

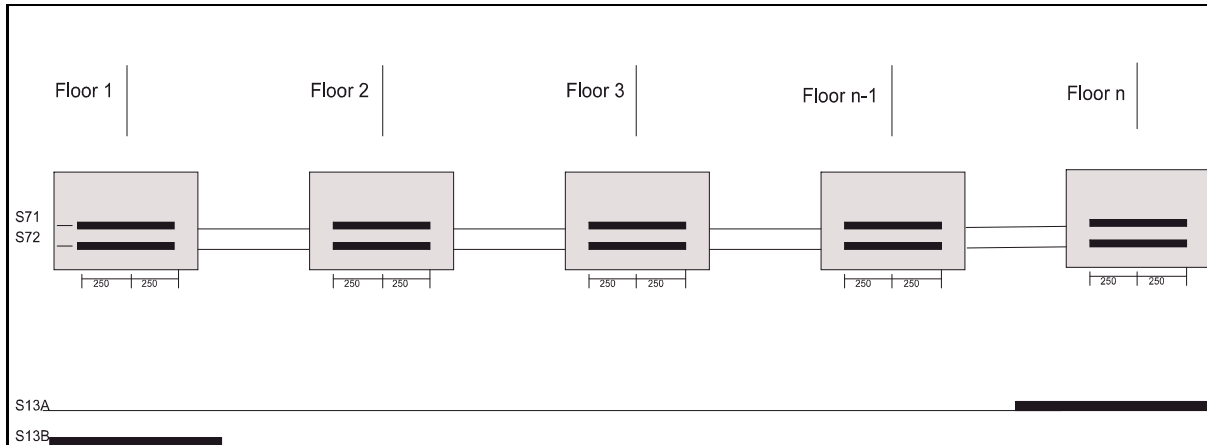
General

The absolute copying represents a digital shaft copying which is operated either without magnet control or with 3-4 magnet control:

Option 1: Without shaft switches

After assembly that of ABS-encoder-system is turned off the car between floor 1 and 2. After start of the parameter way-collection-learn, the car moves downward with the back getting control or the inspection control. Now the control recognized the counting direction. Afterwards the car in the floor 1 (lowest stop) placed concisely. Now the parameter synchronisation stop 01 is activated. The control knows now, the lowest floor possesses which impulse conditions. With reserved pit table (all floors were reserved with calculated concise conditions) the concise correction can take place now in the other stops.

Option 2: With shaft switches



This is a schematic drawing!

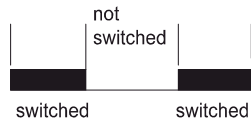
The Zone-switcher S71 & S72, and also the correction switcher are bistable magnet switcher.

- S71 Switch Zone 1
- S72 Switch Zone 2
- S13A Correction Top
- S13B Correction Bottom

The car position of the elevator will be calculated through a digital shaftcopy. For this system you need an encoder to pulses for the car position,

The distance for deceleration and leveling are calculated through a learning drive.

Errors can be corrigated through the correction switches at the top and bottom of the shaft (13A and 13B).



Type 1: Connector at ZR-613: SSI-Encoder Type Schmersal UPS SSI

Terminal	Function	Colour
Pin 1: PE	Erde	Shield
Pin 2: 91	Clock +	14
Pin 3: 92	Clock -	7
Pin 4: 93	Data +	13
Pin 5: 94	Data -	6
Pin 6: 500	0 V DC	8
Pin 7: 050	+5V DC	
Pin 8 : 200	+24V DC	9

Type 2: Connector at FKR-613: SSI-Encoder Type p Wachendorff WDG-SL00 – ALT

Terminal	Function	Colour
Pin 1: PE	Erde	Shield
Pin 2: 91	Clock +	Lila
Pin 3: 92	Clock -	Yellow
Pin 4: 93	Data +	Gray
Pin 5: 94	Data -	Pink
Pin 6: 500	0 V DC	White
Pin 7: 050	+5V DC	
Pin 8: 200	+24V DC	Brown

Type 3: Connector at FKR-613: SSI-Encoder Type ELGO-LIMAX-2 SSI – bin

Terminal	Function	Colour
Pin 1: PE	Erde	Shield
Pin 2: 91	Clock +	Green
Pin 3: 92	Clock -	Yellow
Pin 6: 83	Data +	Gray
Pin 7: 84	Data -	Pink
Pin 4: 500	0 V DC	White
Pin 7: 050	+5V DC	
Pin 5: 200	+24V DC	Brown

