



AWNING BLINDS
FOR VERTICAL AND
ROOF WINDOWS
2016

25
YEARS
OF INNOVATION

FAKRO®

TAKE A REST IN THE SHADE



Most of us look forward to those hot, sunny days but the sun, while so pleasant on a beach, can also be a real nuisance in the home or workplace. Solar radiation flooding a room leads to a marked increase in temperature, particularly through roof windows. The best means of protection comes from use of external awning blinds and shutters, use of which is particularly valuable over south or west facing roofs.



8times
more effective
*than internal sunscreens

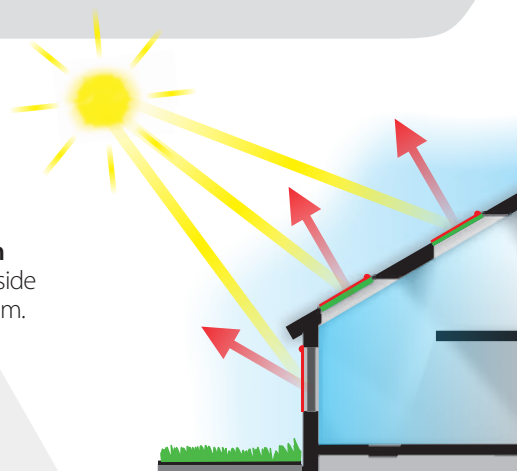
Awning blinds - 8 times more effective protection against heat gain compared with internal blinds

THE TEMPERATURE OF ROOMS IN THE ROOF IS AFFECTED GREATLY BY THE TYPE OF BLIND USED

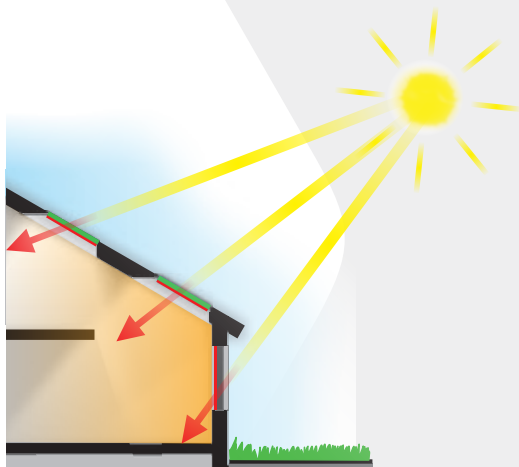
In accordance with DIN 5034-1 standard, rooms should be protected from excessive heat of the sun not by means of internal accessories, but rather external shields (awning blinds, roller shutters).

"The space should be protected from overheating on summer days with external covers placed outside the glass which reflect the heat. The overheating of rooms is a result of absorption of solar radiation by objects in the room which delimit the space (walls, floor). The absorbed radiation changes into long-wave infrared radiation which causes heat gain" - DIN 5034-1.

External accessories are the best protection from high temperatures. They block UV radiation outside the pane, preventing warm air from entering the room.



Solar radiation passes through the pane and is absorbed by an internal blind. It then radiates heat to the interior in the form of long wave infrared radiation, effectively acting as a radiator. Internal accessories should really be used primarily as a means of shading and interior decoration.



