

CONTROL BOX CB9 CARELINE®

Features:

- Connection of max. 4 actuators, type LA31/LA31R and LA34/ LA34R, via 4-pole DIN sockets.
- Compatible with the Rotary actuator, RA40 (only AD type)
- Extremely compact design
- Mains voltage: 100/120/230V AC 50-60 Hz
- Duty cycle: Max. 10% or 2 min. continuous use followed by 18 min. not in use
- Output voltage 24V DC
- Ambient temperature: +5° to +40°C
- Protection class: IP54 or 66 (not for wash tunnels)
- Colour: Grey or black
- DIN-socket for handsets:
 - Ax types: HB40, HB60, HB70, DP or FS
 - Px types: HB4XE, HB5XE, HB60M (PM/IPN versions), HB7XE/W, DPXE or DP1M
- 3.2 m exchangeable straight mains cable
- EOP = Electronic Overload Protection (only AC, AD, AF, AG, AS and Px types)
 - AD and AG types CH1+2 via common current cut off; CH3 + 4 has no EOP!
 - AS type via individual current cut off
 - Px type via pulse measurement
- Medically approved according to EN 60601-1/ UL 2601-1
- Locking mechanism for DIN plugs and mains cable
- Electronic protection of the relays for extended lifetime, EAS (simple EAS); available on AC, AD, AE, AF, AG, AH and Px (not PM and PN) types
- Double power control (FET + relay) monitoring on all AC, AD and AE types.
- Class 1 or 2 protection
- Power supply indication via an LED. Not available with mains cut-off.
- Exchangeable mains fuse from outside
- External battery back up and internal charger (only AC, AD, AE, AF, AG and AH types; use notation A for ordering)
- External battery back-up (no internal charger) (only AC, AD, AE, AF, AG and AH types; use notation B for ordering)
- All functionalities are compatible with mains cut-off



CARELINE®
IMPROVING EFFICIENCY

The CARELINE® CB9 has been developed for use together with LA31/LA31R, LA34/LA34R¹⁾ and the Rotary actuator, RA40 in the Care & Rehab industry. CB9 and LA31 can be fully integrated which saves mounting and wiring or be installed separately.

Exchangeable mains cables, Electronic Overload Protection (EOP), EAS, earth connection (Class 1) and exchangeable mains fuse makes CB9 a good choice for the simple hospital and care beds.

The CARELINE® CB9 series is available as either analogue (Ax) or μ -processor based (Px) types.

The Ax and PX types are developed especially for the Care & Rehab industry and are medically approved according to EN 60601-1/UL2601-1 (IEC 601-1).

With LINAK software packages the Px types are aimed at applications such as workstations, work tables and desks, where parallel drive and/or memory functions are required. Please consult the ordering example for a detailed description of the article number.

¹⁾ The combination of LA34R/CB9"PX" is only available as a special article.

Features only available in Px types:

- Choice of 8 different standard software packages.
All standard software packages have either impulse memory or memory. To use memory in general a handset with memory has to be chosen.
- Approved according to EN 60335-1
- Energy saving function (the control box restores to power down when not operated)
- Compact high power toroidal transformer with low power consumption and low electromagnetic emission.
- All actuators, which are used together with Px types, must be equipped with reed switch and connected with a DIN-plug.

AC and AF: Means common measurement on CH1, CH2, CH3 and CH4. If the total current exceeds 5A all channels will be cut off.

AD and AG: Means a common current measurement on CH1+2. The current will be cut off when the total current on both channels reaches approx. 3.4A.

Note: CH1+2 = RA40 connection and CH3+4 = LA31/LA34 connection.

AS: Means an individual current measurement on CH1, CH2, CH3 and CH4. The current will be cut off only when the current on one channel reaches approx. 4A. Max. current available from the CB9 transformer is approx. 6.5 A.

Example of no protection: If you have CH1 = 3A, CH2 = 3A, CH3 = 3A => 9A in total there is no EOP of the channels and the CB is overloaded!

