FAKRO®

ORIGINAL USER MANUAL

Awning blind for roof window

Z·WAVE

AMZ Solar M

CE

AWNING BLIND DESCRIPTION

The AMZ Solar M awning blind is designed for installation on roof windows and suitable for cooperation with Z-Wave remote control system elements with frequency depending on part of the world.

The AMZ Solar M awning blind comes with the following protections:

- Electronic limit switch - when maximally unrolled or rolled up.
- Current limiting to provide protection against damage in the event of an obstacle or when running a snow-covered awning blind at low temperature.

The functionality of the awning blind allows the percentage read of the current position in the range of 0-100% by the controller with an indicator.

To operate the awning blind, it is required to install it following the picture installation instructions included in the product packaging and assign to the Z-Wave controller. The controller* must be purchased separately.

TECHNICAL SPECIFICATION		
Power supply: 14.4VDC, NiMh 2100 mAh **Reach:** up to 20 m in a building	**Protection class:** III **Protection degree:** IP44 **Radio protocol:** Z-Wave Plus	**Radio frequency:** EU – 868.4 MHz; AS/NZ – 921.4 MHz; US/Canada – 908.4 MHz; RU – 869 MHz (depending on version).

IMPORTANT INFORMATION

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

It is required to observe the following recommendations when installing electrically operated awning blind:

- After unpacking, check the awning blind elements for any signs of mechanical damage.
- Installation should be performed by a qualified person in accordance with manufacturer's instructions.
- Plastic containers used for packing should be stored out of children reach as they may be a potential source of danger.
- The awning blind should be used according to its intended design. FAKRO shall not be responsible for any consequences being the result of improper awning blind use.
- The awning blind cannot be washed using solvent-based substances or open stream of water (do not immerse it in water).
- Any repairs of the awning blind should be carried out by service authorised by the manufacturer.
- The awning blind is intended for outdoor installation.
- In the event of adverse weather conditions (frost, snow) it may not be possible to operate the awning blind.
- The awning blind has been factory calibrated. If, after some time, it is necessary to calibrate the awning blind, it must be performed as described in the "MANUAL CALIBRATION" section.
- The awning blind can only be powered from the original battery included in the set.

🛒 ***CONTROLLER – Z-Wave device such as remote control, module, wall switch, internet gateway.**

BASIC FUNCTIONS

Press the button once.
Manual control.
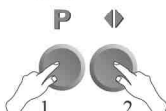
Press the button once.
Programming.

ADDITIONAL FUNCTIONS

Press the button 3 times.
Restoring device parameters.
LED blinks 5 times.

x3

Press the button 5 times.
Device reset.
LED is on for 3 seconds.

x5

While holding the programming button press the manual control button.
LED blinks - follow the MANUAL CALIBRATION section.

1   2

SIGNALLING

LED blinks 3 times.
Overload.

LED blinks once.
Low current.

LED is on for 3 seconds after pressing the P button.
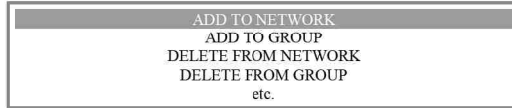The device has not been added to the Z-Wave network.

LED blinks for 10 minutes.
The Autoinclusion function has been activated - this function is available only after performing the autoexclude procedure.

PROGRAMMING

For programming information refer to the user manual of the controller which is to control the awning blind.

I

| ADD TO NETWORK |
| ADD TO GROUP |
| DELETE FROM NETWORK |
| DELETE FROM GROUP |
| etc. |

Run selected function on the Z-Wave controller.

II

P

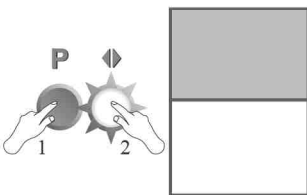Enter the device into the programming mode by pressing the P button.

