

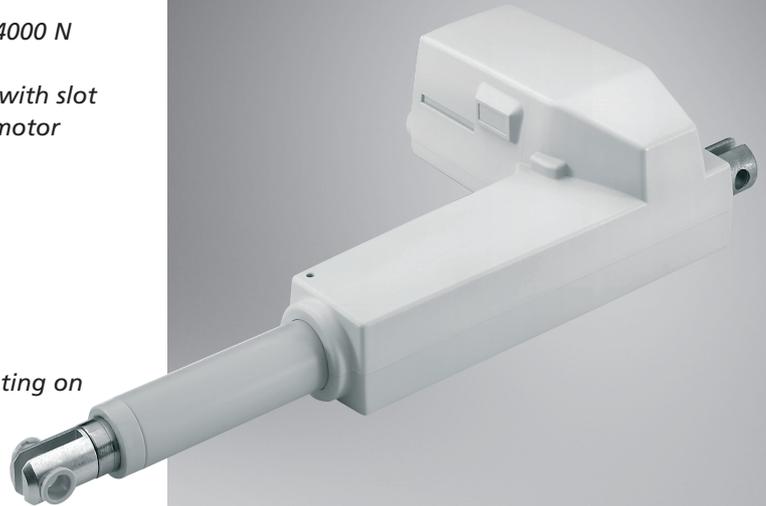
ACTUATOR LA31

Features:

- 24 V DC permanent magnet motor
- Thrust up to 6000 N in push and up to 4000 N in pull
- Electric chromated steel piston rod eye with slot
- High-strength plastic housing protects motor and gears
- Elegant and compact design with small installation dimensions
- Standard protection class: IPX4
- Colour: black
- 2.25 m straight cable
- Built-in limit switches (not adjustable)
- Scratch and wear-resistant powder painting on outer tube Ø30 mm
- Zinc alloy back fixture
- Strong wear and corrosion resistant stainless steel inner tube
- Noise level 48 dB (A); measuring method DSI/EN ISO 3746, actuator not loaded
- Winding isolation class F (155 degrees)

Options:

- LA31 Basic version CARELINE® (no slot in piston rod eye)
- Flexible back fixture
- Reed switch (8 pulses per spindle revolution) for exact positioning of memory control and compatibility with CB9P)
- Hall positioning (for use with CB6 OBF, CB16 OBF, CB20)
- Fast motor
- Mechanical splines (the actuator can only push)
- Jack plug for use with other control boxes than CB9
- Mini-fit cable for use with OpenBus™
- Protection class IPX6
- IPX6 Washable: only with cable placement standard and forward
- Quick release on LA31 (different types of release handle) only available in grey
- 0.2/0.4 m coiled cable with DIN or Jack plug
- Colour: grey
- Safety nut in push
- Mechanical end stop for first failure safety
- Exchangeable cables (also for DIN Reed and protection class IPX6 Washable)
- Emergency lowering



CARELINE®
IMPROVING EFFICIENCY

The LA31 actuator is a very quiet and powerful actuator designed for a variety of applications such as furniture, care or hospital beds. The standard LA31 actuator is available for both the HOMELINE®, CARELINE® TECHLINE® and DESKLINE® product ranges.

Due to its high capacity, design and protection class up to IP66 Washable, the CARELINE® actuator is ideal for the care sector e.g. for beds. The CARELINE® LA31 actuator is available as a standard or a Basic version. The standard LA31 actuator features known parts such as piston rod eye with slot. The LA31 actuator has exchangeable cables and is ideal in combination with OpenBus™ control boxes.

...continued

Usage:

- Duty cycle: Max 10% or 2 minutes continuous use followed by 18 minutes not in use
- Duty cycle of fast motor is only 5%
- Ambient temperature +5°C to +40°C
- The CARELINE system has full compliance with EN 60601-1

Technical specifications:

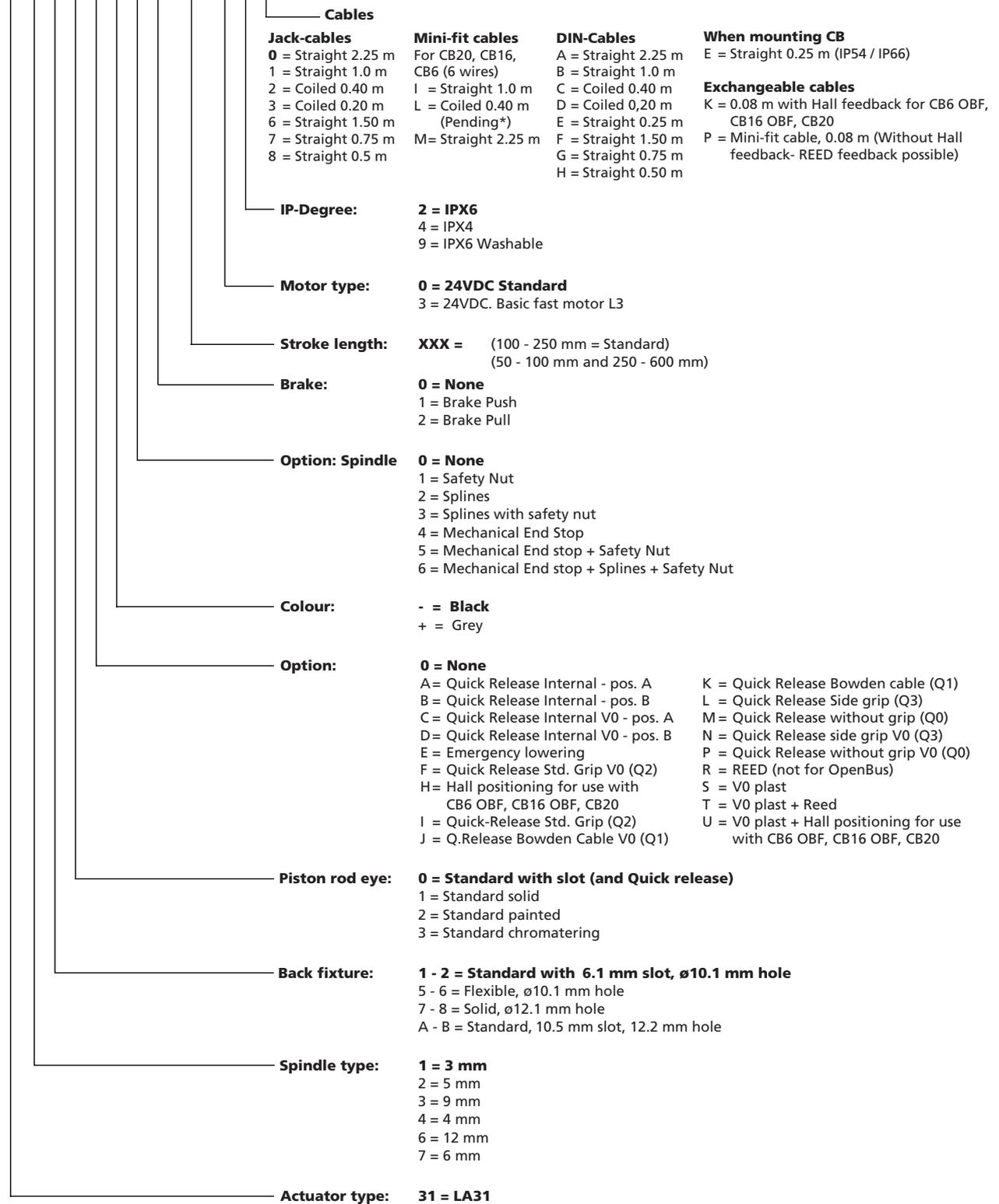
Spindle type	Spindle pitch (mm)	Max load [N]		Typical Amp. Full load	Typical speed		Self lock Max [N]	
		Push	Pull		Unloaded	Full load	Push	Pull
Standard 24V motor								
31.1	3	6000	4000	4.0	6.2	3.2	6000	4000
31.2	5	4000	4000	3.1	11.2	5.4	2000	2000
31.2 With brake	5	4000	4000	3.3	11.2	5.6	4000	4000
31.3 With brake	9	1500	1500	2.5	19.4	10.5	1500	1500
31.4 With brake	4	6000	4000	4.1	8.2	5.4	6000	4000
31.6 With brake	12	1000	1000	2.4	26.6	14.5	1000	1000
31.7 With brake	6	2500	2500	2.5	13.2	6.8	2500	2500
Fast 24V motor								
31.1	3	6000	4000	4.2	8.2	4.9	6000	4000
31.2	5	4000	4000	3.7	14	6.9	2000	2000
31.2 With brake	5	4000	4000	4.0	14	6.4	4000	4000
31.3 With brake	9	1500	1500	2.9	26.6	13	1500	1500
31.4 With brake	4	6000	4000	5	10.7	5.3	6000	4000
31.6 With brake	12	1000	1000	2.8	32.6	17.6	1000	1000
31.7 With brake	6	2500	2500	3.1	16.7	8.3	2500	2500
Standard 24V motor and Quick release								
31.2 with Quick release, max. release force: 75 kg	5	3500	200	3.3	11.2	5.6	3500	-
31.3 with Quick release, max. release force: 75 kg	9	1500	200	2.5	19.4	10.5	1500	-
31.7 With Quick Release max release force: 50 kg	6	2500	200	2.5	13.2	6.8	2500	-
Fast 24V motor and Quick release								
31.2 with Quick release with max. release force: 75 kg	5	3500	200	4	14	6.4	3500	-
31.3 with Quick release with max. Release force: 75 kg	9	1500	200	2.9	26.6	13	1500	-
31.7 With Quick Release with double worm gear max. release force: 50 kg	6	2500	200	6	15	10	2500	-

