

# EXALUS

EXALUS TR7

Spółka z ograniczoną odpowiedzialnością sp.k.  
Kuchary 24F  
63-322 Gołuchów  
www.exalus.pl

EXALUS HOME control system

## USER'S MANUAL OF VB-BIDI SHUTTER CONTROLLER

The shutter controllers operate  
at the frequency of  
868 MHz



### Technical data :

Operating frequency:	868 MHz
Transmission power:	ERP<25 mW
Operating temperature:	from -10 °C to +50 °C
Operating range:	Determined by the system architecture and regulatory factors



# 1. DEVICE DESCRIPTION

VB-BIDI controllers are designed to control external shutters (blinds) driven with 230 V single-phase AC motors. The shutters can be controlled wirelessly via the EXALUS HOME control system or the TR7 control unit and via the wired bus pushbuttons (monostable). IN1 and IN2 terminals are used for wired control. In both cases double shutter buttons can be used. Thanks to two-way communication between VB-BIDI controllers and the TR7 control unit, current status of the shutters can be viewed in the mobile application.

Two-way communication also allows the controller parameterisation and remote addition of transmitters (without physical access to the receivers). A VB-BIDI controller can be concurrently controlled by EXALUS HOME system transmitters. It is possible to add more transmitters to the receivers, as a result a VB-BIDI controller can be controlled independently from several different places at the same time. A VB-BIDI controller can be paired only with one TR7 control unit (once paired, it is invisible for other control units).

The receiver's software can be updated remotely by the TR7 control unit on the condition that the control unit is connected to the Internet. An option to define one favourite position that is automatically switched on by pressing the controller button is an additional advantage of the shutter controller.

The shutter controller can be integrated with a WSZF-BIDI wind sensor. The wind sensor is a recommended auxiliary equipment that protects safe operation of the shutters. Once the wind exceeds the set speed limit, the shutter will roll up and its functions will be paused for 15 minutes.

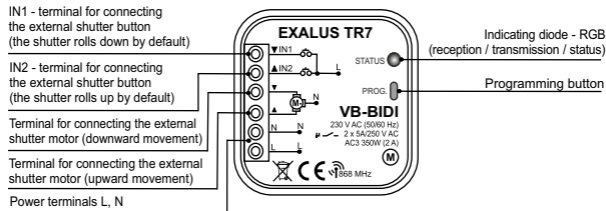


Fig.1

## 2. INSTALLATION

A VB-BIDI controller is designed to be installed in a mounting box. The housing dimensions allow installation both in flush-mounted boxes (minimum Ø60) and surface-mounted boxes. In case of flush-mounted boxes, we recommend using deep or pocket boxes.

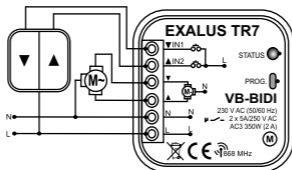
The device must be connected to the single-phase mains in compliance with the applicable standards. The device should be installed, connected and adjusted by qualified electricians who have read the user's manual and who understand how the device functions. For safety reasons, the device should not be mounted without the housing or with the housing that is damaged for the risk of an electric shock.

*NOTE: Prior to the installation, make sure that there is no voltage on the connecting cables. Use a cross screwdriver of the diameter up to 3.5 mm for the installation.*

1. Disconnect the power circuit with a fuse, an overload circuit breaker or switch disconnecter connected to the relevant circuit.
2. Use a suitable device to check the no-voltage state on the power supply cables.
3. Connect the cables to the terminals as per the connection diagram.
4. Install the VB-BIDI controller in the mounting box.
5. Switch on the power supply circuit and check if the device operates properly.

