FAKRO®

AJP Z-Wave user manual

Contents

FAKRO PP Sp. z o.o.
ul. 144A Węgierska
33-300 Nowy Sącz
Polska
www.fakro.com
tel. +48 18 444 0 444
fax. +48 18 444 0 333

1 Safety rules

Please read carefully the instructions below before proceeding to the device installation so as to prevent electric shock, injury, etc.

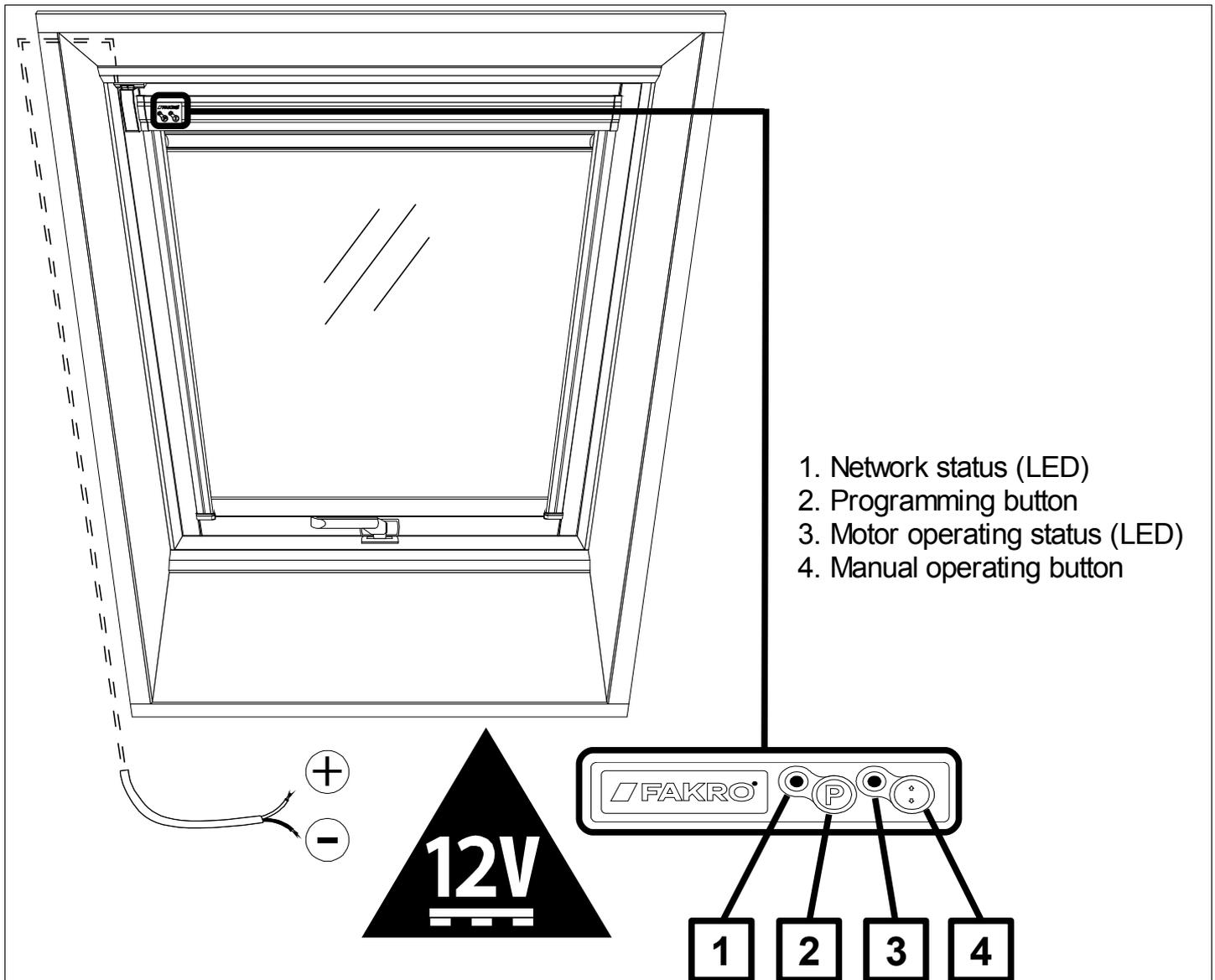When installing the Venetian blind, it is necessary to observe the following recommendations:

● After unpacking, check the Venetian blind elements for any signs of mechanical damage.