Px: Means Electronic Overload Protection via a pulse measurement.

Options (has to be stated separately):

- Can be mounted on the LA31
- Customised software may be ordered. Please see the guidelines for design of special software!

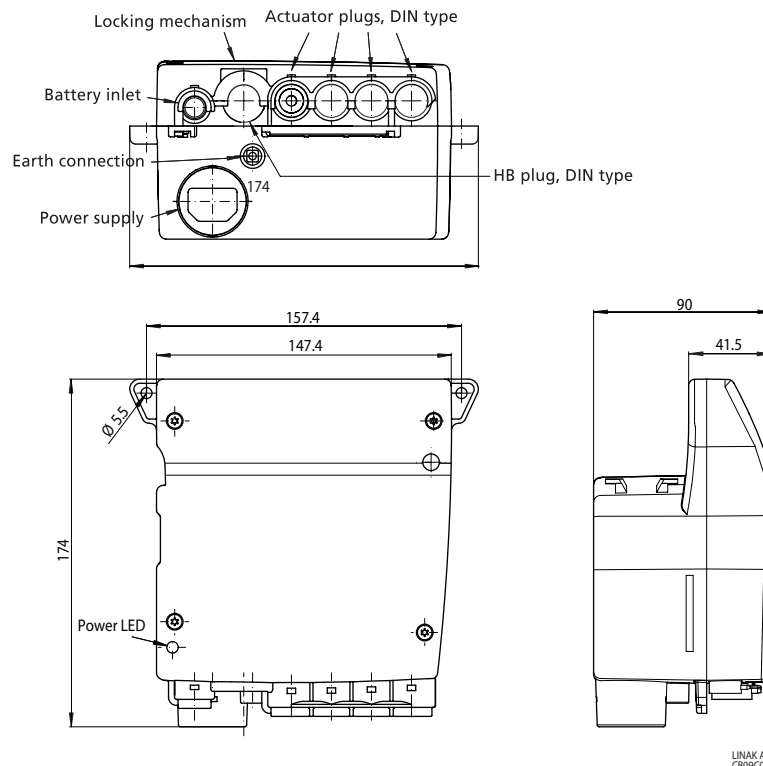


NOTE:

LA34 fast motor is not compatible with any standard versions of CB9, due to high current consumption. For use of LA34 standard motor and small motor always use a CB9 with EAS.

Additionally, actuators with reed switch is not working with AC, AD, AE, AF, AG or AH types because of a conflict between the CB-signal wires and the reed wires.

CARELINE® CB9



Note: The tolerance between the mounting holes is +/- 0.5 mm.

CB9 CARELINE®
Ordering example:

CB9 1 6 0 AS 4 + 0 0 0 1A

Mains cable

Careline, LINAK connector, without earth:

	Black	Grey
10 = Straight, EU, straight mains-plug-end and straight CB-end	0015185	0015196
11 = Coiled, EU, straight mains-plug-end and straight CB-end	0015186	0015197
13 = Straight, UK, angled mains-plug-end and straight CB-end	0015193	
14 = Straight, Japan, straight mains-plug-end and straight CB-end	0015192	0015253
15 = Straight, USA, straight mains-plug-end and straight CB-end	0015194	
17 = Straight, Aus, straight mains-plug-end and straight CB-end	0015239	0015264
19 = Without cable		

Careline, LINAK connector, with earth:

	Black	Grey
1A = Straight, EU, angled mains-plug-end and straight CB-end	0015183	0015184
1B = Coiled, EU, angled mains-plug-end and straight CB-end	0015191	0015198
1D = Straight, UK, angled mains-plug-end and straight CB-end	0015275	
1F = Straight, USA, straight mains-plug-end and straight CB-end	0015195	
1G = Straight, CH, straight mains-plug-end and straight CB-end	0015242	
1H = Straight, Aus, straight mains-plug-end and straight CB-end	0015241	
1J = Without cable		

