



## Control Box CA30 - CA40

### Data sheet

# CA30 - CA40

The control boxes CA30 and CA40 are developed as part of a new control box platform for the care and rehab industry. The control boxes can be mounted separately on the application by means of unique slide-on brackets, but also on several actuator models using a specially designed actuator bracket.

The CA30 and CA40 control boxes are equipped with SMPS (Switch Mode Power Supply) for worldwide operation and optimised performance. The power outputs for channels 1 – 4 are located inside the box. The box has 3 cable exits which make it easy to choose the most suitable cable layout in the application. The control box lid has a double cover and cable lock function. FETs (Field-Effect Transistors), IPX6 Washable DURA™ and a battery port are all standard options.

The CA30 and CA40 communicate with the actuator by means of the built-in end stop switches.



## Features:

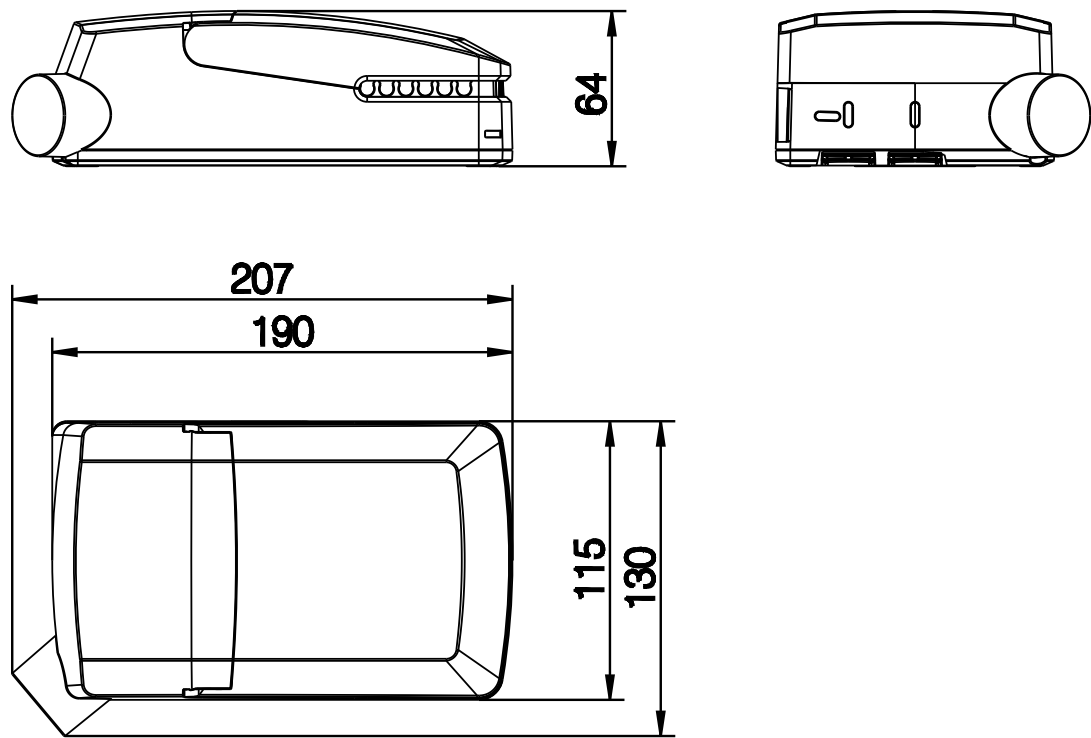
- Power supply: Universal, 120 W power output (Switch Mode Power Supply) 100-240 VAC, 50/60 Hz
- Mains indicator: Yes
- Actuator interface: 2 or 4 channels, 6-pin minifit
- Hand-control interface: 1 port, 10-pin modular plug
- Battery interface: 1 port, 4-pin minifit, (Output 300 mA - no actuator running)
- Standby power: Approx. 0.5 W (230 V)
- Colour: Light grey (RAL 7035)
- Output short circuit protected: Yes
- Control concept: FET (no relay noise)
- Duty cycle: 10 % - 2/18 min. on/off continuous use. Maximum power is 120 W for 80 seconds and 60 W for 40 seconds at 25°C
- Weight: Low weight 0.5 kg
- Actuator compatibility: All standard actuators (signal and power switch)
- Battery charger: Battery input available, No charger, but supports battery with internal charger
- EOP: Yes
- IP-Rating: IPX6 Washable DURA™
- Operation: Simultaneous drive (no feedback)

- Max. current: 8 A/CH (peak) total
- Power management: Voltage regulation to ensure max. performance and to limit the output power to max. 120 W
- Safety system: Thermally protected. Short-circuit protected. Hot-plugging protected.
- Protection class: Class 2. Class 1 is possible with pigtail on mains cable
- Cable lock: Integrated in lid
- Mounting: Compatible with a wide range of mounting brackets: Bed frame, LA27, LA31, LA40

## Usage:

- Operation temperature: +5 °C to +40 °C
- Storage temperature: -10 °C to +50 °C
- Relative humidity: 20% - 90% at 30 °C - not condensing
- Atmospheric pressure: 700 to 1060 hPa
- Meters above sea level: Max. 2000 meters
- Approvals:
  - IEC60601-1:2005 3<sup>rd</sup> edition
  - ANSI/AAMI ES60601-1:2005 3<sup>rd</sup> edition
  - CAN/CSA-22.2 No 60601-1:2008
  - DENAN Technical Requirements Ministerial Ordinance Appendix 8, 10

CA30 - CA40  
Dimension:



CA30 - CA40  
Ordering example:

C	A	3	+	0	9	2	1	1	N	0	9	0	0	0	
															Not used
															Not used
															Not used
															Class
															Not used
															Software
															Voltages
															Effect
															Channels
															IP degree
															H-bridge
															Colour
															Housing
															Functionality
															Family

