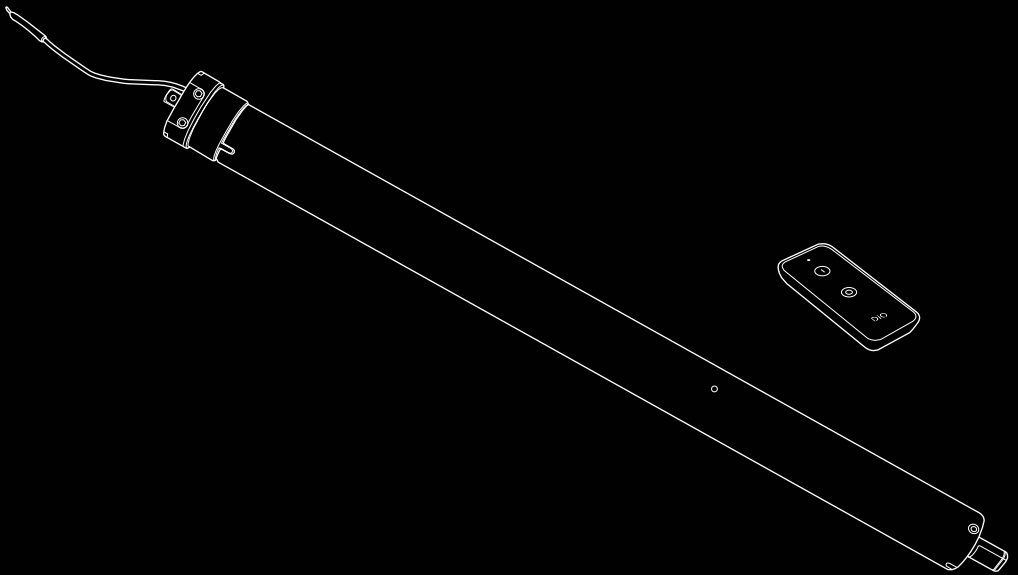


## Motorised wireless and remote controlled roller shutter



### INSTRUCTION MANUAL

MVR-40-10RF / MVR-60-10RF / MVR-60-20RF / MVR-60-50RF

## Important safety warning

Thank you for purchasing a DiO product.

Before installing this product, please read these instructions for use carefully and ensure that you **follow the instructions to ensure the safety of persons**. In the event of non-compliance with these instructions, liability and the warranty of the motor will no longer be valid. **Please contact a professional if in doubt.**

**An installation which has not been carried out in accordance with the instructions may result in serious accidents and damage to both people and property.**

Keep this manual after installation in case of possible future system modifications or maintenance.

If in doubt or in the event of a problem, please **contact** the dealer where you purchased the product, or DiO customer service:

- Via our web site: **www.getDiO.com**
- By telephone on: Belgium 0900 51 100 (National rate €0.45/minute)  
France 01 57 32 48 12 (Local call rate)

### Important instructions regarding the safety of users:

- Keep the control units out of the reach of children.
- Keep an eye on the shutter while it is in motion and keep children and animals away from it until it is completely closed.
- Check the equipment regularly and do not use the motor if it needs adjusting or repair.
- Do not operate the shutters or blinds when maintenance is being carried out, such as when cleaning the windows, for example.

### Important instructions regarding the safety of the equipment:

- These motors are intended exclusively for motorising wooden, PVC or aluminium shutters or blinds. Any other use will void the warranty and the manufacturer accepts no liability for damage caused in the event of non-compliance with these instructions.
- When installing, use only the accessories provided in the kit.
- Fitting the motor and its accessories may be carried out by an unqualified person provided that the instructions in this manual are strictly observed. Connection to the electricity supply must be carried out by a qualified electrician.
- The motor is fitted with a thermal protection device that will stop the motor automatically to enable it to return to its normal operating temperature. If this occurs, please wait for about 20 minutes; the motor will then function as normal.
- The unit may become warm in the event of prolonged use or with no load. Caution – risk of burning.

### Before installation

- Check that the motor is suitable for the shutter to be automated. The torque, the coupling ring and the operating time must be compatible with the characteristics of the driven components. Follow the manufacturer's specifications when defining the load to be applied to the motor.
- Ensure that you disconnect the power supply to the system before carrying out any installation or maintenance.
- Avoid pulling on the power cable excessively.
- Avoid shocks or blows to the motor.
- Do not allow it to come into contact with liquids or any source of heat.