AWNING BLINDS AND ROLL-UP AWNINGS



Awning blind
AMZ Solar

Roll-up awning
VMB Z-Wave



Awning blind
VMZ Solar

➤ **FOR VERTICAL WINDOWS**

VMZ, VMZ Z-WAVE, VMZ SOLAR,
VMB Z-WAVE, VMB SOLAR

➤ **FOR ROOF WINDOWS**

AMZ, AMZ Z-WAVE, AMZ SOLAR



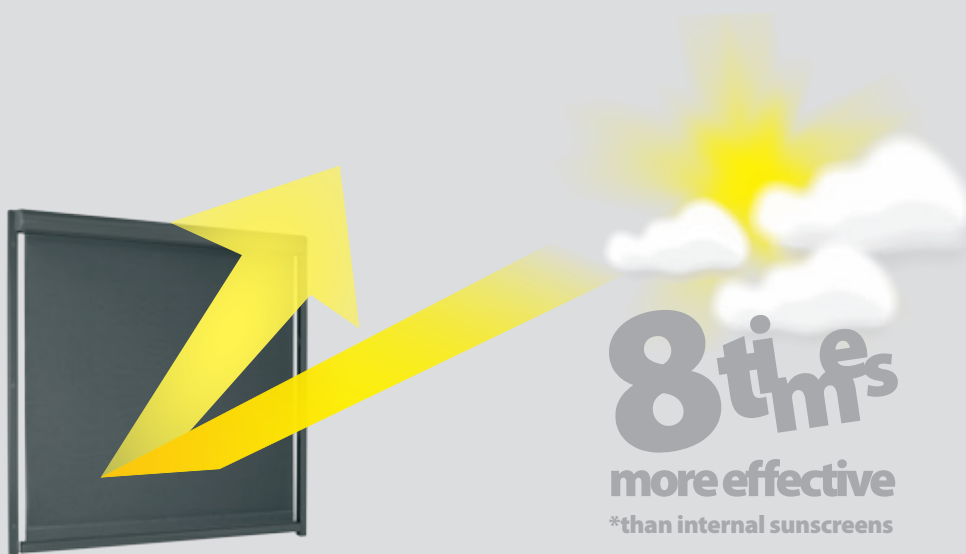
VMZ awning blinds and VMB roll-up awnings are designed specifically for use with vertical windows. The VMB has a movable, tilting bar which allows access to be gained to the sill when the blind is in use. Both

these products are suitable for use with PVC, aluminium or timber windows and doors (balcony or terrace). The awning blinds protect against heat absorption while providing even distribution of light.



AMZ awning blinds are designed for use with pitched roof windows.

WHY DO WE USE ACCESSORIES FOR VERTICAL AND ROOF WINDOWS?



EFFECTIVE PROTECTION AGAINST HEAT

Awning blinds constitute the optimal solution as a means of protection against excessive solar heat. The awning blind absorbs solar radiation before it reaches the glazing and emits the heat to the outside of the room, hence it ensures much better protection from tiresome heat on the sunny days. **By offering up to 8 times more effective protection than internal blinds** this can reduce the internal temperature drop by as much as 10°C.

ENERGY-EFFICIENCY

The VMZ awning blind reduces energy consumption of air conditioning units, thus reducing operating costs and cutting CO₂ emissions. In the same way, it also protects against heat loss in cold temperatures by increasing the heat transfer coefficient up to 16%.

The Solar option consumes no electricity as it is powered by a photovoltaic cell.



INFLOW OF NATURAL LIGHT

Windows with awning blinds rather than external roller shutters allow a free flow of light to the interior.



VISIBILITY TO THE OUTSIDE AND PRIVACY

When pulled down, the awning blind ensures visual contact with the external environment. You can easily view the surroundings and yet have privacy from any observers who might be tempted to take a peek inside.



IMPROVED ERGONOMICS

The unrolled awning blind improves the working environment by maintaining an even level of light. It protects against the type of intense light reflection which causes problems to those working on laptops or watching TV. An awning blind will also protect the eyes from strain by providing even light distribution.



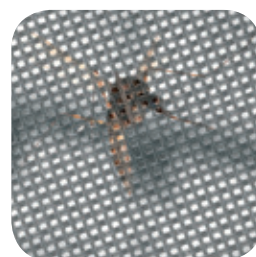
PROTECTION AGAINST HARMFUL UV RADIATION

By limiting the penetration of harmful UV radiation, an awning blind protects materials and furniture from ageing and fading.



PROTECTION AGAINST INSECTS

In addition to providing protection against heat gain, the electric awning blind will also act as an insect screen for an open vertical window.



