

BA001 BATTERY BOX



To learn more about LINAK please visit:
WWW.LINAK.COM

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Preface

We are delighted that you have chosen a product from LINAK A/S. LINAK systems are high-tech products based on many years of experience in the manufacture and development of actuators, electric control boxes, controls, and chargers.

We are also constantly improving our products to meet customer requirements.

This User Manual will tell you how to install, use and maintain your LINAK DESKLINE® and HOMELINE® BA001 Battery box.

Updated manuals and declarations can always be found here:

www.linak.com/desklina or www.linak.com/homeline.

We are sure that the BA001 will give you years of problem-free operation. Before our products leave the factory they undergo full function and quality testing. Should you nevertheless experience problems with your systems, you are always welcome to contact our service departments or service centres.

LINAK subsidiaries and distributors all over the world have authorised service centres, which are always ready to help you.

LINAK provides a warranty on all its products. This warranty, however, is subject to correct use in accordance with the specifications, maintenance being done correctly and any repairs being carried out at a service centre, which is authorised to repair LINAK products.

Changes in installation and use of LINAK systems can affect their operation and durability. Changes must therefore only be made by agreement with LINAK A/S and are made at your own risk.

LINAK A/S

Important information

Important information on LINAK® products can be found under the following headings:



Warning!

Failure to comply with these instructions may result in accidents involving serious personal injury.



Failing to follow these instructions can result in the product being damaged or being destroyed.

Safety instruction

General

Safe use of the system is possible only when the operating instructions are read completely and the instructions contained are strictly observed.



It is important for everyone who is to connect, install, or use the systems to have the necessary information and access to this User Manual. Follow the instructions for mounting – risk of injury if these instructions are not followed.



The appliance is not intended for use by young children or infirm persons without supervision.



If there is visible damage on the product it must not be installed.



Note that during construction of applications, in which the actuator is to be fitted, there must be no possibility of personal injury, for example the squeezing of fingers or arms.



Assure free space for movement of application in both directions to avoid blockade.

Only for EU markets



This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.



Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

Only for Non EU markets



Persons who do not have the necessary experience or knowledge of the product/products must not use the product/products. Besides, persons with reduced physical, sensory or mental abilities must not use the product/products, unless they are under surveillance or they have been thoroughly instructed in the use of the apparatus by a person who is responsible for the safety of these persons.



Moreover, children must be under surveillance to ensure that they do not play with the product.



It is the operator's responsibility to ensure that there is free space for the application to move without risk for the operator or bystanders before operating the application.

Misuse



Do not overload the actuators – this can cause danger of personal injury and damage to the system.



Do not use the actuator system for lifting persons. Do not sit or stand on a table while operating – risk of personal injury.



Do not use the system in environments other than the intended indoor use

General safety notes that must be taken into consideration especially referring to BA001



Only the CBD6S and the SMPS006 can be used for charging the BA001 battery pack.



In connection with charging/discharging notice that the charger/battery can become warm. Keep away inflammable objects.



Keep the charger and the battery away from children. The battery must be stored on a non-flammable base.



In case of damaged batteries, the battery must be removed and replaced immediately to avoid danger and malfunction.



The BA001 must not be exposed to heat or fire. Avoid any contact with water and direct sunlight.



Do not cover neither the charger nor the BA001 during charging.



The surface where the battery is mounted must be suitable and correspond to the demands for e.g. weight and temperature.



In case of suspicious smoke, do not use the battery.



The capacity of the BA001 will deteriorate over time. The deterioration will depend on use and temperature. Under ideal conditions, the discharge capacity is at least 70% after 500 cycles.



A BA001 with below 25% capacity must not be stored. The battery must be recharged before storage (25% equals to 1 LED light bar).



For best performance, perform a full battery charge every time.

Repairs

In order to avoid the risk of malfunction, all DESKLINE® and HOMELINE® repairs must only be carried out by authorised LINAK workshops or repairers, as special tools must be used and special gaskets must be fitted. Lifting units under warranty must also be returned to authorised LINAK workshops.