Careline, mains cut-off, non-detachable, without earth:

	Black	Grey
F0 = Straight, EU (only CB9-trafo)	00WP039C00-00	

Careline, mains cut-off, non-detachable, with earth:

	Black	Grey
FA = Straight, EU (only CB9-trafo)	00WP039C00-0A	

Mains voltage

- 0 = CB9 transformer 230V
- 1 = CB9 transformer 120V
- 2 = CB9 transformer 100V
- 3 = CB18 transformer 230V (only AF, AG, AH or AS-functionality)
- 4 = CB18 transformer 120V (only AF, AG, AH or AS-functionality)
- 5 = CB18 transformer 100V (only AF, AG, AH or AS-functionality)

Fuse cover

- 0 = No
- 1 = Yes

Battery

- 0 = No battery
- A = Con. for ext. 24V bat. and internal charger (only AC, AD, AE, AF, AG or AH func. and not with mains cut-off)
- B = Con. for ext. 24V bat. (no internal charger) (only AC, AD, AE, AF, AG or AH functionality)

Colour

- + = Grey
- = Black

No. of channels 1 - 4

Functionality

Without microprocessor (analog)

	Current cut-off	Compatibel with rotary actuator	EAS	Compatible with CB18-transformer
AS	4,1A at all ch.			X
AC	5,0A at all ch.		X	
AD	3,4A at ch.1 & 2	X	X	
AE			X	
AF	5,0A at all ch.		X	X
AG	3,4A at ch.1 & 2		X	X
AH			X	X

AS-func. Is not for new designs. Please use ACfunc. Instead!

With microprocessor (with memory)

		Impuls drive	EAS
PM	Single		
PN	Single, alternative funct.	X	
PA	Parallel on ch 1/2	X	X
PB	Single	X	X
PC	Parallel on ch 1/2/3		X
PD	Parallel on ch 1/2/3	X	X
PH	Single		X
PI	Parallel on ch 1/3 and 2/4		X
PJ	Parallel on ch 1/3 and 2/4	X	X
PP	Parallel on ch 1/2		X

Not used

0

IP degree

- 4 = IP54
- 6 = IP66

Plastic housing

- 1 = Careline (no mains-indicator and no fuse-cover if mains cut-off)

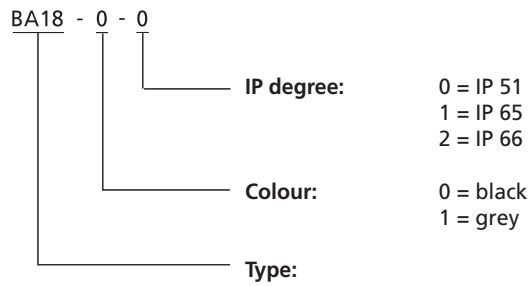
Type CB9



NOTE:
State separately if CB9 and LA31 are to be mounted together.

BA1800 - External battery box

Ordering example:



An external charging device is not available as standard article.



When activating several channels and they are at the same time independent of each other, contact technical support (related to simple EAS design).

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- **It is possible to order blind plugs for CB9 CARELINE IP 66**

Order number:

Grey: 00931082
Black: 00931081

O-rings are not needed for these rubber plugs.

- **It is also possible to order blind plugs for the external battery box outlet (for BA1800)**

Order number:

Grey: 00918035
Black: 00918034
O-rings: 0007018

The blind plugs are delivered in plastic bags of 100 units in each bag.

- **When ordering a CB with mains cable the O-ring and locking ring are automatically included (to maintain the IP degree)**

When ordering a mains cable you only need to specify if the O-ring and / or locking ring are required.

Order number:

O-ring: 0007029
Locking ring: 00912007

Specifications subject to change without prior notice.
It is the responsibility of the product user to determine the suitability of LINAK A/S products for a specific application. LINAK will at point of delivery replace/repair defective products covered by the warranty if promptly returned to the factory. No liability is assumed beyond such replacement/repair.