9 = 2 Pole (Without earth. Class II) Without cable

N = None

1 = 100 - 240VAC +15%/-10%

1 = 120W

2 = 2 Channels

4 = 4 Channels

9 = IPX6 Washable DURA™

0 = Half bridge

+ = RAL7035 light grey

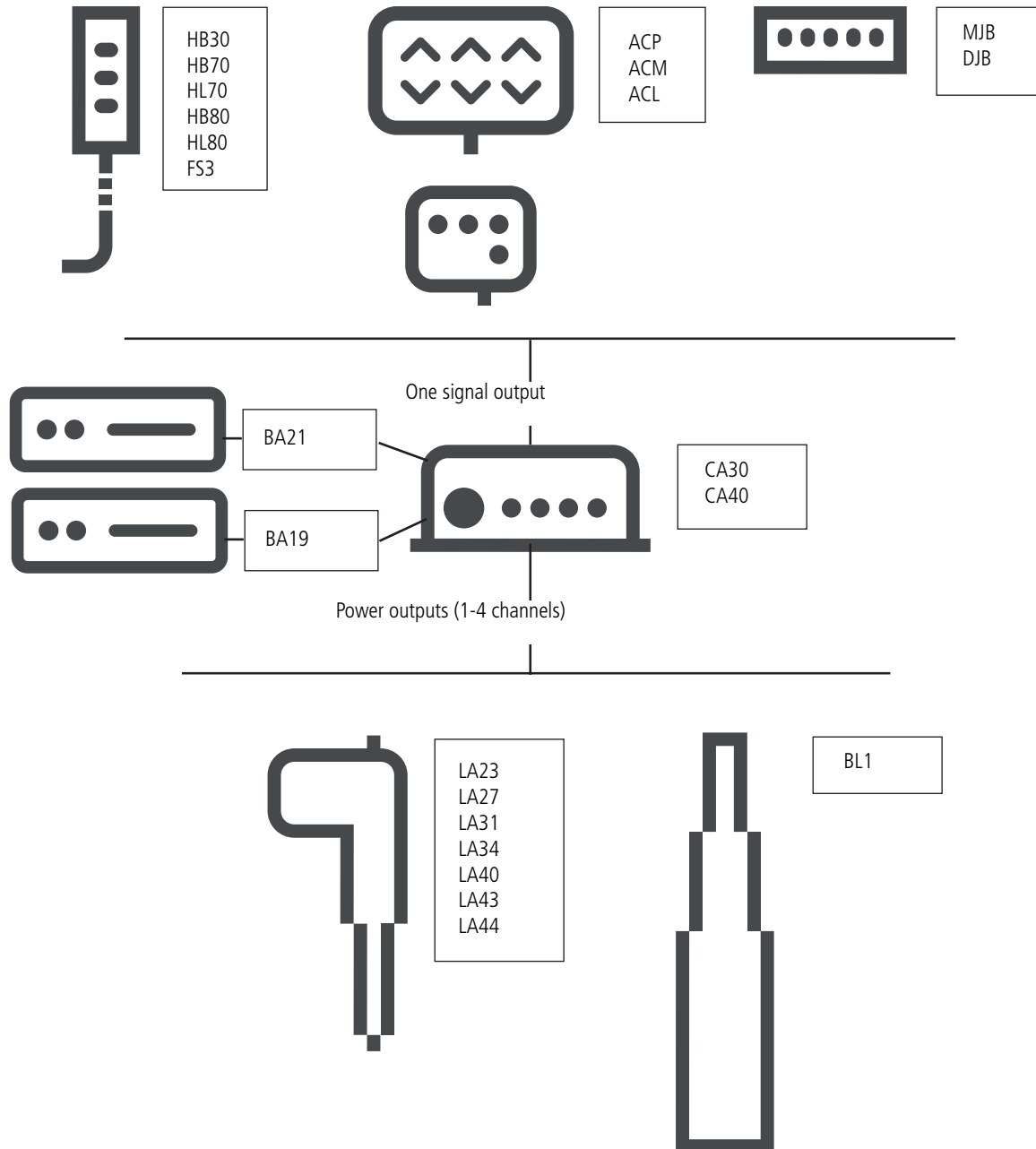
3 = CA30 (2 channel)

4 = CA40 (4 channel)

A = Basic - Analogue input

C = Control Box

## CA30 - CA40 Platform - System Overview



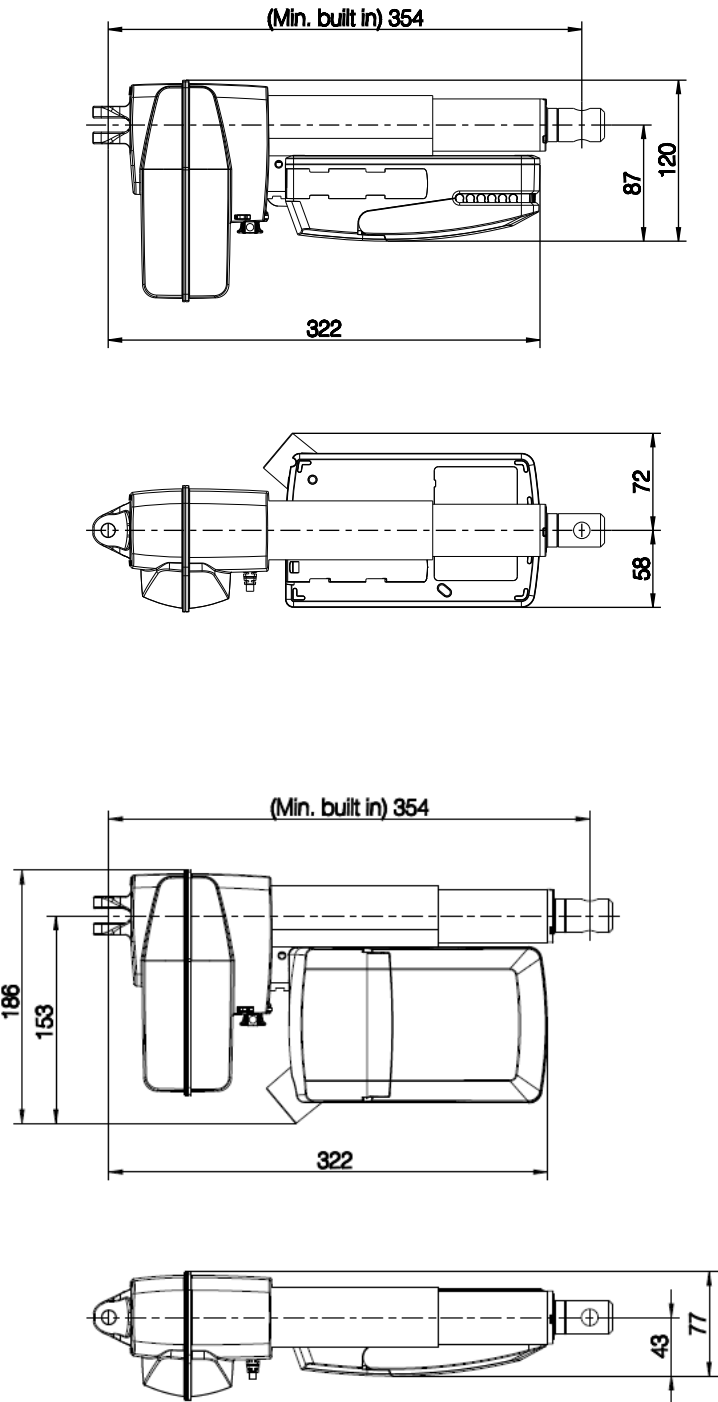
### CA30-CA40 is meant for use with:

LA23 std. motor  
 LA27 std. motor (cable type '0 or B')  
 LA31 std. / fast motor  
 LA34 std. / small motor  
 LA40 std. motor  
 LA43 std. motor  
 LA44 std. / fast motor (fast motor not max. load)  
 BL1  
 HB30, HB/HL7X, HB/HL8X, FS3, ACL/ACM/ACP  
 BA21  
 BA19

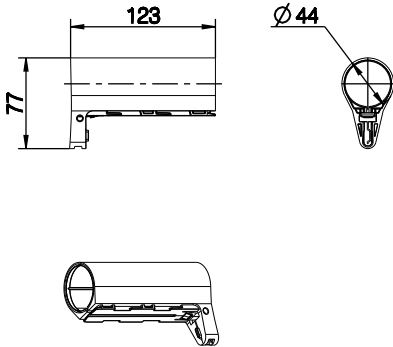
**CA30 - CA40 mounting**

The light weight of CA30/CA40 allows for mounting on an wide range of actuators. For mounting on a LINAK actuator (LA27, LA31 or LA40), a CA30/CA40 mounting bracket is required.