VMZ

VMZ AWNING BLIND

VMZ SOLAR



- automatic control

VMZ Z-WAVE



- remote control or wall switch

VMZ



- manual control by hand or via control rod (not included)

Electric awning blinds are also available in the following versions:

- VMZ Electro 230 - connected to the mains and operated by a wall switch
- VMZ Electro 12 - connected to the mains by means of 15V power supply and operated by a wall switch
- VMZ Electro Solar - powered by solar panels and operated by a wall switch
- VMZ Bluetooth - preparation in progress

Awning blinds available to special order. Get more information at: www.fakro.com

VMB

VMB ROLL-UP AWNING

VMB SOLAR



- automatic control

VMB Z-WAVE



- remote control
or wall switch

Electric awning blinds are also available in the following versions:

- VMB Electro 230 - connected to the mains and operated by a wall switch
- VMB Electro 12 - connected to the mains by means of 15V power supply and operated by a wall switch
- VMB Electro Solar - powered by solar panels and operated by a wall switch
- VMB Bluetooth - preparation in progress

Awning blinds available to special order. Get more information at: www.fakro.com

CONVENIENT CONTROL

The VMZ awning blind is available in three control modes, while the VMB roll-up awning is available in two:

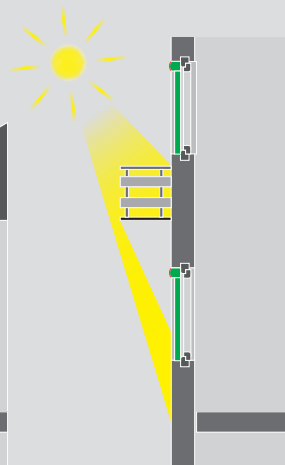
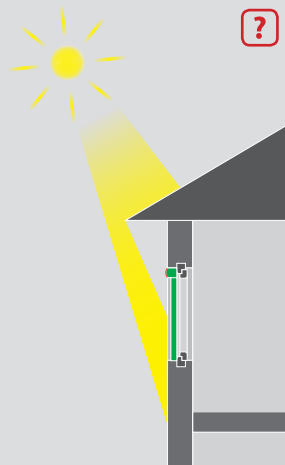
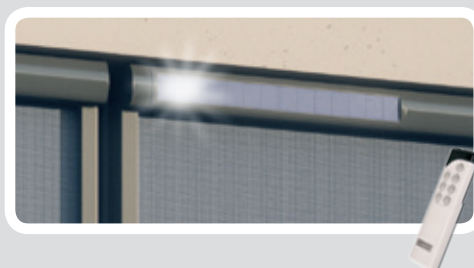


VMZ Solar and VMB Solar

- Automatic control. An intelligent system which detects the level of insolation operates the blind. A photovoltaic panel which reacts to solar radiation acts as a sensor to activate the blind. On cold days (below 0°C) the Solar awning blind switches automatically to winter mode. Where the level of insolation is high, the blind rolls up to allow the inflow of warmth, effectively providing a passive means of heating. In the evening, it unrolls automatically to protect against heat loss. The Solar awning blind is powered by a 12V DC battery pack which is built into the cassette and recharged by the PV panel. The current drawn by the motor is rated at 1.4 Amps.

The awning blind and the Solar type roll-up awning can be controlled in one of three modes:

- automatic (self-activating rolling up and unrolling)
- dependent on the level of insolation)
- semi-automatic (self-activating unrolling, rolling-up via a remote control)
- operation via remote control supplied



1. When installing the VMZ Solar and VMB Solar blinds under balconies or canopies it is necessary to purchase an additional power panel.

2. The blind shaded by a balcony or eaves can be controlled automatically by another blind for vertical or roof windows which is exposed directly to the sun.



VMZ Z-Wave and VMB Z-Wave

- control via a remote control or a wall switch in the wireless Z-Wave system



VMZ

- operated manually or by means of a control rod (rod purchased separately)