Type 4: Connector at ZR-613: SSI-Encoder Type Windtscheid & Wendel W+W 10EX – SSI –bin

Terminal	Function	Colour
Pin 1: PE	Erde	Shield
Pin 2: 81	Clock +	Green
Pin 3: 82	Clock -	Yellow
Pin 4: 83	Data +	Black
Pin 5: 84	Data -	Red
Pin 6: 500	0 V DC	Blue
Pin 7: 050	+5V DC	
Pin 8: 200	+24V DC	Lila

Type 5: Connector at FKR-613: SSI-Encoder Type Wachendorff WDG-SL00 G

Terminal	Function	Colour
Pin 1: PE	Erde	Shield
Pin 2: 81	Clock +	Lila
Pin 3: 82	Clock -	Yellow
Pin 4: 83	Data +	Grey
Pin 5: 84	Data -	Pink
Pin 6: 500	0 V DC	White
Pin 7: 050	+5V DC	
Pin 8: 200	+24V DC	Brown

Type 6: Connector at FKR-613: SSI-Encoder Type Wachendorff WDG-MZS 100 G

Terminal	Function	Colour
Pin 1: PE	Erde	Shield
Pin 2: 81	Clock +	Lila
Pin 3: 82	Clock -	Yellow
Pin 4: 83	Data +	Gray
Pin 5: 84	Data -	Pink
Pin 6: 500	0 V DC	White
Pin 7: 050	+5V DC	
Pin 8: 200	+24V DC	Brown

Type 7: Connector at FKR-613: SSI-Encoder Type Kübler LM2 LM3 SSI

Terminal r	Function	Colour
Pin 1: PE	Erde	Shield
Pin 2: 81	Clock +	Lila
Pin 3: 82	Clock -	Yellow
Pin 4: 83	Data +	Gray
Pin 5: 84	Data -	Pink
Pin 6: 500	0 V DC	White
Pin 7: 050	+5V DC	
Pin 8: 200	+24V DC	Brown

Type 8: Connector at FKR-613: SSI-Encoder Type Wachendorff WDG-MEMN

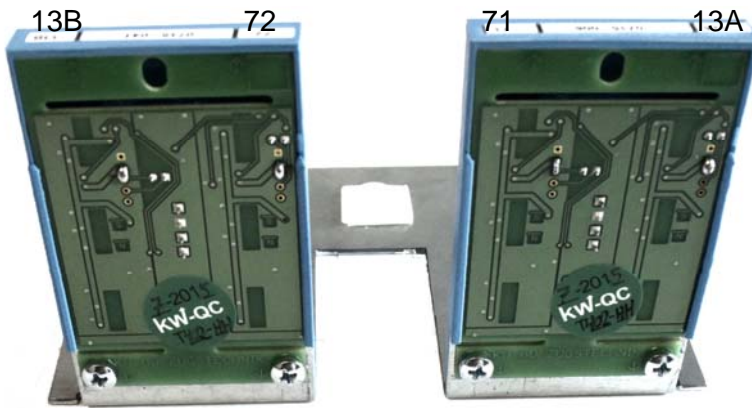
Terminal	Function	Colour
Pin 1: PE	Erde	Shield
Pin 2: 81	Clock +	Lila
Pin 3: 82	Clock -	Yellow
Pin 4: 83	Data +	Gray
Pin 5: 84	Data -	Pink
Pin 6: 500	0 V DC	White
Pin 7: 050	+5V DC	
Pin 8: 200	+24V DC	Brown

Type 9: Connector at FKR-613: SSI-Encoder Type Variotech ANTS SSI-Protokoll

Terminal	Function	Colour
Pin 1: PE	Earth	Shield
Pin 2: 91	Clock +	White
Pin 3: 92	Clock -	Yellow
Pin 4: 93	Data +	Gray
Pin 5: 94	Data -	Pink
Pin 6: 500	0 V DC	Brown
Pin 7: 050	+5V DC	
Pin 8: 200	+24V DC	Green

HSK-46 Mounting / Function description

Version 103



Picture off he Frontside

The shaft copying panel HSK46-102 has four x five hall sensors for the detection of the magnetic tracks on the shaft flags.

The hall switches have the function of the two penultimate switches S13A & S13B above and below and the two zones 71 and 72.

The electrical connection is made using a round cable to the car controller FKR.