Warning!

If any of the DESKLINE® and HOMELINE® products are opened, there will be a risk of subsequent malfunction.



Warning!

The DESKLINE® and HOMELINE® systems do not withstand cutting oil.

DECLARATION OF INCORPORATION OF PARTLY COMPLETED MACHINERY

LINAK A/S
Smedevænget 8
DK - 6430 Nordborg

Herewith declares that LINAK DESKLINE® products as characterized by the following models and types:

Control Boxes	CBD4, CBD5, CBD6, CBD6S
And	
Linear Actuators	LA31, DB4, DB5, DB6, DB7, DB9, DB12, DB14, DB16, LA23
Lifting Columns	DL1A, DL2, DL4, DL5, DL6, DL7, DL8, DL9, DL10, DL11, DL12, DL14, DL15, DL16, DL17, LP2, LP3, BASE1
And	
Desk Panels	DP, DPA, DPB, DPH, DPF, DPT, DP1C, DP1K, DP1L, DP1V, DP1U, WDPL1
RF Controls	HB10, HB20, RFR and RFT
And	
Accessories	BA001, SLS

comply with the following parts of the Machinery Directive 2006/42/EC, ANNEX I, *Essential health and safety requirements relating to the design and construction of machinery*:

1.5.1 Electricity supply

The relevant technical documentation is compiled in accordance with part B of Annex VII and that this documentation or part hereof will be transmitted by post or electronically to a reasoned request by the national authorities.

This partly completed machinery must not be put into service until the final machinery into which it is to be incorporated has been declared in conformity with the provisions of the Machinery Directive 2006/42/EC where appropriate.

Nordborg, 2014-04-10

LINAK A/S
John Kling, B.Sc.E.E.
Certification and Regulatory Affairs
Authorized to compile the relevant technical documentation

DECLARATION OF INCORPORATION OF PARTLY COMPLETED MACHINERY

LINAK A/S
Smedevænget 8
DK - 6430 Nordborg

Herewith declares that LINAK HOMELINE® products as characterized by the following models and types:

Control Boxes CB7, CB9H, CBH Advanced, CBH Basic

And

Linear Actuators LA27, LA27CS, LA28, LA29, LA31 HOMELINE

Dual Actuators TD1, TD3

And

Controls HB10, HB10RF, HB20, HB20RF, HB40, HB60, HC10, HC10RF, HC20RF,

And

Accessories BA001, DC CONNECTOR, DJBH, LED Lightbox, Lightplug001, Massage Motor, SMPS001, SMPS002, SMPS006, TR6, USB Connector

comply with the following parts of the Machinery Directive 2006/42/EC, ANNEX I, *Essential health and safety requirements relating to the design and construction of machinery*:

1.5.1 Electricity supply

The relevant technical documentation is compiled in accordance with part B of Annex VII and that this documentation or part hereof will be transmitted by post or electronically to a reasoned request by the national authorities.

This partly completed machinery must not be put into service until the final machinery into which it is to be incorporated has been declared in conformity with the provisions of the Machinery Directive 2006/42/EC where appropriate.

Nordborg, 2014-12-12



LINAK A/S
John Kling, B.Sc.E.E.
Certification and Regulatory Affairs
Authorized to compile the relevant technical documentation

Misc. on the DESKLINE® and HOMELINE®

This BA001 battery box is developed for furniture and for indoor use. Do not use it in industrial kitchens or in other environments that have to be cleaned with aggressive detergents.

Warranty

There is a 12 months' warranty on the BA001 battery against manufacturing faults from the production date of the individual products (see label).

LINAK A/S' warranty is only valid in so far as the equipment has been used and maintained correctly and has not been tampered with. Furthermore, the system must not be exposed to violent treatment. In the event of this, the warranty will be ineffective/invalid. A loss of capacity over time must be expected. For further details, please see LINAK A/S ordinary conditions of sale.

Maintenance

Clean dust and dirt on the outside of the BA001 at appropriate intervals and inspect them for damage and breaks.