Comments to table:

- The above values are with a CB9 as the power supply.
- LINAK control boxes are designed so that they will short-circuit the motor terminals (poles) of the actuator(s), when the actuator(s) are not running. This solution gives the actuator(s) a higher self-locking ability. If the actuator(s) are not connected to a LINAK control box, the terminals of the motor must be short-circuited to achieve the selflocking ability of the actuator.
- When the load in push is above 4000 N (max. 6000 N), the max. stroke length is 250 mm.

LA31 CARELINE
Ordering example

31 1 1 0 0 - 0 0 1 0 0 2 0

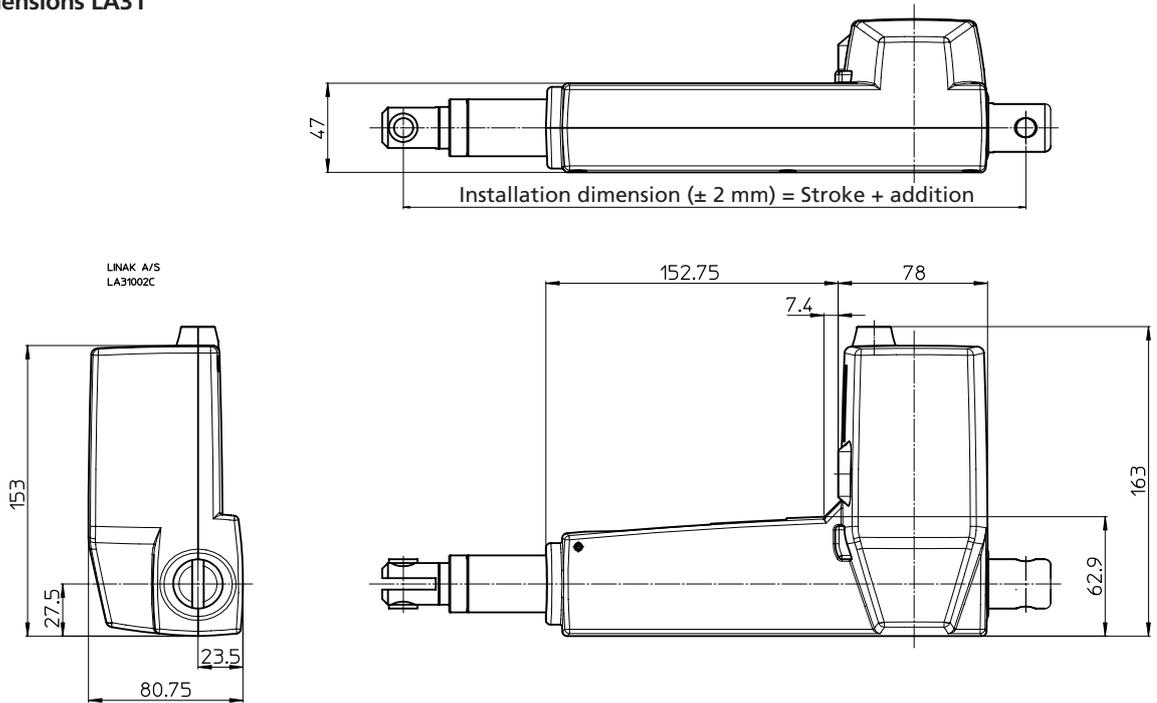


* Mini-fit cable pending not in stock at present



Option H and U: only together with exchangeable cables K (Hall positioning for use with CB6 OBF, CB16 OBF, CB20)

Dimensions LA31



Standard installation dimensions with different combinations of Piston Rod Eyes and back fixtures to LA31.

