

# Operation Manual

## Roller Shutter Motor

62454-62461



Illustration similar, may vary depending on model

Read and follow the operating instructions and safety information before using for the first time.

Technical changes reserved!

Due to further developments, illustrations, functioning steps, and technical data can differ insignificantly.

Updating the documentation

If you have suggestions for improvement or have found any irregularities, please contact us.



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## Introduction

Thank you for purchasing this quality product. To minimize the risk of injury we urge that our clients take some basic safety precautions when using this device. Please read the operation instructions carefully and make sure you have understood its content.

Keep these operation instructions safe.

### Notes:

- Make sure to carefully read the information and instructions found within this operation manual before installing the device.
- Ensure that all parts have been attached so that the motor operates without mechanical issues. The weight exerted should always match the power output of the motor.
- Electrical connections have to be installed by a qualified electrician.

## Product characteristics and fields of application

Tubular motors are the driving force behind a wide variety of shutters, blinds, and garage doors. These products operate silently, are compact in size, can easily be hidden, and be installed without much effort.

Automatic shutters, blinds, sunblinds, or garage doors are often installed in offices, private houses, restaurants, exhibition halls, and other public facilities and are thereby used on a regular basis. To prolong its service life, this motor is equipped with an internal overheat control device and stops automatically if charged over longer periods of time or in case of temperatures exceeding its service temperature. Once it has cooled down again, the device will automatically resume its function.

The micro switch, brake, motor, and gearbox are the main constituents of the roller shutter motor that is equipped with a fixture for an effortless installation, too.

## Technical specifications

Model	62454, 62455	62456, 62457	62458, 62459	62460, 62461
Temperature conditions (°C)	-10→+40 (moisture must not exceed 90 %)			
Power supply	230 V/50 Hz			
Power consumption (W)	132	126	156	204
Rated torque (Nm)	10	10	20	30
Rated speed (1/min)	15			
Tube diameter (mm)	45	35	45	45
Max. tractive force (kg)	20	30	40	60
Protection class	IP44			

## Mounting instructions

**Warning!** Incorrect installation may lead to severe injuries. Ensure to abide by the instructions found in this operation manual and always keep this manual available.

- Before installing the motor, remove all unnecessary cables and deactivate all devices unnecessary for mains operation.
- Make sure to install the motor so that its power cable is not exposed to direct solar radiation or rain.
- When installing blinds, a horizontal distance of at least 0.4 m has to be kept between the motor and the fully extended end of the blind.

- The device for controlling the motor must be installed in a position that allows unobstructed view of the electrically operated item. It has thereby to be ensured that it does not touch movable parts and should further be installed between a height range of 1.5 to 1.8 m.
- Regularly check the installation for imbalance and signs of wear and damage. While checking, especially pay attention to the condition of springs and cables. Do not use the device if any kind of repair or adjustment should be necessary.
- Always store the remote controls in a place inaccessible to children and ensure that children do not play with it or installed control elements.

### Before installation

- The motor and its electrical components must be installed by a qualified electrician.
- Before installing the device, choose a matching shaft adapter. Do not force the motor into the shaft (Fig. 3).
- Do not clean the motor with water and do not expose it to high levels of moisture (Fig. 1).
- The distance between the outer edge of the adapter and the inside diameter of the shaft should not exceed 1 mm (Fig. 2).
- Both the drive adapter and idler should evenly be attached with the help of four 5×20 self-tapping countersunk head screws in radial direction. The screws should be attached in the middle of the adapter as well as the middle of the tensioning roller in an axial direction (Fig. 2, 4).
- The shaft and drive adaptor should be evenly attached by using 4×10 countersunk head screws. It is thereby important that the tip of the screw does not penetrate the hull, as the internal gear might be damaged (Fig. 5).
- When connecting the shaft to the curtain, ensure that the suspension springs are attached in an accurate length and are not too long (Fig. 6).
- Make sure that the roller shutter shaft with the motor inside is installed within a horizontal position and placed directly above the door or window to be covered with the roller shutter (Fig. 7)
- Should it be necessary to drill near the motor, it must be ensured that the drill does not damage the actual motor casing. It is therefore advised to use a drill the length of which outside of the drill chock is less than 15 mm and expanding rivets instead of screws. If screws should be used, ensure that there is at least a distance of 5 mm between the tip of the screw and the motor casing as the motor might otherwise be damaged (Fig. 8).
- Before beginning the installation, make sure that all the accessories are fixed and that the surface of the shaft is smooth enough to avoid additional obstacles in case of mechanical problems.
- Check the lifting power of the motor and confirm that the weight that it must lift corresponds to its capabilities. Always make sure to choose a motor capable of at least lifting the weight that it actually has to lift in order to minimise the risk of accidents. When installing the motor above windows or doors, it can either be placed on the right or the left side.

