

PROGRAMMING THE DEVICE

Function	Description	Z-Wave operating status	
		Motor operating status	Z-Wave operating status
Include	This function allow you to add actuator to the network Z-Wave. Follow the procedur adding device to the network Z-Wave according to user manual supplied with the product. Then, press the programming button on the skylight for 1 second.	-	Before: Light ON After: Light OFF
Association (Add node to group)	Function allow you to add actuator to the group of controller. Follow the procedur adding device to the selected group according to user manual supplied with the product. Then, press the programming button on the skylight for the 1 second.	-	
Exclude (Remove an existed node)	This function allow you to remove actuator from the network Z-Wave. Follow the procedur removing device from the network Z-Wave according to user manual supplied with the product. Then, press the programming button on the skylight for 1 second. Function removes information only about nework Z-Wave.	-	Light on for 5s., after pressing „P”
Delete (Remove node from Group)	Function allow you to remove actuator from the group of controller. Follow the procedur removing device from the selected group according to user manual supplied with the product. Then, press the programming button on the skylight for the 1 second.	-	
Default	This function allows to remove device from the Z-Wave network without using controller. Press programming button 5 times. Device will be removed from the Z-Wave network. Default parameters will also be restored.	-	Light on for 5s., after pressing „P”

ASSOCIATION GROUPS

There are three association groups in actuator from FVS window:

- Life Line – group for position reporting actuator after each a stoppage and alarm reporting (overcurrent, rain alarm, low battery alarm, damage encoders). This group can consist maximum 1 device.
- Basic Repeat – group used to transfer the received basic commands by device, to the devices included in this group. This group can consist maximum 5 devices.
- Basic Rain – group used to transfer the received close command, from rain detectors to the devices included in this group. This group can consist maximum 5 devices.

ADDITIONAL INFORMATION

1. NETWORK STATUS CAN BE CHECKED BY PRESSING PROGRAMMING BUTTON:

- Window assigned to the Z-Wave network – LED is off
- Window not assigned to the Z-Wave network – LED is on for 5 seconds.

2. SIGNALLING OF FULL CLOSING/OPENING:

- Window closing is indicated by LED blinking 3 times.
- Window opening is indicated by a single blink of LED.

3. BATTERY STATUS:

- U<11.5V – low battery status, lock in the opening direction (window can be closed) – when trying to start, LED blinks 2 times.
- U<10.5V – critical battery status, window closed automatically – when trying to start, LED blinks 2 times.

4. MANUAL CONTROL

- Within 1 second press programming button 2 times. Control is carried out sequentially: Start – Stop – Start (in the opposite direction).

5. RAIN SENSORS ACTIVATE WHEN THE WINDOW IS OPEN AND THE ACTUATOR COMPLETED ITS WORK.

CALIBRATION

The actuator in the FVS window is factory calibrated. In addition, the calibration is automatically repeated every time the actuator completes its full work cycle. In case of large discrepancy between specified position and reported position, it is required to force full work cycle of the actuator.

WARRANTY

The manufacturer guarantees correct device functioning. It also undertakes to repair or replace faulty device if damage is a result of material or structural faults.

The warranty period is 24 months from the date of purchase, fulfilling the following conditions:

- Installation has been performed by an authorised individual, as per manufacturer recommendations.
- Seals remain intact and no authorised 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.
- The FVS Z-Wave skylights are supplied to the client with preprogrammed remote control. If reset, call service for reprogramming will be treated as service.

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 postwarranty repairs are performed by the manufacturer i.e. FAKRO PP. Sp. z o.o.

FAKRO Sp. z o.o.

