ELGO ELECTRONIC

LIMAX02

- Robust measuring principle for use in rough environments
- Non sensitive to dirt, smoke and humidity
- Simple and flexible installation
- High accuracy and repeatability
- Absolute positioning with a measuring length of up to 260 m
- Resolution up to 1 mm
- Absolute position is always directly available
  no referencing even after long power cuts
- Compatible with most common controls with absolute
  encoder interface
- Noiseless measuring principle
- Available interfaces:
  SSI, CAN, CANopen (DS406, DS417), RS422

LIMAX02

LIMAX02 is an absolute shaft information system which is used for positioning elevator cars.

The magnetic measuring principle is characterized by ist extremely high robustness. Dust, dirt and moisture do not affect the measurement in any way. Smoke and high temperatures have no influence on the quality of the measurement. Therefore, LIMAX02 is also appropriate for lifts for fire departments. Thanks to ist composition, the magnetic tape is resistant to the sometimes rough conditions during installation and operation.

Another advantage of the system is the easy and flexible installation. The installation itself can be done by experts in less than one hour. The installation can take place at any position in the elevator shaft according to the given space.

LIMAX02 is able to cover lifting heights of up to 260 meters and speeds up to 10 m/s.
By default, LIMAX02 evaluates the position with an resolution of 1 mm. Resolutions up to 0.25 mm are also possible.

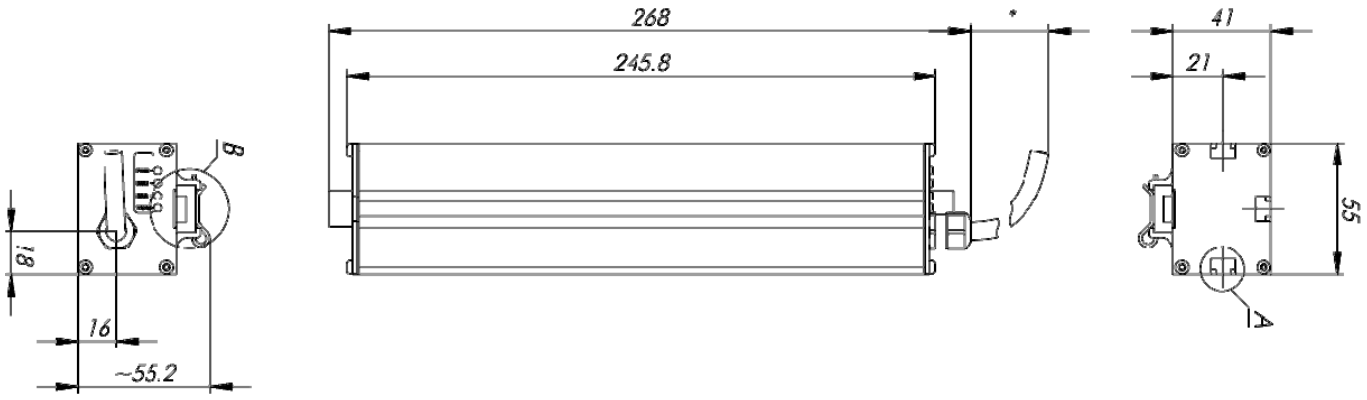
As LIMAX02 is delivered with several interfaces, it can be connected directly to most common lift controls.

Technical Data

Mechanical data		Environmental condition	
Measuring principle	absolute	Storage temperature	-25… +85 °C
Repeat accuracy	+/- 1 mm	Operating temperatur	-10… +70 °C (-25… +85 °C) on request
System accuracy in µm at 20 °C	+/- (1000 µm + 20 µm x L) L = measuring length in meters	Protection	IP50
Distance between the sensor And the magnetic tape	4 mm	**Electrical data**	
Basic pole pitch	8 mm	Supply	10 - 30 VDC
Sensor housing material	Aluminium	Ripple	10 - 30 V: < 10 %
Sensor housing dimensions	L x B x H = 244 x 55 x 51 mm	Current draw	Max. 0,2 A
Necessary magnetic tape	AB20-80-10-1-R-D-15-BK80	Interfaces	SSI, CAN, RS422 CANopen (DS406, DS417)
Max. measuring length	260 m	Resolution	1 mm (others on request)
Cable connection	Open cable end	Travel speed	max. 10m/s (physical)
Weight	Ca. 460 g without cable Kabel: ca. 60 g per meter	Cable	3 m standard cable length Others on request, Drag chain suitable

Product key	Control type
LIMAX2-00-030-0500-CO1TG-D9M	Böhnke bp306/bp308 (CANopen CiA 417)-terminated
LIMAX2-00-030-0500-CO1G-D9M	Böhnke bp306/bp308 (CANopen CiA 417)- not terminated
LIMAX2-00-030-62N5-SSG0-D9M1	NEWLift FST2
LIMAX2-00-030-1000-SSB0	KW Aufzugstechnik David 606
LIMAX2-00-030-1000-CO0	LIMAX02 with CANopen encoder profile DS406
LIMAX2-05-030-1000-SSB0	Kollmorgen MRL4 / MFE4 (MPK400)
LIMAX2-04-015-1000-CO1-D9M	Sodimas Quickinstall
LIMAX-003-03.0-1000-CO0	Schindler MX-GC (customer specific version)

Dimensions:



Mounting principle:

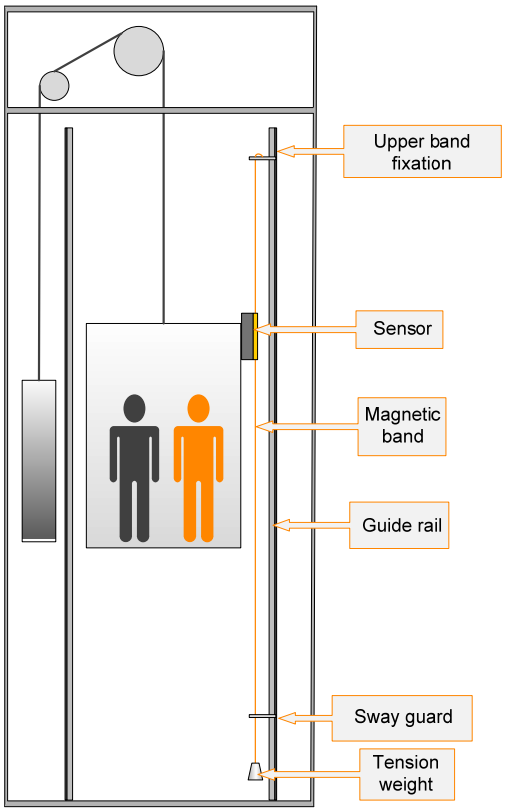
LIMAX2 can be installed at any position in the hoistway, depending on space situation and layout of the particular elevator installation.

The magnetic band is installed vertically in the hoistway. Preferred fixation is on the guide rail by use of an appropriate mounting kit. The necessary tension in the band is provided by a tension weight of about 5 kg. 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. Alternatively, the band can be fixed to any structure in the shaft head or directly bolted into the ceiling. A spring may be used to provide tension on the band.

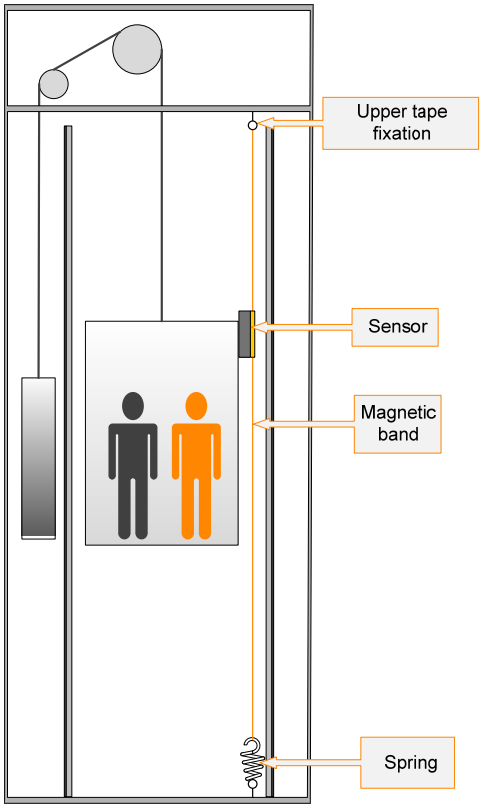
The sensor head can be mounted onto the car body or car frame – again depending on the specific conditions of the elevator.

Detailed installation instructions are available. Please contact us for support and further details.

Rail installation with weight



Dowel installation with spring



Type designation

Example: LIMAX2 - 00 - 030 - 1000 - CO0T - D9M

Device designation:
LIMAX2 = LIMAX02 (1-channel)

Version:
00 = Standard version
01 = 1. special version (etc.)

Cable length:
030 = 3,0 m (standard)
050 = 5,0 m
other cable length on request

Resolution
62N5 = 62,5 µm = 0,0625 mm
0125 = 125 µm = 0,125 mm
0250 = 250 µm = 0,25 mm
0500 = 500 µm = 0,50 mm
1000 = 1000 µm = 1,00 mm

Interface:

2320	= RS232	[Standard protocol RS232 / position]
2321	= RS232	[Extended protocol RS232 / position & speed]
4220	= RS422	[Standard protocol RS422 / position]
4221	= RS422	[Extended protocol RS232 / position & speed]
4850	= RS485	on request
CN0	= CAN	[Standard protocol Basic-CAN]
CO0	= CANopen	[Encoder profile DS406]
CO1	= CANopen	[Elevator profile DS417]
SSB0	= SSI-Interface	[25 Bit binary code / position]
SSG0	= SSI-Interface	[25 Bit gray code / position]

Caution:
-> CAN interface is optional available with galvanic isolation / assembly CAN-load resistor selectable
-> RS232 interface is never terminated!
-> RS422 & RS485 & SSI interface is basically terminated!

CAN interface	Without galvanic isolation	With galvanic isolation (G)
Terminated 120R (T)	CN0T (Standard)	CN0TG
Not terminated	CN0	CN0G
Terminated 120R (T)	CO0T (Standard)	CO0TG
Not terminated	CO0	CO0G
Terminated 120R (T)	CO1T	CO1TG
Not terminated	CO1 (Standard)	CO1G

SSI interface	
Without optocoupler at clock input (terminated 120R)	With optocoupler at clock input (G) (terminated 120R)
SSB0 (standard)	SSB0G
SSG0 (standard)	SSG0G

connector- options:

D9M	= 9-pol. D-Sub-connector	[CAN & CANopen]
D9M1	= 9-pol. D-Sub-connector	[SSI / option NEWLIFT FST2]
D9M3	= 9-pol. D-Sub-connector	[SSI / option LödigeSEW]
D9F0	= 9-pol. D-Sub-connector	[RS232 / to connect to DEE/DTE]
M12M	= 5(8)-pol. M12-round plug	[Number of poles or assignment depending on interface]

(open cable end if no option is selected)

other connectors on request

Accessories:

Installation Kit	LIMAX RMS for centrally guided lift cars LIMAX RMS90 angled for cabins with rucksack layout LIMAX S-RMS with safety position switch
Mounting angle	For attachment at the lift car of the LIMAX

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