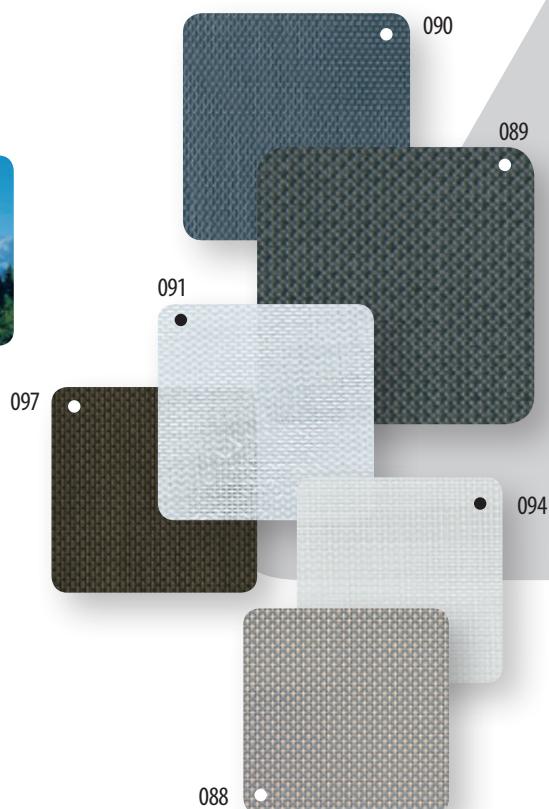
▶ AVAILABLE COLOURS AND FABRICS



VMZ, VMB GROUP I



(fabric with **10%**
relative open area)



Awning blinds and roll-up awnings are available in four standard colours (white, grey, black and brown) or any RAL colour on request. The customer also has a choice of fabrics.



VMZ, VMB GROUP II



(fabric with **1%**
relative open area)



▶ AVAILABLE COLOURS AND FABRICS



VMZ, VMB GROUP III



(fabric with **6%**
relative open area)



VMB GROUP IV

(fabric with **0%**
relative open area)





VMB GROUP IV

(fabric with **0%**
relative open area)

361



362



366



369



365



364



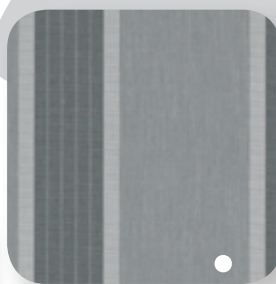
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360



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367



AWNING BLINDS FOR FAKRO ROOF WINDOWS

AMZ AWNING BLINDS

The AMZ awning blind is made of durable, weather-resistant mesh. It is rolled up on a spring-loaded shaft and inserted into an aluminium cassette mounted above the window. This design ensures ease of operation and provides a wider fabric area to shade the interior more effectively.



8times
more effective
*than internal sunscreens

**Awning blinds - 8 times
more effective protection**
against heat gain in comparison
with internal shading devices



**New
Generation
of Awning
Blinds**

Awning blinds used with FAKRO roof windows block solar radiation before it reaches the glazing and therefore provide the best means of protection against heat absorption. Awning blinds are recommended by FAKRO as they also allow incoming light to pass through them whilst also providing an unrestricted view. They also reduce noise from weather when closed.



AMZ SOLAR



- automatic control

Intelligent system controls the awning blind depending on the insolation. High insolation levels trigger the awning blind to unroll automatically. In cloudy weather, the awning blind rolls back up without any user intervention.



AMZ Z-WAVE



- remote control or wall switch



AMZ NEW LINE



- manual control by hand or control rod (included)

AMZ



Electric awning blinds are also available in the following versions:

- AMZ Electro 230 - connected to the mains and operated by a wall switch
- AMZ Electro 12 - connected to the mains by means of 12V power supply and operated by a wall switch
- AMZ Electro Solar - powered by solar panels and operated by a wall switch
- AMZ Bluetooth - preparation in progress

Awning blinds available to special order. Get more information at: www.fakro.com

AVAILABLE COLOURS AND FABRICS

The AMZ awning blind comes in three price groups, whereas the AMZ Z-Wave and AMZ Solar are available in two price groups.



