

**** Warning: Read the safety instructions before you start installation. If these instructions are not followed, the Manufacturer's liability and warranty are forfeited. Manufacturer is not liable for any change in the regulations and standards introduced after the publication of this manual.**

I. Product instruction:

The current product can be used as an electrical drive and automatic control for the rolling doors, the awnings or the similar equipments. With the advantages of compact structure, easy operation, convenience installation and high liability, the product is widely used in residences, stores and hotels.

II. Warnings:

1. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
Children should be supervised to ensure that they do not play with the appliance.(not for EU market)
2. 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 been 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.(for EU market only)
3. It must only be supplied at safety extra low voltage corresponding to the marking on the appliance.
4. Means for disconnection must be incorporated in the fixed wiring in accordance with the wiring rules.
5. **WARNING: Important safety instructions. It is important for the safety of persons to follow these instructions.**
Save these instructions.
WARNING: the drive shall be disconnected from its power source during cleaning, maintenance and when replacing parts.
WARNING: Important safety instructions. Follow all instructions, since incorrect installation can lead to severe injury.
6. -Do not allow children to play with fixed controls. Keep remote controls away from children
-Frequently examine the installation for imbalance and signs of wear or damage to cables and springs. Do not use if repair or adjustment is necessary
-Do not operate when maintenance, such as window cleaning, is being carried out in the vicinity;
-Before installing the drive, remove any unnecessary cords or components and disable any equipment not needed for powered operation;
-That the characteristics of the driven part must be compatible with the rated load and rated operating time;
7. -That the actuating member of a biased-off switch is to be located within direct sight of the driven part but away from moving parts. It is to be installed at a minimum height of 1,5 m and not accessible to the public;
-The mass and the dimension of the driven part shall be compatible with the rated torque and rated operating time;
-Fixed controls have to be clearly visible after installation;
8. The installation and the regulation of the motor must be carried out by the professional staff.
9. Before the installation, please verify the mechanical performance of the motor's transmission part.
10. The motor should be firmly fixed. The shutter should move in the rail smoothly without any obstacles.

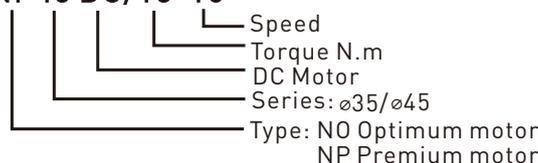
**** Important safety instructions. It is important to follow and keep these instructions for the sake of safety.**

11. The control box should be installed at a height of 1.5m, all the wires have to be kept out of the way that the shutter moves.
12. On the electric outlet, there must be a grounding hole which is connected to earth.
13. The torque and the functioning time must be calculated in order to select the proper motors for the shutter, the awning and the rolling doors.
14. Keep the children away from the fix and remote control.
15. While functioning, there is an area of about 0.4m in the middle of the motor is the high-temp are which the wires should be kept away from.
16. Make sure there is no one around before close the door or the shutter.
17. Cut the power of the motor and the control before any maintenance or repair.
18. If the cable is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified person in order to avoid a hazard.
19. The instructions shall state that the A-weighted emission sound pressure level of the drive is equal to or less than 70 dB(A), e.g. by writing $LpA \leq 70 \text{ dB(A)}$.
20. It must only be supplied at safety extra low voltage corresponding to the marking on the appliance.
21. The appliance is only to be used with the power supply unit provided with the appliance. **(Supply power current $\leq 5.5A$)** .