- Do not disassemble the product. Do not insert sharp objects into the motor.
- Fit the power cable inside waterproof protective tubing if it is to be installed externally in order to avoid any possible ingress of water into the motor.
- Do not use the motor if the power cable is damaged, and contact customer service or the dealer immediately.
- Do not make holes in the motor and pay particular attention to the length of the retaining screws of the roller of the shutter or blind.
- Please refer also to the shutter or blind instruction manual for additional safety instructions.

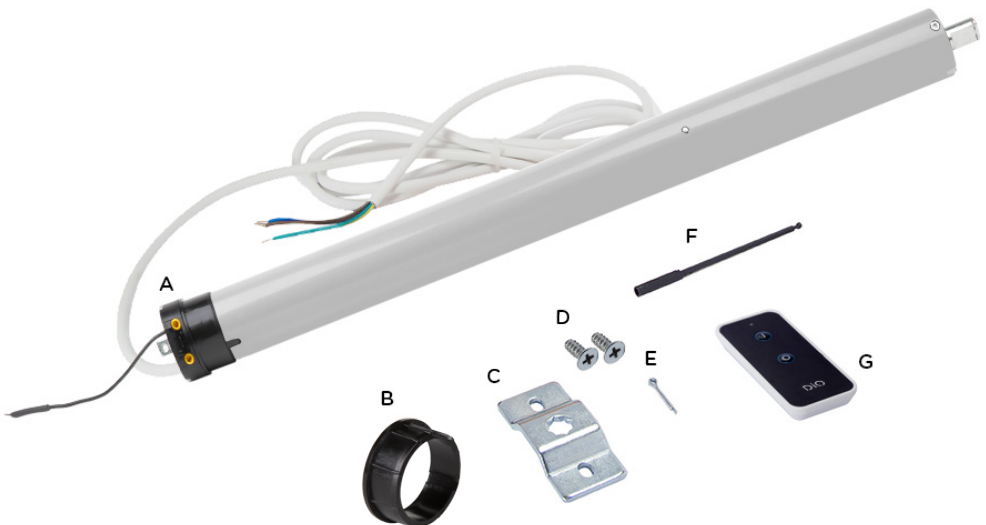
**Note for the warranty:**

**Important!** No warranty is accepted for the product in the event of faults or problems due to non-compliance with the standards for installation.

## Contents

This kit contains:

- A tubular motor 45mm in diameter (35mm for Ref.: MVR-40-10RF) with a 60mm diameter drive wheel (40mm for Ref.: MVR-40-10RF)
- A 60mm diameter octagonal ring (40mm for Ref.: MVR-40-10RF)
- A retaining bracket
- Retaining screws
- Retaining pin
- An end stop adjustment tool
- A one channel DIO 1.0 remote control unit



# Installation

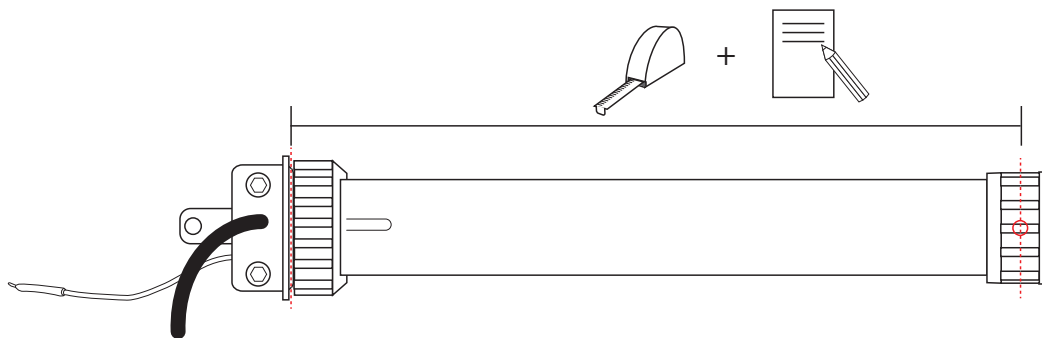
## I. Installing the motor

Please follow the instructions for your shutter or blind to remove it and gain access to the roller.

