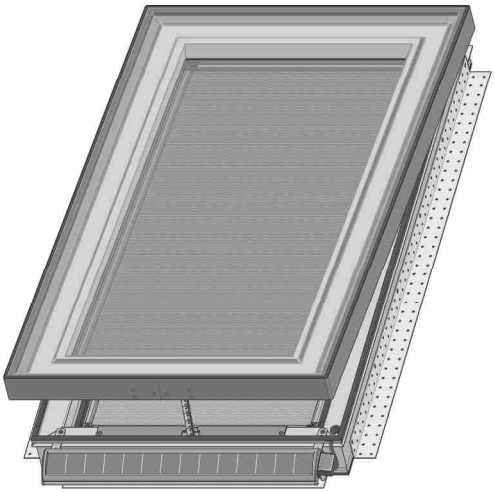
FAKRO®

US

ORIGINAL USER MANUAL

ELECTRIC SKYLIGHT

PDS



NC 8C7_PDS Solar_24.02.26_FAKRO_KB3485 mobile

https://www.fakrousa.com/installers/installation-videos/installation-videos-for-skylights/

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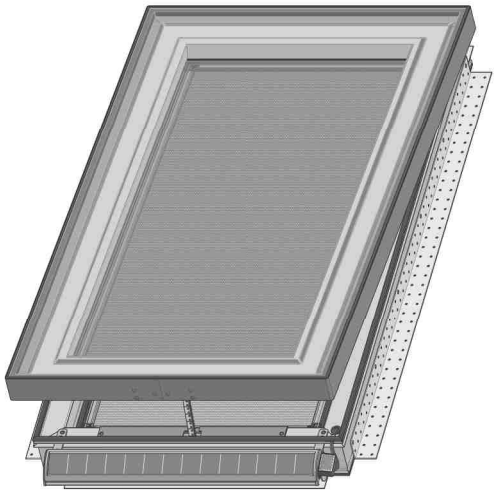
SKYLIGHT DESCRIPTION

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. PDS skylights are equipped with a Z-Wave communication system, allowing for easy remote operation without the need of pointing the remote towards the skylights. PDS 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) **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:** -10ºC to 65ºC	**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 skylight 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 ZRH12 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 ZRH12 remote control. The PDS skylight is equipped as standard with rain detector that in case of rain send command "close" to the actuator which closes the skylight.

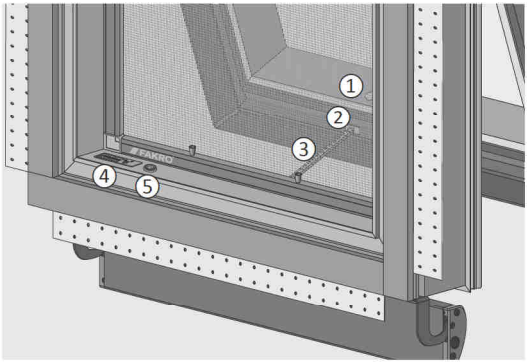
The offer includes different versions of remote controls depending on the frequency of the particular region of the world, e.g. ZRH12US - USA/Canada, ZRH12AUS - Australia/New Zealand, ZRH12KOR - South Korea …

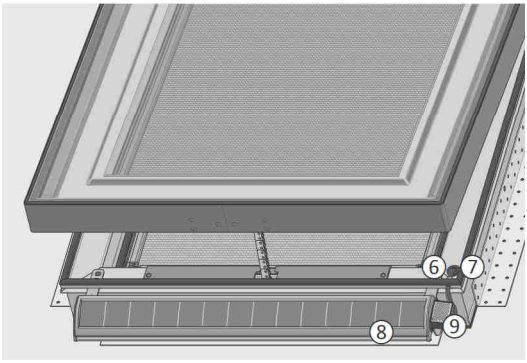
Actuator of the skylight is factory programmed to remote control from the set on channel No. [1] – see user manual of the ZRH12 remote control.

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 ZRH12 remote control.

Information on changing the configuration settings of the ZRH12 remote control (controller programming: quick configuration, basic functions, additional functions, etc.) is to be found in the user manual of the ZRH12 remote control included with the product.

Information on programming the PDS skylight to controller of other manufacturer is to be found in the user manual included with the product.





SKYLIGHT CONSTRUCTION			
①	Screw to block the chain catch	⑥	Power connector
②	Chain catch	⑦	Rain sensor connector
③	Actuator chain	⑧	Photovoltaic panel
④	Control panel	⑨	Rain sensor
⑤	On/off button		

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

WARNING! If water appears on the rain detector, the actuator automatically closes the skylight!

WARNING! Danger of electric shock!

SAFETY REQUIREMENTS

When installing PDS skylight 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 skylight 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 skylight, the actuator exerts the force of 200N (app. 20kg)!
- If the skylight is easily available e.g. skylight'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 skylight elements for any signs of mechanical damage.
- Installation should be performed by a qualified person in accordance with the manufacturer instructions.
- Before connecting the skylight, 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 skylight should be used according to its intended design. The FAKRO Company shall not be responsible for any consequences being the result of improper skylight use.
- Any activities relating to cleaning, adjustment or dismantling electric parts of the skylight 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 skylight should by carried out by service authorised by the manufacturer.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

QUICK START

MANUAL CONTROL

Control the skylight 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 ZRH12 REMOTE CONTROL

The PDS Solar skylight is factory-assigned to the first group of the ZRH12 remote control.

Control the skylight using UP/DOWN buttons.

Stop the action using STOP button.

Only those groups to which devices have been assigned are active.

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 skylight 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 skylight 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 skylight 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 skylight twice rapidly.	-	-
Default	This function allows to remove device from the Z-Wave network without using controller. Press the programming button on the skylight 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 PDS skylight:
- 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:
- skylight closing is indicated by LED blinking 3 times.
- skylight opening is indicated by a single blink of LED.
2. BATTERY STATUS:
- U<11.5V – low battery status, lock in the opening direction (skylight can be closed) – when trying to start, LED blinks 2 times.
- U<10.5V – critical battery status, skylight closed automatically – when trying to start, LED blinks 2 times.
3. RAIN SENSORS ACTIVATE WHEN THE skylight 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
Skylight 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 – FF 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

US

https://www.fakrousa.com/customer-service/

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Quality certificate

Device _____

Model _____

Serial Number _____

Seller _____

Address _____

Purchase date _____

Invoice No. _____

Signature (stamp) of installing person