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Quality certificate

Device _____

Model _____

Serial Number _____

Seller _____

Address _____

Purchase date _____

Signature (stamp) of installing person

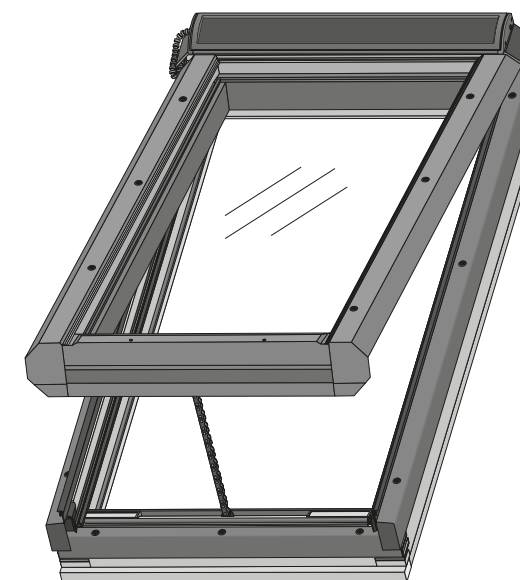
FAKRO[®]
ORIGINAL USER MANUAL

GB

ELECTRIC SKYLIGHT



FVS



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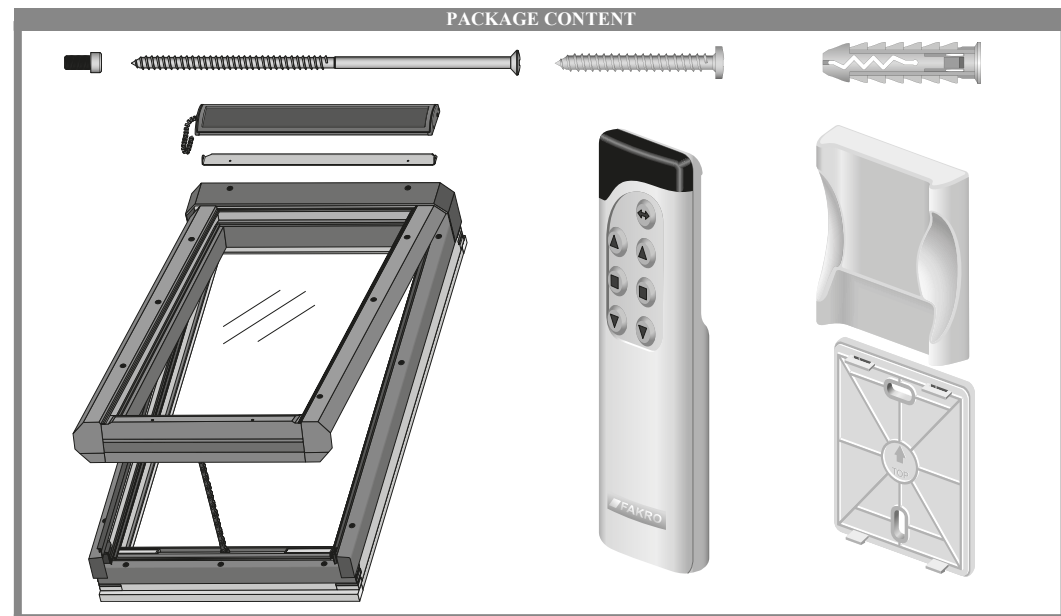
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Dear Sir/Madam! Thank you for purchasing FAKRO product. We do hope that it will meet your expectations. To ensure appropriate functioning of the product, please peruse this User Manual.



WINDOW DESCRIPTION

Solar powered deck mounted skylights are ideal solutions for out of reach applications, where besides the natural light, you would like to enjoy fresh air as well. FVS skylights are equipped with a Z-Wave communication system, allowing for easy remote operation without the need of pointing the remote towards the skylights. FVS skylights are powered by the integrated solar panel, so connection to a power source is not required.