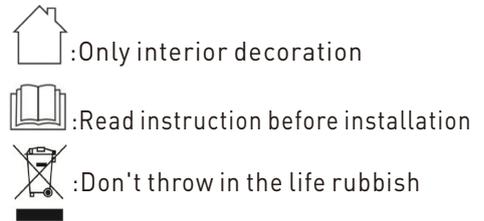
III. Product type instruction:

NP45 DC/15-16

1. Type instruction:

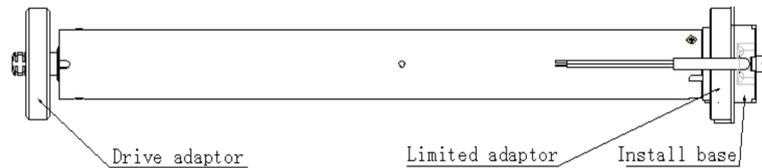


2. Motor label instruction: eg.NP45 DC/15-16
 Rated Voltage: DC12V Rated operate time: 4min
 Rated Power: 48W Protection class: III
 Rated Current: 4A Moisture protection : IP44
 Rated Torque: 15N.m
 Rated Speed: 16rpm



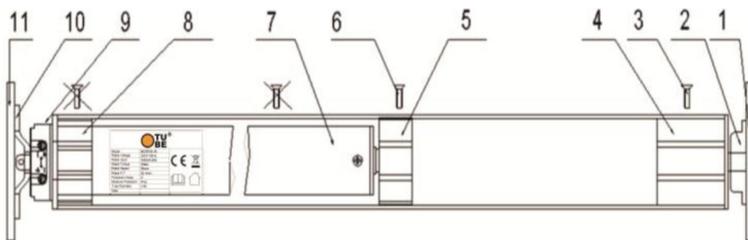
IV. Structure characteristic:

1. Insert the motor into the roller($\Phi \geq 50\text{mm}$), the motor will pass the torque onto the roller through the adaptor, and to drive the rolling doors or the similar equipment up and down.
2. Regulate the open and close position of the shutter through the limit switch unit inside the motor.
3. Product scheme:



V. Installation:

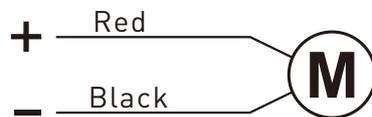
1. Ensure the supplied power is in accordance with the specification.
2. Check the dimensions and the shapes of the limit adaptor and the drive adaptor if they are both in accordance with the roller, before the installation, be sure that all the accessories are fixed and will not cause any mechanical obstruction to the motor.
3. While defining the position of installation, the customer can choose to install the motor on the right or the left of the shutter according to the real condition.
4. If it is a round roller, make a slot at the end of the roller to allow the Limit switch unit work properly; if it is the other shape, then inset the motor directly into the roller.
5. After inserting the motor into the roller, use the screw to fix the limit adaptor to the roller to ensure the normal functioning of the motor.
6. During the installation, keep the motor and the roller horizontal, and the roller should be vertical to each side of the door or window.
7. Fix the mounting brackets on each side to the wall firmly with the screws.
8. Fix the mounting bracket above the window or the door.
9. Mounting scheme:



- | | |
|----------------------|-------------------|
| 1. Mounting surface | 2. Idle bracket |
| 3. Fixing screw | 4. Plug end |
| 5. Drive Wheel | 6. Fixing screw |
| 7. Tubular Motor | 8. Crown |
| 9. Motor head | 10. Motor bracket |
| 11. Mounting surface | |

10. After the installation, power on the motor, push the button rapidly to check if the up and down movements are good.
11. If the direction of the movement is not in accordance with the signs on the button box, switch the connection of the brown and black wire.

VI. Electrical scheme:

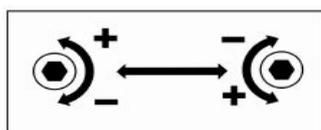


The motor will turn in an anticlockwise direction when viewed from the drive wheel end.

VII. Limit setting:

Remark: the programming should be done after the motor be installed completely.

1. The customer can set limit positions according to their situations.
2. According to the motor's rotating direction and the adjusting instruction, Insert travel limit pole into its travel limit hole to adjust limit travel: the direction of "+" will increase the shutter's travel; the direction of "-" will reduce the shutter's travel:



Warning:
 Both limit setting & manual override with cordless drill are forbidden.
 If the motor is damaged due to the use of the drill, the manufacturer will not be responsible for the warranty liability.

Use only:

3. After setting the limits, start motor to make the shutter go up-and-down once, to see if the positions are well set.