

Linear measuring technology

Shaft copying system	Ants LES01	Absolute position measurement, SIL3 Measuring range up to 392 m
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Ants LES01 is an extremely robust and compact measuring system. Elevator car absolute position values are measured slip-free with a resolution of 1 mm and a traverse speed of 5 m/s. Additional components such as magnetic switches are no longer needed. Especially the easy mounting reduces installation time, thus contributing to overall costs reduction.



 392 m Wide measuring range	 1 mm Resolution	 Easy installation	 Compact	 Robust	 Shock / vibration resistant	 Reverse polarity protection	 -5° ... +70°C Temperature range
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Characteristics

- SIL3-certified by TÜV.
- Absolute position measurement.
- Measuring length up to 392 m.
- Extremely robust and compact.
- Stainless steel code tape.
- Simple mounting.
- Non-contact measuring system.

Benefits

- Fulfills safety functions in compliance with EN81-20/-21/-50 (combinable with Kübler PSU01).
- Eliminates components required until now such as limit switches, door zone magnets, ...
- Highest elevator availability - no referencing required in case of power failure.
- 100% slip-free thanks to absolute position measurement directly on the elevator car.
- Suitable for tight installation spaces.
- Reduced installation work.

Order code	8.LES01.1111.1111
Sensor	Type a b c
a Interface / power supply 1 = CAN / 10 ... 30 V	b Type of connection 1 = cable, 5 m [16.40'], 4-pin, open cable end
	c Interface profile 11 = CAN proprietary, V1.0.0

Order code	8.LEX.BA.XXXX																																								
Code tape, absolute	Type a																																								
a Measuring lengths XXXX = lengths in meters (max. length = 392 m)	<table border="0"> <tr> <td>Standard lengths</td> <td></td> <td>Intermediate lengths on request as from 5 pieces</td> <td>Stock types</td> <td></td> </tr> <tr> <td>0010 = 10 m</td> <td>0060 = 60 m</td> <td></td> <td>0010 = 10 m</td> <td>0030 = 30 m</td> </tr> <tr> <td>0015 = 15 m</td> <td>0070 = 70 m</td> <td></td> <td>0015 = 15 m</td> <td>0040 = 40 m</td> </tr> <tr> <td>0020 = 20 m</td> <td>0080 = 80 m</td> <td></td> <td>0020 = 20 m</td> <td>0392 = 392 m</td> </tr> <tr> <td>0025 = 25 m</td> <td>0090 = 90 m</td> <td></td> <td>0025 = 25 m</td> <td></td> </tr> <tr> <td>0030 = 30 m</td> <td>0100 = 100 m</td> <td></td> <td></td> <td></td> </tr> <tr> <td>0040 = 40 m</td> <td>0392 = 392 m</td> <td></td> <td></td> <td></td> </tr> <tr> <td>0050 = 50 m</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	Standard lengths		Intermediate lengths on request as from 5 pieces	Stock types		0010 = 10 m	0060 = 60 m		0010 = 10 m	0030 = 30 m	0015 = 15 m	0070 = 70 m		0015 = 15 m	0040 = 40 m	0020 = 20 m	0080 = 80 m		0020 = 20 m	0392 = 392 m	0025 = 25 m	0090 = 90 m		0025 = 25 m		0030 = 30 m	0100 = 100 m				0040 = 40 m	0392 = 392 m				0050 = 50 m				
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Accessories	Order no.
Mounting kit, absolute shaft copying system	8.LES.MK.0001

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Technical data

Mechanical characteristics sensor Ants LES01	
Code	absolute, 16 bit
Max. measuring length	392 m
Speed	5 m/s
Resolution	1 mm
Accuracy	1 mm
Type of connection	cable 5 m with open end
Max. acceleration	49.1 m/s ² (5 G)
Weight	500 g
Housing (material)	aluminum
Dimensions	L x W x H 135 x 45 x 33 mm [5.31 x 1.77 x 1.30"]

Electrical characteristics sensor Ants LES01	
Power supply	10 ... 30 V DC
Reverse polarity protection	yes
Power consumption	max. 100 mA
Interfaces	CAN proprietary, V1.0.0

Environmental conditions Ants LES01	
Protection acc. to EN60529	IP30
Humidity	< 90 % (non condensing)
Working temperature	-5°C ... +55°C [+23°F ... +131°F]
Storage temperature	-10°C ... +70°C [+14°F ... +158°F]
Air pressure (operating altitude)	800 ... 1013 hPA (up to 2000 m above NN)

Technical data tape LEX.BA	
Material	V2A spring-loaded stainless steel, chamfered edges
Dimensions	16 x 0.4 mm [0.63 x 0.016"]
Max. length	392 m
Weight	50 g / m [1.76 oz/m]
Thermal expansion	16 x 10 ⁻⁶ / K between 20°C ... 100°C