### Figures and illustrations

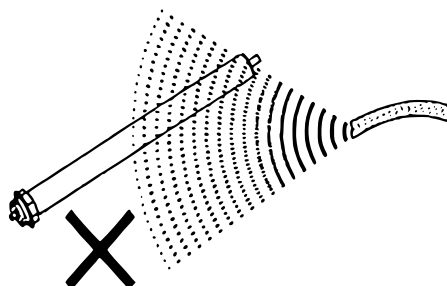


Fig. 1

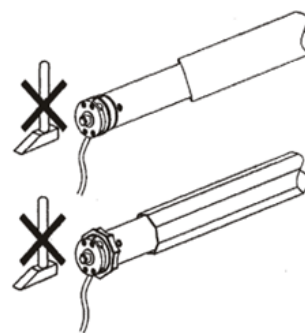
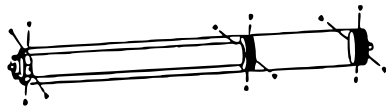
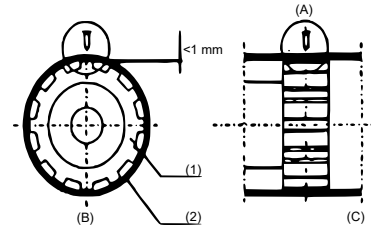


Fig. 3



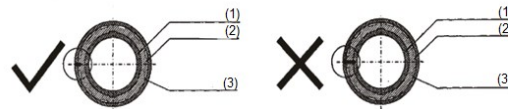
**Fig. 2**



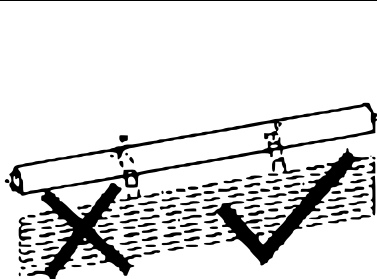
**Fig. 4**

<b>1</b>	Drive wheel	<b>B</b>	Radial direction
<b>2</b>	Roller shutter shaft	<b>C</b>	Axial direction
<b>A</b>	Centred alignment		

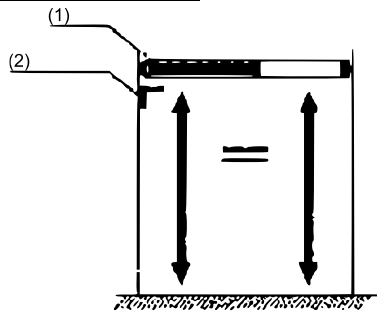
<b>1</b>	Internal gear
<b>2</b>	Crown
<b>3</b>	Roller shutter shaft



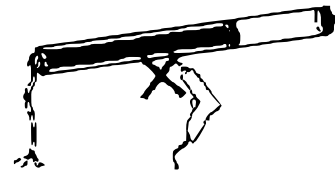
**Fig. 5**



**Fig. 6**

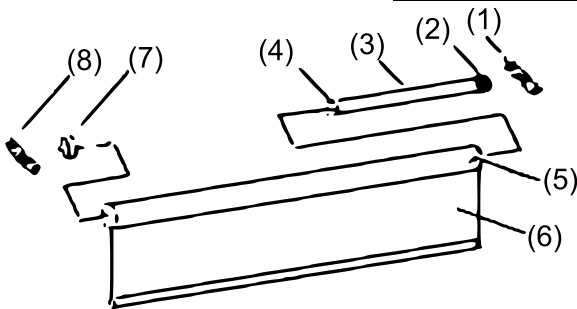


**Fig. 7**

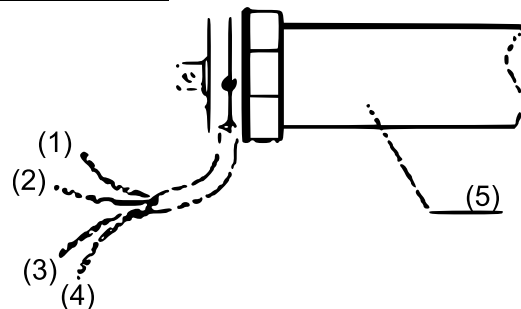


**Fig. 8**

<b>1</b>	Motor head
<b>2</b>	Assembly bracket



**Fig. 9**



**Fig. 10: Wiring diagram**

<b>1</b>	Bracket	<b>5</b>	Roller shaft	<b>1</b>	Black wire	<b>4</b>	Green-yellow wire
<b>2</b>	Crown	<b>6</b>	Curtain	<b>2</b>	Blue wire	<b>5</b>	Motor
<b>3</b>	Tubular motor	<b>7</b>	Idler	<b>3</b>	Brown wire		
<b>4</b>	Drive adaptor	<b>8</b>	Bracket				