**Dimensions - mounted with LA40**



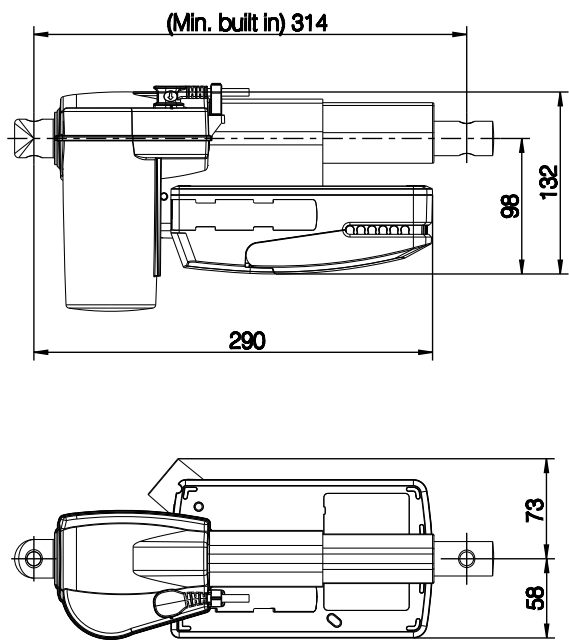
**Mounting bracket**



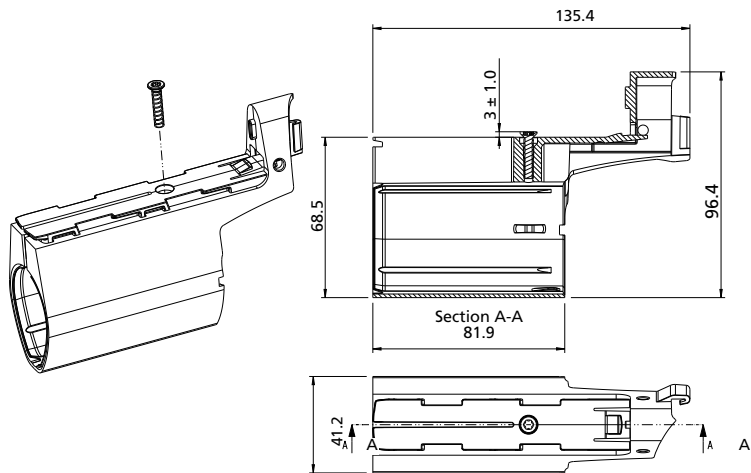
**Min. built-in dimensions**

LA27	314
LA31	333
LA40	354

Dimensions - mounted with LA27



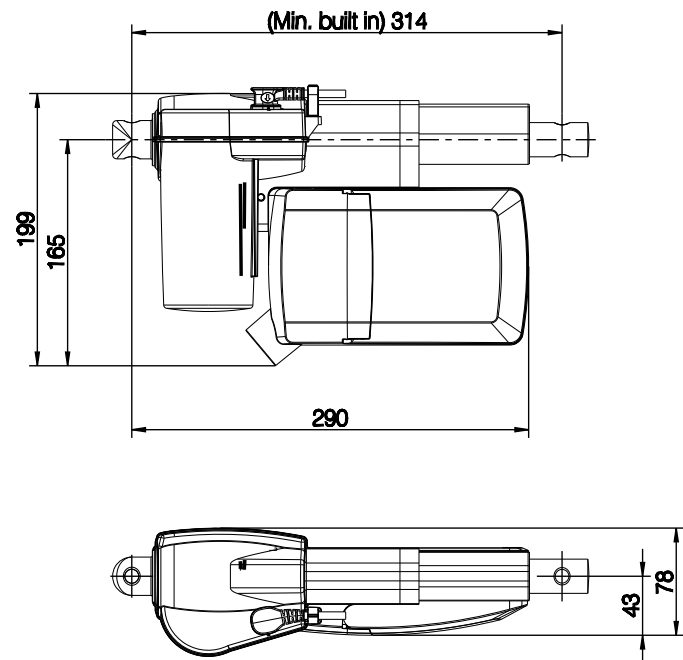
Mounting bracket



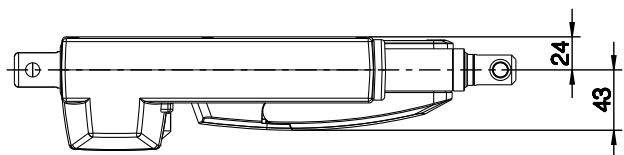
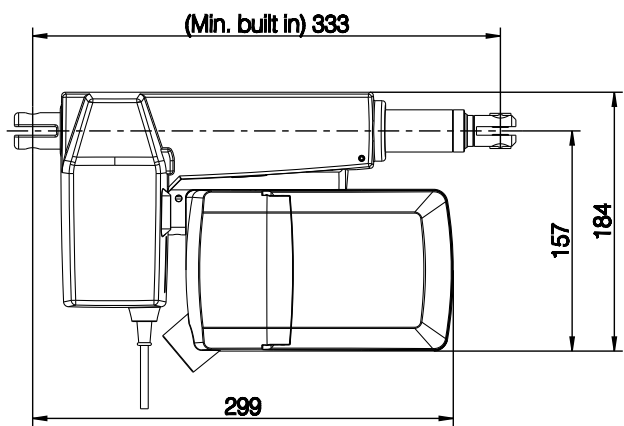
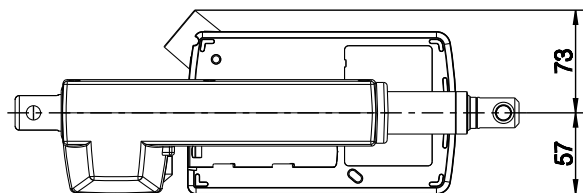
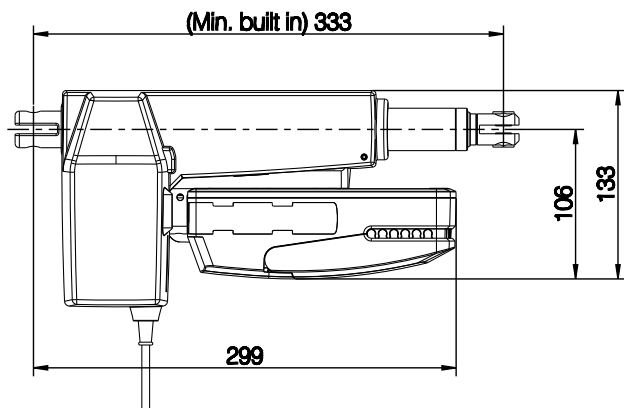
The adapter 1015W9003 includes a screw that is halfway mounted, thus everything as one part.

