FAKRO®

ORIGINAL USER MANUAL

Z-Wave Roller Shutter

ARZ Z-Wave M

Z-WAVE

CE

Dear Sir/Madam! Thank you for purchasing the product from FAKRO. To ensure appropriate functioning of the product, please peruse this User Manual.

ROLLER SHUTTER DESCRIPTION

The ARZ Z-Wave M roller shutter is designed for installation on roof windows and adapted for cooperation with Z-Wave remote control system elements with frequency depending on part of the world.

The ARZ Z-Wave M roller shutter comes with the following protections:

- Electronic limit switch - when the roller shutter armour is fully unrolled or rolled up.

- Current limiting to provide protection against damage in the event of an obstacle or when running a snow-covered roller shutter at low temperature.

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

To operate the roller shutter, 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		
Working temperature: -20°C to + 85°C **Power voltage:** 15V DC **Rated power:** 20W **Power cable cross-section:** 2x0.75mm²	**Protection class:** III **Protection degree:** IP44 **Radio protocol:** Z-Wave Plus	**Radio reach:** Up to 20 m in a building **Radio frequency:** EU – 868,4 MHz; AS/NZ – 921,42 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.
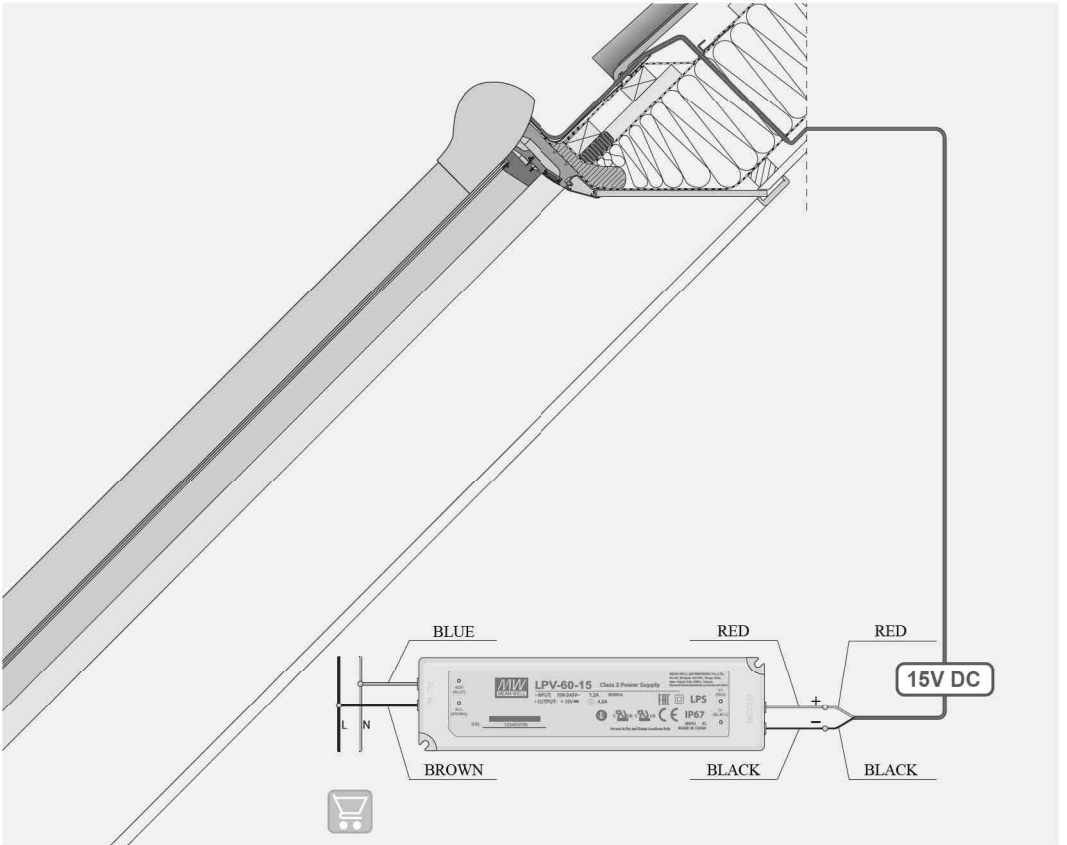
It is required to observe the following recommendations when installing electrically operated roller shutter:

- After unpacking, check the roller shutter elements for any signs of mechanical damage.

- Installation should be performed by a qualified person in accordance with manufacturer's instructions.

- Before connecting the roller shutter, make sure that the power supply corresponds with motor voltage specified on the data plate.

- Take the roller shutter out of the packaging, place in flat position and connect it (2-wire cable – 15V DC). Check its correct operation with one working cycle using manual control button.