### INSTALLATION NOTES

1. The shutter controller interoperates with 230V single-phase AC motors with mechanical or electronic limit switches. Only one motor can be connected to one VB-BIDI controller. The maximum load capacity of 350 W (2A) for loads in AC3 class must be strictly observed.
2. In wired control, shutter monostable pushbuttons can be connected to IN1 and IN2 terminals of the VB-BIDI controller.
3. A VB-BIDI shutter controller is designed to be installed indoors. If installed outdoors, the receiver must be placed in an additional hermetic box. During installation, make sure that the receiver will not have any direct contact with water or operate in environment characterised with increased humidity. The temperature in the place of installation should be within the range between -10 and +55°C.
4. Having installed the VB-BIDI receiver, check if it operates correctly. In case of integration with a control unit, it is necessary to properly pair the receiver with the control unit (see: **PAIRING THE CONTROLLER WITH THE TR7 CONTROL UNIT**).



Connecting the double shutter button

Fig.2

# CONFIGURATION OF FUNCTIONS VIA THE VB-BIDI CONTROLLER

## PROG button functionalities

1. By pressing the PROG button on the controller, you can navigate between menu levels, which is signalled with a change of the LED light colour.
2. You can choose a given function by releasing the PROG button at the right moment.

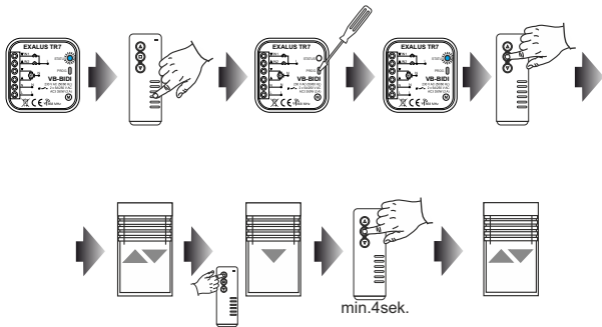
*NOTE: Choosing a given mode is signalled by slow LED light flashing.*

Time from pressing	LED light colour	Function	Notes
1s	BLUE	Adding/removing remote controls	- press STOP on the remote control or 2x RNK button (directions are assigned automatically)
3s	LIGHT BLUE	calibration	- pressing any button on the remote control will activate the slat movement programming mode - autocalibration will start if the PROG button is pressed for a short while,
5s	MAGENTA	favourite position	- press the PROG button for a short while again, - this will delete the favourite position (if earlier set) - and will save the current position as the favourite one
10s	YELLOW	reset	- press the PROG button for a short while to reset the shutter controller - the double Up/Down movement confirms successful reset
15s	BLANKING	exit	- exits the menu without changing any settings

# 1. ADDING A TRANSMITTER

Ensure access to the front panel of the controller

1. Connect the controller to power - STATUS diode will blink blue.
2. Using the buttons on the transmitter (remote control), select the channel number to be paired with the device.
3. Press the PROG button on the VB-BIDI shutter controller. Once the diode starts flashing blue, release the PROG button to select the add the transmitter mode.
4. Then, press the STOP button - the selection will be confirmed with a short UP/DOWN movement.
5. Turn on the shutter using the UP/DOWN buttons to check if the directions are properly set.
6. If the directions are reversed, hold the STOP button for 4 seconds - the shutter will confirm the change of directions with a short UP/DOWN movement.

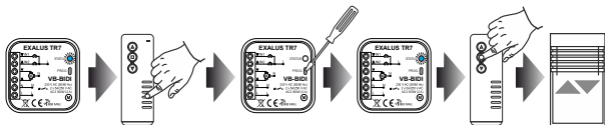


# 2. DELETING AN EARLIER SELECTED CHANNEL / TRANSMITTER (REMOTE CONTROL) FROM THE MEMORY OF THE VB-BIDI SHUTTER CONTROLLER

Ensure access to the front panel of the controller.

1. Connect the controller to power – the STATUS diode will blink blue

- Using the buttons, select the channel number to be deleted.
- Press the PROG button on the VB-BIDI shutter controller. Once the diode starts flashing blue, release the PROG button.
- Then, press the STOP button - the selection will be confirmed with a short UP/DOWN movement.

