Contents

1 The Components

The shaft encoding system consits of:

- the pre-fabricated mounting plates for the magnets (including the magnets)

  Zone and level UP / DOWN

  Impulse UP / DOWN

  Correction TOP / BOTTOM

  Pre-limit TOP / BOTTOM

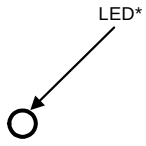
- The accesories for fixing the magnet plates to the guide rails
- 2 magnet switch module systems
  1. A magnet switch module with 6 (MB6), 4 (MB4) or 2 (MB2) magnet switches for mounting on the right or left side of the guide rail
  2. A magnet switch module with 4 (MB4 FS) or 2 (MB2 FS) magnet switches for guide rail mounting
- A magnet switch module with 2 magnet switches for extension of the magnet switch modules (MB2 - 6)
- A pluggable connection cable (10 poles), length: 2, 3 or 5m

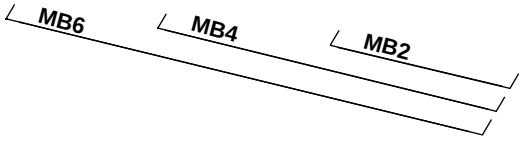
The chapter contains examples for

Simple shaft encoding, Digital shaft encoding, Standard shaft encoding.

2 Magnet Switch Modules MB6, MB4, MB2

All magnet switch modules are provided with the same dimensions.
The setup is with 2, 4 or 6 magnet switches.

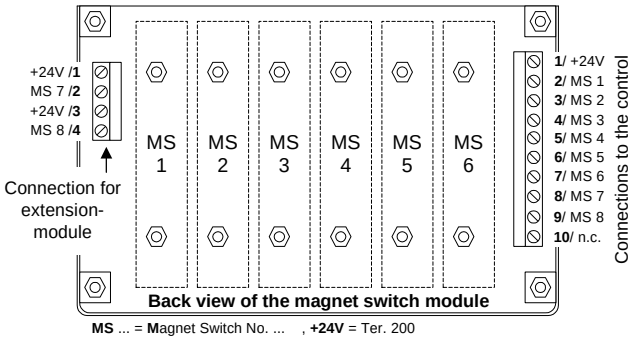




* The LED is dependent on the type of magnetswitches!
Notice: The LED lights up, if the switch is closed and a current flows.

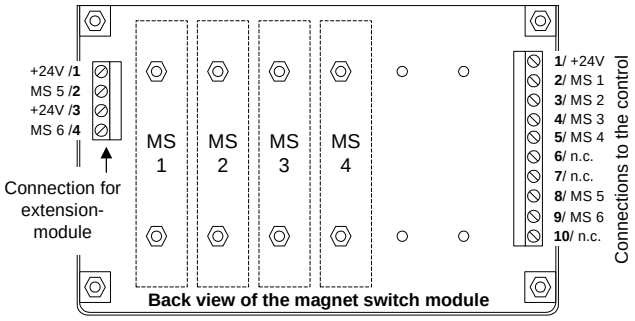
2.1 Terminal arrangement

MB 6:



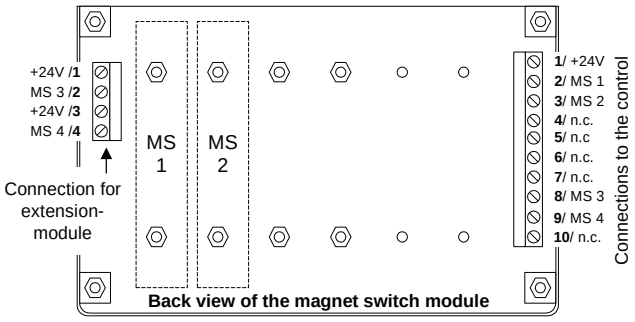
MS ... = **M**agnet Switch No. ... , **+24V** = Ter. 200

MB 4:



MS ... = **M**agnet Switch No. ... , **+24V** = Ter. 200

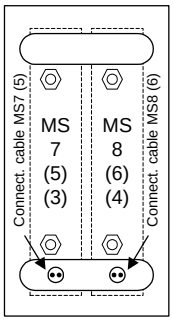
MB 2:



MS ... = **M**agnet Switch No. ... , **+24V** = Ter. 200

2.2 Extension for MB6, MB4, MB2

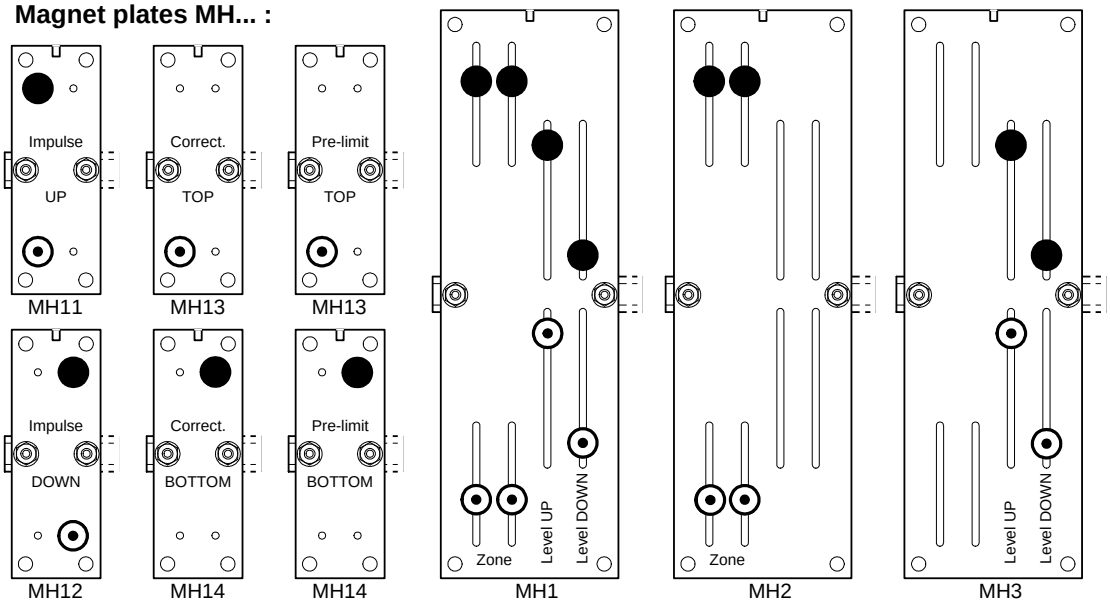
Terminal arrangement



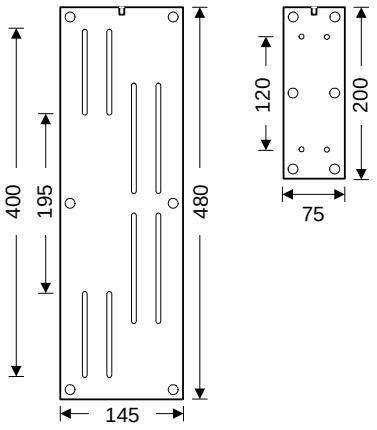
Back view of the magnet switch module

2.3 Magnet Plates and Fixing Rail Overview

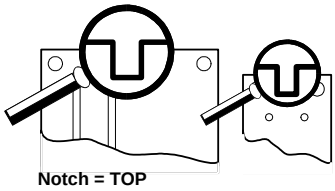
Magnet plates MH... :



