Control Box
CBP2

CBP2 control box is powered by battery pack, which is specially designed for patient hoists or stand-up lifts. It's built with soft-start / stop function to provide a safer and more comfortable user experience. The LCD display shows the battery status and some warning signs, such as low battery, over-duty, overload, and reminder to replace lifting actuator. Moreover, CBP2 provides different input voltage for different charger types, including internal transformer and internal / external SMPS.

Feature

- Main applications: Medical, home care
- Input voltage: 120V AC 60Hz / 230V AC 50Hz (transformer) or 100 ~ 240V AC, 50/60Hz (SMPS)
- Output voltage: 24V DC
- Overload protection current on lifting actuator: 5～9A (on demand)
- Power supply: 24V EI transformer or 29V/1A SMPS
- Max. number of actuators: 2 channels
- Max. number of controls: 1 channel
- Duty cycle: 10%, max. 2 min continuous operation in 20 min.
- IP Protection level: IP66 (EI transformer or internal SMPS) / IPX4 (external SMPS)
- Color: RAL 7035 (front cover), RAL 7016 (back cover)
- Power cord length: 3000 mm (EI transformer or internal SMPS) / 2800 mm (external SMPS)
- Emergency stop button
- LCD display shows status and error info
- Certified: UL (E464256), CE marking MDD 93/42/EEC and 93/68/EEC

تلفن : (021) 33913364 - 33951660
فکس : (021) 33985603

Option

- Internal SMPS charger
- External SMPS charger
- Phone jack(Ø6.35mm) with Ø13.6 or Ø16.7mm molding available
- With / without battery level indicator on BTP1 battery pack
- With / without lead-acid batteries inside BTP1 battery pack

Compatibility

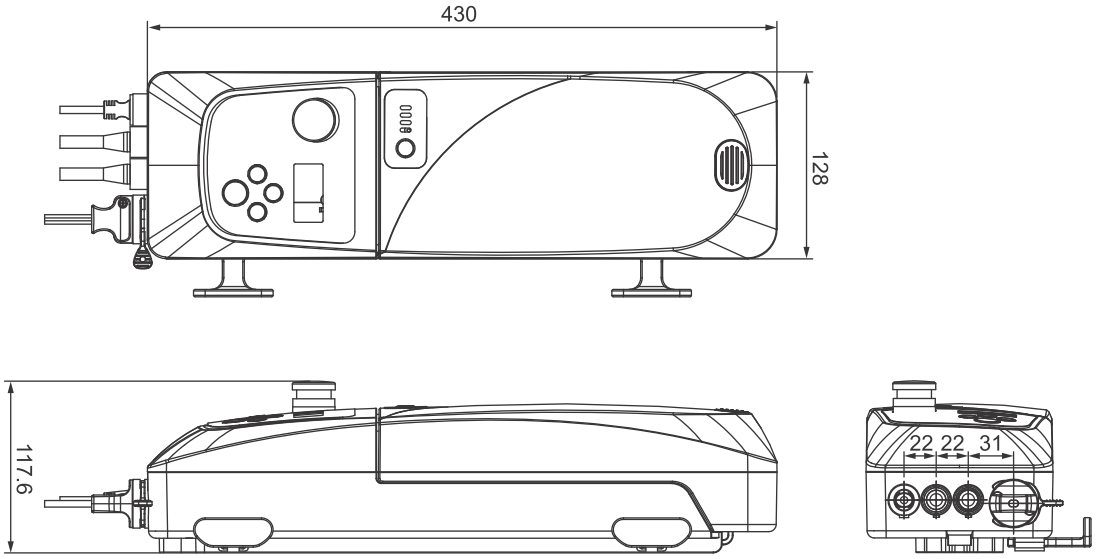
Prouduct	Model	Compatible requirement
Actuator	Lifting actuator: MD60, MD80, MD82, MD100, MD120	- Phone jack(Ø6.35mm) with Moteck J1-type or J2-type plug.
	U base legs spreading actuator: MD50	
Hand control	HTF, HT	- Moteck control category P2 - With 5-pin Moteck H-type DIN plug
Accessory	BTP1 Battery pack *(Fig.1)*	- Nil
	CHP1 Battery charger *(Fig.2)*	- Nil

(Fig.1)