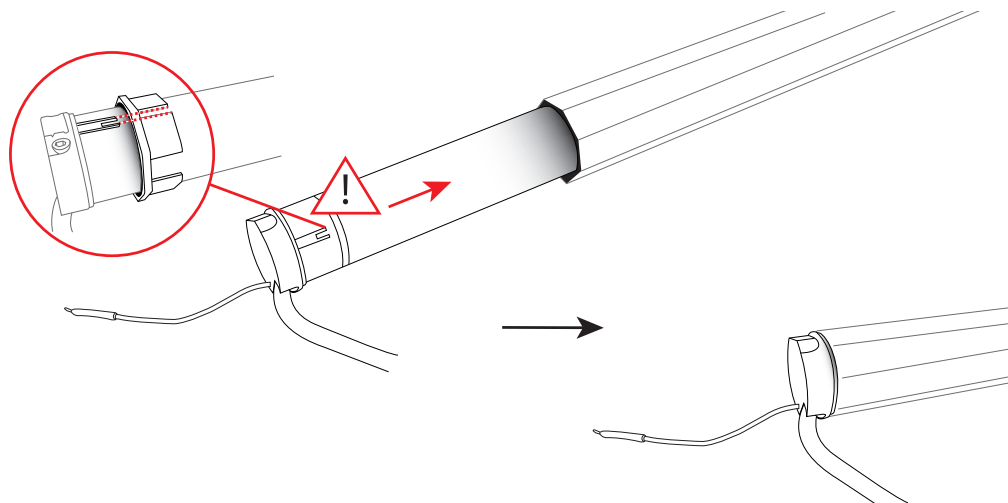
**Warning**, before installing the motorised unit, make sure you **block off the existing wired switch** if you had an electrical installation or remove any equipment which is not needed for a motorised operation such as the strap or the hand crank.

**Warning**, before installing, check that the motor is suitable for the shutter to be automated (see product box).

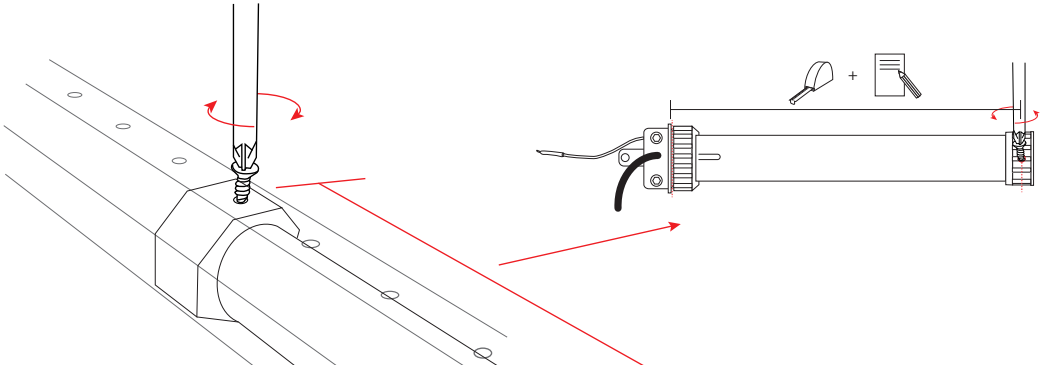
1 Measure the exact distance between the following two points (see diagram):



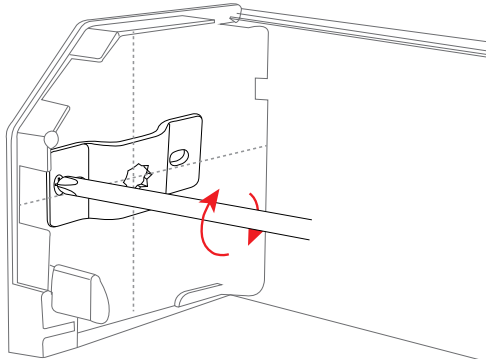
2 Insert the motor into the shutter roller, taking care to align the octagonal ring mark with the adjustment line located on the head of the motor. Only the head of the motor may extend beyond the roller.