AMZ GROUP I

AMZ Z-Wave GROUP I
AMZ Solar GROUP I

(fabric with **10%**
relative open area)

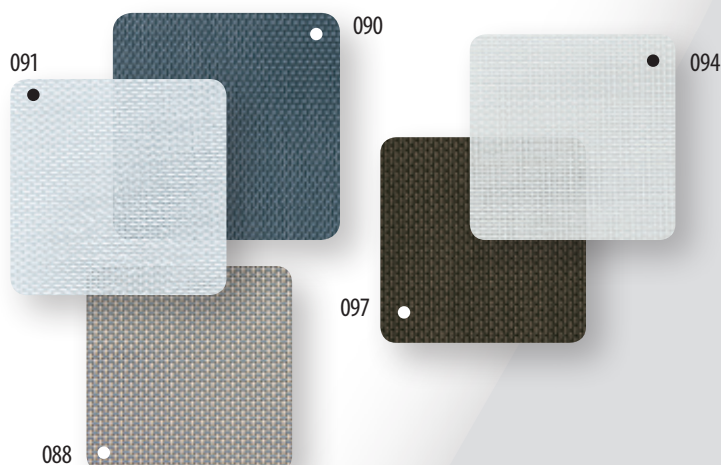


AMZ GROUP II

AMZ Z-Wave GROUP I
AMZ Solar GROUP I



(fabric with **10%**
relative open area)



AMZ GROUP III

AMZ Z-Wave GROUP II
AMZ Solar GROUP II



(fabric with **1%**
relative open area)



Awning blinds in dark colours absorb heat better compared with white awning blinds. Looking out the window covered with the awning blind in dark colour does not produce dazzling effect as it is the case with awning blinds in white. In addition, awning blinds in dark colours are more resistant to dirt.

AWNING BLINDS FOR OTHER ROOF WINDOWS

The FAKRO range also includes awning blinds for use with other roof window manufacturers' products. Simply give us the manufacturer, window name, size and year it was produced.

These awning blinds are available in the manual and solar versions.

The aluminium casing of the awning blind is grey brown in colour (RAL 7022). It can, however, be supplied in any RAL colour on request.



Other manufacturers' awning blinds are priced similarly to those made by FAKRO, though sizes may vary slightly. When pricing it is always advisable to price the nearest larger size (e.g. accept the price for 70x100 as for 78x118).

In the case of Brass windows, the awning blinds are installed from the outside. Operating the manual blind is possible after opening the window.

Z-WAVE WIRELESS CONTROL

For roof windows which are out of reach FAKRO offers Z-Wave wireless operation as standard.



Z-Wave is a wireless radio protocol used for communication between compatible electrical devices. It can connect appliances such as lights, thermostats, alarms, computers, TVs and air conditioning alongside roof windows, awnings and blinds into a single network.

ELECTRICAL CONTROL ELEMENTS

Z-WAVE CONTROL ELEMENTS

● ZWK 10

The **ZWK 10** is wall mounted and designed to operate a combination of products separately or simultaneously: the Z-Wave window, ZWS230 or ZWS12 actuator (for opening the window), ARZ Z-Wave external roller shutter, AMZ Z-Wave awning blind, VMZ Z-Wave vertical awning blind and VMB Z-Wave roll-up blind.



● ZWP 10

The **ZWP 10** remote control is designed to operate a combination of Z-Wave devices separately or simultaneously: the Z-Wave window, ZWS230 or ZWS12 actuator (for opening the window), ARZ Z-Wave external roller shutter, AMZ Z-Wave awning blind, VMZ Z-Wave vertical awning blind and VMB Z-Wave roll-up blind.



● ZRS 24

Multifunctional Z-Wave remote control enables advanced configuration and operation of all devices within the Z-Wave network. The Z-Wave window, ZWS230 or ZWS12 actuator used for opening the window, ARZ Z-Wave external roller shutter, AMZ Z-Wave awning blind, ARF Z-Wave internal blackout blind, ARP Z-Wave internal roller blind or AJP Z-Wave Venetian blind.



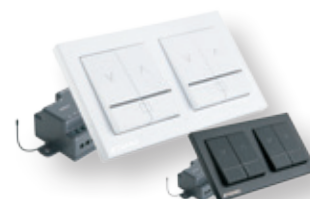
● ZWL1

The **ZWL 1** consists of a wall switch and radio module placed in a flush-mounted box. It is used for the remote control of a single Z-Wave device or a group of up to 231 devices including the ZWS 230 or ZWS 12 actuator, ARZ Z-Wave external roller shutter, AMZ Z-Wave awning blind, VMZ Z-Wave vertical awning blind or VMB Z-Wave roll-up awning.