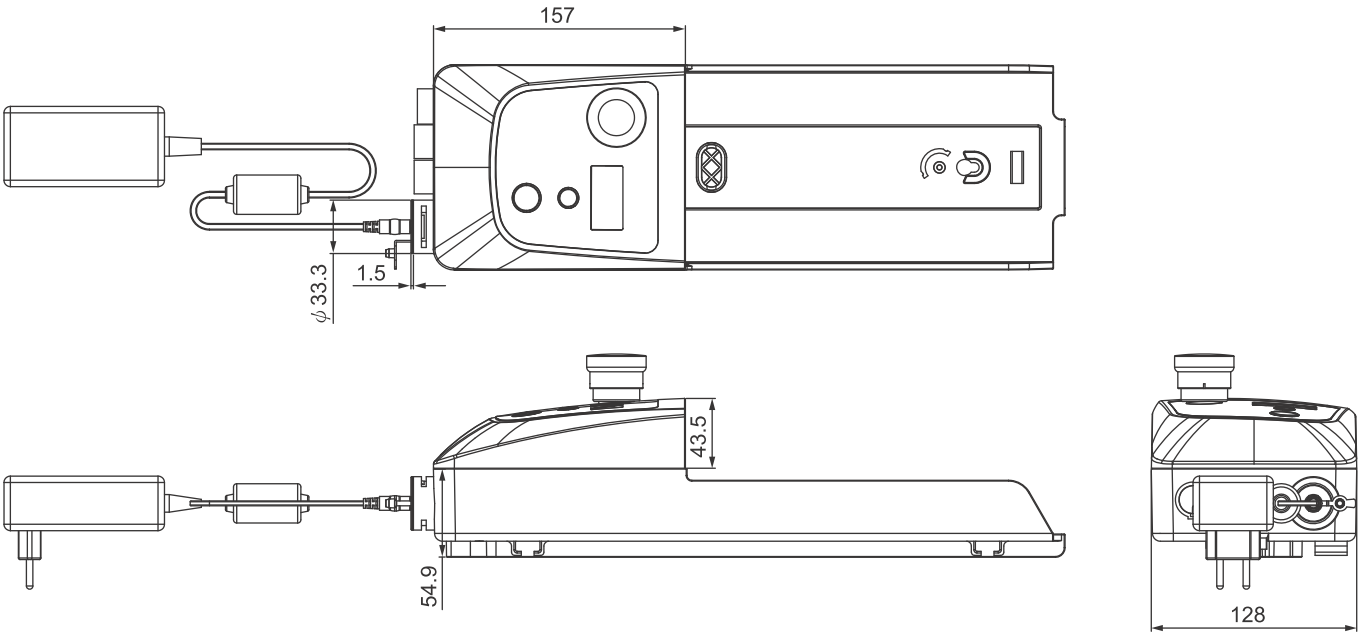
(Fig.2)

Dimensions

Internal charger



External charger



تلفن : (021) 33913364 - 33951660

فکس : (021) 33985603

I/O Introduction

Hand controller

Lifting actuator

U base legs spreading actuator

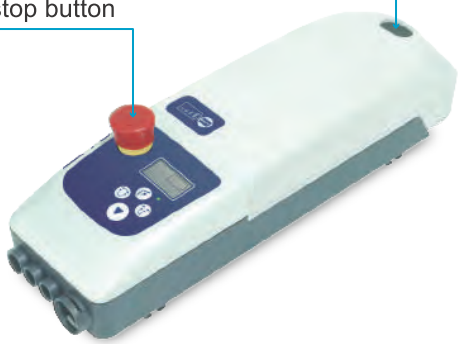
or

AC in
(Internal SMPS)

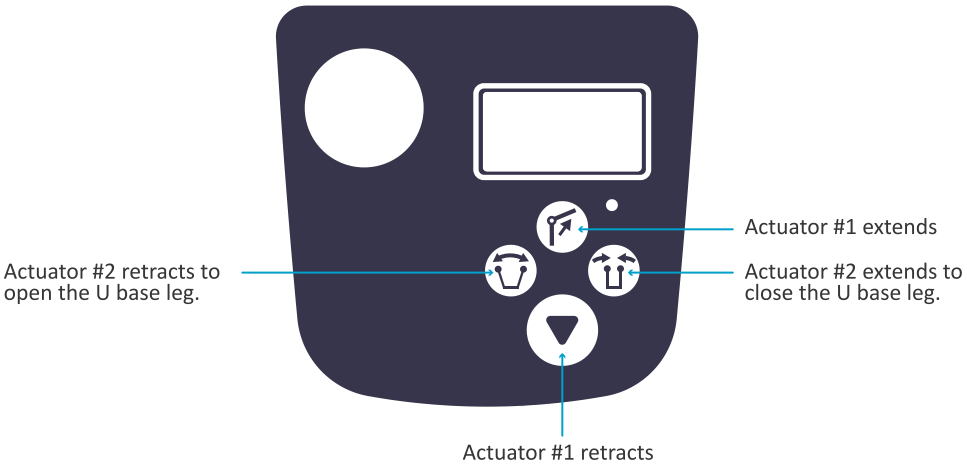
DC in
(External SMPS)