Screw head torx size: T15

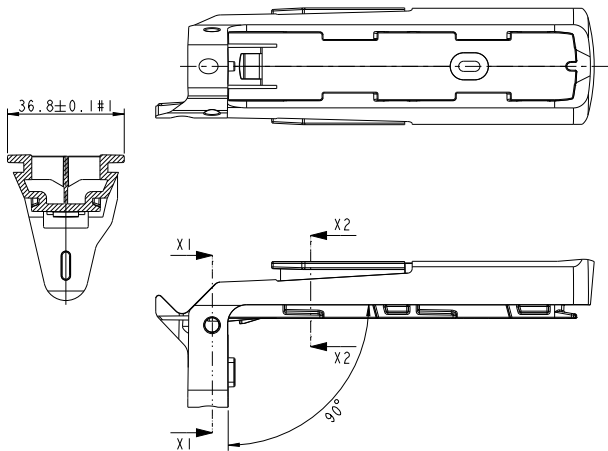
Screw torque: 1.2 ± 0.2 Nm



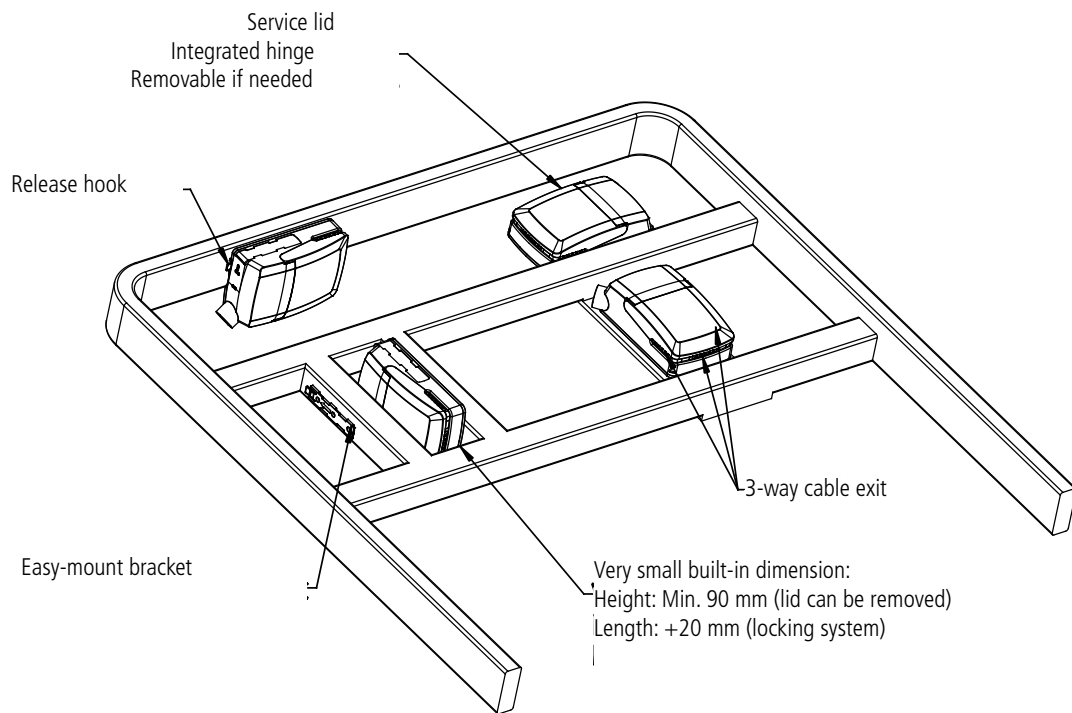
Dimensions - mounted with LA31



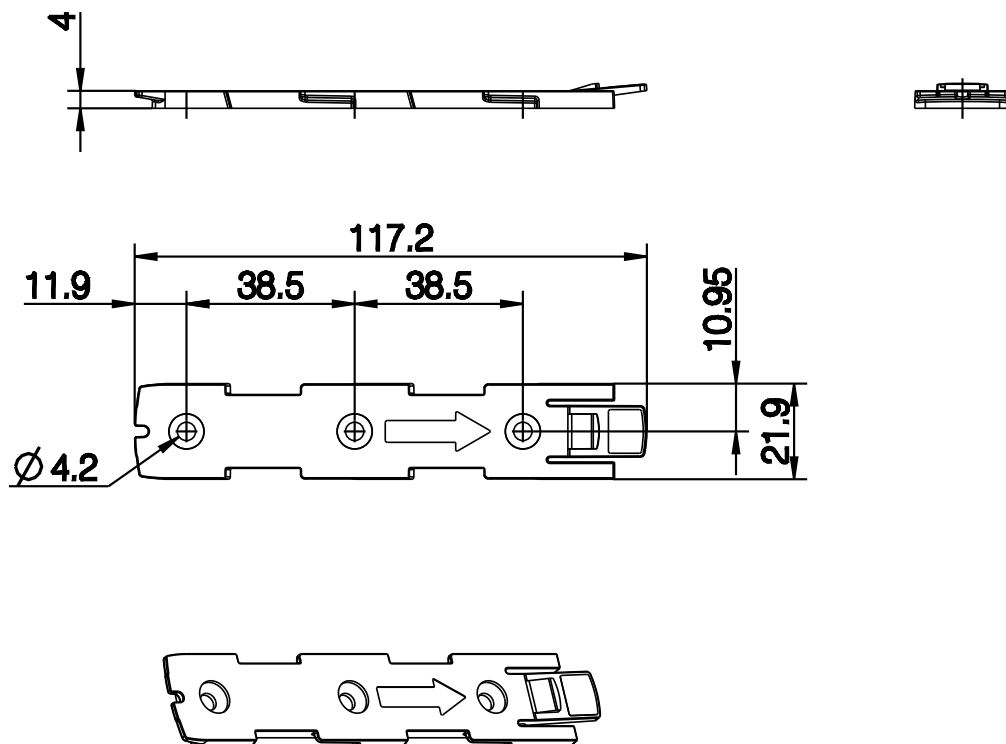
Mounting bracket



### CA30-CA40 - mounted on frame:



### Mounting bracket (frame flat)



It is recommended that the CA30/CA40 is mounted in a position that allows water to escape.

