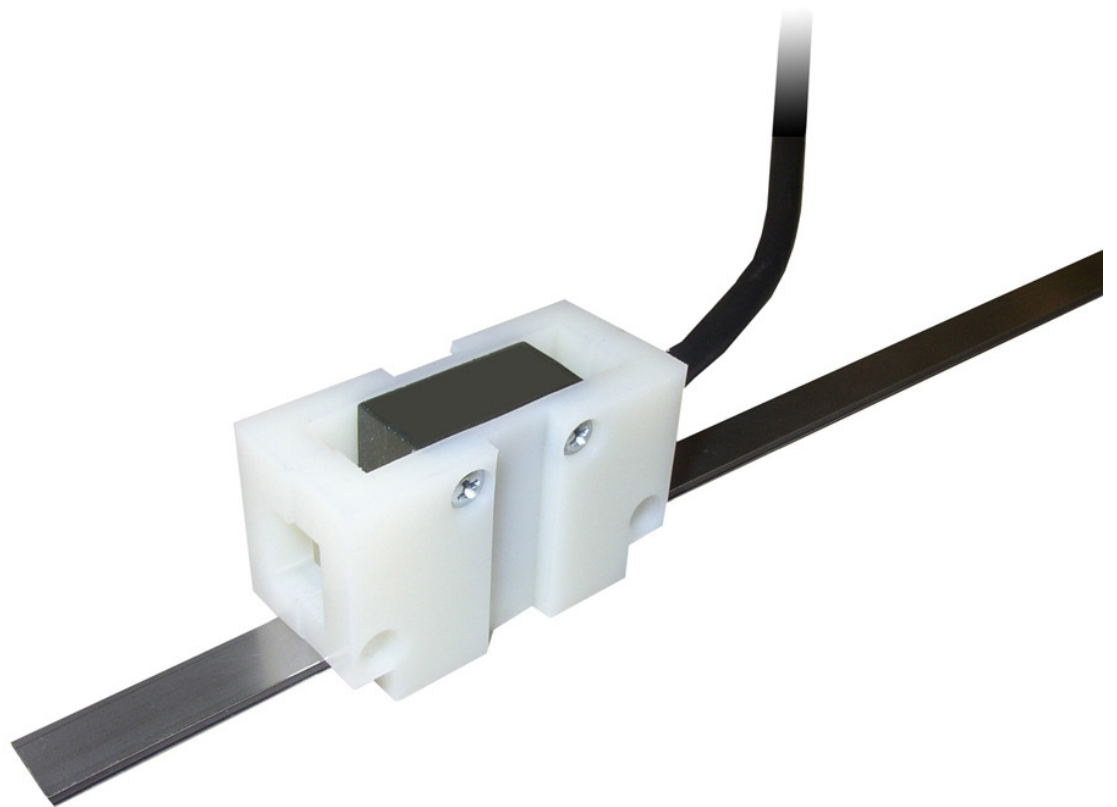


**LIMIX**



Guided Incremental Linear Encoder  
for Elevator Applications

# LIMIX Guided Incremental Linear Encoder for Elevator Applications

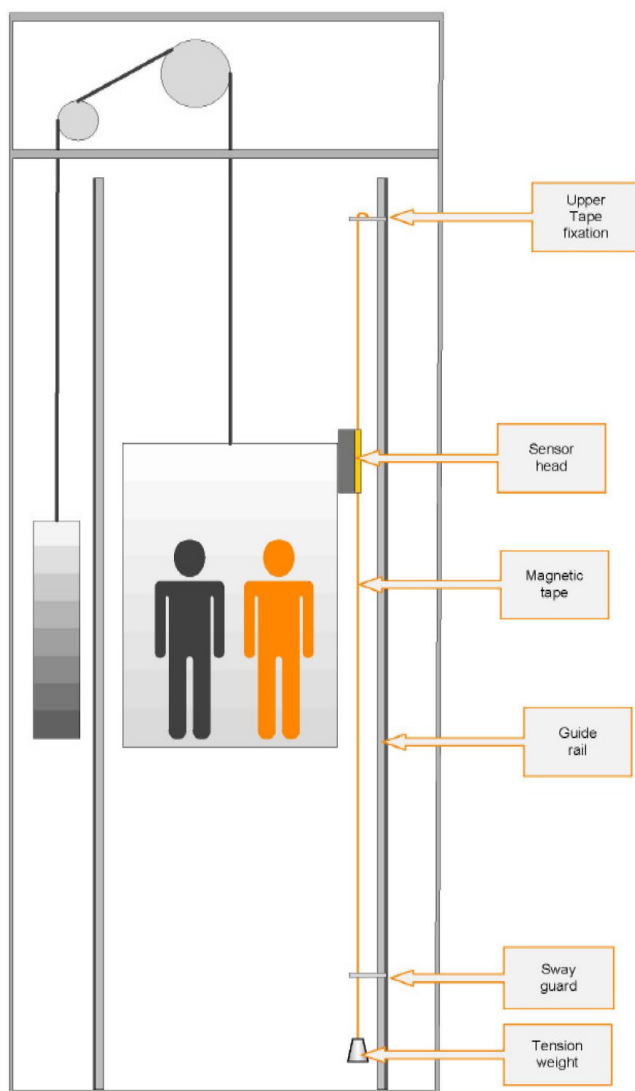
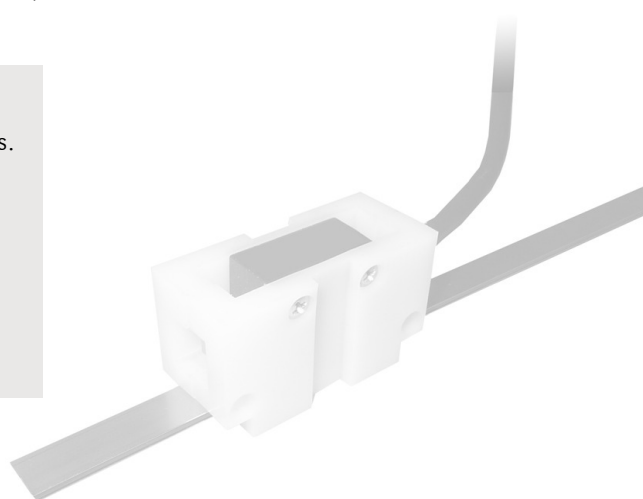
**LIMIX** is an incremental shaft information system that is used for positioning of elevator cars. It consists of only two components: sensor and magnetic band. The band carries an incremental magnetic code. It is installed free hanging in the elevator shaft by use of a mounting kit. The sensor head is mounted to the elevator car. While the actual measurement is contactless the band must be kept within a maximum distance to the sensor head. Therefore, the band is guided along the sensor by use of the polymer band guide. The magnetic measurement principle is extremely robust. Dust, dirt, and humidity do not affect the measurement in any way. Also, smoke and even higher temperatures have no influence on the measuring quality. The sensor is sealed to protection rating IP67, making it ideal for application in harsh environments as often found in elevator hoistways.

Another advantage of the system is the simple and flexible installation. Typical installation time will take about one to two hours. The system can be placed anywhere in the shaft where space conditions allow. With the small space requirement **LIMIX** is perfect for retrofitting and modernization.