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

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

- Any activities related to cleaning, adjustment or dismantling the roller shutter should be preceded with disconnecting the power supply.

- The roller shutter cannot be washed using solvent-based substances or open stream of water (do not immerse it in water).

- Any repairs of the roller shutter should be carried out by service authorised by the manufacturer.

- The roller shutter is intended for outdoor installation.

- In the event of adverse weather conditions (frost, snow) it may not be possible to operate the roller shutter.

- The roller shutter has been factory calibrated. If, after some time, it is necessary to calibrate the roller shutter, it must be performed manually or via a remote control as described in the "Roller Shutter Programming" section.
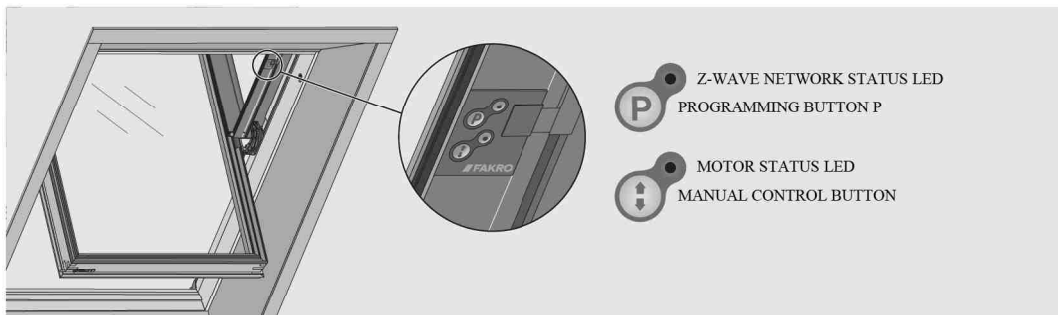
🛒 ***CONTROLLER – Z-Wave device such as remote control, module, wall switch, internet gateway.**

BLUE

RED

RED

LPV-60-15 Class 2 Power Supply

15V DC

+

−

L N

BROWN

BLACK

BLACK

Z-WAVE NETWORK STATUS LED
PROGRAMMING BUTTON P

MOTOR STATUS LED
MANUAL CONTROL BUTTON

Z-WAVE NETWORK STATUS SIGNALLING

The roller shutter in the Autoinclusion mode is ready to be remotely added to the Z-Wave network. Run the procedure of adding the roller shutter on the Z-Wave controller.

The roller shutter has been removed from the Z-Wave network. Remote control of the roller shutter is not possible.

Cause 1: The roller shutter is assigned to the Z-Wave network. Remote control of the roller shutter is possible.
Cause 2: No power supply or no connection to the source of power supply.

PROGRAMMING

For programming information refer to the user manual of the controller which is to control the roller shutter.

ADD TO NETWORK
ADD TO GROUP
REMOVE FROM NETWORK
REMOVE FROM GROUP
etc.

Run selected function on the Z-Wave controller.

METHOD 1*

The Autoinclusion procedure has been started.
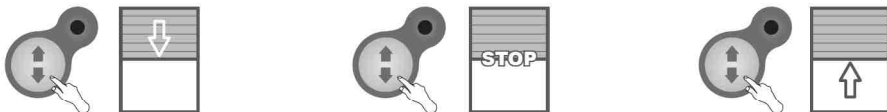The roller shutter will be automatically added to the Z-Wave network.

METHOD 2

Press the P button on the roller shutter.

*It allows a hard-to-access roller shutter to be remotely added to the Z-Wave network without the need for pressing the programming button. Each time the power is switched on, the roller shutter enters the Autoinclusion mode provided that it is not assigned to the Z-Wave network. The mode is active for up to 10 minutes.
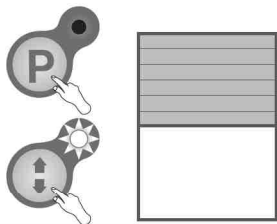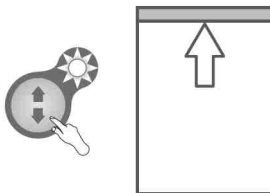
MANUAL CONTROL

Operate the roller shutter by pressing the manual control button. 1. Start, 2. Stop, 3. Start in the opposite direction…
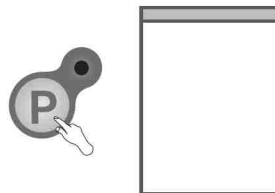
MANUAL CALIBRATION

The roller shutter is factory calibrated. If necessary, the calibration process can be repeated.
If the roller shutter is not calibrated, the control is possible only by holding the manual control button.
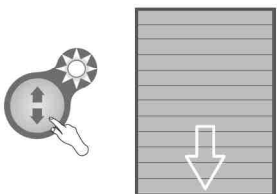
Hold the buttons simultaneously until the manual control LED starts blinking.
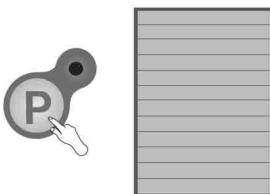
Hold the manual control button until the upper end position is reached. The roller shutter will overload and then retract by 1 cm.