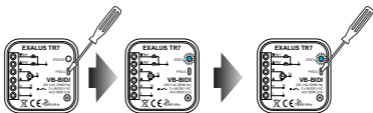


### 3. THE VB-BIDI CONTROLLER AUTOCALIBRATION

*NOTE: Before the autocalibration starts, the shutter controller must have the pre-set end positions. If the end positions have not been adjusted, this must be done immediately.*

Ensure access to the front panel of the controller.

- Press the PROG button on the VB-BIDI controller.
- Once the diode flashes blue, release the button and press the PROG button again to start the autocalibration process. The shutter will automatically complete relevant cycles to memorise the set end positions.

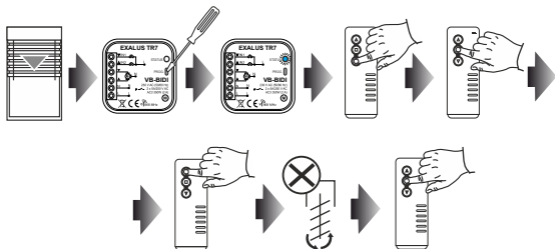


### 4. CALIBRATION OF SLAT ROTATION ANGLE RANGE

Front panel of the controller must be accessible.

- First, start with setting the shutters halfway their downward movement.
- Press the PROG button on the VB-BIDI controller. Once the diode flashes blue, release the PROG button. Press any button on the remote control to activate the slat angle programming mode.
- To start the calibration procedure of the slat rotation angle range, press the DOWN button.
- To confirm the bottom position, press the STOP button on the remote control.
- Make several short upward movements - if you notice the moment when the slats stop rotating and the shutters start moving up, confirm the setting with the STOP button.

*Note: Having completed the procedure, make sure that the shutters reach their end bottom position so that the controller position can be set.*

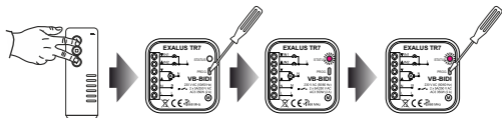


## 5. CONFIGURATION OF THE FAVOURITE POSITION VIA THE VB-BIDI CONTROLLER

*Note: There are two requirements that must be met to properly save/delete/select your favourite position: the controller must be fully calibrated (autocalibration + calibration of slat rotation angle range) and the controller must know its position (after it has been connected to power and calibrated, it must first move to its end position).*

Ensure access to the front panel of the controller.

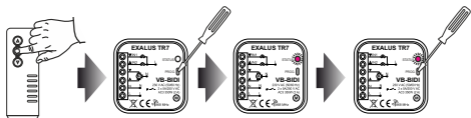
1. Set your favourite position using the transmitter.
2. Press the PROG button on the VB-BIDI controller. Once the diode starts flashing magenta, release the button and press it again to save your favourite position. You can select your favourite position by pressing the STOP button on the remote control.



## 6. DELETING YOUR FAVOURITE POSITION VIA THE VB-BIDI CONTROLLER

Ensure access to the front panel of the controller.

1. Set your favourite position using the STOP button on the controller.
2. Press the PROG button on the VB-BIDI controller. Once the diode starts flashing magenta, release the button and press it again to delete your favourite position.



## 7. RESETTING THE VB-BIDI CONTROLLER

Ensure access to the front panel of the controller.

Press the PROG button on the VB-BIDI controller. Once the diode starts flashing yellow, release the button and press it again to reset the controller.