Magnet plates diameters



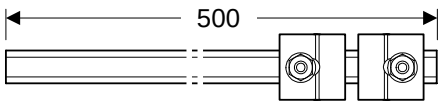
Marking of the magnet plates



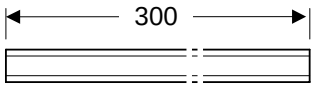
Marking of the magnets

Red = South pole Black = North pole

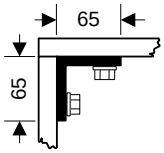
Fixing rail
(for Führungsschiene):



Fixing rail
(for 90° mounting of the magnet plates):

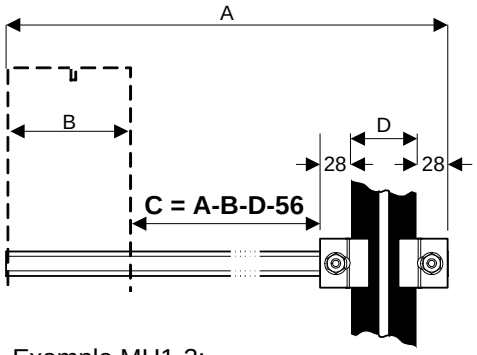


Angle for 90° mounting:



(All dimensions in [mm])

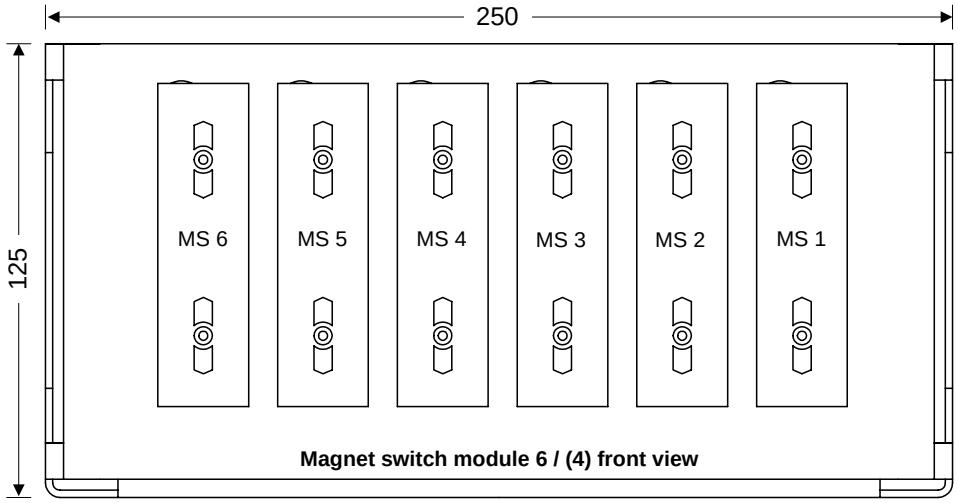
Horizontal setting range (C) of the magnet plates:



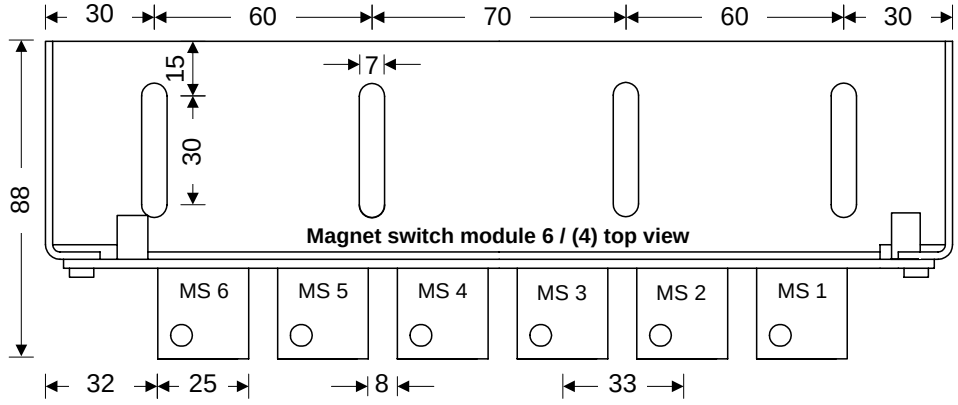
Example MH1-3:
C = 500 - 145 - 90 - 56 = **209**

Example MH11-14:
C = 500 - 75 - 90 - 56 = **279**

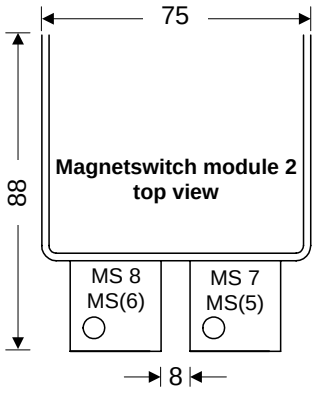
2.4 Shematic Drawings of the Magnet Switch Modules