● Installation should be performed by a qualified person in accordance with manufacturer instructions.

● Before connecting the Venetian blind, make sure that the power voltage corresponds with that provided on the data plate.

● Connect the Venetian blind and verify its correct functioning by performing one full working cycle (two-core cable – 12V DC motor).

● Plastic containers used for packing should be stored out of children reach as they may be a potential source of danger.

● The Venetian blind should be used according to its intended design. The FAKRO Company shall not be responsible for any consequences being the result of improper Venetian blind use.

● Any activities relating to cleaning, adjustment or dismantling the Venetian blind should be preceded with disconnecting the power supply.

● The Venetian blind cannot be washed using solvent-based substances or open stream of water (do not immerse in water).

● Any repairs of the Venetian blind should be carried out by service authorised by the manufacturer

● The Venetian blind has been designed for installation inside the room.

2 Description

The AJP-Wave Venetian blinds are intended for installation in FAKRO roof windows and adapted for cooperation with wireless remote control devices offered by FAKRO and by others manufacturers offering products with logo Z-Wave. The Venetian blinds are equipped with two-way "Z-Wave" communication radio modules. For communication, the Z-Wave module utilises radio wave frequency of 868.42 Mhz.

In order to be able to operate AJP Venetian blind mentioned accesories must be installed according to the picture installation manual included in the product package. Subsequently, the motors should be programmed to network and group – see section 2.

In *Figure 1,* there is presented a general diagram of connecting blinds to power supply.

1. Network status (LED)
2. Programming button
3. Motor operating status (LED)
4. Manual operating button

CAUTION!

The power supply should be connected according to the installation manual (wire: white - "+", brown - "-"). If the blind does not work, it is necessary to change the power supply polarity and check blind functioning by pressing the "Manual operating button".

Figure 1: Description of AJP Z-Wave control and wiring diagram

3 Device programming – *INCLUDE & ASSOCIATE.*

For the device to communicate on the network Z-Wave is necessary to append it to this network and to give a specific node ID number. The device can be added to the network if it is not part of another network. To be able to add the device to another network it is necessary to remove it from the existing network or reset to factory state (read *section 7*, using any Primary controller). Ready to add accessories to a network of Z-wave is indicated by the continuous illumination of the LED1 – Network Status

To be able to operate accesories it is necessary to:

1. Ad the device (using "INCLUDE" function) to selected network. A model procedure is presented in *Figure 2;*

INCLUDE

1. Press the "**In/Ex"** button on the controller once.
2. Ready to add a new device to the network is indicated by controller (Ext, diodes (1,4) on for 10 sec.).
3. Press the programming button on the device for 1 second
4. Successful inclusion to the network is indicated
- by controller (two diodes (2,3) on for 2 sec.)
- by AJP (LED 1 goes off)
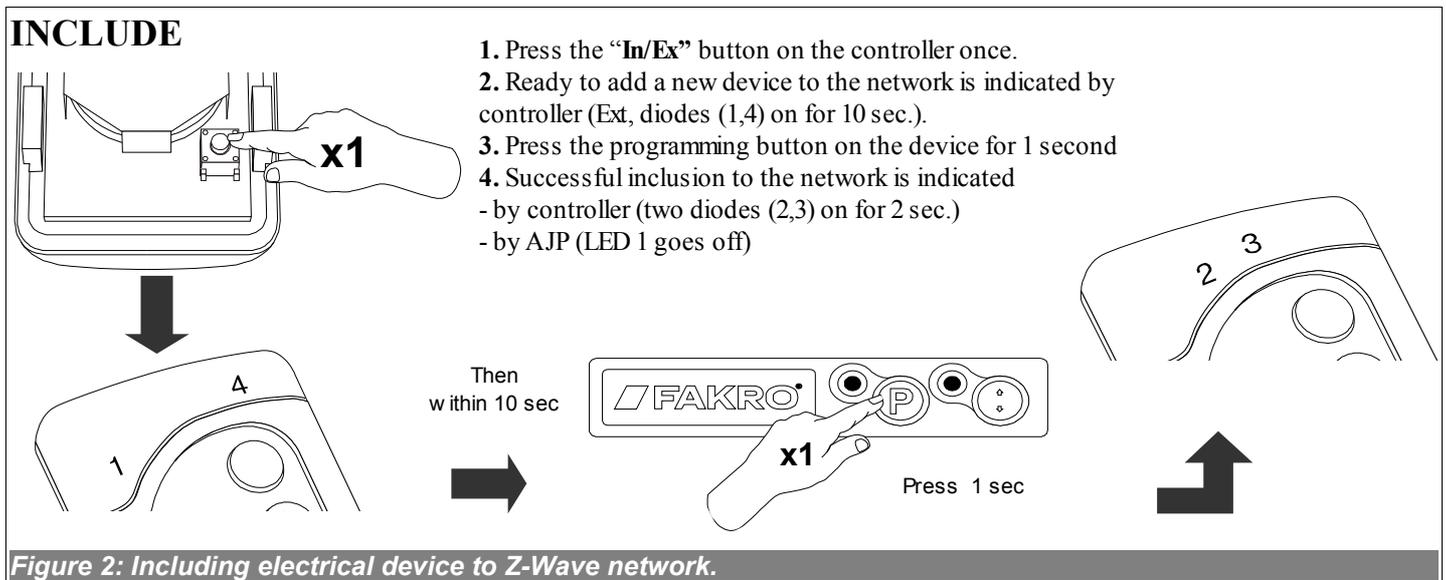
Then within 10 sec

Press 1 sec

Figure 2: Including electrical device to Z-Wave network.

2. Link the device with the selected pair of buttons on the Controller (using "ASSOCIATE" function). A model procedure is presented in Figure 3. For some controllers, it is possible to both Include and Associate at one time.

ASSOCIATE

1. Press sequences of buttons within 1 sec:
- Shortly press "**In/Ex"** and then
- button with a pair of buttons, we want to operate the device (e.g. 2).
2. Ready to create association is indicated by controller (diodes (1,2,3) on for 10 sec.)
3. Press the programming button on the device for 1 second.
4. Successful assignment is indicated by controller (three diodes (2,3,4) on for 2 sec.)