With **LIMIX** travel heights up to 125 meters and speeds up to 4 m/s can be covered.

## Product Features

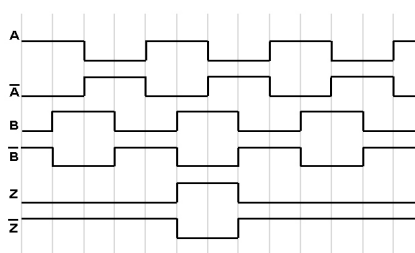
- Robust measuring principle for usage in rough environments. Insensitive to dirt, smoke, and humidity
- Direct measurement on the elevator car
- Easy and flexible installation
- High accuracy and repeatability
- Resolution: 0,625 / 1,25 / 2,5 mm
- Measuring speed up to 4 m/s
- Polymer guide made of self lubricating material



## Mounting principle:

**LIMIX** can be installed at any position in the hoistway, depending on space situation and layout of the particular elevator installation. The magnetic band is installed vertically in the hoistway. Top fixation is either on the guide rail or directly bolted into the ceiling. The necessary tension in the band is provided by a tension weight of about 5kg. A sway guard at the bottom is recommended. This will keep the band from swaying in an uncontrolled manner which may cause damage to the band or other components in the shaft. The sensor head can be mounted onto the car body or car frame – again depending on the specific conditions of the elevator. Detailed installation instructions are available. Please contact us for support and further details.