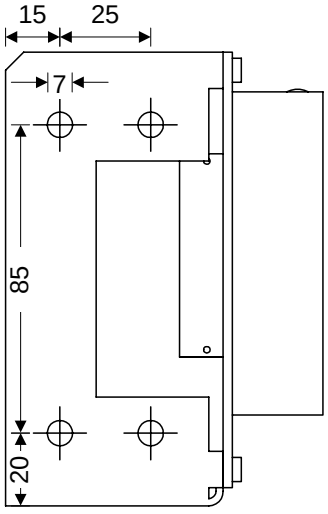
Magnet switch module 6 / (4) front view



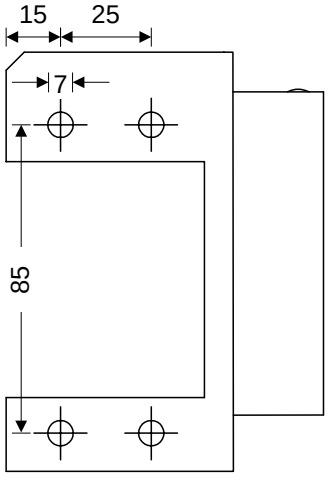
Magnet switch module 6 / (4) top view



Magnetswitch module 2 top view

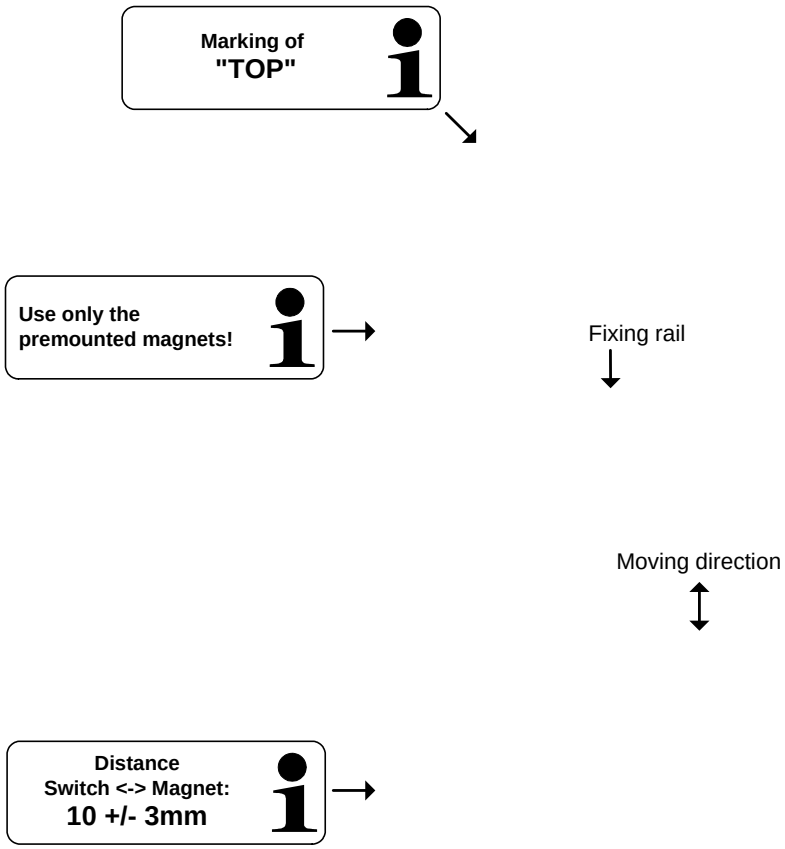


Magnet switch module. 6 / 4 side view

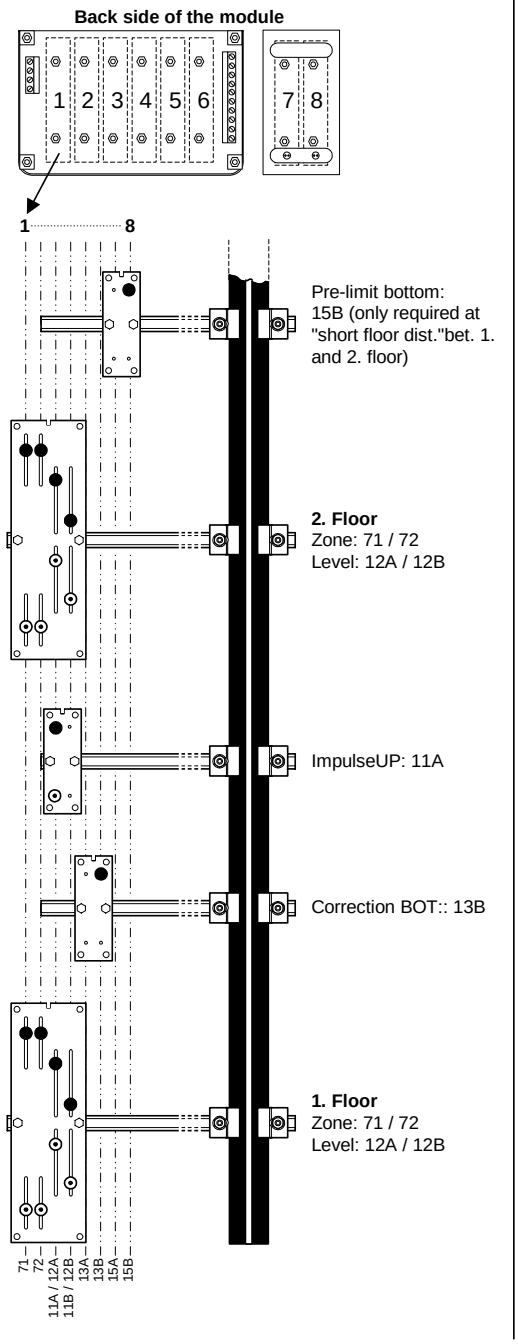


Magnet sw. module 2 side view

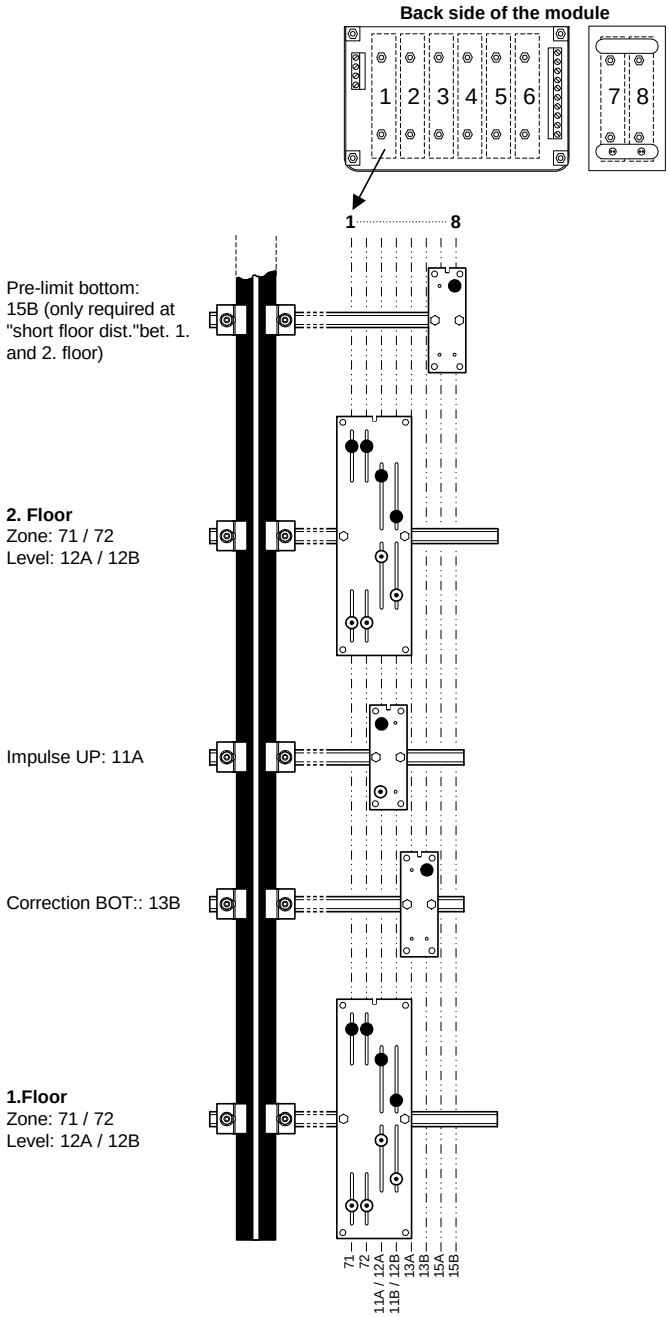
2.5 Mounting


Marking of
"TOP"
Use only the
premounted magnets!
Fixing rail
Moving direction
Distance
Switch <-> Magnet:
10 +/- 3mm