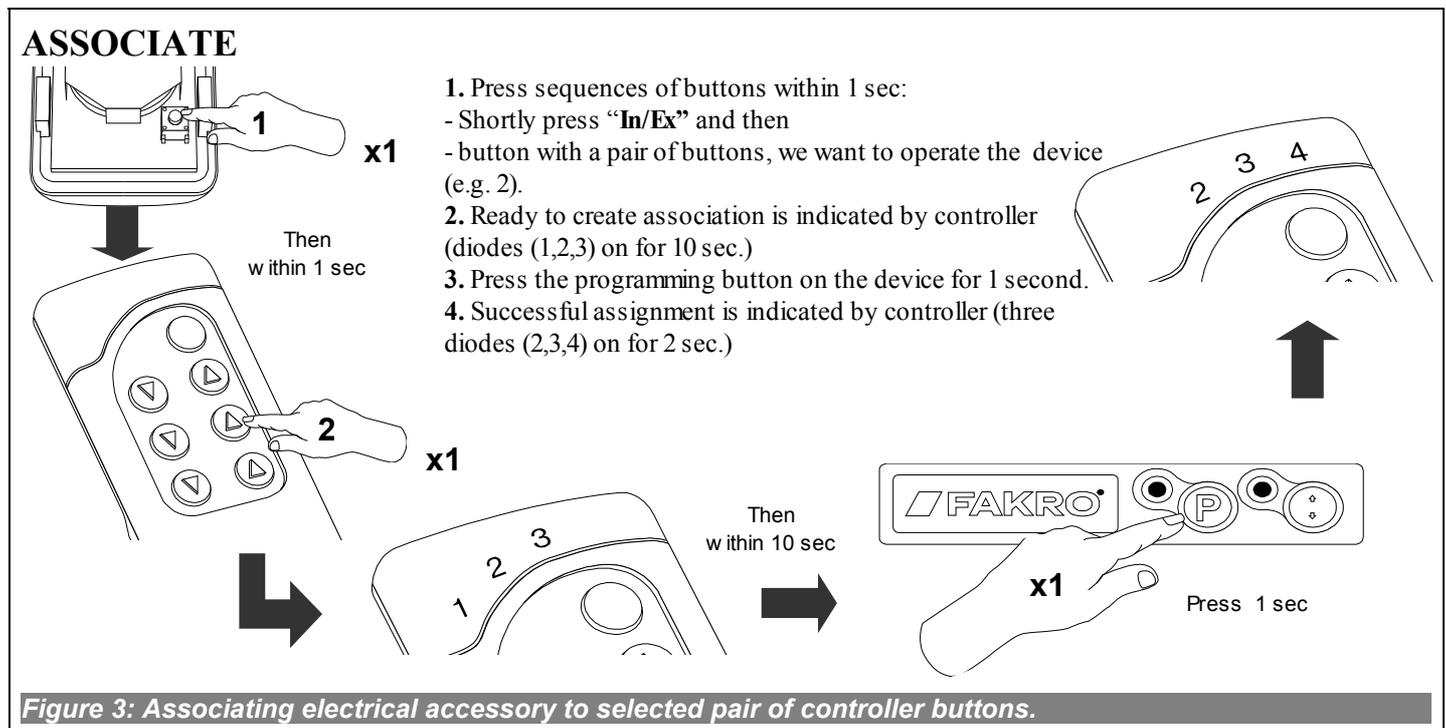Then within 1 sec

Then within 10 sec

Press 1 sec

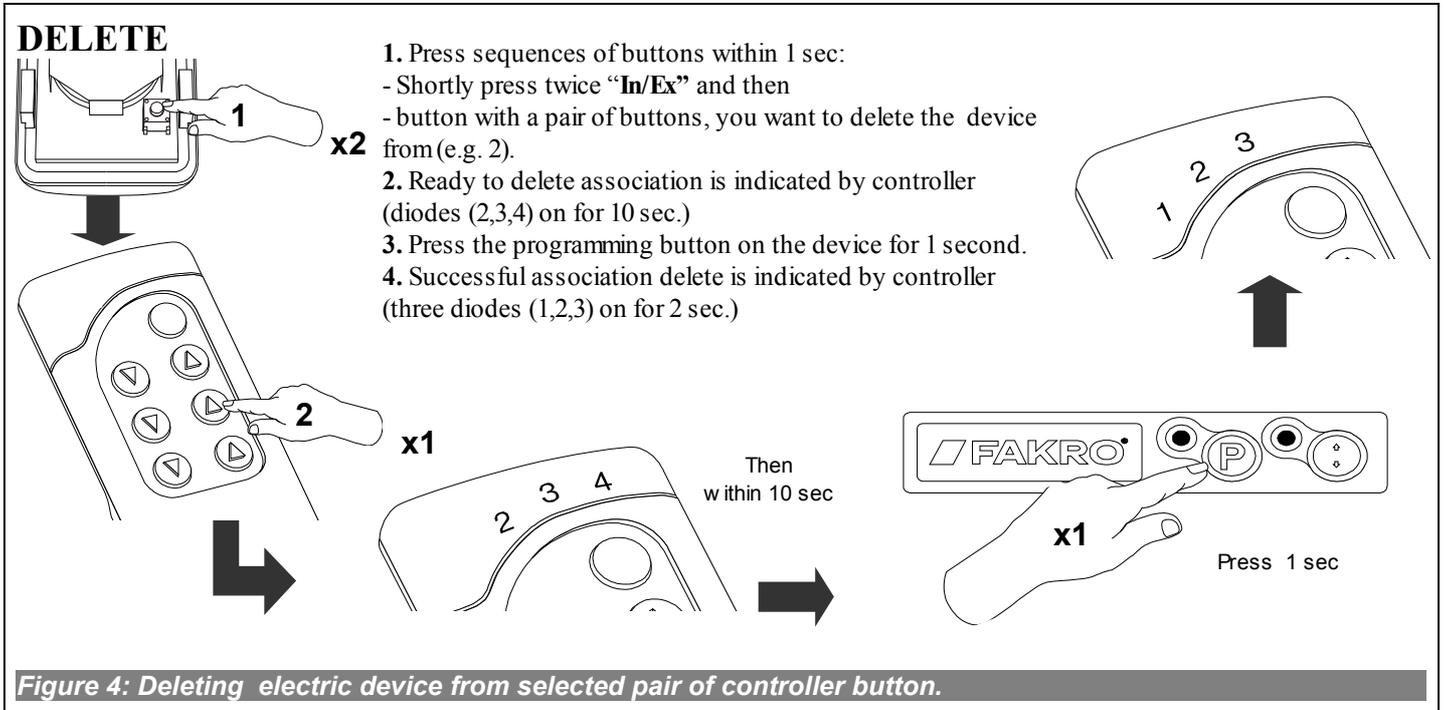*Figure 3: Associating electrical accessory to selected pair of controller buttons.*