Inspect the connections, cables, and plugs and check for correct functioning as well as fixing points.

Mounting instructions:

Guidelines for mounting the BA001.

The battery box is to be fastened with 2 screws with a head diameter between $\varnothing 8$ and $\varnothing 10$ mm. With regard to the surface pressure, $\varnothing 10$ mm is preferable. See drawing for placing of mounting holes and the space the box takes up. M6 nut and screw counterpart is supported too.

The mounting surface to which the battery box is attached should have a surface evenness better than ± 0.5 mm.

The mounting screws must be fastened with a max. torque of 1 Nm.

Alternatively, mount the enclosed bracket following the same guidelines for fastening using the four mounting holes.

The BA001 must not be packed in heat insulating material, but must be placed so that it can emit waste heat to the surroundings. There are no ventilation holes to consider, the BA001 emits heat through its surface.

Charging BA001

The BA001 can be charged either via the DESKLINE control box CBD6S or via the Switch Mode Power Supply SMPS006. The LED light bars on the top of the box shows the current capacity status.



There are four light bars indicating the battery capacity:

Capacity between 0% and 5%	No lights)
Capacity between 5% and 25%:	LED1 lights
Capacity between 25% and 50%:	LED1 and LED2 light
Capacity between 50% and 75%:	LED1, LED2 and LED3 light
Capacity between 75% and 100%:	LED1, LED2, LED3 and LED4 light

The four LED light bars on the BA001

The light turns on when you press the small black button below the light bars. The light will only be on for a few seconds.

Please notice:

- When the capacity is below 25%, the audio alarm sounds once when activating the battery.
- The battery turns off to protect itself when the capacity is approx. 5%. Below the 5% capacity, the audio alarm sounds when activating the battery. No LED light bars can be activated.
- When charging, the LED light bars indicate the current charge capacity
- When the charging is complete the LED light bars will turn off
- Charging will not start if the capacity is above 75%

The BA001 has a built-in protection to ensure the lifetime of the battery and system

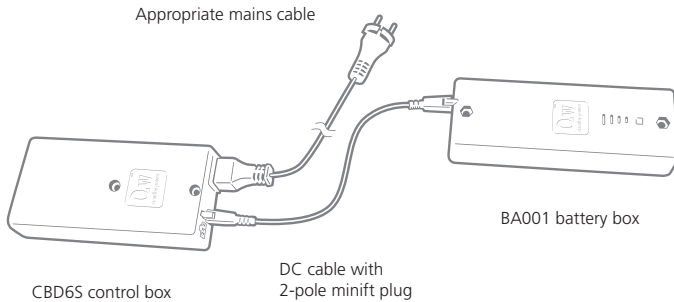
- The battery limits the discharge current to approx. 10A by disconnecting the power.
- The battery can go into a protected mode. Then a reset is made only after disconnecting the cable and in some cases charging the battery.
- If the BA001 stops working please try the following:
 - Disconnect the cable from the BA001.
 - Press the button on the BA001 for minimum 10 seconds.
 - Charge the battery
 - Connect the BA001 again.
- In overload situations, the LED light bars will still turn on when activated. If the capacity is below approx. 25% it is not possible to identify if the BA001 has switched off due to overload or low capacity. Rule of thumb is that the BA001 must be charged if no LED light bars can be turned on.
- As check/identification of the problem, charge the battery. If the battery still switches off it is due to an overload situation.

Charging via CBD6S:

In a DESKLINE system, the BA001 is connected to the CBD6S. If it is preferable to charge the battery while it is mounted on the application, the easiest way of charging is to connect an appropriate mains cable to the CBD6S and plug into the mains.

Charging time is approx. 5 hours at room temperature (around 20° C). The LED light bars turn off when fully charged. When mains is connected via the CBD6S and charging is started, the BA001 will beep twice.