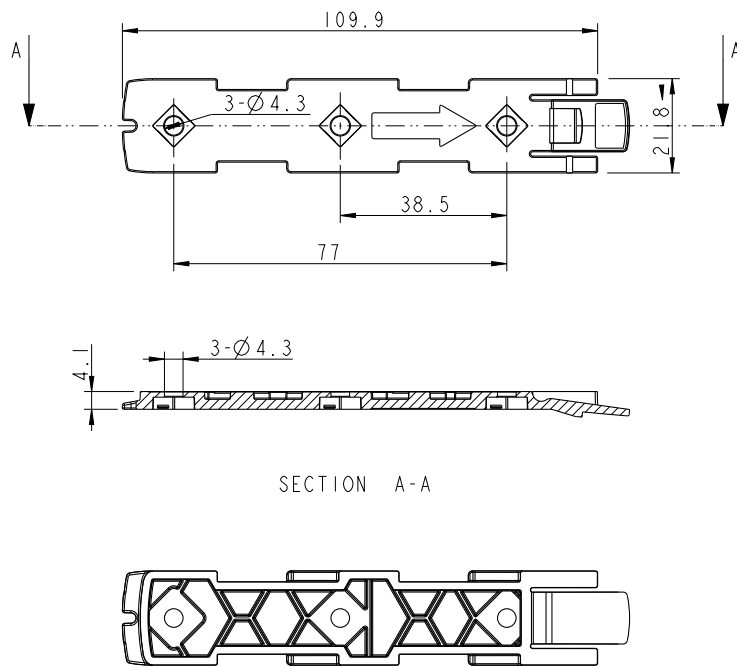
Recommended torque: 0.6 Nm +/-0.1

The bracket can be mounted to the bed frame or any other application by means of one of the following mounting procedures:

- 1) M6 nut to be placed in bracket and fixed with M6 bolt from the rear side.
- 2) M5 machine screw with flat washer to be fixed through bracket with nut on the rear side.
- 3) Self-tapping screw to be placed through bracket and onto the frame.



### Mounting bracket (frame flat) w/M4 nuts



It is recommended that the CA30/CA40 is mounted in a position that allows water to escape.

Recommended torque: 0.6Nm +/-0.1

The bracket can be mounted to the bed frame or any other application by means of one of the following mounting procedures:

- 1) M6 nut to be placed in bracket and fixed with M6 bolt from the rear side.
- 2) M5 machine screw with flat washer to be fixed through bracket with nut on the rear side.
- 3) Self-tapping screw to be placed through bracket and onto the frame.

### Mounting of cables and cable lock:

The control boxes CA30/CA40 have a uniquely designed cable lid. The lid also works as an integrated cable lock when closed.

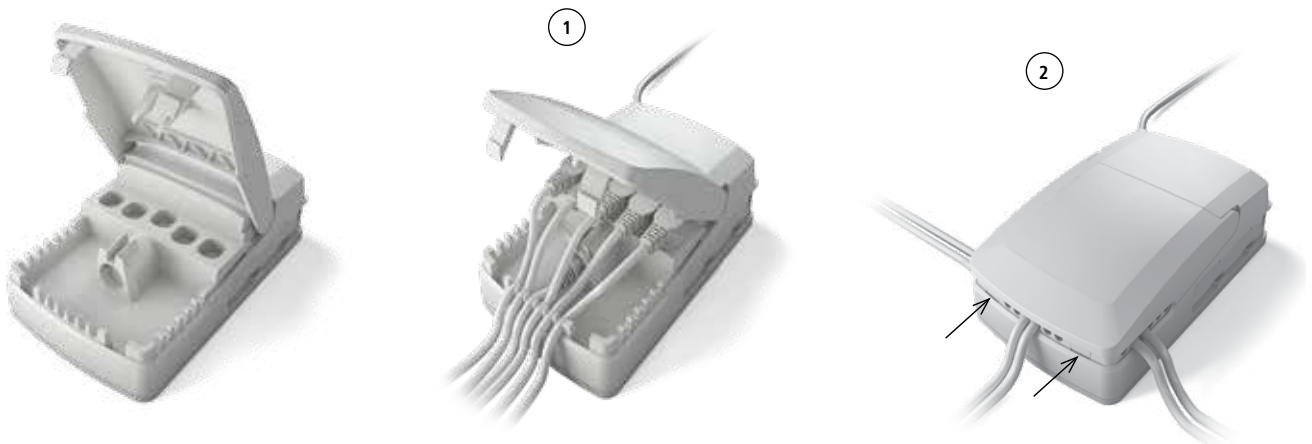
- 1) Mount cable plugs in control box
- 2) Close lid until lock snaps into place (see red arrows)

To allow free access to the cables, the lid has a rest position when completely opened.

It is possible to remove the lid by lifting it a few degrees and pulling it away from the housing under tight mounting conditions.

See illustrations:

### Cable management:







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## Control Box CB8-A Data sheet

# CB8-A

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The CB8A is a battery powered control box operating up to 3 actuators individually. One of these channels can be used either as an external emergency stop device or for battery charging.

Simple design and high quality construction make the CB8A an ideal control box choice for mains-free operation of beds, chairs, tables and many other mobile applications.



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## Features and Options:

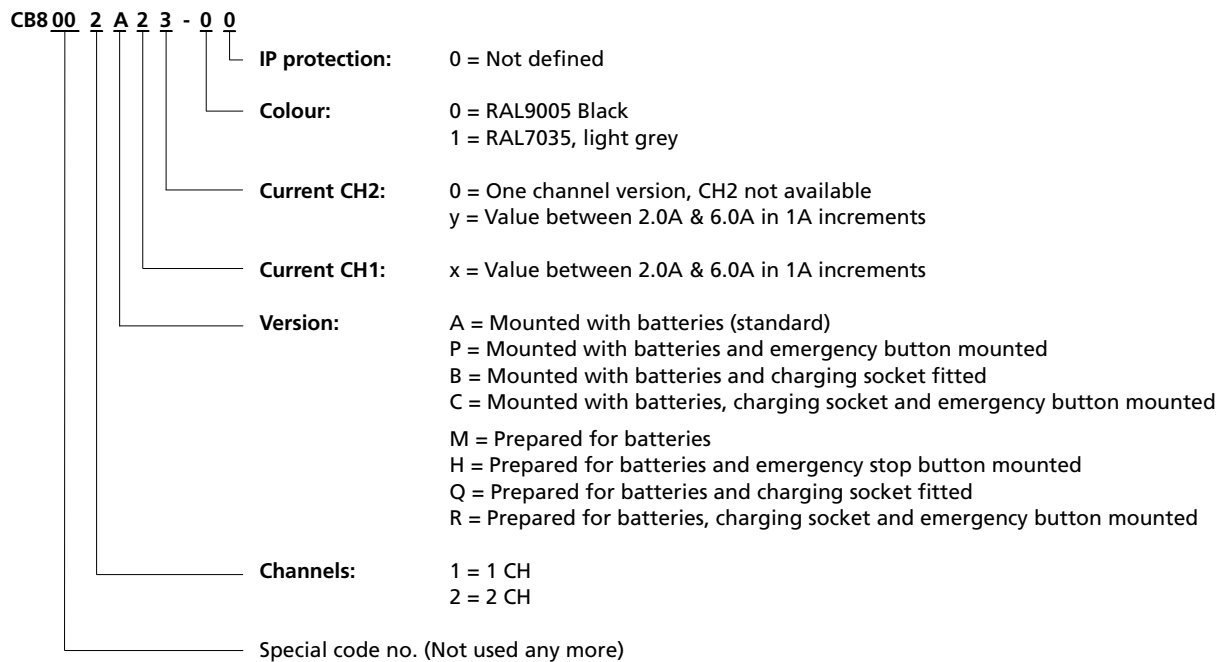
- Connection of up to 3 actuators
- Output voltage 24 V DC
- Colour: black
- High-capacity (2.9 Ah) batteries enable long period of operation between charges
- 8 Pin DIN-socket for handset
- Snap-fit top battery compartment for easy battery removal
- Recharging through external charger CH01 plugged into handset HB40A or directly into the CB8A
- Acoustic alarm sounds when batteries are low and recharging should be started.  
The alarm level corresponds to approx. 17-18 VDC
- Extremely compact design
- Electronic overload protection (EOP) prevents overload of the actuator