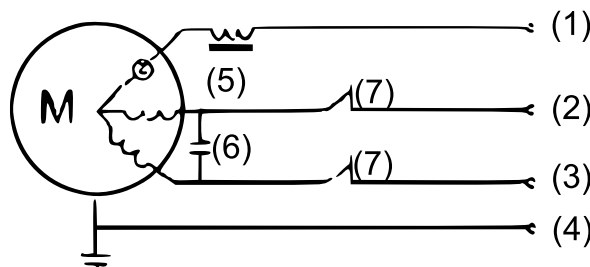
### Installation (Fig. 9)

Make sure that the curtain of the roller shutter has been lowered completely before beginning the installation.

1. Attach the drive adapter (4) to the motor (3) and measure the distance between the adapter and crown (2) before then inserting both into the roller shaft (5) with the adapter being placed inside the shaft.
2. Measure the distance between the drive adapter (4) and end of the shaft (5) in order to avoid damaging it when fixing the motor to the roller shaft.
3. Insert the idler (7) into the shaft (5) on the site opposing from the motor (3) and take proper measurements before attaching it to the shaft by using screws with a maximum length of 1 cm.
4. Install the motor bracket (1) and idler bracket (8) so that the roller shaft (5) is balanced, once it has been attached.
5. Mount the roller shaft (5) to the brackets with the cable of the motor being placed so that you still have access to the adjusting screws (Fig. 12) of the crown.
6. Let an electrician connect the motor to the mains supply and install any kind of electric device. Then use the controls to bring the roller shaft (5) into its lowest position (the one where the shutter would be completely unwound). This sets the lower end position.
7. Attach the shutter curtain (6) to the roller shaft (5) by attaching the suspension springs. Make sure that they are correctly positioned and attached and long enough to allow the curtain to completely cover the door or window.
8. Roll the shutter up until the motor stops. Using a screwdriver, manually raise the shutter until it reaches the wished upper end position by adjusting the lower adjusting screw (Fig. 12).

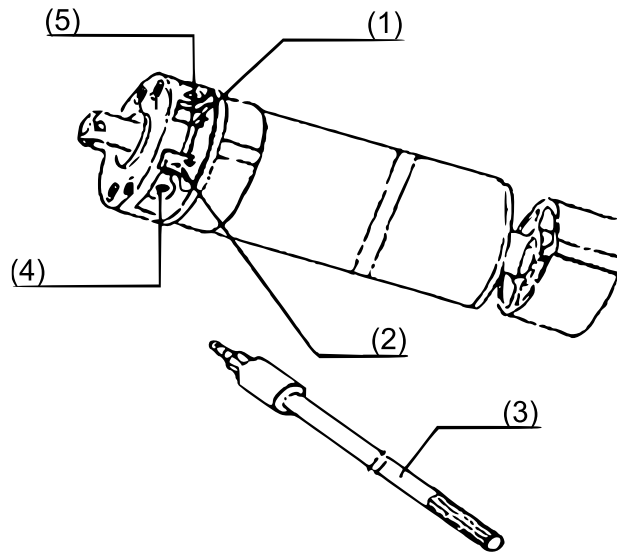
### Cable connection (Fig. 10, 11)

If the combination of the blue and brown cable is activated, the motor will cause the drive adapter to rotate clockwise, while the combination of the blue and black cable will cause the drive adapter to rotate counter-clockwise.



**Fig. 11:** Single-phase asynchronous motor

<b>1</b>	Neutral wire (blue)	<b>5</b>	Inductor
<b>2</b>	Live wire (brown)	<b>6</b>	Capacitor
<b>3</b>	Live wire (black)	<b>7</b>	Limit switch
<b>4</b>	Earth wire (green-yellow)		



**Fig. 12**

<b>1</b>	Direction mark	<b>4</b>	Adjusting screw
<b>2</b>	Direction mark	<b>5</b>	Adjusting screw
<b>3</b>	Screwdriver		

### Adjustments

Start the motor and check its functions. The respective combination of either the blue and brown or the blue and black cables should allow the control panel to move the shutter up or down. The remote control should allow for the same functions. Use the adjusting screws located on the motor in order to adjust the upper and lower end positions of the shutter.