For information on handling, the Inclusion and Association functions using products of another manufacturers, please read the documents of the respective manufacturer.
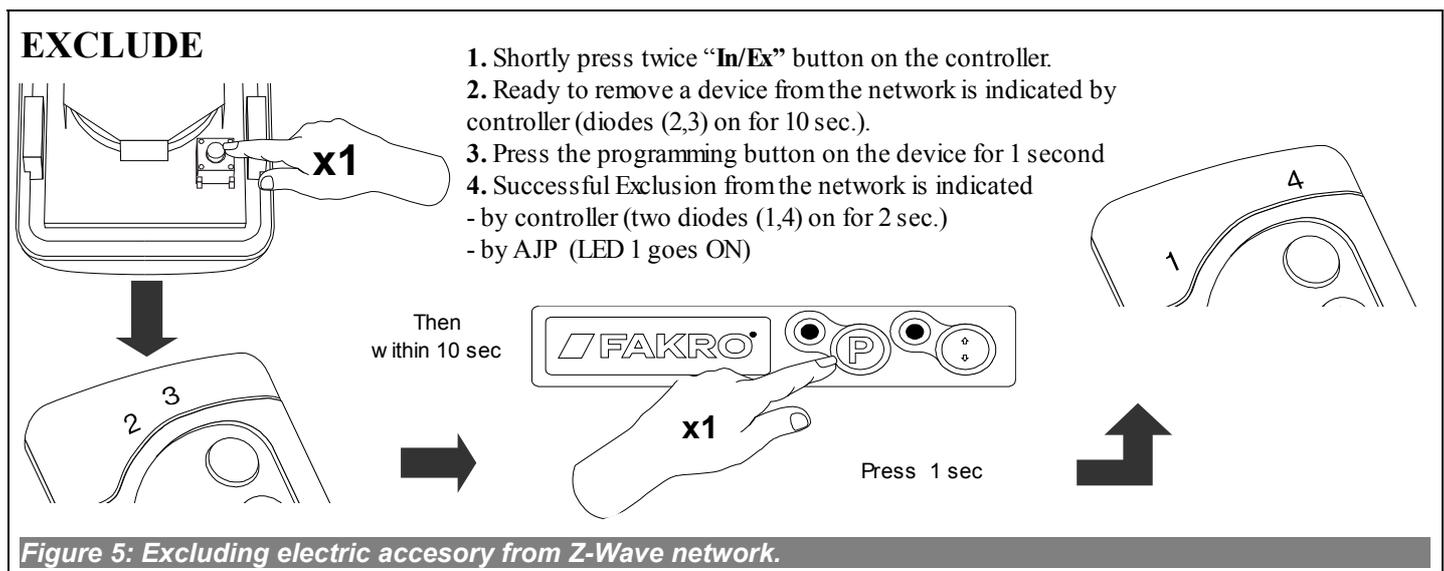
4 Device programming – *EXCLUDE & DELETE*.