## Output pulse diagram:



### Technical specifications:

Measuring principle	incremental
Translator	integrated sensor head
Dimensions sensor l x w x h	30 x 12,5 x 25 mm
Dimensions with polymer guide	51 x 22 x 32 mm
Repeat accuracy	+/- 1 Increment
Ristance to the magnetic band	max. 2,0 mm (fixed by polymer guide)
Sensor housing	Zinc die casting, black
Polymer guide	self-lubrcating PA6G oil
Protection class	IP67
Outputs	push-pull, short-circuit-proof
Output level	10-30 V-HTL oder 5V-TTL
Output current (channel)	20 mA
Index pulse	periodical (every 5 mm)
Power supply voltage DC	10-30 V +/-10 % or 5V +/-2,5 %
Maximum rise	125 m
Oeprating temperature	0° - 65°C
Operating speed	max. 4 m/s, (10-30V-TTL:with optimal evaluation)
Operating humidity	max. 90%, not condensing
Tolerance/ripple	max. 5% by using 10-30 V resp. <50mV by using 5V

### Order reference:

For orders, please use the following order code:

LIMIX - AAA - BB.B - CCCC - DD - EE

#### A Version

- 000 ELGO Standard
- 001 First special version

#### B Signalcable length in XX.X m

- 01.5 1.5m Standard length

#### C Resolution in $\mu\text{m}$

- 0625 0,625 mm

#### D Supply/Output level

- 00 10-30 VDC/10-30 VDC
- 01 10-30 VDC/5 V-TTL line driver
- 11 5VDC/5V-TTL line driver

#### E Options

- D1 Connetcor D-SUB 9 pin

For Example:

LIMIX - 000 - 01.5 - 0625 - 00 - D1  
AAA - BB.B - CCCC - DD - EE

LIMIX ELGO standard, with 1,5 m signal cable length, resolution 0,625 mm, 10-30 VDC/10-30 VDC power supply and an D-SUB9 pin connector.

Your order:

LIMIX - AAA - BB.B - CCCC - DD - EE

### Possible supply voltage / output level

#### 11 - supply voltage 5 VDC/5 V-TTL line driver output

Tolerance / supply voltage: +/- 2,5 %, ripple < 50 mV  
Current consumption: max. 200 mA  
Operating speed: max. 4,0 m/sec  
Max. cable length: 10 m

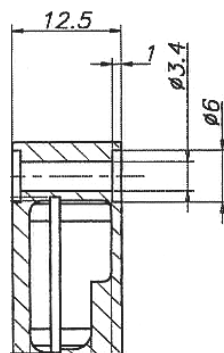
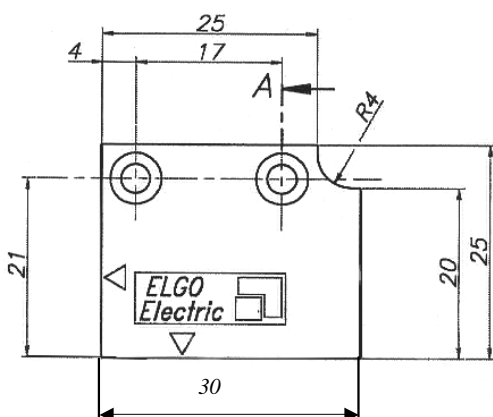
#### 01 - supply voltage 10 - 30 VDC/5 V-TTL line driver output

Tolerance / supply voltage: stabilized, ripple max. 5 %  
Current consumption: max. 150 mA  
Operating speed: max. 4,0 m/s  
Max. cable length: 50 m

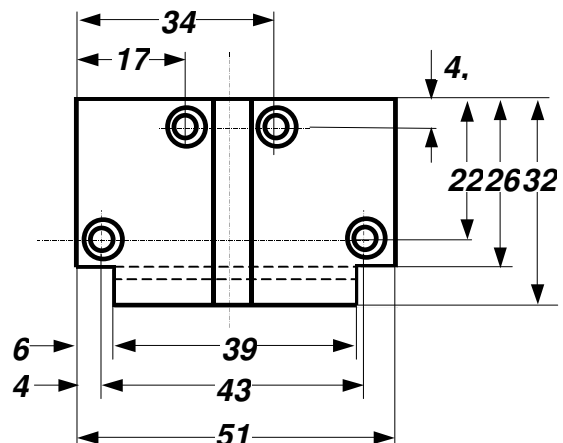
#### 00 - supply voltage 10 - 30 VDC/10 - 30 VDC output

Tolerance / supply voltage: stabilized, ripple max. 5 %  
Current consumption: max. 150 mA  
Operating speed: max. 4,0 m/s depending on controller

### Dimensions: Sensor



### Polymer guide



**Accessories:**

**MB20-50-10-1-R-D**      Magnetic band for **LIMIX** , 5mm pole width

**MKB**                              Mounting kit „MKB“ - Installation on guide rail



**MKF**                              Mounting kit „MKF“ - Installation ceiling / floor