Mounting on the left side of the guide rail

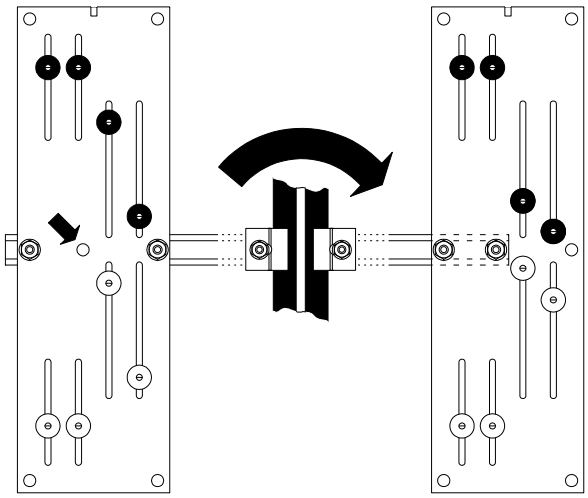


Mounting on the right side of the guide rail

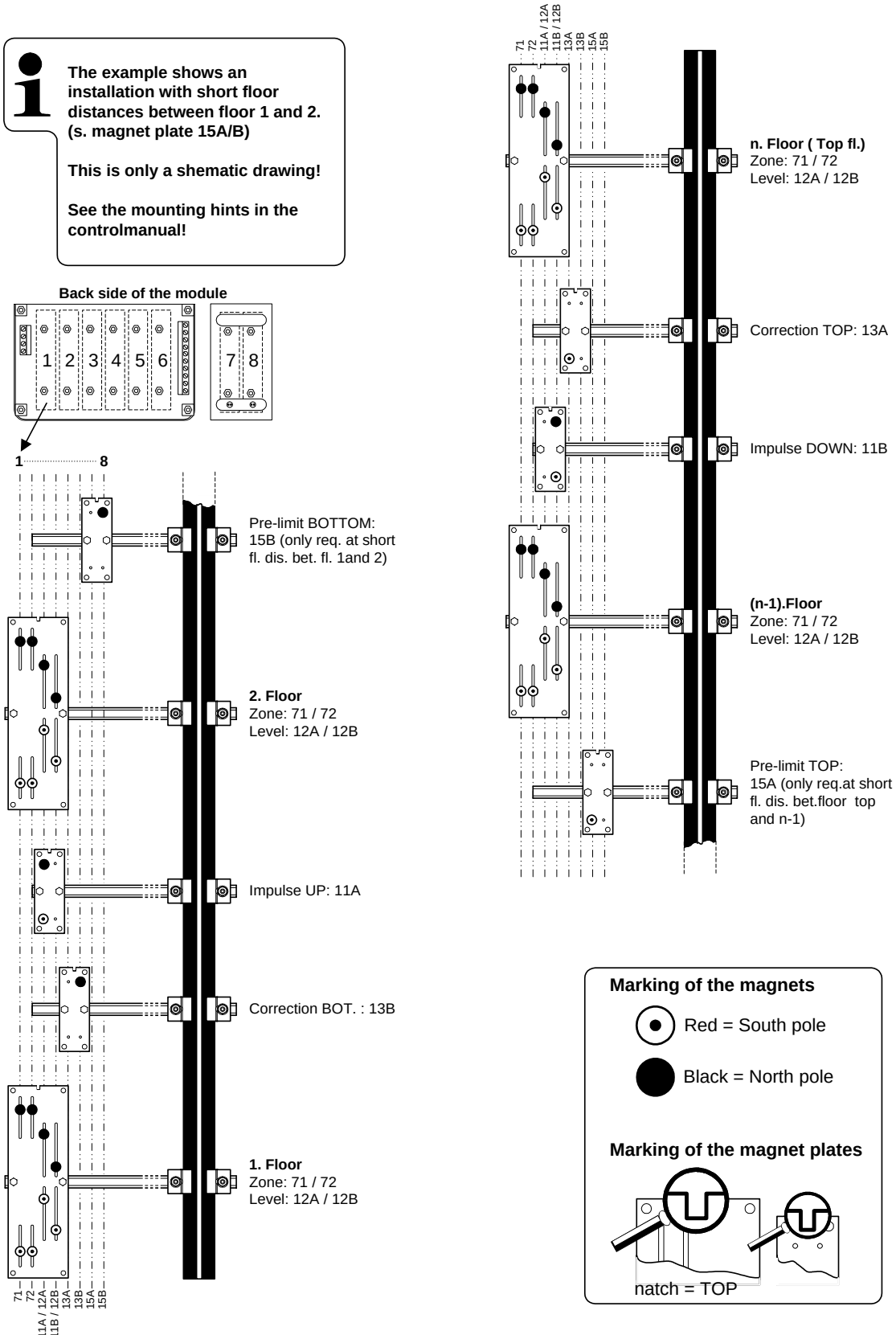


2.5.1 Changing of mounting the magnet plates

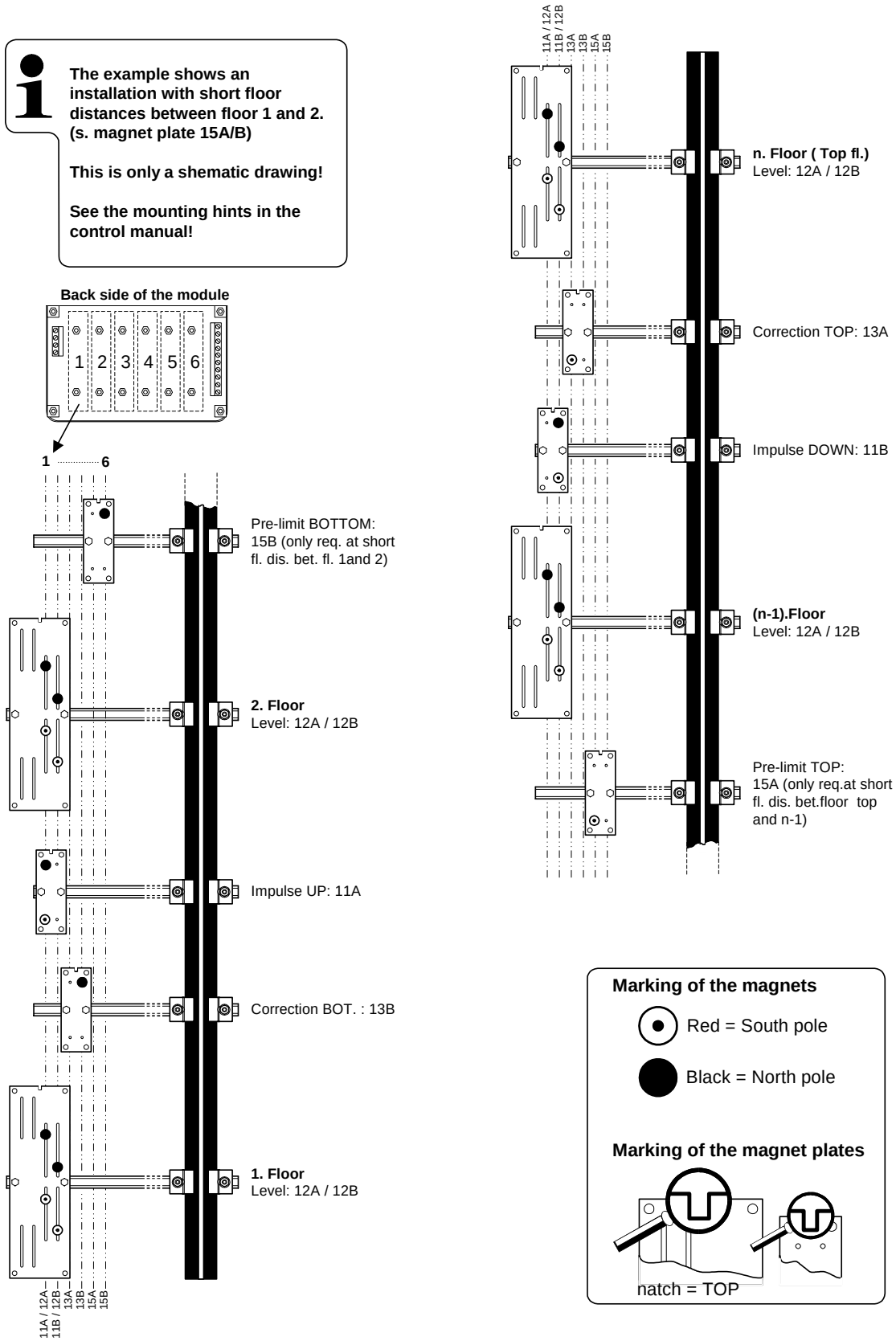
The fixing rails limit the distance of the level magnets. If you need the minimum distance of the level magnets, change the mounting position of the magnet plates from the left to the right side of the guide rail. Please use now the left and the middle screw hole for fixing.