● ZWL2

The ZWL 2 consists of a double wall switch and radio module placed in a flush-mounted box. It is used for the remote control of two Z-Wave devices independently or a group of up to 231 devices including the ZWS 230 or ZWS 12 actuator, ARZ Z-Wave external roller shutter, AMZ Z-Wave awning blind, VMZ Z-Wave vertical awning blind or VMB Z-Wave roll-up awning.



● ZWL3

The ZWL 3 consists of a triple wall switch and radio module placed in a flush-mounted box. It is used for the remote control of three Z-Wave devices independently or a group of up to 231 devices including the ZWS 230 or ZWS 12 actuator, ARZ Z-Wave external roller shutter, AMZ Z-Wave awning blind, VMZ Z-Wave vertical awning blind or VMB Z-Wave roll-up awning.



ELECTRICAL CONTROL ELEMENTS

ELECTRO 12, ELECTRO SOLAR CONTROL ELEMENTS

- **LP1**

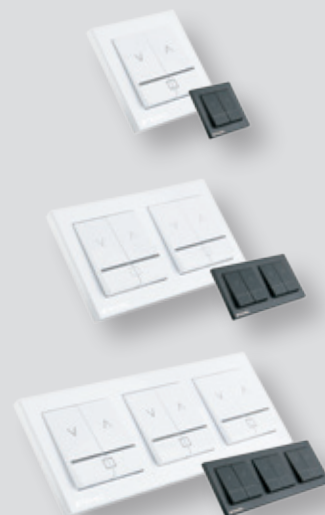
A single wall switch enables potential-free control of a single device such as the AMZ Electro 12, AZM Electro Solar, VMZ Electro 12, AMZ Electro Solar or inputs of ZMWA or ZWMA1 conversion modules.

- **LP2**

A double wall switch enables potential-free control of two devices independently such as the AMZ Electro 12, AZM Electro Solar, VMZ Electro 12, VMZ Electro Solar or inputs of ZMWA or ZWMA1 conversion modules.

- **LP3**

A triple wall switch enables potential-free control of three devices independently such as the AMZ Electro 12, AZM Electro Solar, VMZ Electro 12, VMZ Electro Solar or inputs of ZMWA or ZWMA1 conversion modules.



ELECTRO 230V CONTROL ELEMENTS

- **ZKP**

A single flush mounted wall switch with backup enables the control of a single device such as the AMZ Electro 230, VMZ Electro 230.

- **ZKN**

A single surface mounted wall switch with backup enables the control of a single device such as the AMZ Electro 230, VMZ Electro 230.



ELECTRIC CONTROL ELEMENTS 15V

- **ZZ60**

Ventilated switching the 15V DC power supply to power Z-Wave devices. Output power 60W. To be installed on DIN TS35 rail. It provides power for up to two external electrical accessories.