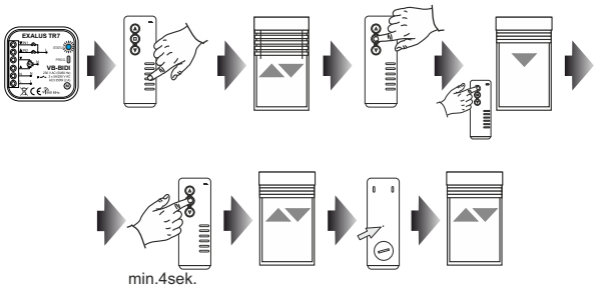
## CONFIGURATION OF FUNCTIONS VIA THE REMOTE CONTROL

### 1. PAIRING THE REMOTE CONTROL WITH THE CONTROLLER

1. Connect the controller to the power supply. The STATUS diode flashes blue.
2. Using the buttons select the channel to be paired with the device (applies to multichannel devices).
3. After a short UP/DOWN shutter movement, press the STOP button on the remote control.
4. Activate the shutter movement using the UP/DOWN buttons to check if the directions are set properly.
5. If the directions are reversed, hold the STOP button for 4 seconds - the shutter will confirm the change of direction with a short UP/DOWN movement.
6. Press the P2 button on the transmitter (remote control) - a short UP/DOWN movement of the shutter will confirm the permanent pairing of the transmitter.

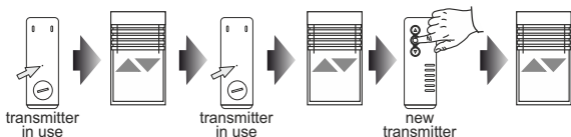
*Note: If the controller has not been yet calibrated, it is necessary to go through the autocalibration procedure.*





## 2. ADDING A NEW REMOTE CONTROL/CHANNEL VIA A REMOTE CONTROL ALREADY IN USE

1. Press the P2 button on an available channel of a given transmitter - the shutter will confirm the setting with a short UP/DOWN movement.
2. Then, press the P2 button - the shutter will confirm the setting with a short UP/DOWN movement again.
3. Press the STOP button on the new remote control/channel to add it – successful addition will be confirmed with a short UP/DOWN movement of the shutter.



**NOTE:** If adding of a new remote control/channel is performed again, the remote control/channel will be deleted from the setting. It is impossible to delete all operating transmitters paired with the VB-BIDI controller using the above described procedure, as there is always one master transmitter that is programmed to permanently interoperate with the controller.

### 3. AUTOCALIBRATION OF THE VB-BIDI CONTROLLER

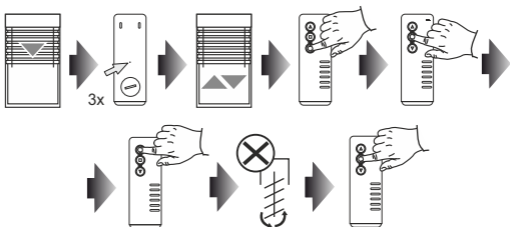
*NOTE: Before the autocalibration starts, the shutter controller must have the pre-set end positions. If the end positions have not been adjusted, this must be done immediately.*

1. Press the P2 button on the remote control three times - it will be each time confirmed with a short UP/DOWN movement of the shutters.
2. To start the autocalibration procedure, press the UP button on the remote control - the shutter will automatically complete complete relevant cycles to memorise the set end positions.



### 4. CALIBRATION OF SLAT ROTATION ANGLE RANGE

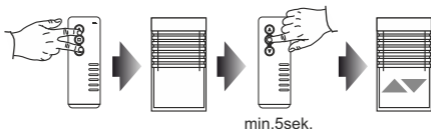
1. First, start with setting the shutters halfway their downward movement.
2. Press the P2 button on the remote control three times - it will be each time confirmed with a short UP/DOWN movement of the shutters.
3. To start the calibration procedure of the slat rotation angle range, press the DOWN button.
4. To confirm the bottom position, press the STOP button on the remote control.
5. Make several short upward movements - if you notice the moment, when the slats stop rotating and the shutters start moving up, confirm the setting with the STOP button.



## 5. CONFIGURATION OF THE FAVOURITE POSITION

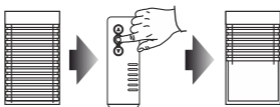
1. Using UP/STOP/DOWN buttons, set the shutter in the desired halfway position.
2. Press the STOP button for 5 seconds at the minimum to save your favourite position - a short UP/DOWN movement will confirm the setting.