## Usage:

- Duty cycle: Max 10% or 2 min. in use followed by 18 min. not in use
- Ambient temperature +5° to +40° C
- Approvals: IEC60601-1:2005 3<sup>rd</sup> edition approved  
ANSI/AAMI ES60601-1:2005 3<sup>rd</sup> edition approved

## CB8-2A - for two channels

Ordering example:



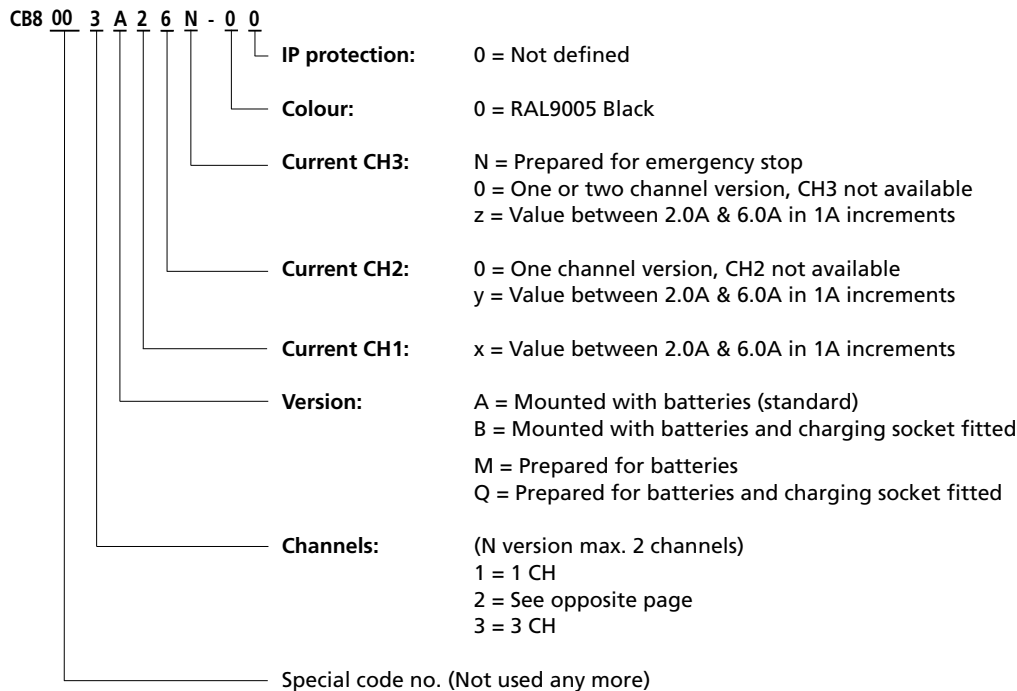
Max. connection of one 6 amp acutator to CB08002A.

Chargers to be ordered separately.

Battery kit (BA0801) has to be ordered separately for M, H, Q, R-versions

## CB8-3A - for three channels

Ordering example:



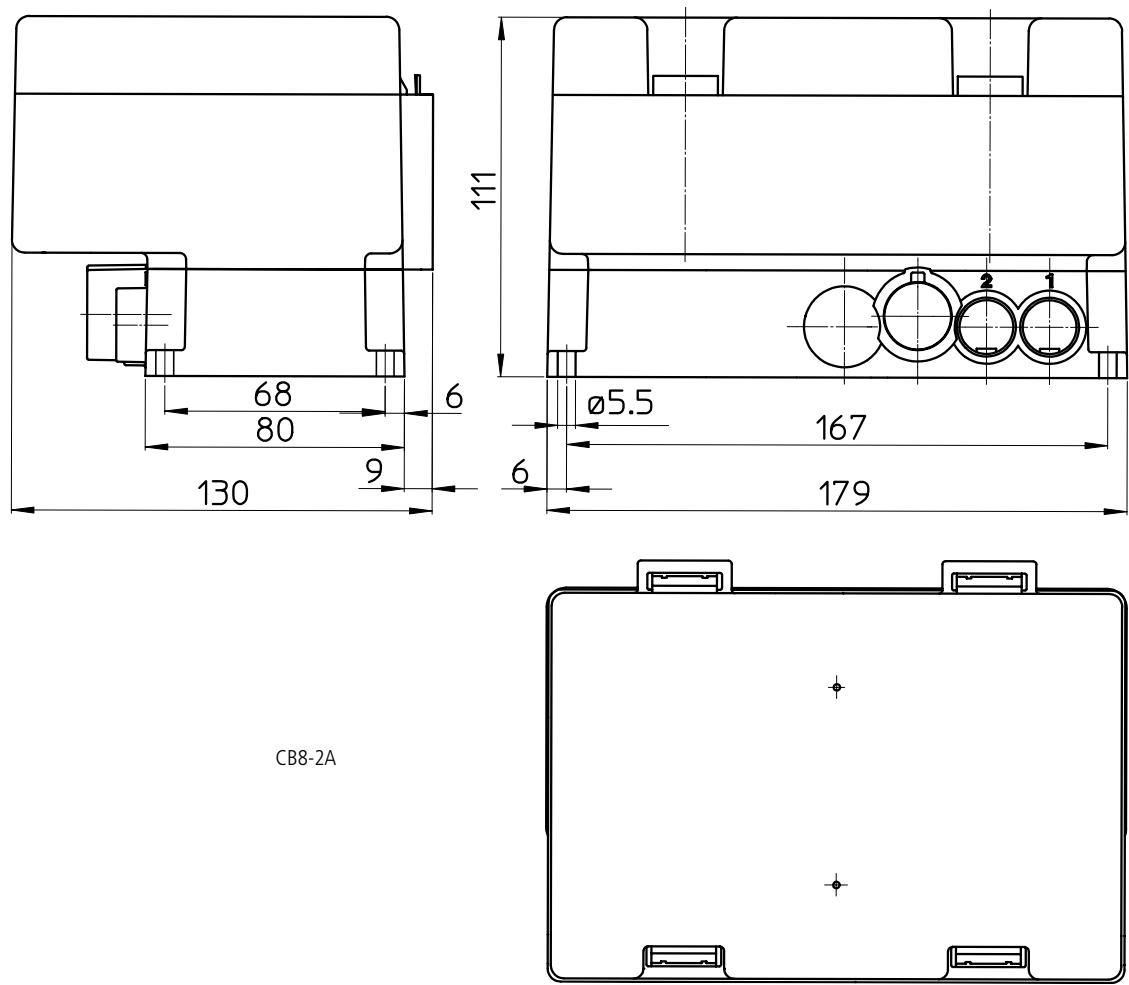
Max. connection of one 6 amp acutator to CB08003A.

Chargers to be ordered separately.