CBD6S

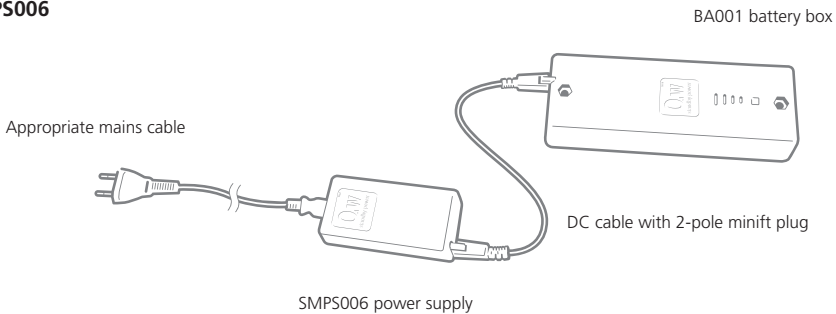


Charging via the SMPS006:

A SMPS006 is typically used for charging in a HOMELINE® application or in an application where one prefers to dismount and e.g. replace the battery with another battery when charging. Simply connect the BA001 to the SMPS006. The SMPS006 is a universal power supply with exchangeable cables connecting to the mains and to the BA001. Read more about the SMPS006 and which cables are available [here \(link\)](#) .

The charging time is approx. 5 hours at room temperature (around 20° C). The LED light bars turn off when fully charged. When the SMPS006 charger is connected to the BA001 and charging starts, the battery will beep twice.

SMPS006



Change between mains supply and battery use on the CBD6S:

Please observe that when you change from standard mains supply to the BA001 the first operation may be at a lower speed/performance. This only refers to the very first operation after the disconnection of the mains supply.

The technical reason for this is that the charge left in the control box is still high, so the control box assumes the mains supply is still connected and regulates according to mains supply characteristics.

After about ½ hour, or after trying to operate without power, the charge is low enough to be detected as battery operation mode. The same goes if operated with battery once.

Packaging and transportation

The BA001 is a Lithium Ion battery and must be packed and transported according to applicable regulations. This must also be considered when repacking and in case of return shipment. Note: Damaged batteries cannot be transported.

Packaging

The BA001 boxes are to be packed according to UN3480 PI: 965 Section II. From the factory, the battery is packed in a primary and a secondary packaging. The primary packaging is a single piece; the secondary packaging contains 8 pieces. The primary and secondary packaging is labelled with the label shown below (example) indicating that the package contains Lithium Ion batteries.



Before unpacking, please inspect the packaging for damages to avoid any injuries.



Damaged batteries must be disposed according to the material safety data sheet of the BA001 and local regulations.



The BA001 can be packed with other products/components, but it must remain in the primary packaging and the new secondary packaging must be labelled with the label shown above. The label must be placed visible at the secondary box/overpack.

Transportation

When transporting the BA001 (a Lithium Ion battery) the current regulations must be observed. This applies to ADR (road transportation), IATA (air shipping) and IMDG (sea freight). When transporting, pay attention to handling and minimise the risk of e.g. dropping the batteries and thereby prevent malfunction and injuries.

Storage

The batteries must be stored in an applicable storage room avoiding direct sun light and high temperatures.

The recommended storage conditions are:

Temperature:	0°C to +45°C
Relative humidity:	45-85% RH
Air pressure:	700-1060 hPa
Altitude:	< 2000 m
Recharging during storage	Recharge the battery 6 months at the latest after production date stated on the label.

Storage temperature range:

Period:	Temperature range:
1 year	0° to +25°C
6 months	0° to +50°C
1 month	0° to +60°C

Accessories and repair

Ordering accessories

Order from your nearest LINAK® dealer or subsidiary.

Accessories

Please contact your nearest LINAK dealer for information.

Repairs

Systems should only be repaired by an authorised LINAK service centre or engineer. Systems to be repaired under warranty must be sent to an authorised LINAK service centre.



Warning!

By unauthorised opening of the system there is a risk that it may malfunction at a later date.

Spare parts

Please contact your nearest LINAK dealer for information on spare parts.