- **ZZ60h**

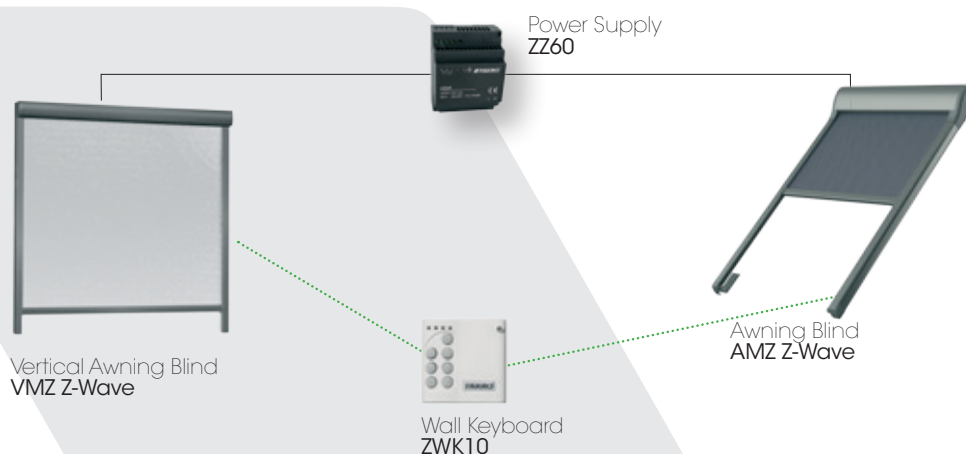
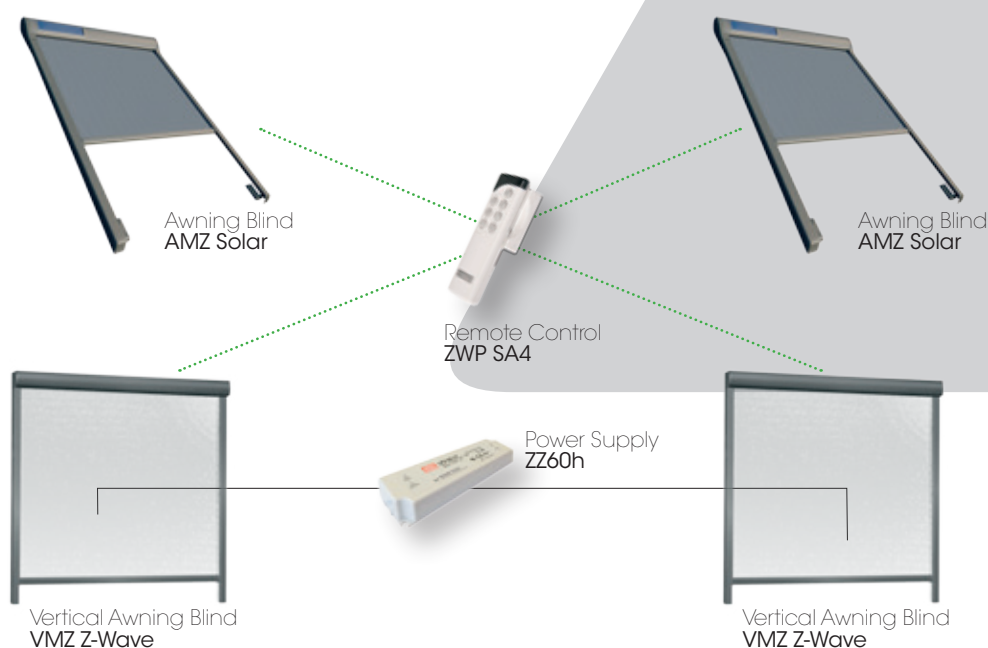
Hermetic switching the 15V DC power supply to power Z-Wave devices. Output power 60W. It provides power for up to two external electrical accessories.



EXAMPLES OF Z-WAVE CONFIGURATION

The Z-Wave system enables many receivers to be controlled (e.g. Z-Wave windows, ZWS12 or ZWS230 actuators, internal and external shutters, external blinds) by means of a multi-channel controller (ZWP10 remote control, ZWK wall keyboard or ZWG3 wall keypad). With the use of this solution you can simultaneously control several receivers (e.g. run 4 awning blinds at the same time) or control only one chosen receiver (e.g. AMZ Z-Wave awning blind). One ZWP10 remote control or ZWK10 wall keyboard can operate a group of up to 10 receivers separately or up to 231 receivers simultaneously.

The AMZ Solar and VMZ Solar awning blinds are factory-equipped with the ZWP SA4 remote control which enables the control of 4 awning blinds separately or simultaneously.



INSTALLATION

Connecting a set of Solar type awning blinds (both roof and vertical) requires no more than for products to be configured and assigned to controllers.