Eye	LA31 Standard		LA31 Splines		LA31 External Quick release		LA31 Internal Quick release		LA31 Splines + EL + Mech. End-stop + 50 mm Overlap	
	Stroke	Stroke	Stroke	Stroke	Stroke	Stroke	Stroke	Stroke	Stroke	Stroke
	length>115 mm	length<115 mm	length>100 mm	length<100 mm	length>115 mm	length<115 mm	length>115 mm	length<115 mm	length>100 mm	length<100 mm
	0, 1, 2 and 3	With QR	With QR	0, 1, 2 and 3	0, 1, 2 and 3	0, 1, 2 and 3	0, 1, 2 and 3			
Back Fixture										
1/2 and 7/8	S + 173 mm	288 mm	S + 189 mm	289 mm					S + 274 mm	374 mm
5/6	S + 173 mm	288 mm	S + 189 mm	289 mm	S + 227 mm	342 mm	S + 173 mm	288 mm	S + 274 mm	374 mm
A/B	S + 176 mm	291 mm	S + 192 mm	292 mm					S + 277 mm	377 mm

Min. inst. dim. = 288 mm., with splines = 289 mm., with quick release (ext.) = 342 mm.

Min. installation dimension type I, K, L, M = 342 mm

Min. installation dimension type A, B = 288 mm

- With mechanical end-stop the installation dimension is increased by 20 mm.
- With Emergency Lowering the installation dimension is increased as shown above, include SPLINE, MECHANICAL END-STOP + 50 mm OVERLAP (20 mm from mechanical endstop is included in the 50 mm).

Installation dimensions - explanation of table.

LA31 Standard:

With a stroke length greater than 115 mm, the installation dim. = Stroke length + 173 mm (+ 176 mm with an A / B type back fixture).

With a stroke length of 115 mm or less the installation dim. = 288 mm (291 mm with A / B type back fixture).

LA31 Splines:

With a stroke length greater than 100 mm, the installation dim. = Stroke length + 189 mm (+ 192 mm with A / B type back fixture).

With a stroke length of 100 mm or less the installation dim. = 289 mm (292 mm with A / B type back fixture).

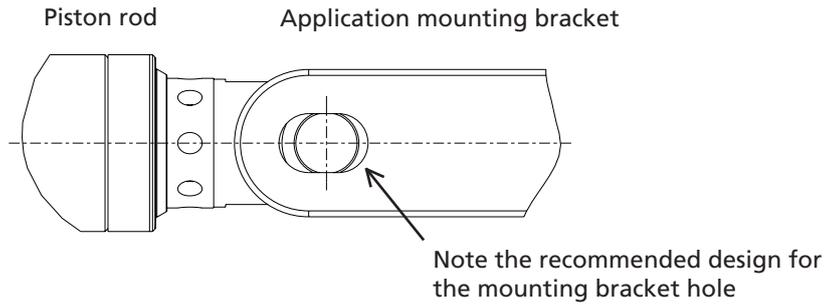
LA31 External Quick Release:

With a stroke length greater than 115 mm, the installation dim. = Stroke length + 227 mm (with type 5 / 6 back fixture). With 115 mm or less the installation dim. will be 342 mm (with type 5 / 6 back fixture).

LA31 Internal Quick Release:

With a stroke length greater than 115 mm, the installation dim. = Stroke length + 173 mm (with type 5 / 6 back fixture). With 115 mm or less the installation dim. will be 288 mm (with type 5 / 6 back fixture).

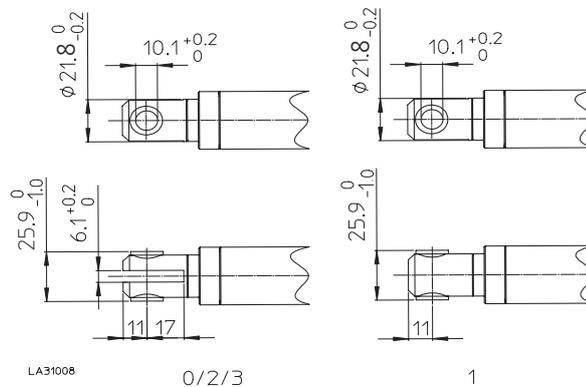
Mounting bracket instructions:



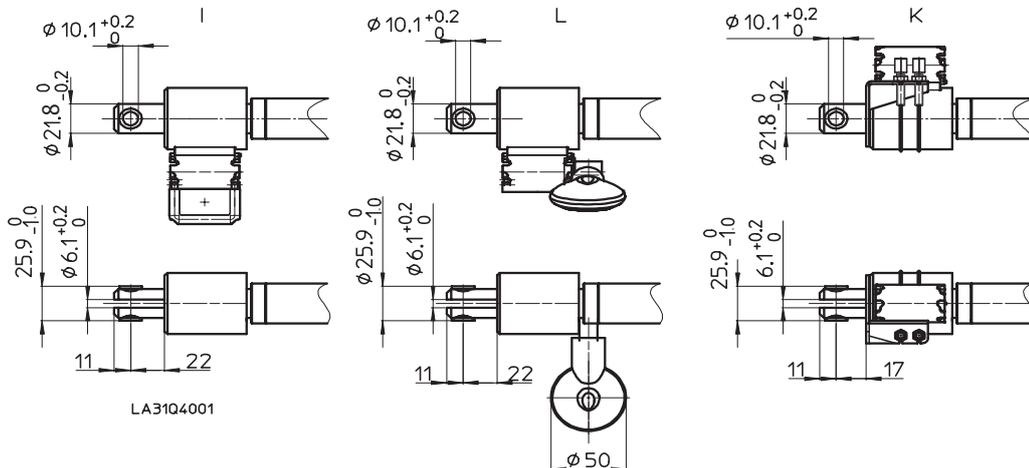
To avoid damage to the actuator.

When the application is in the "rest" position there should be no load / tension on the actuator.

Piston Rod Eyes:



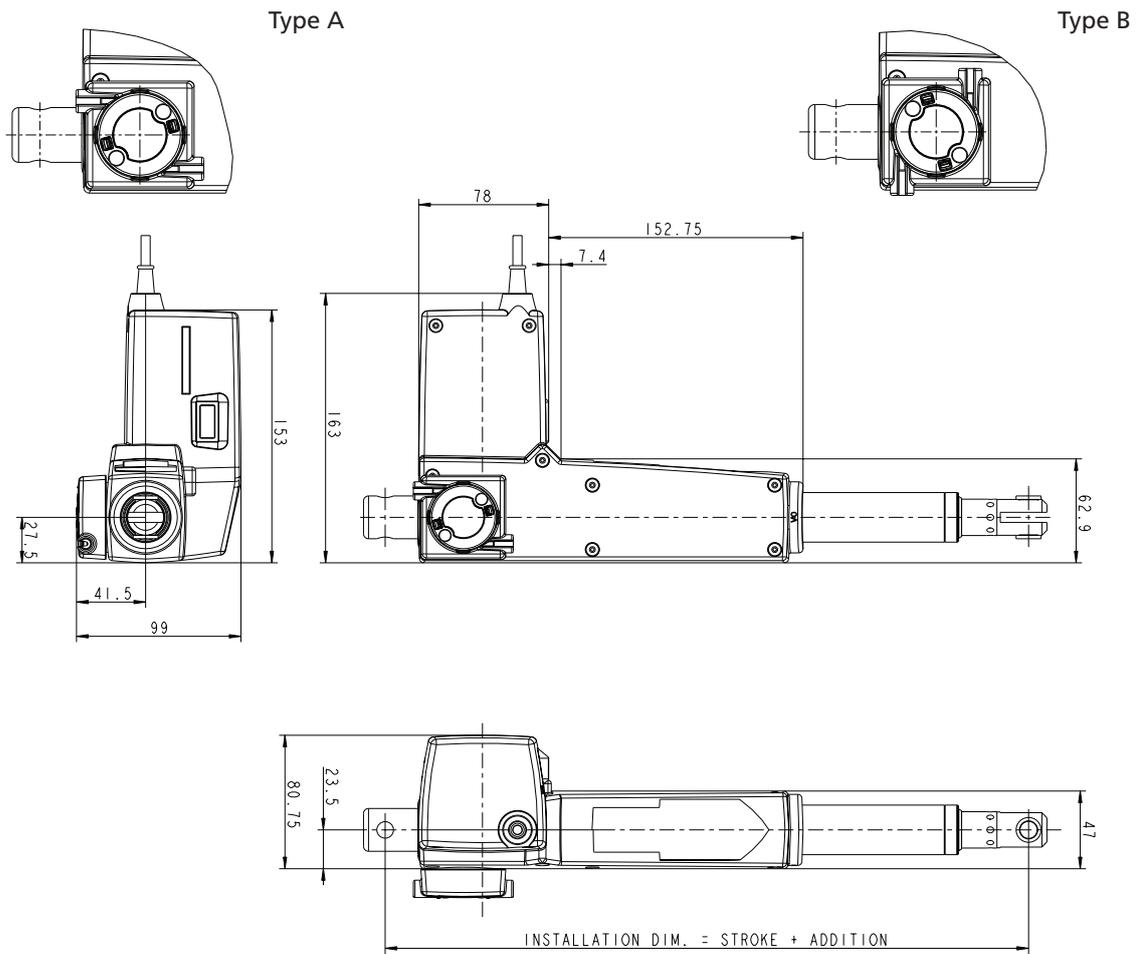
Quick releases:



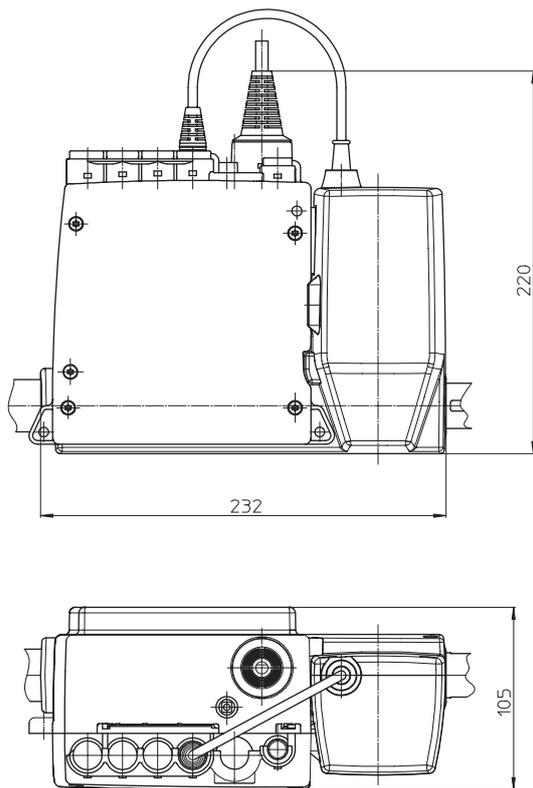
Quick release

- LA31 with external quick release, types I, K, L, and M can maximum pull 200 N. LA31 with quick release types A and B is not designed for use in pull.
- The necessary release force on an actuator with 5 mm pitch is 75 kg for 6 mm pitch = 50 kg.
- It is not possible to combine splines with the external quick release.
- LA31 with quick release is always with brake (push).
- The flexible back fixtures (05 or 06) must be standard when the LA31 is equipped with quick release.
- With QR types A and B, when operating the QR function the QR must be activated all the way down.

Dimensions: LA31 with internal quick release

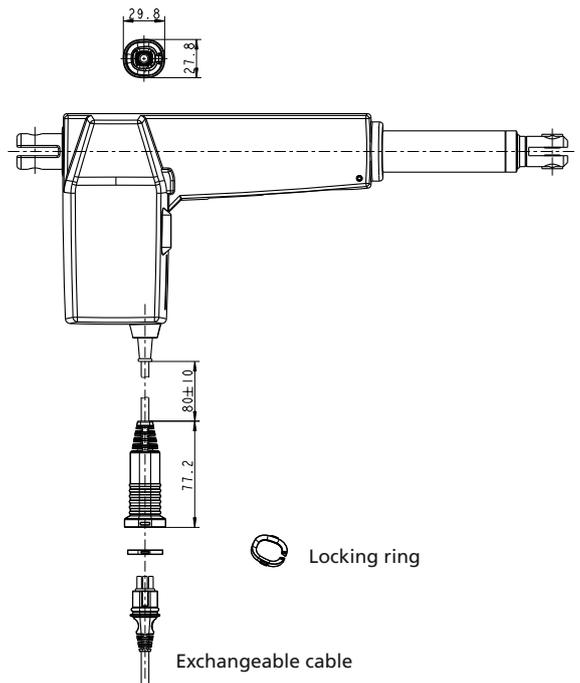


Dimensions: LA31 with CB9



CB09B_LA31B001B

LA31 with exchangeable cable connector and ring:



Exchangeable cables

Article number:	Description:	Colour:	Length (mm):
00914572	DIN plug / minifit plug (2 wires)	Grey	2100 mm straight
00914624-200	DIN plug / minifit plug (2 wires)	Grey	200 mm coiled
00914624-400	DIN plug / minifit plug (2 wires)	Grey	400 mm coiled
00914573	JACK plug / minifit plug	Grey	2100 mm straight
00914622-200	JACK plug / minifit plug	Grey	200 mm coiled
00914622-400	JACK plug / minifit plug	Grey	400 mm coiled
00914571	DIN plug / minifit plug (2 wires)	Black	2100 mm straight
00914623-200	DIN plug / minifit plug (2 wires)	Black	200 mm coiled
00914623-400	DIN plug / minifit plug (2 wires)	Black	400 mm coiled
00914569	JACK plug / minifit plug	Black	2100 mm straight
00914621-200	JACK plug / minifit plug	Black	200 mm coiled
00914621-400	JACK plug / minifit plug	Black	400 mm coiled



Locking ring:

Locking ring must be ordered separately. Part no. 0961006-B (for an individual locking ring), please order in multiples of 100 pcs.

Remember to ensure the locking ring is in position when connecting cables.

Exchangeable Reed cables

00914668-200	DIN Reed / minifit plug	Grey	200 mm coiled
00914668-400	DIN Reed / minifit plug	Grey	400 mm coiled
00614667-200	DIN Reed / minifit plug	Black	200 mm coiled
00914667-400	DIN Reed / minifit plug	Black	400 mm coiled
00914666	DIN Reed / minifit plug	Grey	2100 mm straight
00914665	DIN Reed / minifit plug	Black	2100 mm straight

Exchangeable cables from OPENBUS™ CB / CBJH to actuator.

Article number:	Description:	No. of wires:	Colour:	Length (mm):
0694003-300	Minifit to minifit	6	Grey	300 mm straight
0964003-500	Minifit to minifit	6	Grey	500 mm straight
0964003-1000	Minifit to minifit	6	Grey	1000 mm straight
0964003-1250	Minifit to minifit	6	Grey	1250 mm straight
0964003-2500	Minifit to minifit	6	Grey	2500 mm straight
0964002-200	Minifit to minifit	6	Grey	200 mm coiled
0964002-400	Minifit to minifit	6	Grey	400 mm coiled

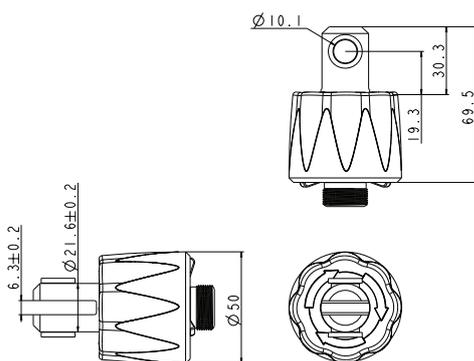
LA31 with Emergency lowering:



The purpose of the EL (Emergency Lowering) is in case of a power-failure, to be able to mechanically lower a patient by turning the EL part in the clockwise direction until the actuator is fully lowered.

The EL part substitutes the std. piston rod eye, and its function is intended for patient hoists. In normal operation the EL part will work as a piston rod eye, but in a failure condition the actuator can be lowered by turning the outer ring manually.

Dimensions:



Features:

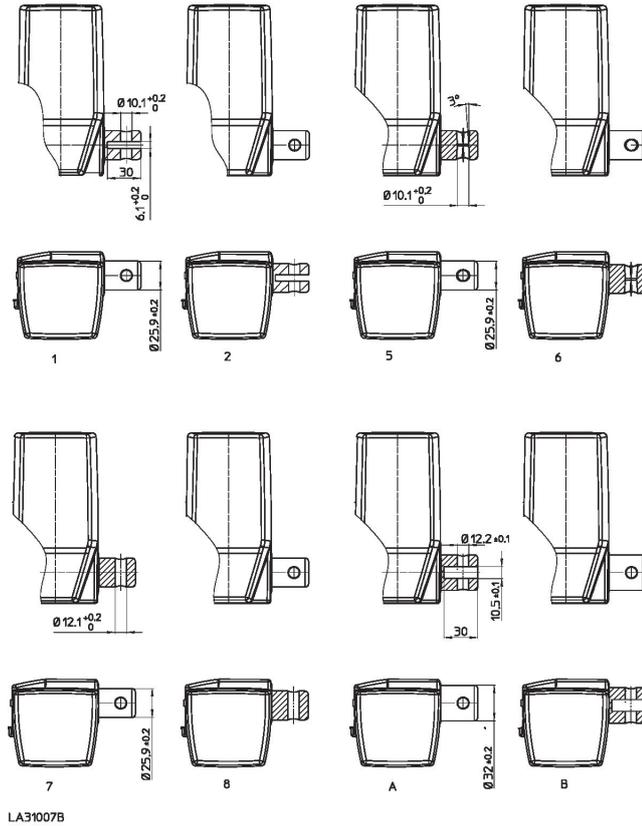
- Mechanical lowering of actuator
- Zinc piston rod eye - slotted
- With Ø10.1 POM bushings
- Max. 6000N in push
- Only 3 mm and 4 mm pitch actuators
- IPx4
- Grey - RAL 7035

