

**ELECTRIC ROOF WINDOW****DEA Solar**

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## ROOF WINDOW DESCRIPTION

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



### TECHNICAL SPECIFICATION

**Power supply:**  
12-15V DC (Battery)  
**Rated power:**  
16 [W]  
**Operating range:**  
Up to 20m in the building

**Chain extension speed:**  
6 [mm/s]  
**Chain pushing force:**  
200 [N]  
**Closing force:**  
200 [N]

**Chain outreach:**  
25 [cm]  
**Current limiting:**  
YES  
**Working temperature:**  
-10°C to 65°C

**Radio protocol:**  
Z-Wave  
**Frequency:**  
EU – 868,4 MHz;  
AU/NZ – 921,42 MHz;  
US/Canada – 908,4 MHz;  
RU – 869 MHz;  
KR – 919-923MHz  
(depending on version)

A general view of the Z-Wave roof window is presented above. 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 25cm. The chain is finished with a special tip that allows to block it in the sash. The ZRH1 remote control is used for the Z-Wave roof window operation. The programming button is located in the lower left corner of the roof window. If you want to change the configuration of the Z-Wave network – see programming instructions of the ZRH1 remote control. The DEA Solar roof window is equipped as standard with rain detector that in case of rain send command “close” to the actuator which closes the roof window.



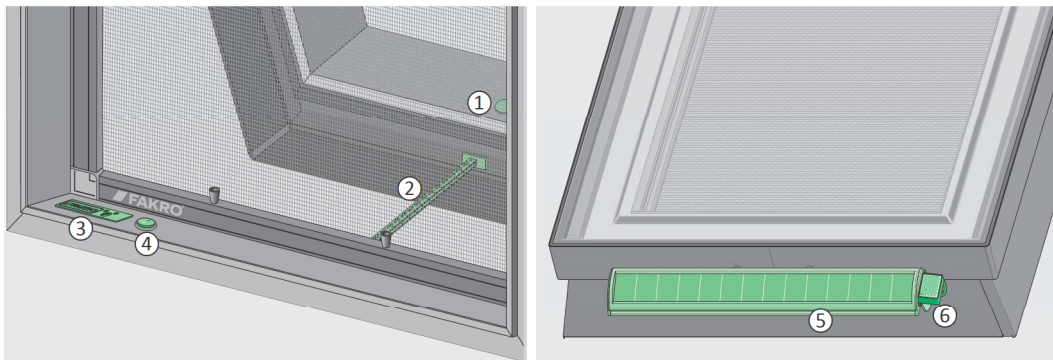
The offer includes different versions of remote controls depending on the frequency of the particular region of the world, e.g. ZRH1US - USA/Canada, ZRH1AUS - Australia/New Zealand, ZRH1KOR - South Korea ...

**i** Actuator of the roof window is factory programmed to remote control from the set on channel No. [1] – see user manual of the ZRH1 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 ZRH1 remote control.

**i** Information on changing the configuration settings of the ZRH1 remote control (controller programming: quick configuration, basic functions, additional functions, etc.) is to be found in the user manual of the ZRH1 remote control included with the product.

**i** Information on programming the DEA Solar roof window to controller of other manufacturer is to be found in the user manual included with the product.



#### ROOF WINDOW CONSTRUCTION

- |   |                                |
|---|--------------------------------|
| ① | Screw to block the chain catch |
| ② | Actuator chain                 |
| ③ | Control panel                  |

- |   |                    |
|---|--------------------|
| ④ | On/off button      |
| ⑤ | Photovoltaic panel |
| ⑥ | Rain sensor        |

**⚠** WARNING! Danger of crashing. When closing the roof window, the actuator exerts the force of 200N (app. 20 kg)!

**⚠** WARNING! If water appears on the rain detector, the actuator automatically closes the roof window!

**⚠** WARNING! Danger of electric shock!

#### SAFETY REQUIREMENTS

When installing DEA Solar roof 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 roof 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 roof window, the actuator exerts the force of 200N (app. 20kg)!

- If the roof window is easily available e.g. roof 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 roof 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 roof 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.