### Additional information:

- Do not place or store the motor within an environment of alkaline, acidic, polluted, or eroding materials.
- Do not use the motor in environments with high levels of humidity.
- Do not start the motor repeatedly and do no overcharge it, as this might affect its performance and service life.
- Make sure to always keep the product number and nameplate available.

### Troubleshooting

<b>Nº</b>	<b>Problem</b>	<b>Possible causes</b>	<b>Proposal for solution</b>
<b>1</b>	The roller shutter moves up, when the remote control's "down" button is used.	Cables inverted	Exchange the connection of the brown and black wires.
<b>2</b>	The motor does not start or only works slowly despite being connected to the mains supply.	Voltage too low	Adapt the voltage to the value stated on the nameplate.
		Faulty cable connection	Check cables and connections. Have damaged cables be replaced by qualified electrician.
		Overcharged	Reduce the burden on the device by attaching a lighter curtain.



		Assembly error	Disconnect the device and correct potential assembly errors.
<b>3</b>	The motor stops in the middle of operation.	Operating time of 4 min exceeded	Allow the motor to cool down for about 20 min.
<b>4</b>	The motor stops before the shutter opens or closes completely.	Upper or lower end position not adjusted correctly	Raise or lower curtain until motor stops and use adjusting screws in order to adjust respective end position.
<b>5</b>	The roller shutter makes a lot of noise while being lowered.	Shaft possibly too long or pieces of installation obstructed	Make sure that moving parts are not obstructed and shorten shaft if necessary and possible.

### Instructions for (optional) remote control

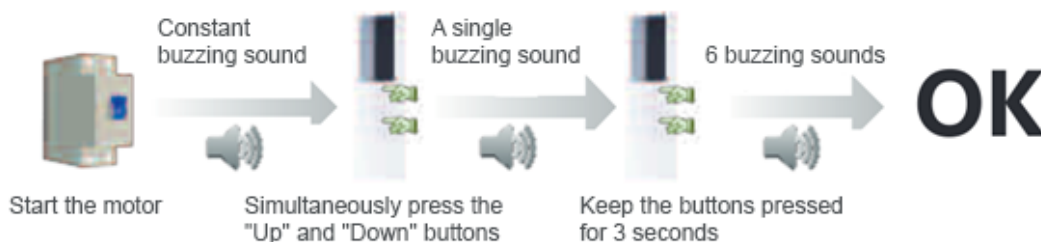
Button	Function
Upper “^” button – “Up” button	Raising shutter
Middle “-” button – “Stop” button	Stopping motor
Lower “v” button – “Down” button	Lowering shutter

The channel settings can be switched by utilising the “^,” “-,” and “v” buttons. Every channel capable of controlling either a single or a cluster of motors. If all LEDs are illuminated or the channel “o” has been chosen, the remote-control switches into cluster control mode. In this mode, codes cannot be aligned, reversed, added, or removed codes.

**Note!** The time interval between operation of the buttons must not exceed 10 s, as the input will otherwise be reset.

#### Aligning code

**Attention!** The motor has previously undergone code alignment. The original memory will be overwritten and thereby become unavailable after another code alignment.