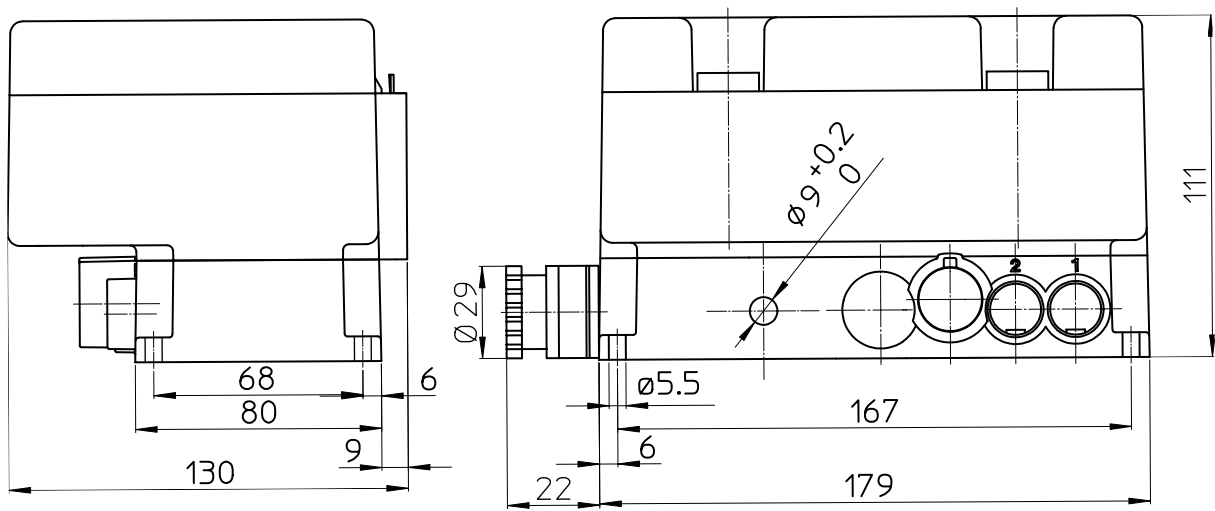
Battery kit to be ordered separately for M,Q-version.

Pls. note: It's only possible to charge CB0800xA, CB0800xM through HB4xA

Dimensions CB8A with 2 channels:

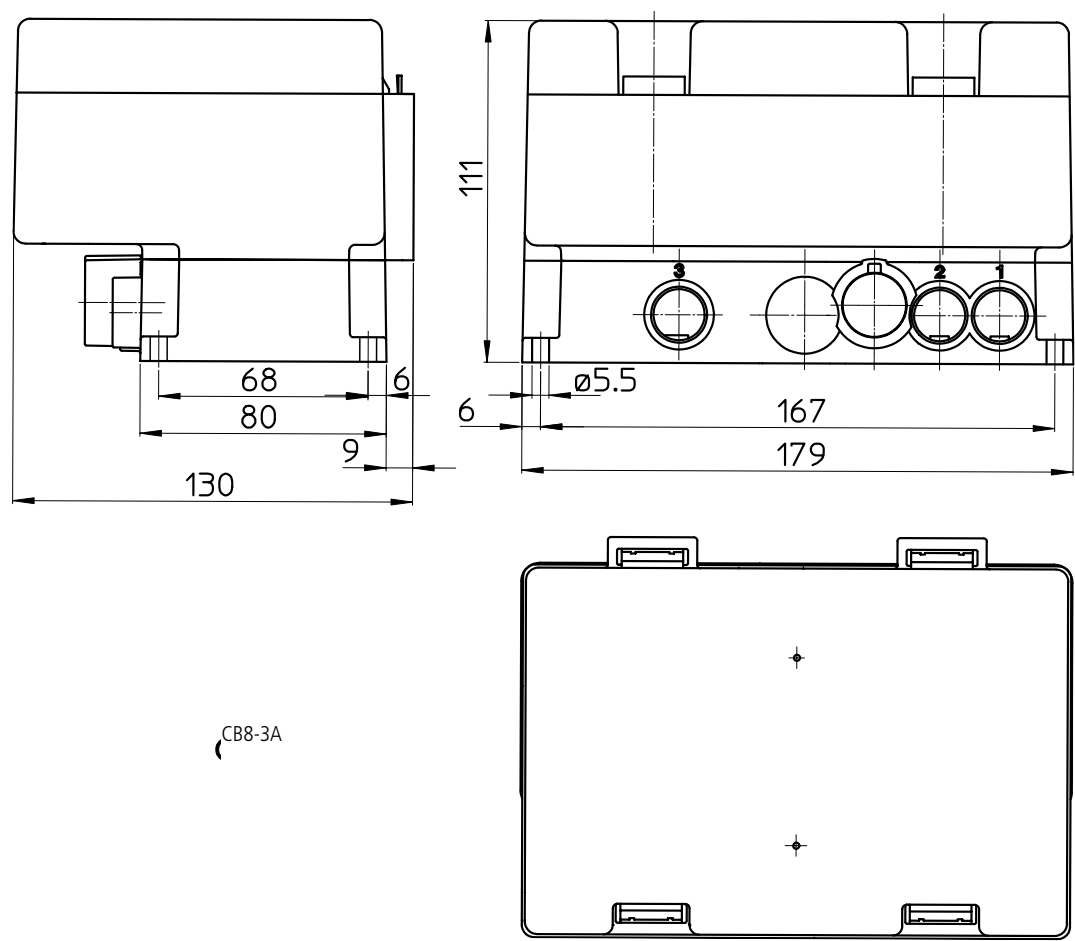


Dimensions CB8A with emergency stop button + charging connection:

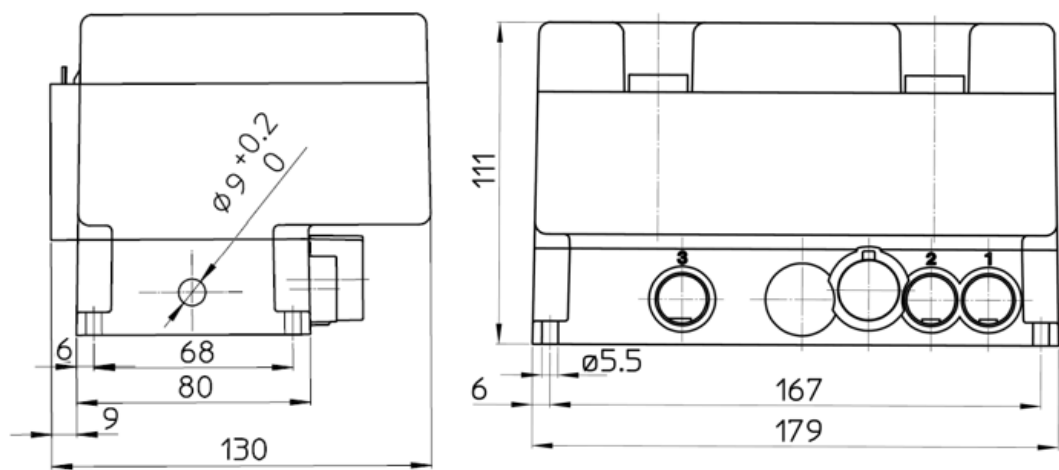




Dimensions CB8A with 3 channels:



Dimensions CB8A + charging connection:







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## Control Box CARELINE® Basic CB9 Data sheet

# CB9 CARELINE® Basic

The CARELINE® Basic CB9 has been developed for use together with LA31 and LA34 in the Care & Rehab industry. CB9 and LA31 can be fully integrated thus saving mounting and wiring or they can be installed separately.