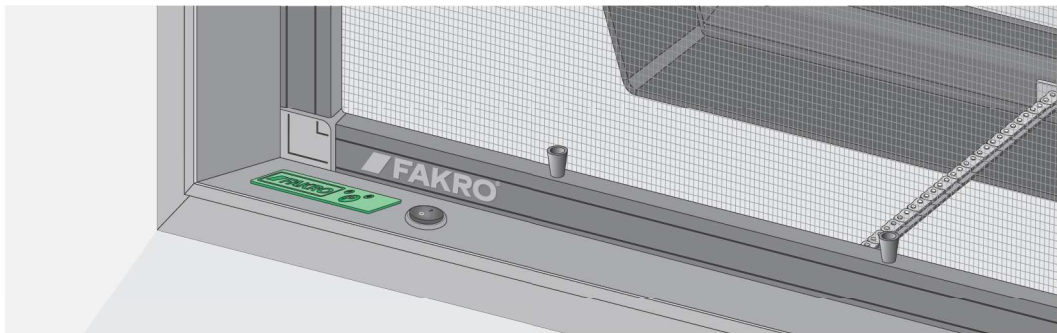
- Children are not allowed to play with controllers, controllers should be stored out of their reach.

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

- Any activities relating to cleaning, adjustment or dismantling electric parts of the roof 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 roof window should be carried out by service authorised by the manufacturer.



### MANUAL CONTROL



Control the roof window by pressing the button.



The button works in sequential mode: 1. Start, 2. Stop, 3. Start in the opposite direction, 4. Stop, 1. Start...

### OPERATION USING THE ZRH1 REMOTE CONTROL



The DEA Solar roof window is factory-assigned to the ZRH1 remote control.



Control the roof window using UP/DOWN buttons.



Stop the action using STOP button.

### SIGNALIZATION



Red led flashes 3 times – OVERLOAD

## PROGRAMMING THE DEVICE

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, it is required to carry out the procedure of REMOVING DEVICE FROM THE Z-WAVE NETWORK.

### ENTERING PROGRAMMING MODE



Press P button twice rapidly.

Z-WAVE FUNCTIONS			
Function	Description	Z-Wave operating status	
		Motor operating status	Z-Wave operating status
Inclusion	This function allows 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 roof window twice rapidly.	-	Blinking for 2s., after pressing P button 2 times
Association (Add node to group)	This function allows 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 roof window twice rapidly.	-	-
Exclude (Remove an existed node)	This function allows 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 roof window twice rapidly. Function removes information only about newtork Z-Wave.	-	Light on for 3s., after pressing P button 2 times
Delete (Remove node from Group)	This function allows 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 roof window twice rapidly.	-	-
Default	This function allows to remove device from the Z-Wave network without using controller. Press the programming buton on the roof window twice rapidly, 5 times. Device will be removed from the Z-Wave network. Default parameters will also be restored.	-	-



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

## ASSOCIATION GROUPS

There are three association groups in actuator from DEA Solar roof 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.
- Multilevel Repeat – group used for sending received commands of movement (SWITCH MULTILEVEL SET, SWITCH MULTILEVEL START LEVEL CHANGE, SWITCH MULTILEVEL STOP LEVEL CHANGE) to devices belonging to these groups. A maximum of 5 devices can be in the group.
- 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. SIGNALLING OF FULL CLOSING/OPENING:

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

### 2. BATTERY STATUS:

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

### 3. RAIN SENSORS ACTIVATE WHEN THE roof window IS OPEN AND THE ACTUATOR COMPLETED ITS WORK.

## Z-WAVE CONFIGURATION PARAMETERS

Parameter	Parameter No.	Value	Default value	SET (sending)	GET (querying)
Chain extension speed	7	1 2 3 4	4	1 – the slowest 4 – the fastest	1 – the slowest 4 – the fastest
Roof window speed (rain sensor)	8	1 2 3 4	4	1 – the slowest 4 – the fastest	1 – the slowest 4 – the fastest
Go to position	13	1 2	1	1 – IT go to maximum 2 – FF go to previous position	-
Ventilation	15	0 120	0	Close after set time (minute)	Check time till the end of ventilation (minute)
Default settings	99	1 2	1	1 – default parameters 2 – parameters other than the default	-
Autoexclusion	100	1 2	1	2 – autoexclusion	-
The position above which the rain sensor starts to work	102	0 99	0	0 - full range of rain detector 99 - rain sensor not working	0 - full range of rain detector 99 - rain sensor not working

# WARRANTY



PL

<https://www.fakro.pl/servis/gwarancja/>



GB

<https://www.fakro.com/service/customer-service/>

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## Quality certificate

Device

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Model

---

Serial Number

---

Seller

---

Address

---

Purchase date

---

Invoice No.

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Signature (stamp) of installing person