2.6 Example „Simple Encoding with zone-signal“



2.7 Example „Simple Encoding without zone-signal“



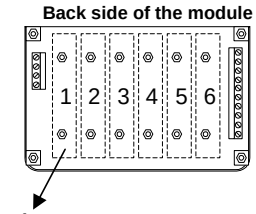
2.8 Example „Digital Shaft Encoding“

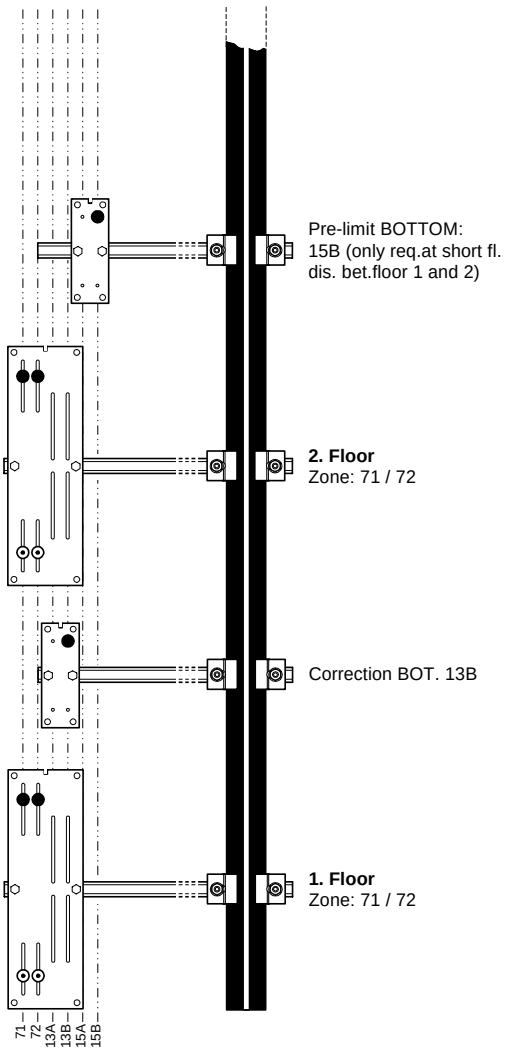
(with 2 zone-switches for safety circuit)

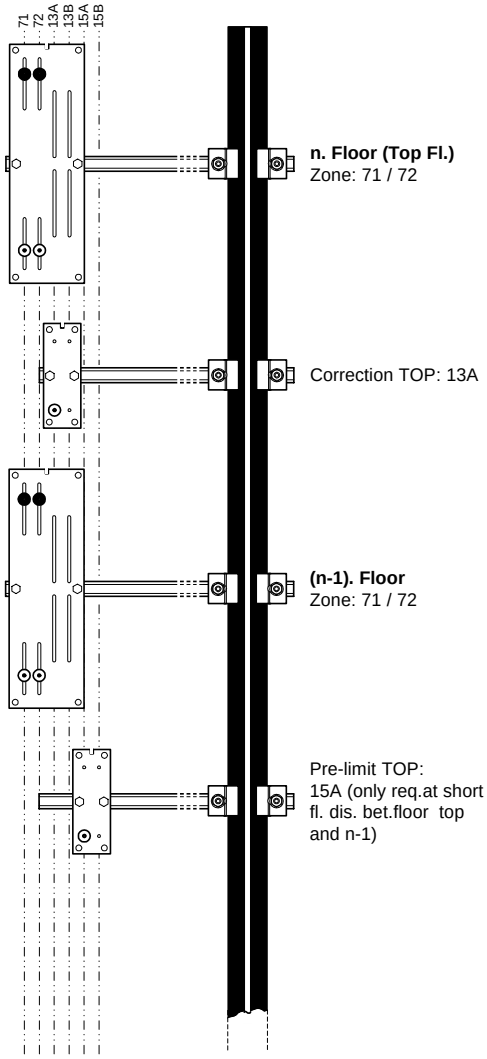
The example shows an installation with short floor distances between floor 1 and 2. (s. magnet plate 15A/B)

This is only a shematic drawing!