Disposal of LINAK's products

As LINAK's customers often ask us how our products can be disposed or scrapped we have prepared this guidance that enables a classification to different waste fractions for recycling or combustion.

Guidance

We recommend our products to be disassembled as much as possible and divided into different waste groups for recycling or combustion.

For example, waste can be sorted into metals, plastics, cable scrap, combustible material, and recoverable resources.

Some of these main groups can be further divided into subgroups; e.g. metal can be divided into steel/ aluminium/copper and plastic can be divided into ABS/PA/PE/PP.

As an example, the table below breaks down the different components in LINAK products to various recycling groups:

Product	Components	Recycling group
Column/ Actuator :	Spindle and motor Plastic housing Cable PCB boards	Scrap Plastic recycling or combustion Cable scrap or combustion Electronics scrap
Control Box :	PCB boards Plastic housing Cable Transformer	Electronics scrap Plastic recycling or combustion Cable scrap or combustion Metal scrap
Handset/Control :	Plastic housing Cable PCB board	Plastic recycling or combustion Cable scrap or combustion Electronics scrap

By now almost all our casted plastic parts are supplied with an interior code for plastic type and fibre contents, if any.

Main groups of disposal

Product main groups	Metal scrap	Cable scrap	Electronics scrap	Plastic recycling or combustin	Comments
BA001	X		X	X	

Disposal of batteries

Details regarding safe disposal of used and leaking batteries:

Batteries should be disposed in accordance with appropriate federal, state and local regulations. LINAK recommends that used or leaking batteries are disposed through local recycling system. Please do not throw used or leaking batteries in normal household waste or in nature. This will cause damage to the environment.

How to deal with leaking batteries.

Leaking batteries should be disposed as described above.

If leaking batteries are discovered in the product the batteries must be removed at once to minimise damage to the product. If leaking batteries are left in the product it might become defect.

It is recommended to use plastic gloves when handling leaking batteries. The contents of a leaking batteries can cause chemical burns and respiratory irritation.

If exposed to the contents of a leaking battery, please wash with soap and water. If irritation persists, please seek medical attention. In case of eye contact, please flush eyes thoroughly with water for 15 minutes and seek medical attention."

Labels

Label for BA001

LINAK  GROUP
HEADQUARTERS
SMEDEVAENGET 8
DK 6430 NORDBORG

WE IMPROVE YOUR LIFE

Item:BA001 Li-ion Battery 24V 2.2Ah 53Wh
U Out:24V --- , I Out Max.9A
U In:Charge 29V-40V --- , I In Max 0.5A

CAUTION

- DO NOT SHORT CIRCUIT.
- MUST BE DISPOSED OF ACCORDING TO SAFETY DATA SHEET.
- DO NOT USE A DAMAGED BATTERY
- USE SPECIFIED CHARGER ONLY.
- MAY EXPLODE IF DISPOSED IN FIRE.