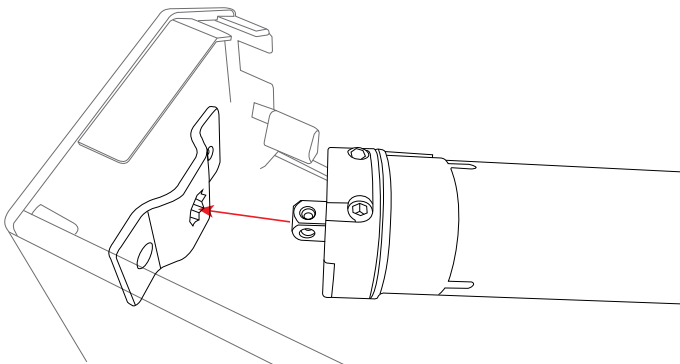
- 3** Make a mark on the roller depending on the distance measured in point 1 and using the screw provided, screw the roller to the tubular motor. Make sure that the screw is screwed onto the plastic drive wheel and not onto the metal tube.



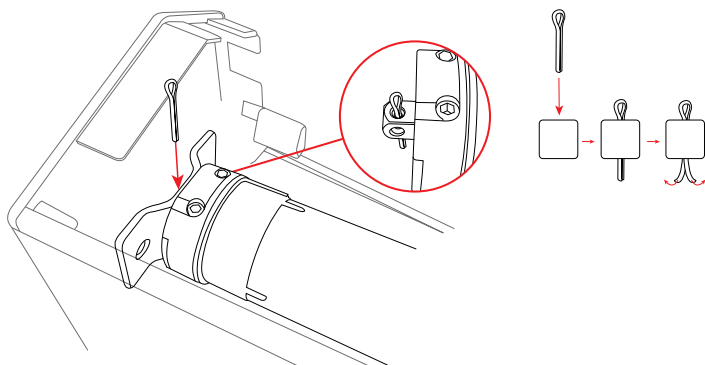
- 4** Attach the retaining bracket on the appropriate side of the housing.



- 5** Attach the roller with the motor installed in the housing, slotting the bracket into the retaining head (see diagram).

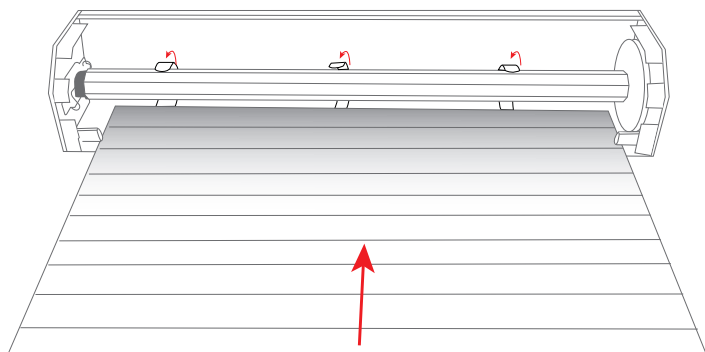


**6** Finish by securing the motor head using the pin supplied.



**7** Refit the shutter onto the roller in accordance with the instructions for your shutter or blind, taking care that the power cable or antenna does not impede it from rolling up.

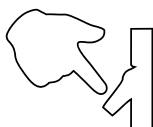
**Warning**, if the shutter is attached with screws, ensure that the screws are not long enough to touch the motor inside the roller.



## II. Connecting to the power supply

Connection to the power supply must be undertaken by a qualified electrician.

**Warning**, disconnect the power supply before you start working.



**Warning**, if the power cable is damaged, the product must not be used and must be replaced. In this case, contact DiO customer service.


### III. Installing the remote control unit

**Important:** If you install several roller shutter motors, please install each motor separately with its remote control unit.

The motor is connected (paired) with its remote control unit the first time the shutter motor is switched on. Please do not connect all your shutter motors at the same time or they will all be linked to the same control unit.

The motor will retain the first remote control unit in memory in the event of a power failure.