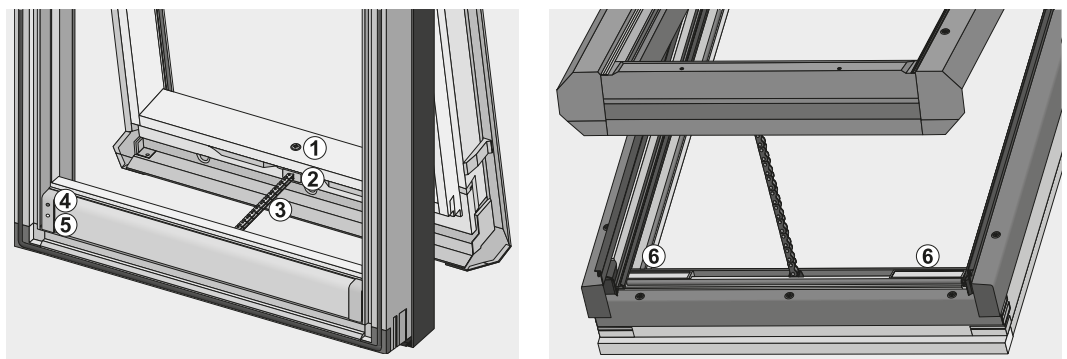
TECHNICAL SPECIFICATION			
Power supply: 12-15V DC (Battery)	Chain extension speed: 6 [mm/s]	Chain outreach*: Basic - 17 [cm] Extended - 27 [cm]	Radio protocol: Z-Wave
Rated power: 16 [W]	Chain pushing force: 200 [N]	Current limiting: YES	Frequency: EU - 868,42 MHz; AU/NZ - 921,42 MHz; US/Canada - 908,4 MHz; RU - 869 MHz; KR - 919-923MHz (depending on version)
Operating range: Up to 20m in the building	Closing force: 200 [N]	Working temperature: -10°C to 65°C	

By default, the chain outreach length is 17 [cm]. Change of the chain outreach length can be changed by means of advanced controllers, e.g. ZRS24 or Gateway Z-Wave. In order to change the chain outreach length it is required to send parameter No. 75 with a value of:
- value 1 – outreach 17cm
- value 2 – outreach 27cm

A general view of the Z-Wave skylight is presented below. The actuator is placed under plastic plate. The actuator is equipped with a two-way communication radio module. For communication, the Z-Wave module exploits radio wave appropriate frequency. The actuator is equipped with a chain featuring maximum extension at the level of 27cm (by default, the chain outreach length is 17cm). The chain is finished with a special tip that allows to block it in the sash. The ZWP10* remote control is used for the Z-Wave skylight operation. The programming button is located in the lower left corner of the skylight. If you want to change the configuration of the Z-Wave network – see programming instructions of the ZWP10* remote control. The FVS Z-Wave skylight is equipped as standard with rain detectors that in case of rain send command “close” to the actuator which closes the skylight. Once the installation is completed, connect the battery.

* The offer includes different versions of remote controls depending on the frequency of the particular region of the world, e.g. ZWP10US - USA/Canada, ZWP10AUS - Australia/New Zealand, ZWP10KOR - South Korea ...

- i** Actuator of the skylight is factory programmed to remote control from the set on channel No. [1] to first group of buttons of movement – see user manual of the ZWP10* remote control.
- i** If you want to use remote control from the set to operate other Z-Wave products or change settings of Z-Wave network use programming and usage instructions of the ZWP10* remote control.
- i** Information on changing the configuration settings of the ZWP10* remote control (controller programming: quick configuration, basic functions, additional functions, etc.) is to be found in the user manual of the ZWP10* remote control included with the product.
- i** Information on programming the FVS Z-Wave skylight to controller of other manufacturer is to be found in the user manual included with the product.