Battery pack produced by
Greenway for LINAK

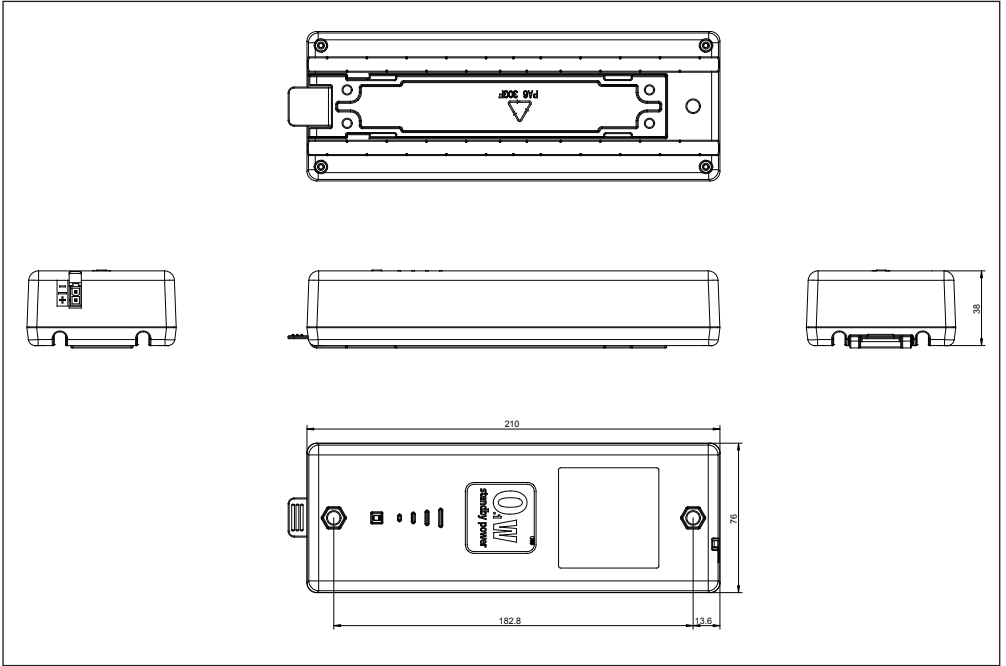
Assembled in China

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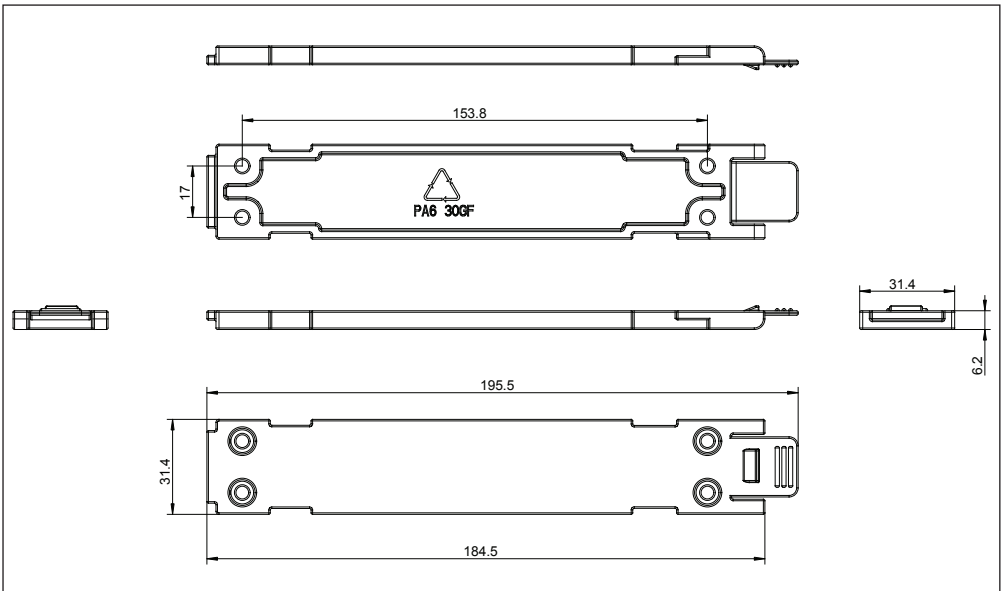
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DRAWING APPENDIX

BA001



BA001 Battery mounting bracket



LINAK APPLICATION POLICY

The purpose of the application policy is to define areas of responsibilities in relation to applying a LINAK product defined as hardware, software, technical advice, etc. related to an existing or new customer application.

LINAK products as defined above are applicable for a wide range of applications within the Medical, Furniture, Desk and Industry areas. Yet, LINAK cannot know all the conditions under which LINAK products will be installed, used, and operated, as each individual application is unique.

The suitability and functionality of the LINAK product and its performance under varying conditions (application, vibration, load, humidity, temperature, frequency, etc.) can only be verified by testing, and shall ultimately be the responsibility of the LINAK customer using any LINAK product.

LINAK shall be responsible solely that the LINAK products comply with the specifications set out by LINAK and it shall be the responsibility of the LINAK customer to ensure that the specific LINAK product can be used for the application in question.