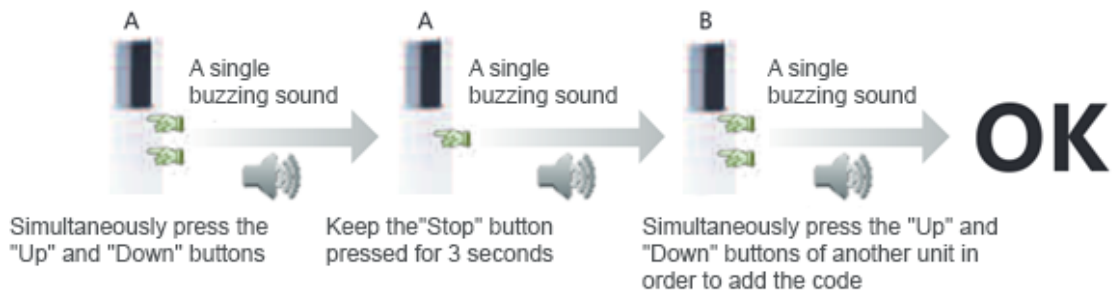


#### Adding code

**Note!** A maximum of 20 codes can be saved.

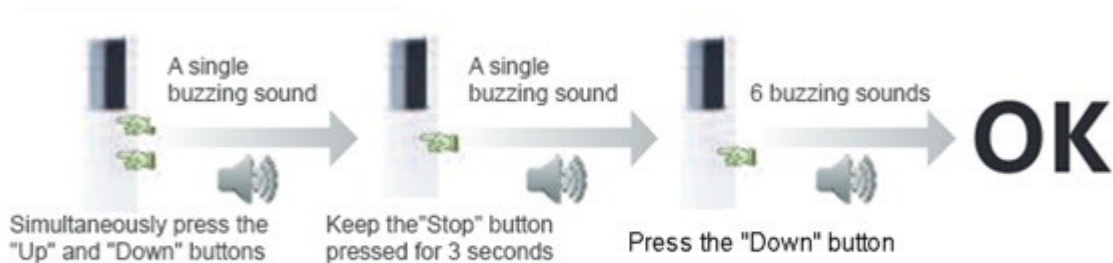
- Transmitter A = Code aligned
- Transmitter B = Code unaligned



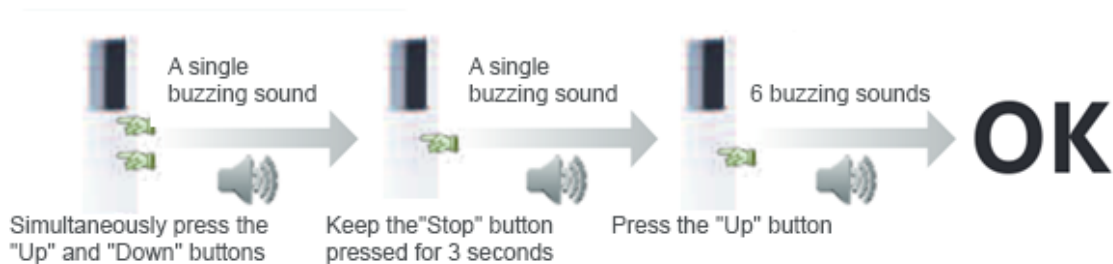


### Removing code

**Attention!** All coded transmitters are affected, if code removal is performed for one of them, causing all previously entered codes to become invalid.

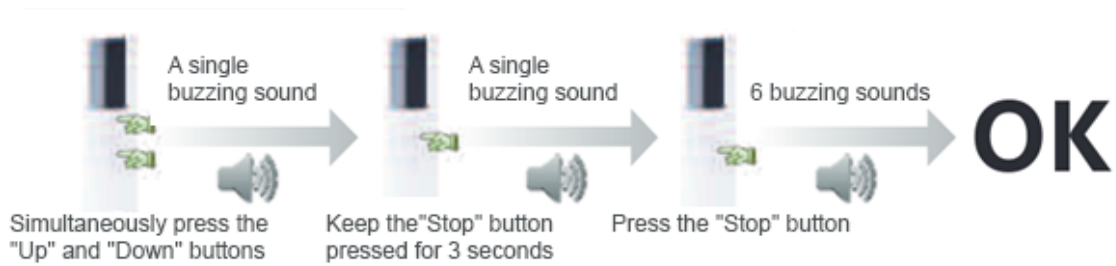


### Reversing code



### Inching operation

During inching operation, the motor will continue to operate after the “Up” or “Down” buttons have been pressed for less than 1.5 s. This will cause the shutter to be completely raised or lowered after shortly tapping one of the buttons. The operation of the motor will thereby proceed until it either reaches a set limit or the “Stop” button is pressed.



## Disposal regulations

EU guidelines regarding the disposal of scrap electric appliances (WEEE, 2012/19/EU) were implemented in the law related to electrical and electronic equipment and appliances.

All WiTec electric devices that fall under the WEEE regulations are labelled with the crossed-out wheeled waste bin logo. This logo indicates that this electric equipment must not be disposed with the domestic waste.

The company WiTec Technik GmbH has been registered in the German registry EAR under the WEEE-registration number DE45283704.

Disposal of used electrical and electronic appliances (intended for use in the countries of the European Union and other European countries with a separate collection system for these appliances).

The logo on the article or on its packaging points out that this article must not be treated as normal household waste but must be disposed to a recycling collection point for electronic and electrical waste equipment. By contributing to the correct disposal of this article you protect the environment and the health of your fellow men. Environment and health are threatened by inappropriate disposal.



Material recycling helps reduce the consumption of raw materials.

Additional information on recycling this article can be provided by your local community, municipal waste disposal facilities, or the store where you purchased the article.

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