In some cases (changing the place of installation, replacement of damaged equipment) is necessary to remove devices with both memory of the controllers (the links with buttons - DELETE) and Z-wave network (EXCLUDE) to prevent erroneous routing of commands.

Do not remove devices from the network without an EXCLUDE function executed, as this may cause a delay in the operation of other devices on the network and reduce the battery life time of remote controllers.

1. Device deleting (**"DELETE"** function) from selected controller *group of* buttons. Device deleted from group of buttons still is a part of Z-wave network until "**EXCLUDE"** function is executed.

DELETE

1. Press sequences of buttons within 1 sec:
- Shortly press twice "**In/Ex**" and then
- button with a pair of buttons, you want to delete the device from (e.g. 2).
2. Ready to delete association is indicated by controller (diodes (2,3,4) on for 10 sec.)
3. Press the programming button on the device for 1 second.
4. Successful association delete is indicated by controller (three diodes (1,2,3) on for 2 sec.)

Then within 10 sec

Press 1 sec

Figure 4: Deleting electric device from selected pair of controller button.

2. Device removing (**"EXCLUDE"** function) from the network Z-Wave. Excluded from the network device does not have Node ID and it can be "**INCLUDED**" into the new network. At *AJP Venetian blind* this stage is indicated by the LED no.1 continuous glow. The device is no longer a part of the network and can not be used as a router in the network anymore.

EXCLUDE

1. Shortly press twice "**In/Ex**" button on the controller.
2. Ready to remove a device from the network is indicated by controller (diodes (2,3) on for 10 sec.).
3. Press the programming button on the device for 1 second
4. Successful Exclusion from the network is indicated
- by controller (two diodes (1,4) on for 2 sec.)
- by AJP (LED 1 goes ON)

Then within 10 sec

Press 1 sec

Figure 5: Excluding electric accesory from Z-Wave network.

For information on handling, the Delete and Exclusion functions using products of another manufacturers, please read the documents of the respective manufacturer.

5 Interoperability of devices different manufacturers

The Z-Wave allows you to integrate devices from different manufacturers working in different functional groups, such as light, heating, home automation, ect. Z-Wave devices, are acting as repeaters in the network and increases the range of radio communication. The more devices on the networks, the more stable and more resistant to distortion networks are.

6 Including AJP Venetian blind into a third-party network

Start the INCLUDE procedure on the controller which is able to perform inclusion for desired network and press "Programming" button on the *AJP Venetian blind* which to be included.

Note: For information about how to activate procedure of Inclusion, using products of another manufacturers, please read the manuals of the respective manufacturer.

7 Reset (factory default)

Sometimes it is necessary to reset *AJP Venetian blind* to the factory settings and deleting all network information. For resetting, a Primary controller (able to include/exclude) is needed. For *AJP* Reset function is synonymous with "EXCLUDE".

