Manual

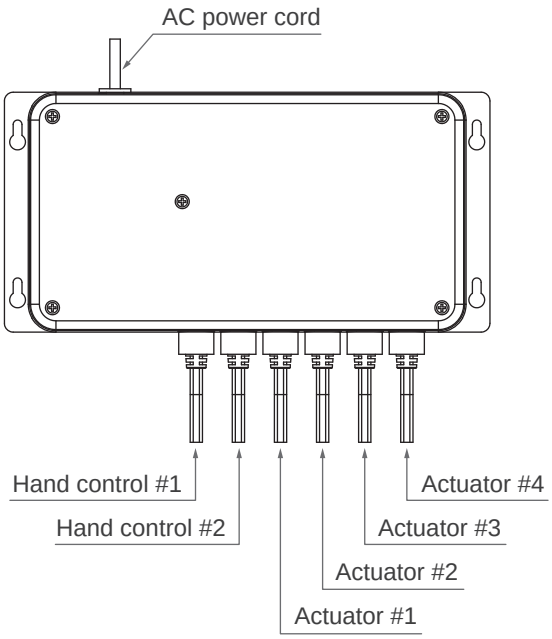
Control Box
CB4M

Revision	2024.08_V2.0

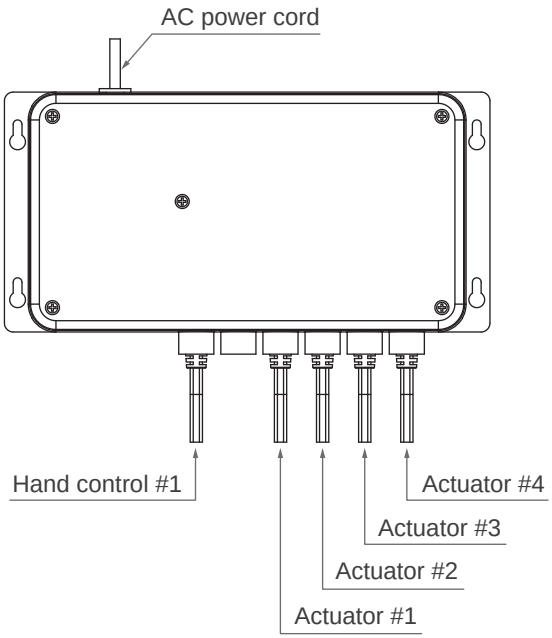
Technical changes may be made to improve the product without notice！

1. I/O Introduction

1.1 CB4M



1.2 CB4M-B / CB4M-S



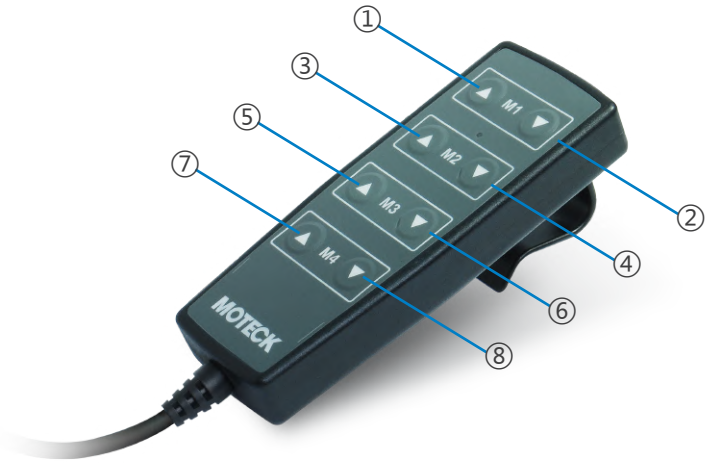
2. Operation Guide for CB4M

When the UP/DOWN control button is pressed, the actuator will start moving, and once the button is released, the actuator will stop immediately.

- Buttons and operation:

(Take HD hand control as an example)

① Actuator #1 extends
② Actuator #1 retracts
③ Actuator #2 extends
④ Actuator #2 retracts
⑤ Actuator #3 extends
⑥ Actuator #3 retracts
⑦ Actuator #4 extends
⑧ Actuator #4 retracts



HD hand control

3. Installation & Operation for CB4M-B & CB4M-S

3.1 Precautions Before Installation

For safety reasons during initial installation, the entire set of products, including the actuator, must complete the electrical connection and perform the "stroke learning" function before the actuator can be mechanically installed on the user's equipment.