See the mounting hints in the control manual!





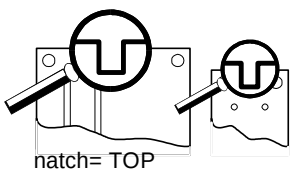


Marking of the magnets

Red = South pole

Black = North pole

Marking of the magnet plates

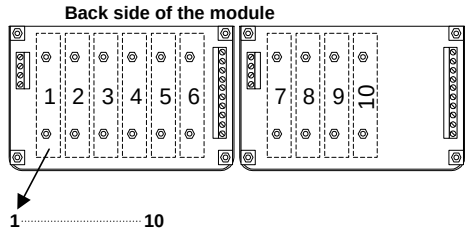


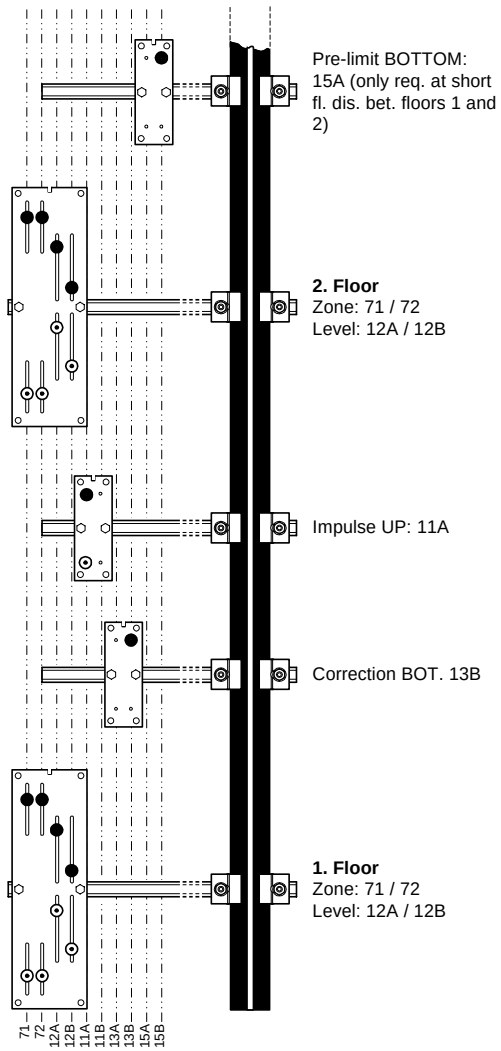
2.9 Example „Standard Encoding“

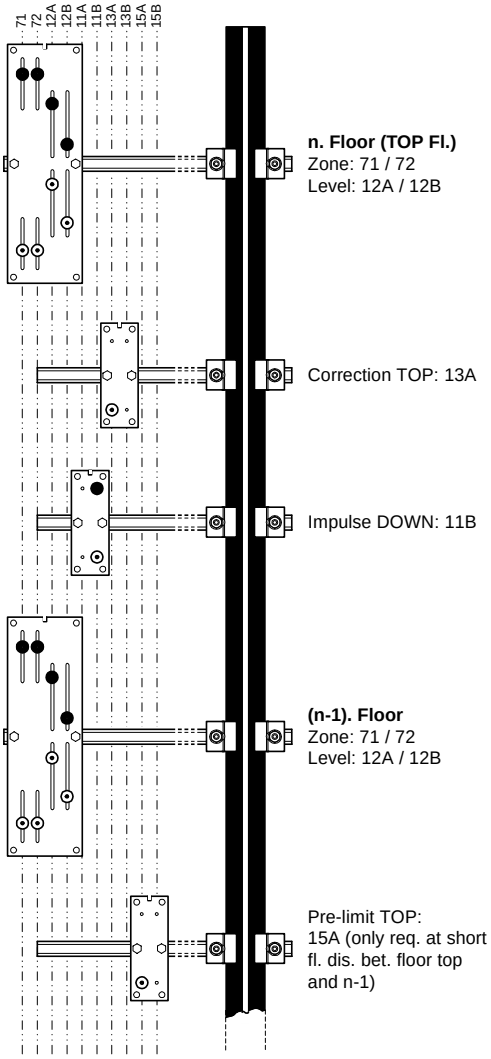
The example shows an installation with short floor distances between floor 1 and 2. (s. magnet plate 15A/B)

This is only a shematic drawing!

See the mounting hints in the control manual!





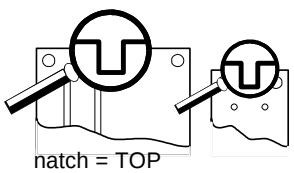


Marking of the magnets:

Red = South pole

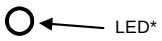
Black = North pole

Marking of the magnet plates

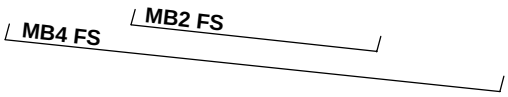


3 Magnet switch modules MB4 FS, MB2 FS

The magnet switch modules are constructed for using in the area of the guide rail.
You can use the module with 2 or 4 magnet switches.

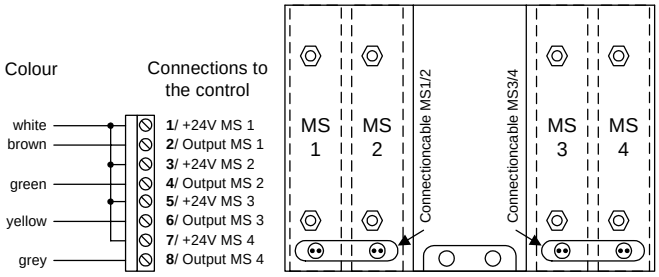


* The LED is dependent on the type of magnetswitches!
Notice: The LED lights up, if the switch is closed and a current flows.



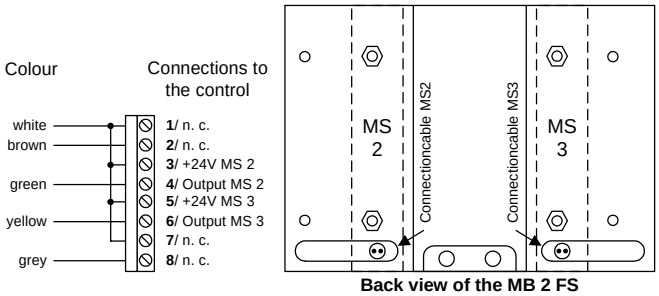
3.1 Terminal arrangement

MB 4 FS:



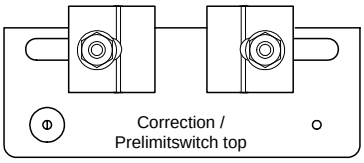
Back view of the MB 4 FS
MS ... = **M**agnet **S**witch No. ...