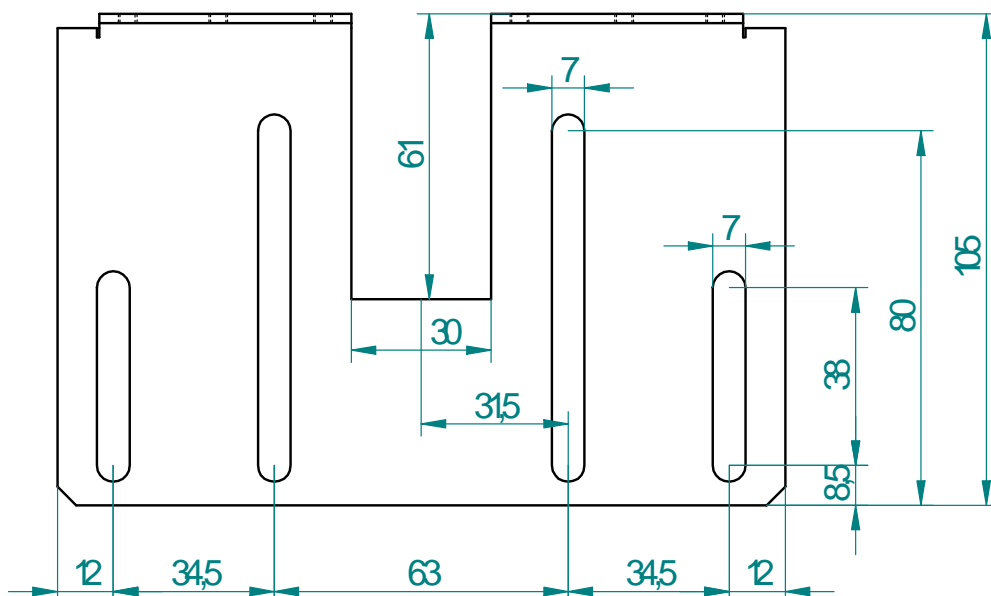
Picture of the Backside

It is mounted on the cabin roof.

These are 2 to 3 holes provided with an M5 thread.

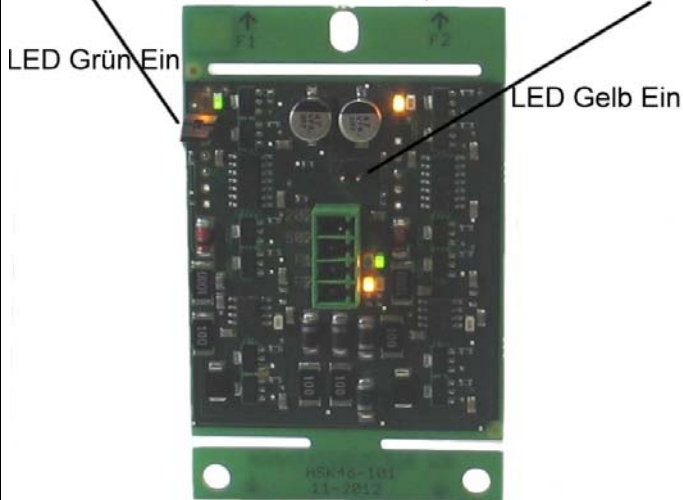
Over the long holes in mounting angle of the HSK-46, the optimal distance from the magnet can be adjusted on the shaft flag.

Mechanical Draft



Einstellen der Funktion

- > Setzen des Jumpers -> Vorendschalter-Fkt.
- > Ohne Jumper -> Zonenfunktion



Fazit: F1-Spur = Vorend - F2-Spur = Zone

The function of the Hall sensor is adjustable via a jumper:

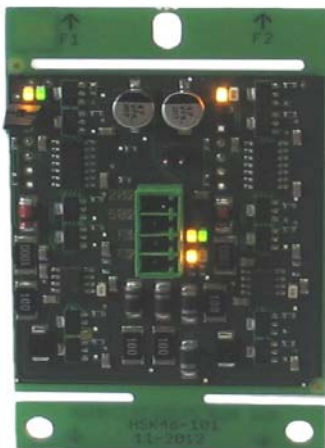
- A) **Without Jumper the function** is Zone-switch.
- B) **With Jumper the function** is pre-limit-switch

The function, which is set with the jumper will be shown by the LED-indicator:

- Yellow LED means Zone-switch active
- Green LED means Pre-limit-switch

Startzustand beim Einschalten

Beim erstmaligen Einschalten der HSK46 blinken die 4 gelben LEDs sehr schnell!