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

The CARELINE® Basic CB9 series is only available as an analogue (Ax) type.

Consult the ordering example for a detailed description of the article number.



## Features:

- Connection of max. 4 actuators, type LA31 and LA34 via 4-pole DIN sockets
- Extremely compact design
- Mains voltage: 230 V AC 50-60 Hz
- Output voltage 24V DC
- Protection class: IPX4 or X6 (not for wash tunnels)
- Colour: Grey or black
- DIN-socket for handsets HB40, HB70, DP or FS
- 3.2 m fixed straight mains cable
- EOP = Electronic Overload Protection \* - AJ type CH1+2 (3.4A) and CH3+4 (7.0A) via common current cut-off
- Locking mechanism for DIN plugs and mains cable
- Electronic protection of the relays for extended lifetime, EAS (simple EAS).
- Double power control (FET + relay) monitoring on all AJ and K types.
- Class 1 or 2 protection
- External battery backup and internal charger; use notation A when ordering
- External battery backup (no internal charger); use notation B when ordering
- External battery backup (and internal charger); use notation C when ordering

- All functionalities are compatible with mains cut-off
- All functionalities short cut protection 15A

## \* Electronic Overload Protection

AJ: Means separate current measurement on CH1+2 and CH3+4. The current will be cut off when the total current on CH1+2 reaches approx. 3.4A and when total current on CH3+4 reaches approx. 7.0A.

AK: Means a common current measurement on all channels. The current will be cut off when the total current on all channels reaches approx. 7.0A.  
Example of EOP: CH1 = 3A, CH2 = 4A = 7.0A in total.

## Options (have to be stated separately):

- Can be mounted on the LA31
- 100V type can be ordered as a special article, 120V type, please refer to CB9 Careline

## Usage:

- Duty cycle: Max. 10% or 2 min. continuous use followed by 18 min. not in use.
- Ambient temperature: +5° to +40°C
- Compatible with up to 4 actuators, type LA31 and LA34 via 4-pole DIN sockets
- Medically approved according to EN 60601-1/UL 60601-1



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 may not be connected to AD or AE types because of a conflict between the CB-signal wires and the reed wires !

#### Various information:

- It is possible to order blind plugs for CB9 CARELINE IPX6.

Order number:

	Bag of 100 pcs.	Singles
Grey:	00931082	00931143
Black:	00931081	00931142

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:

	Singles
Grey:	00918035
Black:	00918034
O-rings:	0007018

- 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

CB9 CARELINE® BASIC

Ordering example:

CB9260AD4+0001A

Mains cable:

CARELINE Basic, LINAK connector, with earth:

1A = Straight, EU, angled mains-plug-end and straight CB-end

1B = Coiled, EU, angled mains-plug-end and straight CB-end

1D = Straight, UK, angled mains-plug-end and straight CB-end

1F = Straight, USA, straight mains-plug-end and straight CB-end

1G = Straight, CH, straight mains-plug-end and straight CB-end

1H = Straight, Aus, straight mains-plug-end and straight CB-end

1J = Without cable

CARELINE Basic, non-detachable, without earth:

20 = Straight, EU, straight mains-plug-end and straight CB-end

21 = Straight, CH, straight mains-plug-end and straight CB-end

23 = Straight, UK, angled mains-plug-end and straight CB-end

24 = Straight, Japan, straight mains-plug-end and straight CB-end

25 = Straight, USA, straight mains-plug-end and straight CB-end

27 = Straight, Aus, straight mains-plug-end and straight CB-end

CARELINE Basic, mains cut-off, non-detachable, without earth:

F0 = Straight, EU

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

FA = Straight, EU

Mains voltage:

0 = CB9 trafo 230V

Fuse cover:

0 = No

Battery:

0 = No battery

A = Connection for external 24V battery and internal charger (not with mains cut-off)

B = Connection for external 24V battery (no internal charger)

Colour:

+ = Grey

- = Black

Channels:

1 - 4

Functionality:

Without microprocessor (analog)

	Current cut-off	EAS
AJ	3.4A on ch1 & 2 and 7.0A on ch3 & 4	X
AK	7.0A on all channels	X

Not used

0

Protection class:

4 = IPX4

6 = IPX6

Plastic housing:

2 = CARELINE Basic wo/mains-indicator

Type:

CB9

Black

Grey

0015183

0015184

0015191

0015198

0015275

0015195

0015242

0015241

Black

Grey

0015262

0015295

0015542

0015504

0015502

0015503

0015505

Black

Grey

00WP039C00-00

Black

Grey

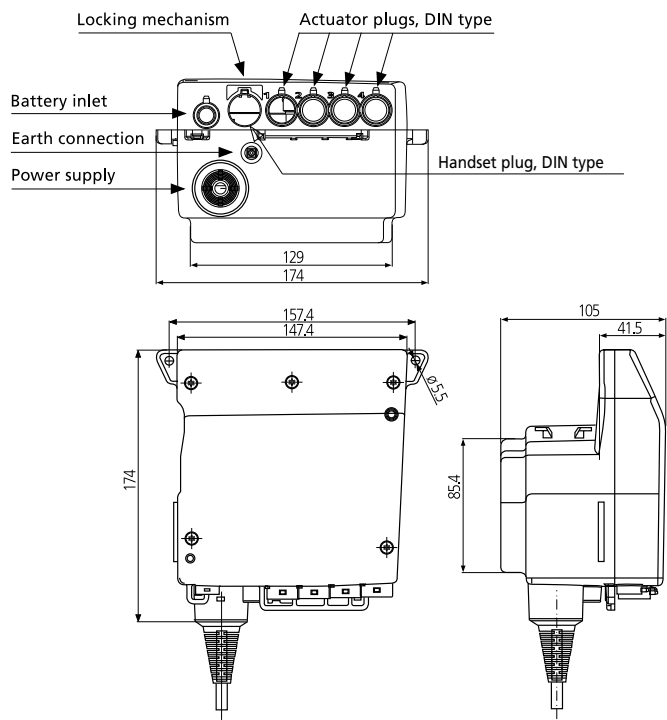
00WP039C00-0A



State separately if CB9 and LA31 must be mounted together.



CARELINE® BASIC CB9



BA1800 - External battery box

Ordering example:

BA18	0	0	-	0200	-	0	0	0	
									0 = Not used
									0 = Not used
									Cable type:
									0 = Standard
									1 = CB7 (Only IPX1, 700 mm)
									- = Not used
									Cabel length:
									From 200 mm to 1300 mm with steps of 50 mm
									- = Not used
									IP Protection:
									0 = IPX1
									1 = IPX5
									2 = IPX6
									Colour:
									0 = Black
									1 = Grey
									Type: BA18



An external charging device is not available as a standard article.





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