Release battery pack

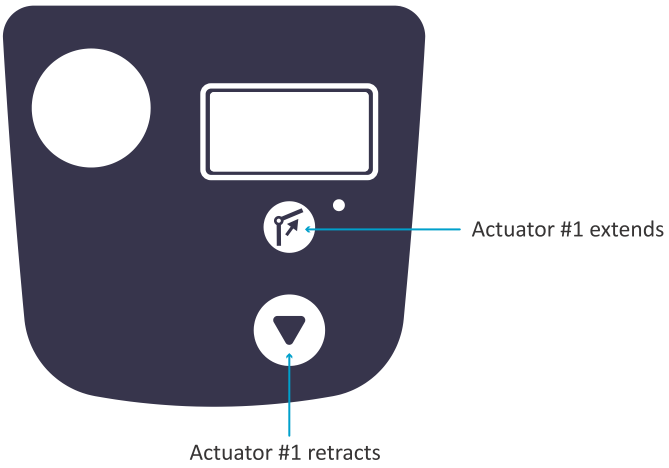
Emergency stop button

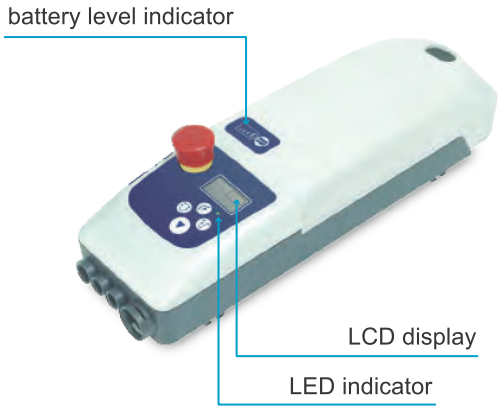


2 drives model



1 drive model





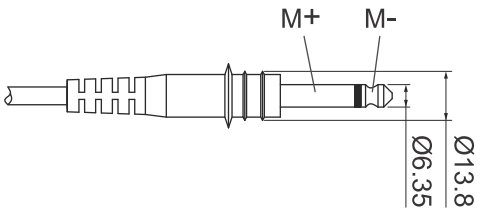
Remarks:
Please refer to "CBP2 user guide" to get more information about this control box.

تلفن : (021) 33913364 - 33951660

فکس : (021) 33985603

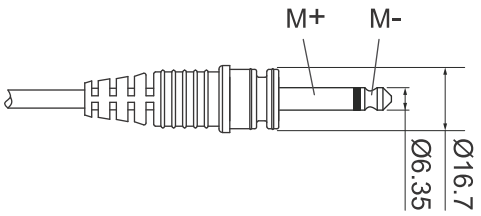
Socket

Actuator socket with Moteck J1-type phone jack



J1-type

Actuator socket with Moteck J2-type phone jack

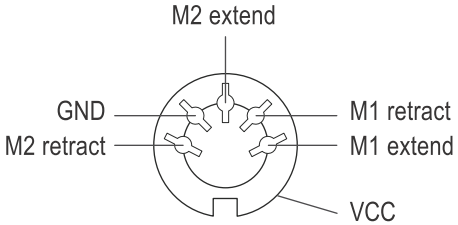


J2-type

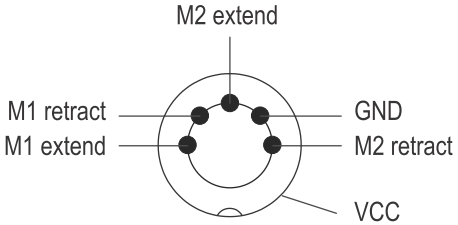
Hand controller socket with Moteck H-type DIN plug

