magnet should be cared.



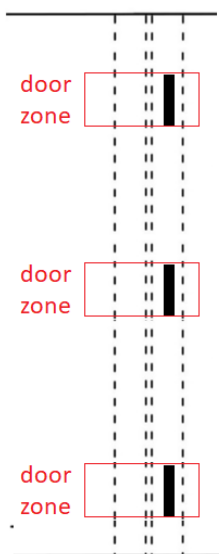
INSTALLING DOOR ZONE SWITCHES ML1 AND ML2

- **ML1** and **ML2** are used to detect door zone, where doors are allowed to be opened.
- They are mono-stable magnetic switches and used together with strip magnets.
- They are placed one on the other.
- Mount ML1 and ML2 switches to the car frame on top of the car as shown in the figure by using the supplied holder.
- ML1 must be placed below and ML2 above. This is very important since ML1 is the reference switch in counting floor selector systems when shaft or motor encoder are selected.
- The input terminals of ML1 and ML2 are fixed. No input definition is required.



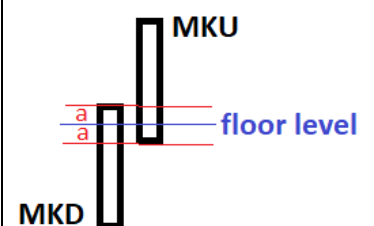
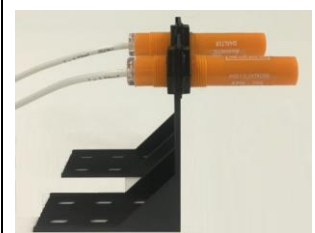
- Place strip magnets onto the rails in front of the magnetic switches.
- The side (pole) of the strip magnet is not important in placing.
- The length of the strip magnets determines the length of door zone.
- The door can be opened only and only if ML1 and ML2 are both are in front of the magnet strip.
- Therefore, **the center of these magnets must be located exactly at the floor levels.**
- To check the operation of ML1 and ML2 move the car by using inspection or recall command buttons.
- ML1 and ML2 must be ON when they are in front of the strip magnets placed at door open zone and OFF otherwise.

Vertical Cross Section of the Shaft



INSTALLING RELEVELLING SWITCHES MKD AND MKU

- **MKD** and **MKU** switches serve as **stopper** as well as **relevelling position detectors** in case of floor selector is used as counter mono.
- MKU and MKD must be defined before used.
- They are **mono-stable magnetic switches** and placed horizontally onto the cartop.
- They use 10 cm magnet strips in front of them.
- Place the strip magnet for MKD downwards starting from 20 mm above the floor level at each floor.
- Place the strip magnet for MKU upwards starting from 20 mm below the floor level at each floor.
- They initiate relevelling operation by detecting the position of the car relative to the floor level.
- Relevelling starts if one of them becomes OFF, namely does not see the magnet. No relevelling motion is started if both are ON or OFF.



MAGNET MAP AND SWICTES IN SHAFT FOR COUNTER MONO