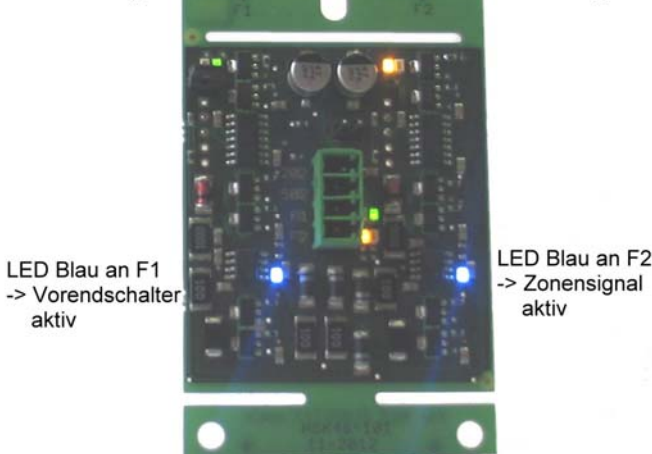
Nach dem ersten Magnetkontakt ->kein Blinken!

After the module is switched on for the first time, the yellow LEDs flash rapidly. This is terminated when the individual sensor reads in for the first time its magnet.

If, nevertheless, the yellow LEDs flash rapidly during operation, an error has occurred; The magnetic distribution is not OK, or there is an interference from an adjacent magnet from the other track.

HSK46 in Funktion

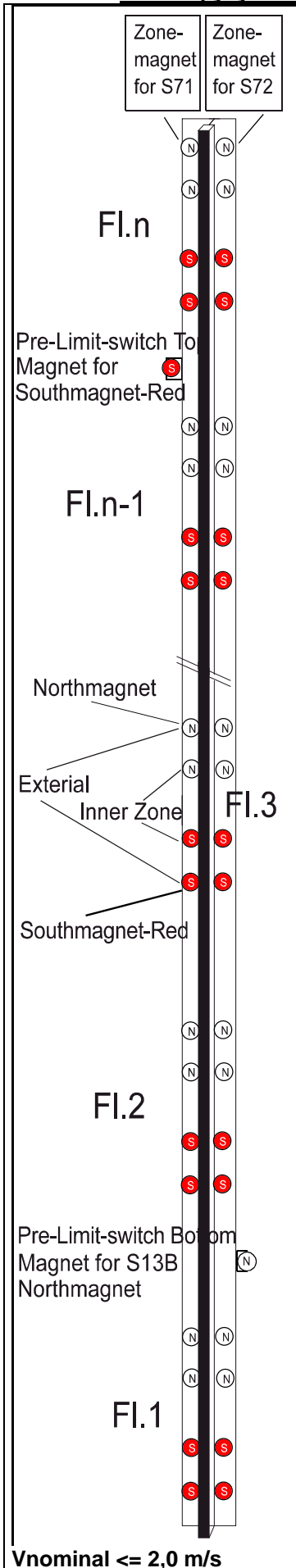
Funktion Vorendschalter: -> LED ist grün
Funktion Zonensignal -> LED ist gelb



If a sensor is switched through, this is indicated by a blue LED display.

In the picture on the left, the pre-limit switch Top (13A) and Zone 71 are active!

Schematic-Shaftcopysystem with UCM-Zone



HSK46 System

The shaft copy system consists of respective magnets and mounting hardware.

On the rail, the North magnets are always on top! Each 4 round magnets of a track-form an exterior and an interior zone. The exterior zone is responsible for the driveway with the door open, the interior zone for catching up / UCM detection. The shaft resolution approximation HSK-46 panel is mounted on the cab roof using the mounting bracket.

The switching distance between magnet and the HSK-46 is 7- 9mm!

The electrical connection of the HSK-46 will be done with a plug & play wire.



The pre-limit up / top S13A correction is turned on by a magnet south. The magnet must be between the penultimate and last floor!

The pre-limit down / bottom correction S13A is turned on a north magnet. The magnet must be between the 2 - and are lowest floor!

At a higher Speed than 2.0 m/s, or short travel stops, respectively, a second pre-limit switch is necessary.

The second pre-limit up / top S15A turned off-a South magnet. The magnet must be located between the pre-penultimate and penultimate floor.

The second pre-limit down / bottom S15B is turned on a north magnet. The magnet must be between the 3rd and 2nd Floor there.