▶ *Moteck control category P2*

- 2 drives model



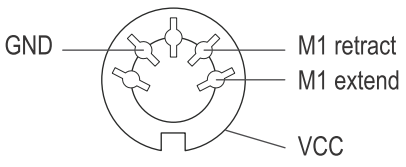
5-pin socket



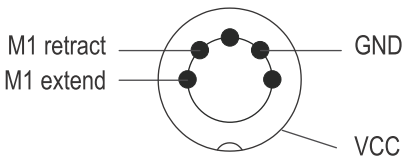
5-pin plug

H-type

- 1 drive model



5-pin socket



5-pin plug

Ordering Key

CBP2- ISW - 24 - 2 - P1 - B1 - V1 - A

Input voltage	**100**: Transformer 100V AC **120**: Transformer 120V AC **230**: Transformer 230V AC **ISW**: Internal SMPS (100 ~ 240V AC) **TSW**: External SMPS (100 ~ 240V AC)
Output voltage	**24**: 24V DC
Number of actuator	**1**: 1 channel **2**: 2 channels
Actuator socket	**P1**: Compatible with Moteck J1-type (Ø13.6 mm) Phone jack **P2**: Compatible with Moteck J2-type (Ø16.7 mm) Phone jack
Battery pack	**B1**: With lead-acid battery inside (12V 5Ah x 2 pcs) **B0**: Without lead-acid battery inside
Battery level indicator	**V1**: With LED indicator **V0**: Without LED indicator
Power cord length	**A**: Straight 3000 mm (EI transformer or internal SMPS) **D**: Straight 2800 mm (external SMPS)

تلفن : (021) 33913364 - 33951660
فکس : (021) 33985603

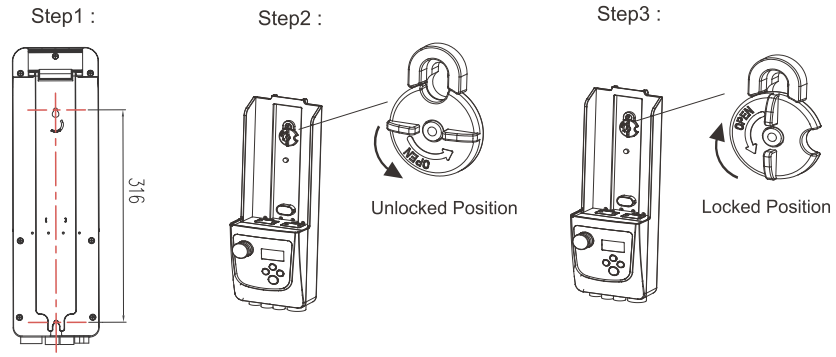
User Guide
Control Box

Model: CBP2

A. Installation

1. Control Box

Step 1. Put two mounting bolts (M5 with 8mm head) onto the frame according to the drawing.
Step 2. Turn the locker to “Unlock Position” (CCW) , then mount Control Box onto the bolts of the frame.
Step 3. Turn the locker clockwise to “Locked Position” to fix the Control Box.



2. Battery Pack

2.1 Insert:
2.1.1 Hold the battery pack downward (Fig. 1)
2.1.2 Tilt the pack a little bit to get a smooth installation and keep pressing the release button (Fig. 2 Ⓐ / Ⓑ).
2.1.3 Push the pack downward till you hear "click"(Fig. 3), make sure the pack will not be pulled out by hand without pressing release butto n.
2.2 Remove:
2.2.1 Press release button and pull the pack out upward (Fig. 4 Ⓐ / Ⓒ).
2.2.2 Tilt the pack a little bit at the beginning of pulling (Fig. 5), then pull out the battery pack.