Note: A successful reset is indicated by the *AJP Venetian blind*, continuous light of network status diode (LED 1 see Figure 1)

8 Special functions – *ALL SWITCH*

„*ALL SWITCH*" - it is possible to define if device should respect "All close" (OFF) or "All Open" (ON) command send by controllers..

Note: The description for activation and deactivation of the "ALL SWITCH" function is described in the user manual of the controllers supporting this function.

9 Venetian blind control

9.1 *Venetian blind control with handheld controllers*

Venetian blind control with the use of handheld controllers (ZWP, ZWK, ZWG) is achieved through several types of commands.

- Command triggered by momentary pressing the controller button – Venetian blind changes its state to the limit positions or defined positions *(see setting comfortable position).*

If the slats are in an undefined position, Venetian blind may perform a cycle of closing the slats and then return to the position defined by the user.

- Command triggered by long pressing the controller button - Venetian blind starts to change its state until the button is released or limit position is reached (total closure towards open or close).

9.2 *Defining comfort position*

To enhance comfort, it is possible to define a position to which Venetian blind slats are set automatically after momentarily pressing the "Open" button:

– Press the button responsible for closing the blind and hold it until the motor status LED flashes on the blind control keyboard

From this point, the user has 15 seconds to carry out the remaining points of the procedure

– By holding the "Open" button longer, set the slats to a position most suitable in a given moment (depending on the season of the year, window mounting angle, etc.)

– Press the button responsible for closing the blind and hold it until the motor status LED flashes on the blind control keyboard. Release the button.

– Confirmation of setting a comfortable position is confirmed by 7 flashes of the motor status LED.

9.3 *Manual control with the use of keyboard on Venetian blind*

The „*manual control button*" (see Figure *1, item 4*) allows manual control of the motor after power is supplied. The manual control works in a sequential mode, i.e.:

1. First pressing the button after connecting power will run the motor
2. Second pressing the button will stop the motor
3. Third pressing the button will run the motor in the opposite direction.

10 Technical parameters

Technical Parameters	
Parameter	*Motor AJP Z-Wave*
Speed	40 r.p.m
Rated current	0.4 A
Standby current	0.03 A
Working temperature	(-10ºC) do (65ºC)
Power cable	2 x 0.25 mm^2
Power voltage	12V DC

11 Signalling description – LEDs

Motor status (see Figure 1)		*Network status (see Figure 1)*	
Single diode flash	The current consumed by the motor is too low. In case of problems operating, please contact FAKRO service.	**Diode continuously on**	The device has not been associated with any network, i.e. remote controlling the device is not possible. This LED is always on after connecting the power to a brand new motor. It is switched off after adding the device to the network by means of the "*INCLUDE*" button.
Triple diode flash	The current consumed by the blind motor is too high. In case of problems operating, please contact FAKRO service.		

12 Warranty

The manufacturer guarantees correct device functioning. It also undertakes to repair or replace the device if its defects result from material or structural faults. The warranty period is 24 months from the purchase date, fulfilling the following conditions:

- Installation has been performed by an authorised individual, as per manufacturer recommendations.
- Seals remain intact and no unauthorised structural changes have been made.
- The device has been used in accordance with its intended use as per user manual.
- Damage is not a result of improperly made electrical system or atmospheric phenomena.
- The manufacturer is not liable for damage which occurred as a result of improper use or mechanical damage.

In case of failure, the device must be submitted for repair with a Warranty Card. Defects revealed within the warranty period will be removed free of charge no longer than 14 days after accepting the product for repair. Warranty and post-warranty repairs are performed by the manufacturer i.e. FAKRO PP. Sp. z o.o.

Quality Certificate:

Device

Model..

Serial Number..

Seller...

Address..

Date of Purchase...

....
Signature (stamp) of installing person