*NOTE: There are two requirements that must be met to properly save/delete/select your favourite position: the controller must be fully calibrated (autocalibration + calibration of slat rotation angle) and the controller must know its position (after it has been connected to power and calibrated, it must first move to its end position).*



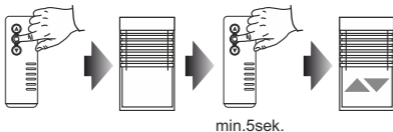
## 6. SELECTING YOUR FAVOURITE POSITION

1. When the shutter is not moving, press the STOP button for a short while.
2. The shutter will move to your previously set favourite position.






## 7. DELETING YOUR FAVOURITE POSITION

1. Using the STOP button, move the shutter to your favourite position.
2. Then, hold the STOP button for 5 seconds at the minimum to delete your currently set halfway position - a short UP/DOWN movement will confirm successful deletion.



## 1. PAIRING A SHUTTER CONTROLLER WITH THE TR7 CONTROL UNIT

(FIRST ACTIVATION):

1. Connect the controller to power – the STATUS diode will blink blue for several seconds.
2. Log into the EXALUS HOME application and go to the DEVICE CONFIGURATION tab.
3. Select the NEW tab and click  "Search" - after a few seconds, available devices will be displayed on the list.
4. To add a selected device to the application, pull  down the menu of a given device and next press  button to pair it with the TR7 control unit.  
*\* If the software update is available, a window will pop up asking you to confirm the update process – click the UPDATE button (during the entire update process, do not switch off the application).*  
*\* After successful completion of the software update (100%), the status will change to: The update has been successfully installed. Next, click the CLOSE button.*
5. To check which VB-BIDI shutter controller has been added, click the IDENTIFY button - the controlled therewith shutter will make a short UP/DOWN movement.
6. Having identified the device, press the CONFIGURE button. A configuration window will pop up, therein you can name the device in the item Name of the controlled object. You can add the device to a group by selecting its name from the drop-down menu or by adding a new group (the Add new group button shall be pressed then).
7. Next, navigate to the CONFIGURATION window by clicking the PARAMETERS SETTING.
8. In this window you can respectively pair a transmitter and calibrate the shutter.

## 2. OPTIONS AVAILABLE VIA THE TR7 CONTROL UNIT

### SHUTTER CALIBRATION

*UNOTE: Before the autocalibration starts, the shutter controller must have the pre-set end positions. If the end positions have not been adjusted, this must be done immediately.*

1. To carry out the SHUTTER CALIBRATION procedure, first check if the directions of the controlled motor are set properly, using the UP, STOP and CLOSE buttons. If the rotation directions are set incorrectly, change the directions by clicking the CHANGE DIRECTION.
2. Having set the directions correctly, click the SHUTTER CALIBRATION button. Calibration can be at any time discontinued by clicking the STOP THE SHUTTER.
3. Once the shutter calibration has been successfully completed, the slat angle calibration starts. Follow the application instructions.

## PAIRED TRANSMITTERS

1. To add a transmitter, click the ADD TRANSMITTER button and select the remote control from the list.

Having changed selected parameters, click the CLOSE and then SAVE buttons.

## **3. DELETING A SHUTTER CONTROLLER FROM THE TR7 CONTROL UNIT**

1. To remove the paired VB-BIDI controller, log into the EXALUS HOME application and go to the DEVICE CONFIGURATION tab.

2.

1. In the Added tab select a relevant controller from the drop-down menu and click the "BIN" button - a window will pop up asking you to confirm the deletion of the device. If the VB-BIDI controller is within the range of operation of the control unit, it will be deleted, but, if the control unit is unable to communicate with the controller (e.g. it is disconnected from power), another window will pop up informing you about no communication with the device and confirming the deletion of its settings. In such a case, when the shutter controller is activated again, it must be reset via the service button (VB-BIDI CONTROLLER RESET).

*NOTE: If the shutter controller update has failed, it should not be deleted from the menu.*