Precautions:

- An addition of 35 mm to installation dimension compared to standard (with spline)
- Only for push applications
- Use spline actuators
- Cannot be retro fitted

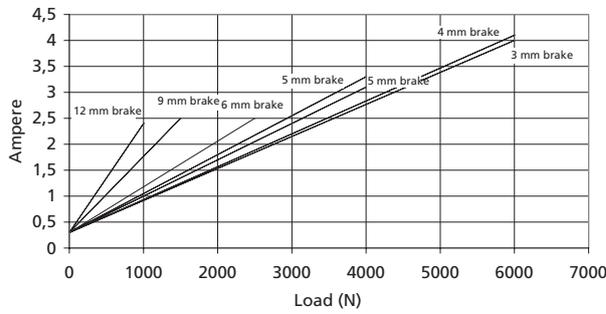
Drawing no. 03111202

Back fixtures:

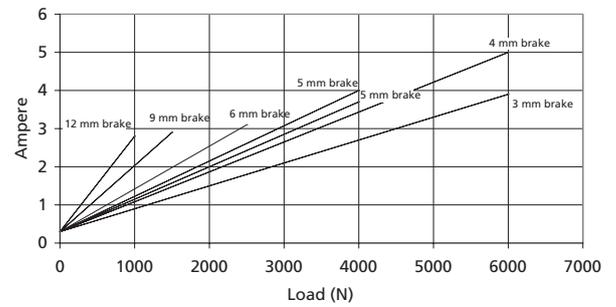


Curves:

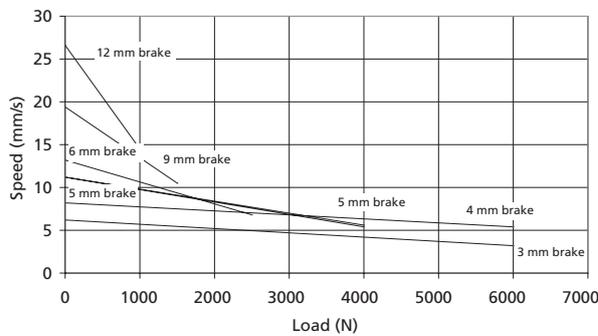
LA31 24V std. motor current v's load



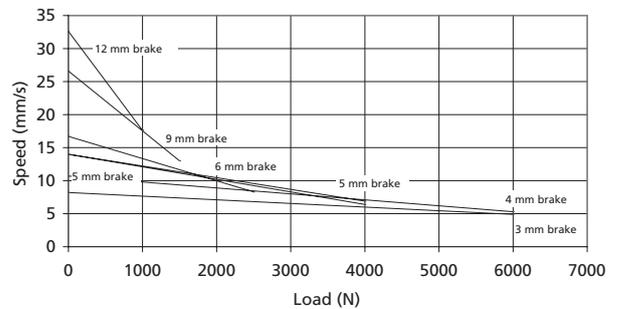
LA31 24V Fast motor current v's load



LA31 24V Std. motor speed v's load



LA31 24V Fast motor speed v's load



Terms of use

The user is responsible for determining the suitability of LINAK products for specific application. LINAK takes great care in providing accurate and up-to-date information on its products. However, due to continuous development in order to improve its products, LINAK products are subject to frequent modifications and changes without prior notice. Therefore, LINAK cannot guarantee the correct and actual status of said information on its products. While LINAK uses its best efforts to fulfil orders, LINAK cannot, for the same reasons as mentioned above, guarantee the availability of any particular product. Therefore, LINAK reserves the right to discontinue the sale of any product displayed on its website or listed in its catalogues or other written material drawn up by LINAK. All sales are subject to the Standard Terms of Sale and Delivery for LINAK. For a copy hereof, please contact LINAK.