Technical data mounting kit LES.MK	
Dimensions	see manual
Material	see manual

Standards / Directives / Certificates		
Standards	safety rules for elevators	EN81.20, EN81.50
	EMV emission	EN12015
	EMV immunity	EN12016
	vibration resistance	EN60068-2-6
	shock resistance	EN60068-2-27
	environmental conditions	EN60068-2-14
Directives	EMV directive	2014/30/EU
	elevator directives	2014/33/EU
	RoHS directive	2011/65/EU
Safety level		SIL3
CE compliant		Yes

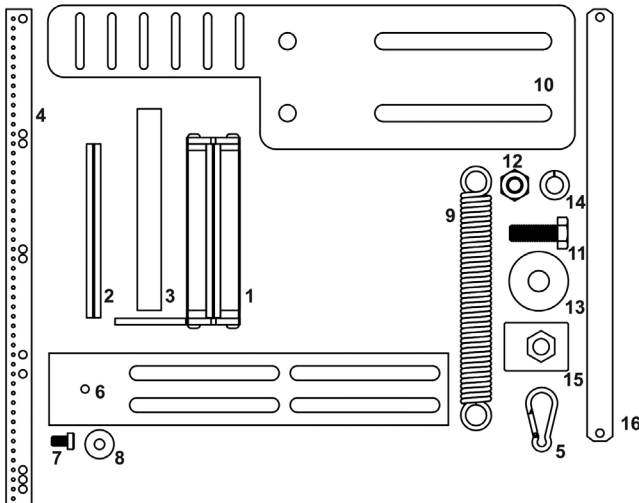
Terminal assignment Ants LES01

Interface	Type of connection	Cable				
1 CAN	1	Signal:	+V	0 V	CAN_H	CAN_L
		Core color:	BN	WH	GN	YE

+V: Power supply +V DC
 0 V: Power supply ground GND (0 V)

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Measuring range up to 392 m

Scope of delivery Ants LES01 with LEX.BA and LES.MK



The following components included in the SIL3 certification are required for proper operation.

Sensor Ants LES01

- 1** 1 x sensor
- 2** 2 x sliding plates
- 3** 1 x closing strip

Code tape LEX.BA

- 4** 1 x tape

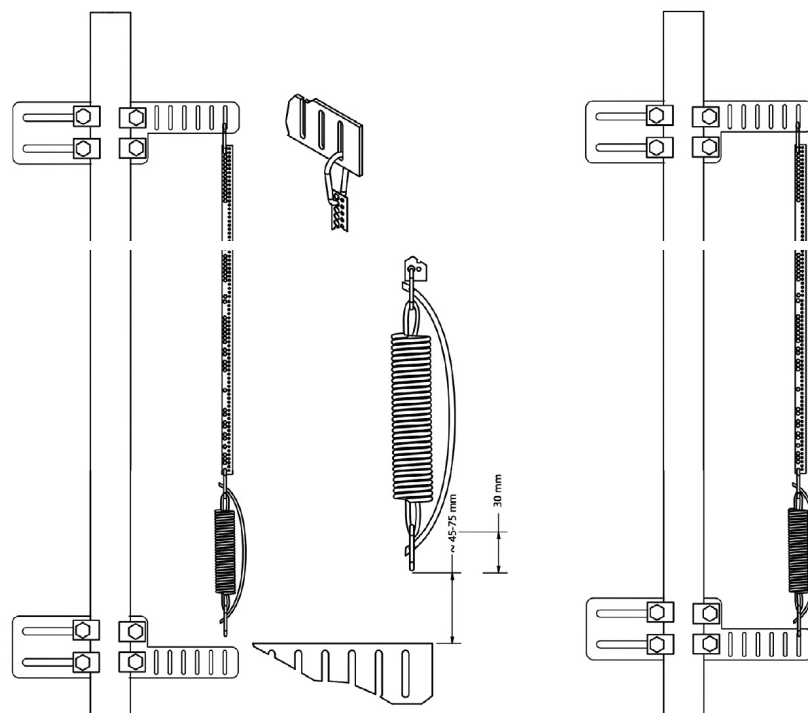
Mounting kit LES.MK

- 5** 3 x stainless steel snap hook
- 6** 1 x sensor cabin fastening plate
- 7** 1 x sensor fastening screw
- 8** 1 x washer
- 9** 1 x spring
- 10** 2 x rail fastening plates
- 11** 8 x M10x30 screws
- 12** 8 x M10 nuts
- 13** 8 x M10 large diameter washers
- 14** 8 x M10 retaining rings
- 15** 8 x clamping plates
- 16** 1 x securing band

Technology in detail

Code tape fastening

Ants LES01 stands out in particular for its ease of installation. This saves time and costs.



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Dimensions

Dimensions in mm [inch]

Sensor