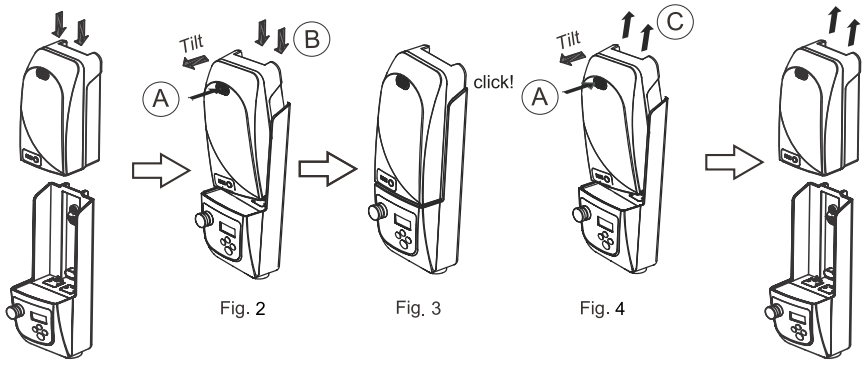
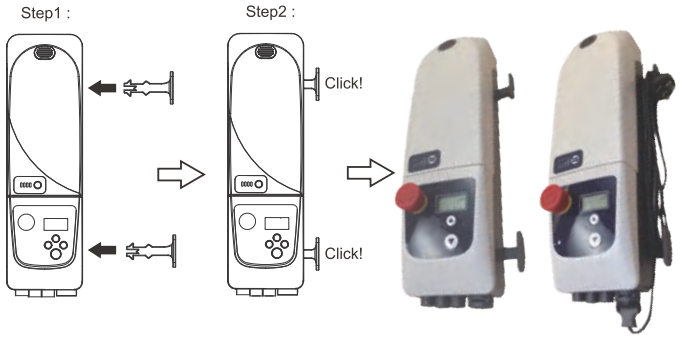
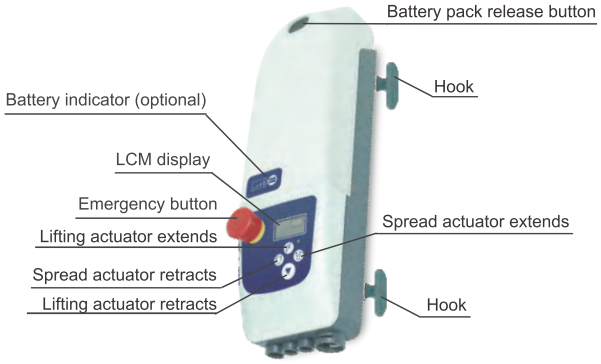


Fig. 1 Fig. 2 Fig. 3 Fig. 4 Fig. 5

3. Hook

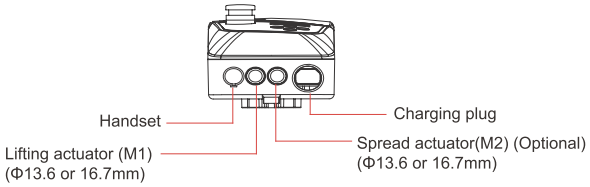


B. Interface



1. Connection

There are 4 connection ports as indication on following drawing.



2. LCM Display

A = Over Load
B = Overduty (overused)
E= Time to replace actuator
C = Battery Volume
D = Battery Low (Blink)

Battery is charged to around 100%.
Battery is charged to around 75%.
Battery is charged to around 50%.
Battery is charged to around 25%.

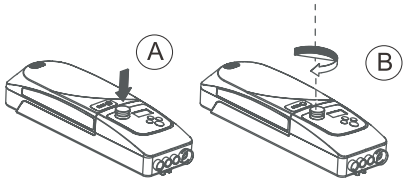
3. Emergency Stop

Press the button firmly to make it locked with click sound. It cuts off the power and actuator stop instantly.

i. Lock: Press the red button as shown in (A), then the button locked and the power is cut off.

ii. Unlock: Turn the red button in clockwise, as shown in (B), then the button bounded and the power is restored.

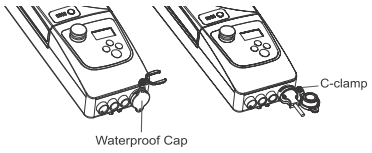
> ⚠ In order to keep the batteries stay in good condition for long, we strongly recommend you to press this button when not going to use this device for a couple days.



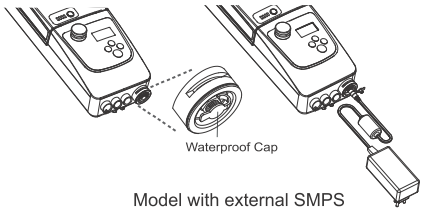
C. Battery Charging

1. Charging on CBP2

1.1 When battery level remains only one bar on LCM display, Low Batt. icon keeps blinking or continuous 4 beeps in every 4 seconds sound, it is reminding users to charge the battery immediately.
1.2 Remove the cap and connect the charging cable properly.
1.3 If the model is with AC charging cable, insert the C-clamp to fix the cable.
1.4 The level bar on LCM and indicator on control panel keep blinking (1Hz) during charging, and all functions are locked.
1.5 The level bar and indicator keep lighting means charging is done.
1.6 When not charging, cover with waterproof cap properly to prevent water ingress.