MANUAL CONTROL

Control the device by pressing the manual control button: 1. Start, 2. Stop, 3. Start in the opposite direction…
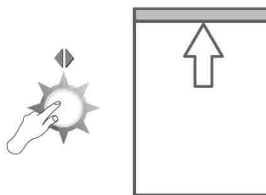
MANUAL CALIBRATION

The awning blind is factory calibrated. If necessary, the calibration process can be repeated.
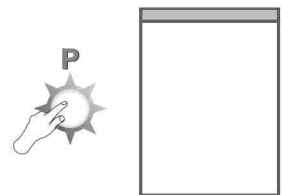If the awning blind is not calibrated, the control is possible only by holding the button.
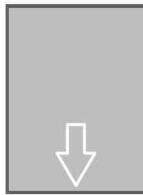
While holding the programming button press the manual control button.

Hold the button until the upper end position is reached. The awning blind will overload and then retract by 1 cm. Release the button.

Accept the upper position using the button. LED will be on for 1 second and then start blinking.

Hold the button until the lower position is reached. Then release the button.

Accept the lower position using the button. LED will be on for 1 second. The awning blind is calibrated.

ADDITIONAL INFORMATION

OPERATION MODES

The awning blind comes with the solar and temperature sensor, allowing it to be controlled in one of three modes.

MANUAL MODE
The awning blind can be unrolled or rolled up only by means of the controller or control button situated on the awning panel.

SEMI-AUTOMATIC MODE
In the SUMMER mode the awning blind automatically unrolls after exceeding set value of insolation.
The awning blind can be rolled up only by means of the controller or control button situated on the awning panel.
In the WINTER mode the awning blind automatically unrolls when it does not exceed set value of insolation.
The awning blind can be rolled up only by means of the controller or control button situated on the awning panel.

AUTOMATIC MODE
In the SUMMER mode the awning blind automatically unrolls after exceeding set value of insolation.
Below this value (e.g. permanent cloudiness) it rolls up.
In the WINTER mode the awning blind automatically rolls up after exceeding set value of insolation.
Below this value (e.g. permanent cloudiness) it unrolls.

Switching between control modes can be made by means of the controller used to operate the awning blind.

> In the WINTER mode, the awning blind works following the principle 100% minus the set value, .eg. sensitivity level set to 60% in the winter mode is 100% - 60% = 40%.

ALL ON / ALL OFF

Turning on this function makes it possible to control all devices simultaneously. It is available if supported by the controller.

Z-WAVE DEVICES COMPATIBILITY

The Z-Wave makes it possible to integrate devices of different manufacturers (lighting, heating, domestic automatic control, etc.). The Z-Wave devices operate as repeaters in the network which extends the communication range of radio waves.
This product is compatible with other certified Z-Wave devices of other manufacturers. All battery-free devices of different manufacturers operating in one Z-Wave network can route through other devices, which can result in increased range.

Note: All information on adding devices to the Z-Wave network in controllers offered by other manufacturers can be found in user manuals of these products.

ASSOCIATION GROUPS

1. Life Line – group for reporting the position of the awning blind after each stop and reporting the alarm (overload). A maximum of 1 device can be in the group.

2. Basic Repeat – group used for sending received BASIC SET commands to devices belonging to this group. A maximum of 5 devices can be in the group.

3. Multilevel Repeat – group used for sending received SWITCH MULTILEVEL SET, SWITCH MULTILEVEL START LEVEL CHANGE, SWITCH MULTILEVEL STOP LEVEL CHANGE commands to devices belonging to those groups. A maximum of 5 devices can be in the group.

4. Basic Control – group associated with the automatic mode, depending on the insolation level, it controls devices belonging to this group.