3.2 Learning and Operating Guide

3.2.1 For CB4M-B (Take DP11 hand control as an example)

(1) For first time use, it's required to proceed with the learning process first. All actuators must be connected to the control box according to the model of CB4M-B. If any one is not connected properly, learning and synchronized actions will not be possible.

(2) Press ^ and v buttons at the same time until the actuators start to move, and starts automatic learning. The actuator will automatically move to the lowest position, move to the highest position, and then return to the lowest position to complete automatic learning. Once it's finished, the system is ready for mechanical installation or normal operation.

DP11 hand control

3.2.2 For CB4M-S (Take DKP3 hand control as an example)

(1) When CB4M-S and DKP3 are connected and power on at the first time, the display of DKP3 flashes "SEt". Only learing procedure can be excuted now. All four actuators must be connected to the CB4M-S control box. If any one is not connected properly, learning and synchronized actions will not be possible.

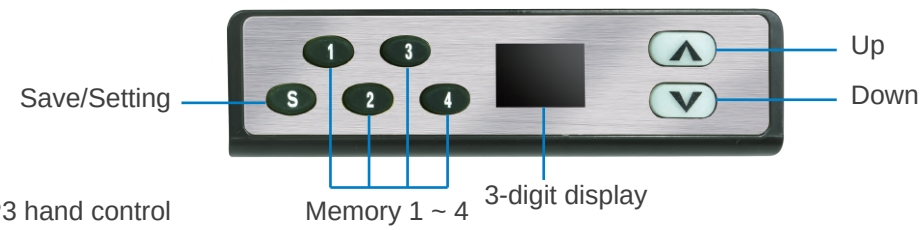
(2) Hold buttons S and ^ together for 2 seconds, the display flashes "SEt" and the 4 actuators start to run full stroke, so that the program can automatically determine the positions of upper and lower limits. That is, the actuators will all retract to the bottom and extend to the end position, then retract to the bottom position again. After the learning procedure is finished, the display shows a static sign of "000". Then the actuators are ready to be mechanically installed to user's device.

(3) General Operation

- Press and hold button ^, the table will move up to the upper limit position 012.
- Press and hold button v, the table will move down to the bottom position 000.
- Standby mode: Display will be off automatically if no button is pressed in 20 seconds.

(4) Memory Function

- Adjust table as mentioned in paragraph 'General Operation' to the height desired. Hold button S for 2 seconds until screen flashes. Followed by pressing button 1, then screen will show "001"; Release the button and the height number will be shown on screen and memorized as position 1.
- It's the same way to memorize positions 2, 3, and 4 as position 1.
- While the screen flashes after holding button S for 2 seconds, if there is no button 1 ~ 4 pressed within 10 seconds, the screen will stop flashing and leaving the memory mode.
- After the memory positions were set, by pressing and holding each button 1, 2, 3 or 4, table will move toward the memorized position accordingly. But the table will stop immediately once the button is released during the operation.



3.3 Others about Learning Function

- After complete mechanical installation on user's device, please perform learning function again to learn on the device. However, the unit has to learn again if any one actuator is exchanged or the whole set is moved to drive another table or device.

- In case of any emergency, pressing any buttons or unplugging the panel can stop actuators from learning procedure immediately.

- The unit will memorize the full stroke of the application after finishing the learning procedure. If the power is cut off and reconnected, you can operate it directly without having to “Learn” it again.

4. Displayed Messages (for CB4M-S only)

4.1 Over load protection

The actuators stop moving automatically and panel display will show “E01” when table is loaded over weight. Please release button and reduce some weight of the load. Then press it again to continue operating. Display will show current position of movement.

4.2 Reset alignment

When the display is flashing “000”, press and hold to make table moving down to the bottom position for alignment reset. It means reset is finished when display turns to a static sign of “000”, and

For more information about the Hand control operation guide, please refer to the corresponding product data sheet, which can be downloaded from the MOTECK website.

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