#### Installing the first remote control unit:

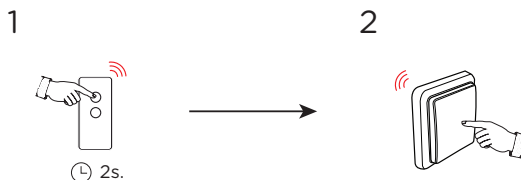
- 1 Turn the power on; the wireless motor will make two back-and-forth movements confirming that it is in pairing mode; in other words that it is ready to be linked to a control unit.
- 2 Within 2 minutes of connecting the motor to the power supply, press the ON ('I') button on the remote control unit for 2 seconds; the motor will make a brief to-and-fro movement to confirm that the link has been established. 
- 3 Within 2 minutes of connecting the control unit, check the up or down movement of the shutter (the ON ('I') button to raise and the OFF ('O') button to lower). If the movement is not correct, within 12 seconds, you can reverse the direction of the movements by pressing the OFF ('O') button for 2 seconds; the shutter motor will make a brief to-and-fro movement to confirm the change.

If you use the DiO 1.0 brightness detector (Ref. 54783), you must reverse the direction of your shutter control unit for it to work correctly. Select ON ('I') to lower and OFF ('O') to raise.

**Warning:** During the installation, if you are not performing the next operation within the time given (i.e.: pressing the ON ('I') button on the remote control unit for 2 seconds after connecting the motor), the motor will make a brief to-and-fro movement informing that it's no longer on pairing mode. In that case, you should turn the power off and on in way to restart the installing from step 1.

#### Adding an additional control unit in 2 clicks

- 4 To add an additional DiO 1.0 control unit (remote control, wireless switch, LiteBox or HomeBox to control using your smartphone, etc.), press the ON ('I') button of the main remote control (first control unit installed) for 2 seconds. The motor will make a brief to-and-fro movement to confirm the pairing mode, then within 12 seconds press the ON ('I') button of the new control unit. The motor will make a brief to-and-fro movement once more to confirm that the new control unit has been added.



**Note:** You can install up to 12 DiO 1.0 wireless control units per shutter motor.

The DiO 1.0 wireless roller shutter motor is not compatible with the switch micro-module (Ref 54700).

**Warning:** Do not use more than one control unit at the same time.

Do not forget to remove or block off the wired switch to prevent damaging the new shutter motor.

### Deleting a control unit

**5** In certain cases, it may be useful to delete one or more control units to free up memory (maximum 12 control units). To delete a control unit, press the ON ('I') button of the first remote control unit for 2 seconds. The motor will make a brief to-and-fro movement, then press the OFF ('O') button of the control unit to be deleted. The motor will make a brief to-and-fro movement once more to confirm that the link has been deleted.

## IV. Adjusting the end stops

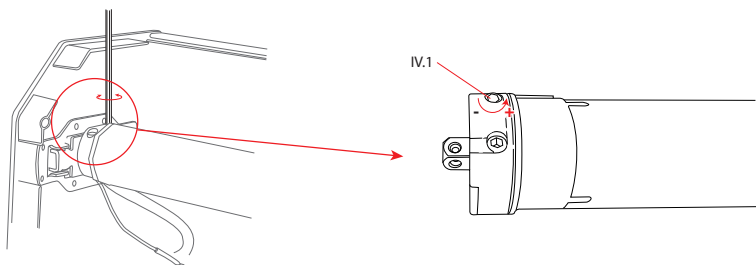
**Warning, do not use any tools other than the adjustment tool provided.**

**1** Adjusting the 'down position' end stop (shutter completely closed):

Locate the adjustment screw corresponding to the level of the motor; it is the one located on top (see Figure IV.1.) (It does not matter if the motor is installed on the right or left side of the housing).

Press the OFF ('O') button on the remote control to close the shutter completely.

- If the shutter stops before the required down position, increase the end stop by gradually turning the top screw anti-clockwise (towards '+') with the adjustment tool provided (see Figure IV.1.). The shutter will gradually descend as you turn the screw. If the adjustment lasts more than two minutes, press the OFF ('O') button to start lowering the shutter again.
- If the shutter reaches the required down position before stopping automatically, **stop it immediately** by pressing the OFF ('O') button on the remote control unit, raise it again by pressing the ON ('I') button on the remote control unit, and correct it by gradually turning the top screw clockwise (towards '-') with the adjustment tool. Press the OFF ('O') button on the remote control again to close the shutter and check if the shutter stops at the required down position. Repeat the operation until it reaches the required position.