Z-WAVE PROCEDURE DESCRIPTION

Functions	Function description	LED signalling	
		MOTOR STATUS LED	Z-WAVE NETWORK STATUS LED
Autoinclusion	It allows a hard-to-access awning blind to be remotely added to the Z-Wave network without the need for pressing the P button. The Autoinclusion procedure is activated automatically once the Autoexclusion procedure has been completed. This mode is active for a maximum of 10 minutes.	-	Blinking up to 10 minutes
Inclusion	The awning blind can be manually added to the Z-Wave network. Run the Inclusion function on the controller and then press the P button on the awning blind. This function is possible provided that the awning blind is not assigned to the Z-Wave network.	-	Before: On for 3 sec.after pressing P button. After: Off
Association	The awning blind can be added to the selected group in the controller by pressing the P button.	-	-
Exclude	The awning blind can be removed from the Z-Wave network. Run the Exclude procedure in the controller and then press the P button on the awning blind.	-	On for 3 sec.
Delete	The awning blind can be removed from the selected group of the controller. Run the Delete procedure in the controller and then press the P button on the awning blind.	-	-
Device Reset Locally	Press 5 times the P button. Awning blind reset.	-	On for 3 sec.
Parameter Reset Locally	Press 3 times the P button. Restoring default parameters of the awning blind.	-	Blinking times
Remote calibration	Calibration of the awning blind via the controller. Calibration is possible after the awning blind has been recalibrated. Send parameter 12 with a value of 2.	On for 3 sec.	-
	Send parameter 12 with a value of 1.	Blinking	-
	Press the "Up" button and hold until the awning blind reaches the upper end position.	Blinking	-
	Press the "Stop" button to accept 1 end position.	It stops blinking and is on for 2 seconds.	-
	Press the "Down" button and hold until the awning blind reaches 2 end position.	Blinking	-
	Press the "Stop" button to accept 2 end position.	It stops blinking and is on for 2 seconds.	-

PROBLEMS & ERROR CODES

Power voltage	Error signalling
<10V	Movement locked in both directions. Signalling – motor status LED blinking twice.
10V – 10,5V	Movement locked in the unroll (close) direction. Signalling – short upward movement (about 5 cm), motor status LED blinking twice.
10,5V – 11V	Movement locked in the unroll (close) direction. Signalling – short upward movement (about 5 cm) and return, motor status LED blinking twice.
>16V	Movement locked in both directions. Signalling – motor status LED and network status LED blinking twice simultaneously

Z-WAVE CONFIGURATION PARAMETERS

Parameter	Parameter no.	Value	Default value	SET (sending)	GET (querying)
Operation mode	1	0 1 2	0	0 – manual 1 – semi-automatic 2 – automatic	0 – manual 1 – semi-automatic 2 – automatic
Season of use	2	1 2	1	1 – summer 2 – winter	1 – summer 2 – winter
Reaction time	3	1 30	3	1 – 1min 30 – 30min	1 – 1min 30 – 30min
Insolation level % [mA]	4	3 99	40	30 – 30% 99 – 99%	30 – 30% 99 – 99%
Calibration	12	1 2 3	1	1 – calibration - entering mode after prior decalibration 2 – out of calibration	1 – calibrated 2 – out of calibration 3 – defective encoders
Go to position	13	1 2	1	1 – FF go to maximum 2 – FF go to previous position	1 – FF go to maximum 2 – FF go to previous position
Charging current % [mA]	17	1 2	-	-	10 – 10% 99 – 99%
Default parameters	99	1 2	1	1 – restore default parameters	1 – default parameters 2 – parameters other than default
Autoexclusion	100	1 2	1	2 – autoexclude	-

ALARMS & NOTIFICATIONS

Notification type	Event
Energy management	Overload
System	System device failure (defective encoders)

MANUFACTURER SPECIFIC REPORT

Parameter	Value
Manufacturer ID	0x0085
Product Type ID	0x0005
Product ID	0x0012

COMMAND CLASSES

Command Classes	Role	
	Support	Control
Command Class Z-Wave+ Info v2	ok	
Command Class Basic v1	ok	ok
Command Class Version v2	ok	
Command Class Manufacturer Specific v2	ok	
Command Class Device Reset Locally v1	ok	
Command Class Association v2	ok	
Command Class Association Group Info v1	ok	
Command Class Powerlevel v1	ok	
Command Class Switch Binary v1	ok	
Command Class Switch Multilevel v3	ok	ok
Command Class Switch All v1	ok	
Command Class Configuration v1	ok	
Command Class Notification v3	ok	
Command Class Node Naming v1	ok	
Command Class Battery	ok	

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Quality certificate:

Device

Model

Serial number

Seller

Address

Purchase date

Invoice No.

Signature (stamp) of person installing a device