

# AE-MAESTRO

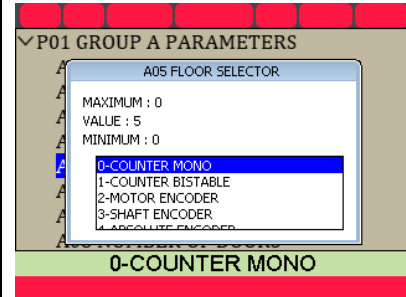
## Integrated Lift Control System

### 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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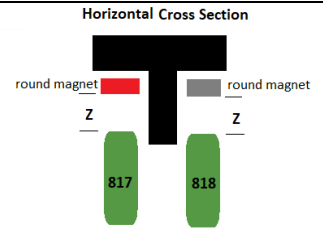
[www.aybey.com](http://www.aybey.com)

## 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.



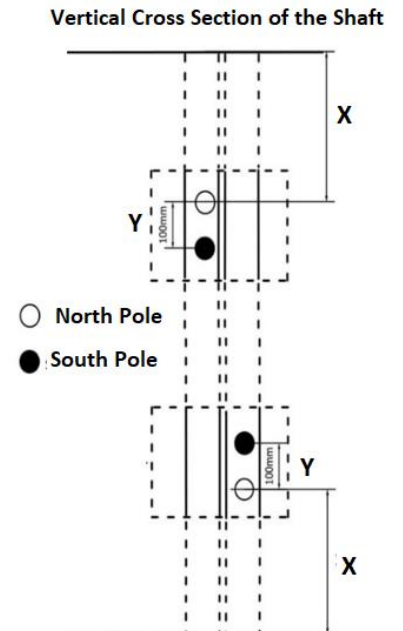
- Place the round magnets onto the rails as shown in figure.
- The distance between magnetic switch and magnet **Z** should be **minimum 10mm and maximum 20 mm**.
- This should be achieved everywhere along the shaft.



- 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.



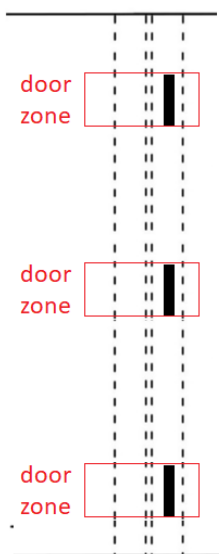
### INSTALLING DOOR ZONE SWITCHES ML1 AND ML2

- **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.



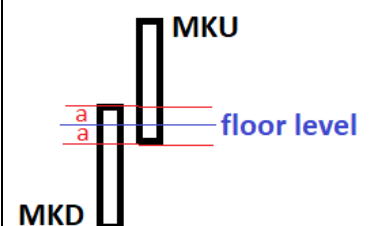
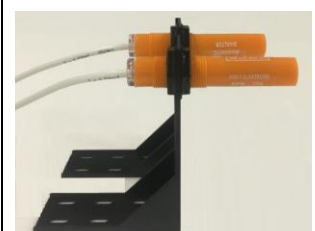
- Place strip magnets onto the rails in front of the magnetic switches.
- The side (pole) of the strip magnet is not important in placing.
- The length of the strip magnets determines the length of door zone.
- The door can be opened only and only if ML1 and ML2 are both are in front of the magnet strip.
- 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 RELEVING 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