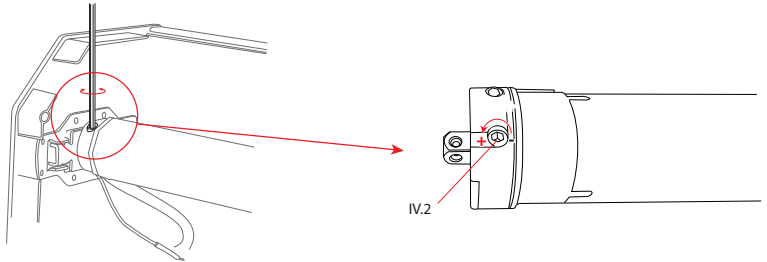
**2** Adjusting the 'up position' end stop (shutter completely open):

Locate the adjustment screw corresponding to the level of the motor; it is the one located underneath (see Figure IV.2.) (It does not matter if the motor is installed on the right or left side of the housing).

Press the ON ('I') button on the remote control to open the shutter completely.

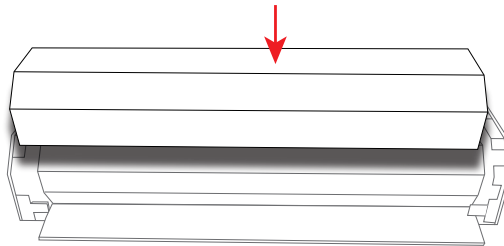


- If the shutter stops before the required up position, increase the end stop by gradually turning the bottom screw anti-clockwise (towards '+') with the adjustment tool provided. The shutter will gradually go up as you turn the screw. If the adjustment lasts more than two minutes, press the ON ('I') button to start raising the shutter again.
- If the shutter reaches the required up position before stopping automatically, **stop it immediately** by pressing the ON ('I') button on the remote control unit, lower it again by pressing the OFF ('O') button on the remote control unit, and correct it by gradually turning the bottom screw clockwise (towards '-') with the adjustment tool. Press the ON ('I') button on the remote control again to open the shutter and check if the shutter stops at the required up position. Repeat the operation until it reaches the required position.



**We recommend that you adjust the end stops gradually by only turning the adjustment screws a few turns at a time. Warning, depending on the size of your shutter, you may have to turn the screws several dozen times to get the correct setting.**

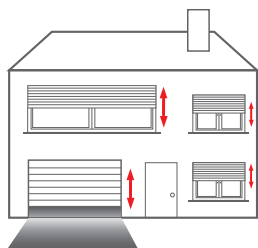
- 3 Close the housing again in accordance with the instructions for your shutter or blind, taking care not to leave the power cable in the housing so that it does not impede the shutter from rolling up, or the radio antenna in order to optimise the range of the signal and thus its connection with your DiO 1.0 control unit(s).



## Use

<b>Fully closed</b>	Press the OFF ('O') button on the remote control.
<b>Partial closure of the shutter</b>	Press the OFF ('O') button on the remote control to start closing the shutter. Press the same button again to stop the shutter at the required position.
<b>Fully open</b>	Press the ON ('I') button on the remote control.

<p><b>Partial opening of the shutter</b></p>	<p>Press the ON ('I') button on the remote control to start opening the shutter. Press the same button again to stop the shutter at the required position.</p>
<p><b>Add control points</b></p>	<p>You can add DiO 1.0 accessories to control your shutter with other control units (switch, remote control, smartphone, etc.; maximum 12 control units) - see III.4. Installing the remote control unit.</p>
<p><b>Control and programme all your devices using your smartphone</b></p>	<p>With the Dio HomeBox or LiteBox, you can control your shutters using your smartphone, control of your control units centrally, programme opening and/or closing times and create life scenarios.</p>