Accept the upper position by pressing the programming button.

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

Accept the lower position by pressing the programming button. The roller shutter is calibrated.

ADDITIONAL INFORMATION

ALL ON / ALL OFF

Turning on the function makes it possible to control all devices simultaneously. The function 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 roller shutter after each stop and receiving information about the alarm (overload). A maximum of 1 device can be in the group.

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

3. Multilevel Repeat – group used for sending received commands (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.

Z-WAVE PROCEDURE DESCRIPTION

Function	Function description	LED signalling	
		MOTOR STATUS LED	Z-WAVE NETWORK STATUS LED
Autoinclusion	The roller shutter can be remotely added to the Z-Wave network. Each time the power supply is switched on, the roller shutter is entered into the Autoinclusion mode provided that it is not assigned to the Z-Wave network. This mode is active for 10 minutes. In order to add the device to the network, run the Add to Network function in the controller.	-	Blinking up to 10 minutes
Inclusion	The roller shutter can be manually added to the Z-Wave network. Run the Inclusion function on the controller and then press the P button on the roller shutter. This function is possible provided that the roller shutter is not assigned to the Z-Wave network.	-	Before: On After: Off
Association	The roller shutter can be added to the selected group in the controller. Pressing the P button enters the roller shutter into the Association mode provided that it is assigned to the Z-Wave network.	-	-
Exclude	The roller shutter can be removed from the Z-Wave network. Run the Exclude procedure in the controller and then press the P button on the roller shutter.	-	On
Delete	The roller shutter 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 roller shutter.	-	-
Device Reset Locally	Information about the Z-Wave network can be removed from the roller shutter without using the controller. Quickly press 5 times the P button on the roller shutter.	-	On
Parameter Reset Locally	Default parameters of the roller shutter can be restored. Press 3 times the P button on the roller shutter.	-	Blinking 5 times
Remote calibration	Calibration of the roller shutter via the controller. Calibration is possible after the roller shutter has been recalibrated.		
		Send parameter 12 with a value of 2.	On	-
		Send parameter 12 with a value of 1.	Blinking	-
		Press the "Up" button and hold until the roller shutter 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 roller shutter 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

Voltage during operation	Roller shutter closing	Roller shutter opening
11V – 11.5V	LED blinking twice every 2 seconds.	LED blinking twice every 2 seconds.
<11V	The roller shutter stops after 5 seconds – LED blinking three times every 2 seconds and sending an alarm.	The roller shutter stops after 5 seconds – LED blinking three times every 2 seconds and sending an alarm.
Pre-start voltage	**Roller shutter closing**	**Roller shutter opening**
11V – 11.5V	Operation is not allowed – LED blinking twice and sending an alarm.	Operation is allowed – LED blinking twice every 2 seconds.
<11V	Operation is not allowed – LED blinking twice and sending an alarm.	Operation is allowed – the roller shutter stops after 5 seconds – LED blinking twice every 2 seconds and sending an alarm – the roller shutter can be opened in steps.
11V<	High voltage lock: If the supply voltage is higher than 16V, the controller blocks the possibility of starting the motor. This is indicated by the motor status LED blinking quickly twice which means 'incorrect supply voltage'.	

Z-WAVE CONFIGURATION PARAMETERS

Parameter no.	Value	Default value	Size	Description
12	1 2 3	1	1	1 – calibrated 2 – out of calibration – entering the calibration mode is possible after the previous decalibration 3 – defective encoders
13	1 2	1	1	1 – FF go to maximum 2 – FF go to previous position
99	1 2	1	1	1 – restoring all parameters to factory settings. If there is 2 in the report, it means that one of the parameters has a value other than the default one
100	1 2	1	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	0x0003
Product ID	0x0111

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	

WARRANTY

The manufacturer guarantees correct device functioning. The manufacturer also undertakes to repair damaged device if the damage results from defects in materials and structure. The warranty period is 24 months from the date of purchase, fulfilling the following conditions:
- Installation has been performed in accordance with the manufacturer's recommendations.
- 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 during the warranty period will be removed free of charge within no more than 14 working days from the date of accepting the device 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
_____

Purchase date
_____

Invoice No.
_____

Signature (stamp) of person installing a device