MB 2 FS:

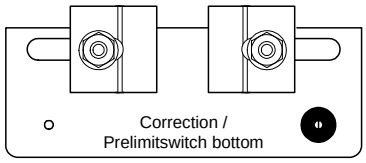


Back view of the MB 2 FS
MS ... = Magnet Switch No. ...

3.2 Diameters and overview Magnet Plates

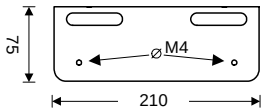


MH23

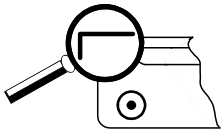


MH24

Diameters magnet plate:



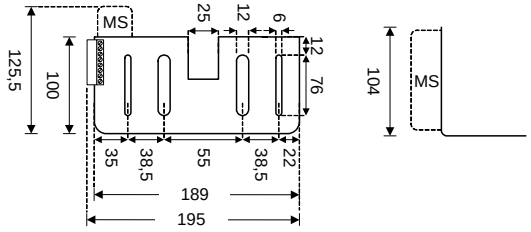
Marking magnet plate:



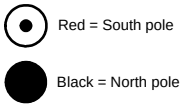
Edge = TOP

Diameters magnet switch plate:

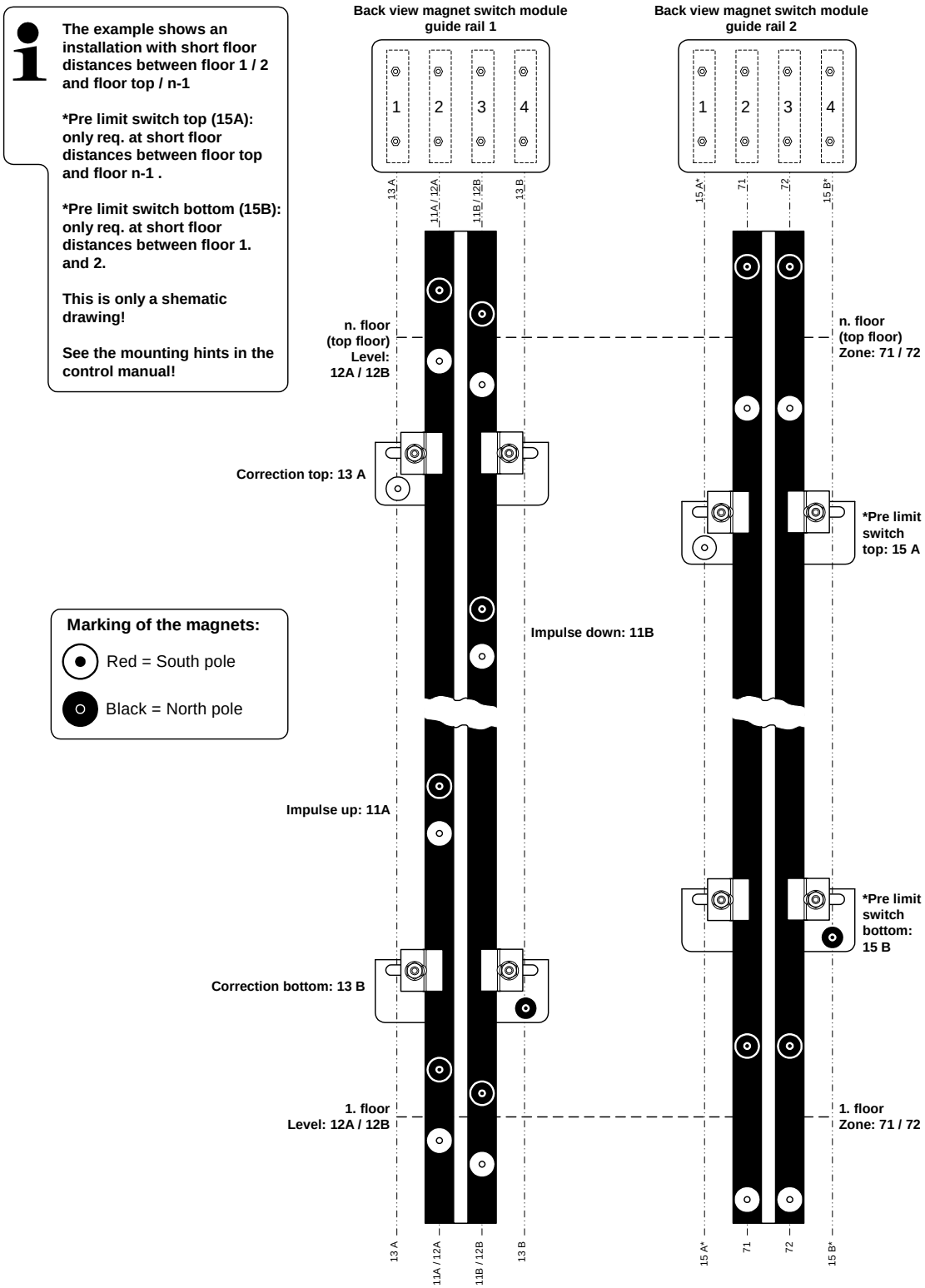
(Top view) (Side view)