## Troubleshooting

<p>The motor does not work even though it is powered on.</p>	<p>1) A thermal protection device may be activated. In this case, wait for about 20 minutes for the motor to cool down.</p>
	<p>2) Check that the network voltage matches the specifications listed on the product label.</p>
	<p>3) Check that the end stop settings do not overlap. If this is the case, turn each adjustment screw a few turns anti-clockwise and adjust the end stops again (see IV. Adjusting the end stops).</p>
<p>I cannot control my motor remotely.</p>	<p>1) Check that the radio antenna is not damaged and that it is coming out of its housing properly.</p>
	<p>2) Check the motor connections</p>
	<p>3) The transmission distance between the remote control and the radio antenna of the motor is about 50 metres. This distance may be reduced by an existing wireless environment or by the thickness of the walls. If necessary, add a transmission relay (Ref 54799) to increase the distance.</p>

	<p>4) Check the condition of the remote control battery.</p> <p>5) Check that there is distance of one metre between each radio antenna to avoid any interference.</p>
I cannot link my wireless motor with a control unit (remote control unit, switch, ...)	<p>1) Check the condition of the remote control battery.</p> <p>2) Make sure that your motor is not already connected to 12 control units. If it is, partially empty the memory of the motor concerned and reconnect it to the new control unit (See III.4. Installing the remote control unit/deleting a control unit).</p>
I have lost my first control unit and want to add a new one.	To change the first control unit, cut the power to the electrical distribution board for 2 seconds, restore the power for 10-15 seconds, cut the circuit breaker again for 2 seconds and turn the power on again; the motor will make a to-and-fro movement. Then, press the OFF ('O') button of your new primary control unit for 2 seconds; the motor will make a to-and-fro movement and finally press the OFF ('O') button on the new main control unit for 2 seconds; the motor will make a to-and-fro movement again to confirm the registration.
I want to delete all my registered control units (reset).	To do this, cut the power to the electrical distribution board for 2 seconds, restore the power for 10-15 seconds, cut the circuit breaker again for 2 seconds and turn the power on again; the motor will make a to-and-fro movement. Then, press the OFF ('O') button of your primary remote control unit for 2 seconds; the motor will make a to-and-fro movement and finally press the ON ('I') button on the main remote control unit for 2 seconds; the motor will make a to-and-fro movement again to confirm the deletion. The next time the power is turned on, the motor will automatically be in pairing mode for 2 minutes.
My shutter stops going up/ going down after just a few centimetres.	Check that there is no wired switch installed. If there is, remove it immediately and replace it with a wireless switch.

## Specifications

### Roller Shutter Motor


Frequency: 433.92MHz  
 Radio protocol: DiO 1.0 (433MHz by DiO)  
 Transmission range: 50m (free field)  
 Power supply: 230V - 50Hz  
 Operating temperature: -10 to 40° C  
 Internal use: IP44

Product	Torque			Tubing axis	Max power	Rotation speed
	10 Nm	20 Nm	50 Nm			
MVR-40-10RF	X			40 mm	150W / 0.65 A	16 rpm
MVR-60-10RF	X			60 mm	115W / 0.55 A	16 rpm
MVR-60-20RF		x		60 mm	165W / 0.75 A	16 rpm
MVR-60-50RF			x	60 mm	260 W / 1.20 A	12 rpm

### Remote control

Frequency: 433.92MHz  
 Transmission range: 50m (free field)  
 Number of channels: 1  
 Lithium battery: CR 2032 3V (included)

## Declaration of compliance

 The undersigned, Chacon, declares that the radio equipment references: MVR-40-10RF/ MVR-60-10RF/ MVR-60-20RF/ MVR-60-50RF are in conformance with Directive 2014/53/EU.

The complete text of the EU declaration of conformity is available at the following Internet address: [www.chacon.be-support-téléchargements](http://www.chacon.be-support-téléchargements)

## Recycling (Directive 2002/96/EC WEEE)



In accordance with European WEEE directives (2002/96/EC) and in relation to accumulators (2006/66/EC), any electrical or electronic device or accumulator must be collected separately by a local system specialising in the collection of such waste. Do not dispose of these products with ordinary waste. Check the regulations in force.

The logo shaped like a waste bin indicates that this product must not be disposed of with household waste in any EU country. To prevent any risk to the environment or human health due to uncontrolled scrapping, recycle the product in a responsible manner. This will promote the sustainable use of material resources. To return your used device, use the return and collection systems, or contact the original dealer. The dealer will recycle it in accordance with regulatory provisions.