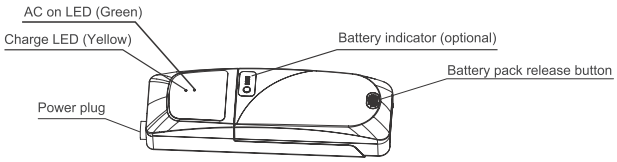
Model with AC charging cable



Model with external SMPS

2. CHP1 Charger (Optional)

2.1 CHP1 is an optional stand alone charger for BTP1 battery pack. User can charge additional battery pack (option) while CBP2 is on duty for use. Be noted that CHP1 equips EI type transformer and has to follow the AC voltage of the country.



CHP1 charger + battery pack

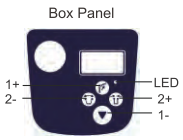
2.2 The Charge LED keeps blinking (1Hz) during charging, and all functions are locked. The LED indicator keeps lighting means charging is done.

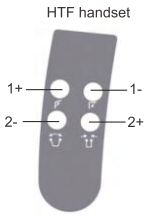
D. Operation

1. Basic control function

1 means lifting actuator (M1)
1+ ： represents M1 extends
1- ： represents M1 retracts

2 means spread actuator (M2)
2- ： represents M2 retracts
2+ ： represents M2 extends





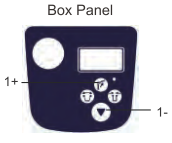
2. Soft start/stop & key tone

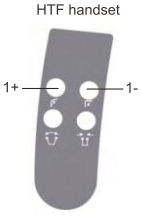
Function		Method	Feedback (LED blinks or sound)
soft start/stop	ON	Keep pressing "1+" button on HTF handset, then unlock the emergency button	Blinks 4 times, no sound
	OFF		Blinks 2 times, no sound
key tone (for 2-motor model only)	ON	Press 2+, 2- buttons on handset or panel at the same time.	Blinks 2 times, beep once
	OFF		Blinks 2 times, no sound

3. Check cumulative running time

3.1 Press 1+,1- buttons on the HTF or panel at the same time.
3.2 The number of level bar on the LCM means the cumulative running time.
3.3 It's approximate cumulative running time.

Level bar	Cumulative running time
	over 150K sec.
	over 300K sec.
	over 450K sec.
	over 600K sec.



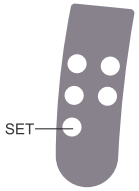


4. Error code trouble shooting

Display	Information	Disposal
	Low battery *(less than 20V DC, lifting actuator can only retract.)*	Charging battery pack at once.
	Lifting actuator over duty *(after 4mins continuous operating)*	Stop operation for a while. The error message will gone automatically after sufficient rest.
	Lifting or Spread actuator over load	Find out and remove obstruction or improper load. Please call the agency if the error code keeps on.
	Cumulative running time over 600K seconds on lifting actuator.	Call agency to replace the actuator.

5. Setting mode (only available with service handset by service agency)

Service handset



5.1 How to get in setting mode?
Press the SET button (the fifth key) over 2 seconds to go into set mode.

5.2 The over load icon keeps blinking means CBP2 is under setting mode now.

5.3 How to quit setting mode?

5.3.1 Press the SET button over 2 seconds or without any input over 10 seconds. The set data will be saved automatically.

5.3.2 If pressing the emergency button or remove the handset directly at this moment, then all the set data is nullity.

5.4 When CBP2 under setting mode, we can:

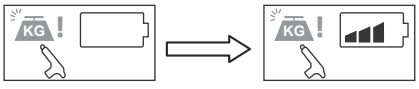
5.4.1 Set the M1 actuator current limit on demand (operation available on handset or panel as well)

i. Press “2+“ to increase the current limit on handset or panel
ii. Press “2-” to decrease the current limit on handset or panel
iii. The available range is 5~9A, step 1A.

Value	5A	6A	7A	8A	9A
Display					

5.4.2 Detect the M1 actuator current limit by self-learning

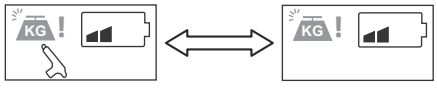
i. Press “1+” for 1 second
ii. The lifting actuator extends automatically for 2.5 seconds
iii. The level bar disappeared means self-learning is on going, till the level bar appears again means the self-learning is done and CBP2 got a new current limit as shown below.



detecting done

iv. The available range is 5~9A, step 1A.

5.4.3 Switching the "Over duty protection on M1" active or inactive by pressing "2+" & "2-" at the same time.



active inactive

5.4.4 Reset

i. Pressing "1+" & "1-" at the same time over 2.5 seconds.
ii. Then the device backs to default value, as shown below

iii Default: Key tone and soft start/stop off, over duty protection active, current limit 7A.