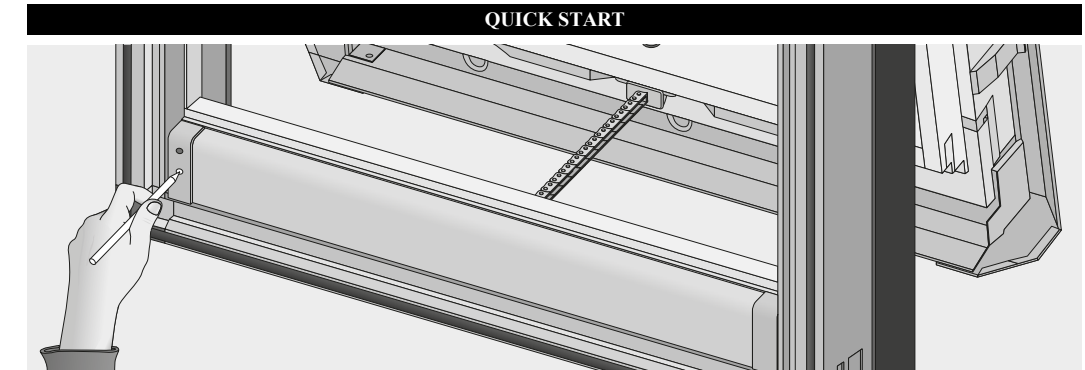
WINDOW CONSTRUCTION

1 Screw to block the chain catch	4 Indication LED
2 Chain catch	5 Programing button
3 Actuator chain	6 Rain detectors

- ⚠** WARNING! Danger of crashing. When closing the window, the actuator exerts the force of 200N (app. 20 kg)!
- ⚠** WARNING! If water appears on the rain detector, the actuator automatically closes the window!
- ⚠** WARNING! Danger of electric shock!

SAFETY REQUIREMENTS

When installing FVS Z-Wave window it is necessary to observe the following recommendations:
- Safety requirements should be particularly respected. The use of electric mechanical actuator installed in order to operate the window creates a risk of injury. Although the mechanism of the actuator is equipped with an overload switch, forces present there are strong enough to cause physical injuries. When closing the window, the actuator exerts the force of 200N (app. 20kg)!
- If the window is easily available e.g. window’s bottom edge is lower than 2.50m from the floor, special precautions should be taken in order not to allow rising of health risk.
- This equipment is not designed for use by people (including children) with limited physical, sensory or mental ability, or by people that do not have experience or knowledge of equipment, unless it is done under supervision or according to equipment usage instructions, which are provided by the person responsible for safety. Do not allow children to play with equipment.
- After unpacking, check the window elements for any signs of mechanical damage.
- Installation should be performed by a qualified person in accordance with the manufacturer instructions.
- Before connecting the window, make sure that the power voltage corresponds with voltage specified on the data plate.
- Plastic containers used for packing should be stored out of children reach as they may be a potential source of danger.
- Children are not allowed to play with controllers, controllers should be stored out of their reach.
- The window should be used according to its intended design. The FAKRO Company shall not be responsible for any consequences being the result of improper window use.
- Any activities relating to cleaning, adjustment or dismantling electric parts of the window should be preceded with disconnecting the power supply.
- Electric parts cannot be washed using solventbased substances or open stream of water (do not immerse in water).
- Any repairs of the window should be carried out by service authorised by the manufacturer.



NOTE! Before proceeding to programming make sure that the device is not already assigned to other Z-Wave network. This is indicated by the Z-Wave network status LED. If the device is powered and the Z-Wave network status LED is off after pressing programming button “P”, it is required to carry out the procedure of REMOVING DEVICE FROM THE Z-WAVE NETWORK

ADDING DEVICE (WINDOW) TO THE Z-WAVE NETWORK

- Enter controller into device adding mode to the Z-Wave network.
- Press programming button on the window. After adding to the Z-Wave network, status LED goes off.

ADDING DEVICE (WINDOW) TO THE GROUP

- Enter controller into device adding mode to the group.
- Press programming button on the window.

REMOVING DEVICE (WINDOW) FROM THE Z-WAVE NETWORK

- Enter controller into device removing mode from the Z-Wave network.
- Press programming button on the window. After removing from the Z-Wave network, status LED is on for 5 seconds every time once the programming button “P” is pressed.

i Information on how to carry out programming procedure is to be found in user manuals of controllers.