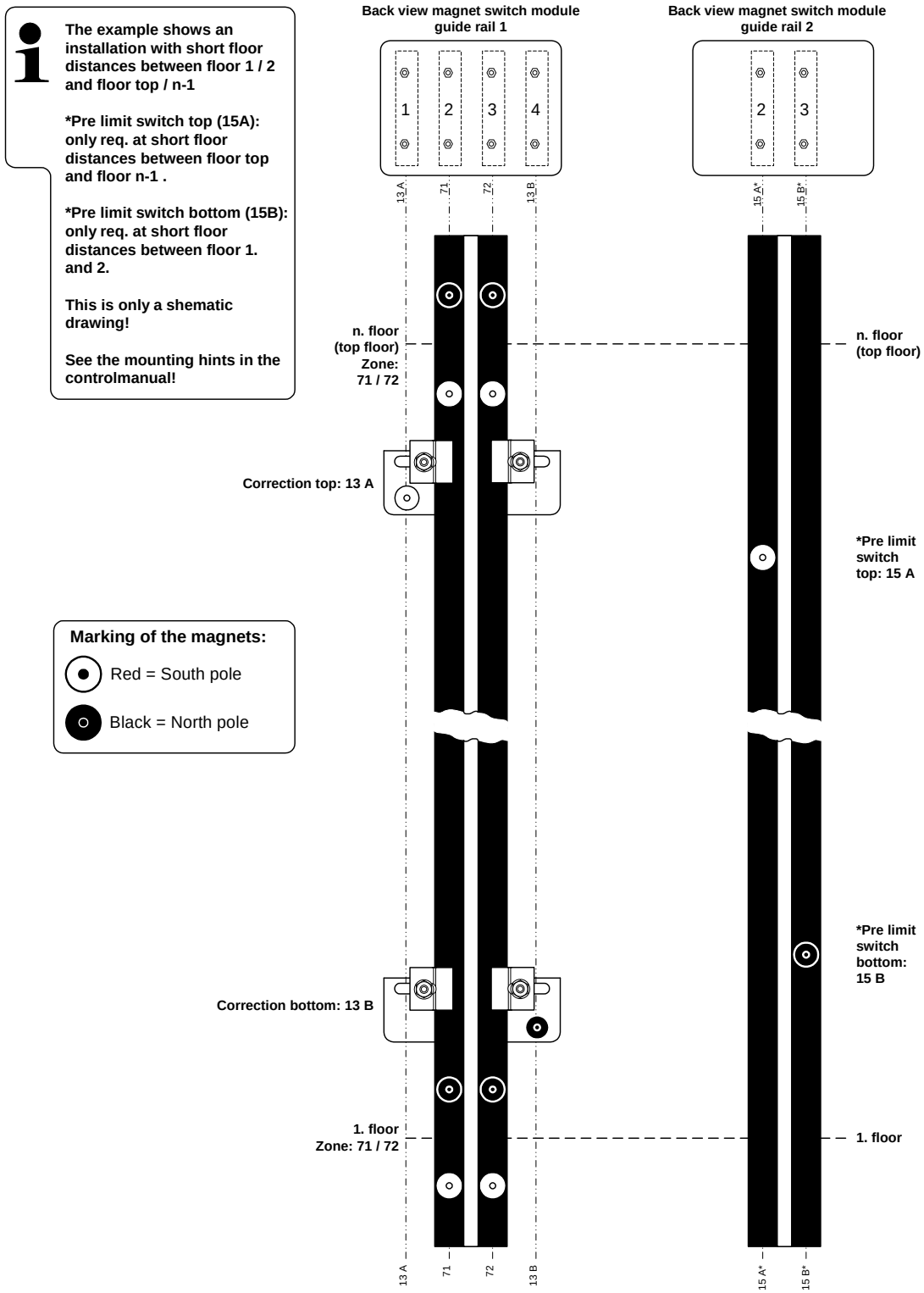
Marking of the magnets:



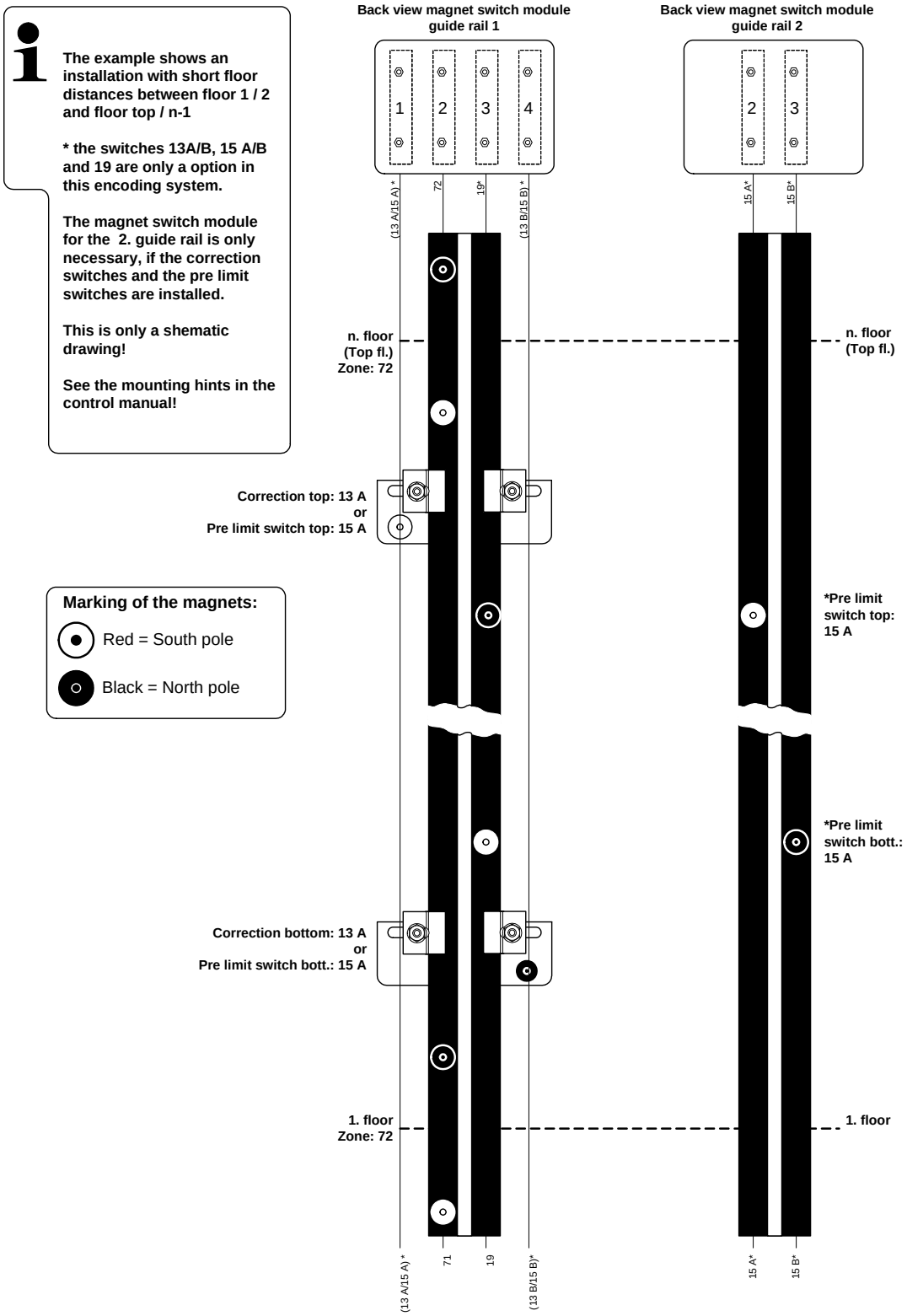
3.3 Example „Simple Encoding“



3.4 Example „Digital Shaft Encoding (DSC)“



3.5 Example „Absolute Positioning System (APS)“



4 Technical Data of the Magnet Switch

Switch output	bistable
Switching voltage	max. 30 VAC/DC
Switching current	max. 0,5 A
Life cycle	10^8 to 10^9 switching sequences load dependant
Temperature range	-25 to +70 °C
Switching status indication	(Dependent on switch type)
Protection	IP 00
Enclosure material	Plastic
Diameters	24mm x 25mm x 89mm
Switching distances	10 +/- 3 mm with magnet R10