Connecting a set of Z-Wave type awning blinds (both roof and vertical) consists of connecting products to the 15V ZZ60 or ZZ60h power supply. Next steps involve configuring products and assigning them to a certain number of controllers. Controllers (e.g. ZWK10, ZWG3) are mounted to the wall or other flat surface by means of screws included in the mounting kit or by double-sided adhesive tape. The ZWK10, ZWG3 or ZWG1 controllers can also be put in another freely chosen place as they are powered by a 3VDC battery.

TENDER FORMS

Forms are available at builders' merchants containing all the necessary information for selection and installation of awning blinds. Additional information is also available on the available palette of RAL colours and helps match the awning blinds to design of the building.

REQUEST FOR QUOTATION FORM
AWNING BLINDS for vertical windows VMZ Z-Wave, VMZ SOLAR

I submit form to request for quotation and pricing of products
I submit form to order products

Data of person submitting request for quotation

Name & Surname / Company
Address
Phone

Data for the invoice (in case of order)

Name & Surname / Company
Address
Tax Identification Number

Data for the product delivery

Name & Surname / Company
Address
Phone

I attach to the form:

Attachment 1
Attachment 2

Pursuant to article 24, paragraph 1, of the Law of 1992, I hereby agree to inform that:

- 1) Administrator of your company (subcontractor)
- 2) Your personal data (subcontractor)
- 3) You have the right to request the deletion of your data
- 4) Providing personal data is optional

I hereby agree to provide my personal data to FAKRO

YES

I hereby agree to provide my personal data to FAKRO

YES

Note: Form with postcard also be

page 2

Attachment 1
Measurement card: AWNING BLINDS FOR VERTICAL WINDOWS (VMZ Z-WAVE, VMZ SOLAR)

DIMENSIONS OF VERTICAL WINDOWS					Description	Notes
Dimensions	Window 1	Window 2	Window 3	Window 4		
A (mm)					Width of the lining recess	Minimum A width for Z-Wave version = 430 mm Minimum A width for Solar version = 643 mm Maximum width A max = 4000 mm
B (mm)					Height of the lining recess	Minimum height: B min = 300 mm For 480 mm < A < 3000 mm: B max = 3500 mm For 480 mm < A < 4000 mm: B max = 2200 mm
C (mm)					Width of the visible frame element in the side section	C1 < 22 mm and C2 < 22 mm installation to the frame C1 < 22 mm and C2 < 22 mm installation only to the lining* * current visible from the inside after window opening (for details see page 4)
C (mm)						

PARAMETERS OF THE AWNING BLIND		Information on page 3:	
Type of the awning blind		Method of power supply	VMZ Z-Wave -- it is necessary to purchase power supply and control device (www.fakro.com) VMZ Solar*** - remote control and battery included
Type of fabric		Type of fabric	Fabric with 10% open area: 088, 089, 090, 091, 094 Fabric with 1% open area: 092, 093
Colour of profiles		Colour of runners and box	Standard colours: RAL 7023, RAL 8003, RAL 9005, RAL 9010 It is possible to make profiles in any colour. Please provide colour from RAL spectrum
Wire exit direction		Wire exit direction	The choice of direction 1, 2, 3, 4 (description on the picture) *** only for VMZ Z-Wave
Cassette Blower** Cassette 100mm**			

* Available in the awning blinds with the following sizes: 480-1200 x 500-2400mm
500-1600 x 1200-2500mm
** Available in any size

NOTE: For proper dimensioning of windows, selection and installation of awning blinds it is necessary to familiarize with installation special conditions before placing an order (see page 4)

ILLUSTRATIVE DRAWINGS TO TAKE MEASUREMENTS OF VERTICAL WINDOWS

In case of the VMZ Solar awning blind installation under balconies and roofs it is necessary to purchase additional power panel or installation sensor.
The awning blind protected by the balcony or the roof can be mechanically connected with another roof or vertical awning blind that is directly exposed to sun rays.

Panel changes batteries and acts as an installation sensor

Direction 1: To the bottom of the cassette

Direction 2: To the side of the cassette

Direction 3: To the top of the cassette

Direction 4: To the back of the cassette

www.fakro.pl

NOTEBOOK



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FAKRO reserves the right to change specifications and technical parameters of products without prior notice.